US Army Corps of Engineers ®
Galveston District

Appendix M-3

Public Involvement Supporting Documents
- 2020 Public Review Period Comments and USACE Responses
- Cooperating Agency Letters

for

Coastal Texas Protection and Restoration Feasibility Study

August 2021

Public Comment Response
2020 Draft EIS Public Review Period

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-0001	-01	Mike Booher	…the study references to Hurricane Harvey and even went to as far as to imply that storm surge had a major effect on the Houston/Galveston flooding. When in fact, it was the rain that was the major contributor. Any associated storm surge was much farther South and West of Galveston, Houston, and the Bolivar Peninsula.	Planning	POOCs/Purpose and Need	The response to Comment #4 in Section 7.1.2.2.2 Bolivar Roads Gate System of the EIS will be revised to remove any inference that Hurricane Harvey was an extreme storm surge event.
E-2020DEIS-0001	-02	Mike Booher	My concern is the facts that have been mis-stated or missing concerning the plan, and specifically not addressing rain as a major flooding impact.	Planning	POOCs/Purpose and Need	Appendix D, Section 2.7 describes design critera that included 10 and 25-year rainfall events in conjunction with overtopping rates associated with the 1% AEP storm were used for drainage analyses and sizing of pumps. The analysis assumds that the peak rainfall and overtopping events occurred simultaneously (a conservative approach). Probabilistic dependence of rainfall and surge events will be analyzed in PED to inform design refinements for Tier 1 measures (both Gulf- and Bay-defenses).
E-2020DEIS-0001	-03	Mike Booher	The draft proposal states a timeline for funding, several years out, and implementation timelines many, many years out that would leave the community possibly stuck with a project that is out of date and lacking in what more current technology and deisgns could better address.	Project Management	Implementation Schedule and Cost	The PED phase offers an opportunity to consider and incorporate the latest technological advances. For this project in particular, the design phase for features like the Bolivar Roads Gate System willl make use of the latest technological advances. The current designs presented in this report are at a 30-35% Engineering level, and as these designs are matured in the PED phase, innovations can be incorporated into the designs to improve performance, minimize and avoid impacts, and reduce costs. With respect to the timeline, project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
E-2020DEIS-0002	-01	Jack and Jennifer Baer	Storm surge protection is needed especially in the upper Texas coast due to the potential nightmare of flooding/rising water affecting petrochemical industry and potentially causing hazardous chemicals to leak into the surrounding waterways. In addition, the billions and billions that are spent on hurricane relief efforts to rebuild could be potentially reduced/mitigated by the sound strategies of keeping a storm surge at bay and controlling the flow of water coming into the Houston Ship Channel area.	Planning	POOCs/Purpose and Need	Concur, and thank you for your comment.
E-2020DEIS-0006	-01	Rick Suder	[Summarized] Earthloc is an engineered solution that coud be considered for cnstructing the dune. The commenter describes the key features of the solution.	Engineering	Designs	Designs will be refined in the PED phase, and options such as the EarthLoc approach could be considered at that time. Thank you for the information.
E-2020DEIS-0010	-01	Kent Hemphill	The proposed plan only addresses one symptom of hurricane disasteres: surge from the Gulf of Mexico. While surge is an important harm to mitigate, recent storms like Hurricane Laura in Southwest Louisiana and Hurricane Harvey, caused more damage due to devastatingly high wind speeds and record flood from rain-neither of which the Coastal Barrier will address.	Planning	Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and GLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E-2020DEIS-0010	-02	Kent Hemphill	As the second most ecologically productive estuary in the United States, environmental harm to the Galveston Bay will undoutedly result in economic losses for our region. Current modeling from the Corps shows the 2-mil long gate structures will reduce the natural flow of water between Galveston Bay and the Gulf of Mexico. Reduced flows can restrict movement of marine species, as well as drastically change salinity and circulation within Galveston Bay. These impacts must be better understood before it goes for congressional appropraition.	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-0010	-04	Kent Hemphill	The draft plan and environmental statement must include a comprehensive analysis of all possible impacts to the ecosystem, including effects on fisheries, water flow, and marine migration patterns.	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-0020	-05	Jean Naples	Assuming immediate funding in full and a steady construction schedule, the Coastal Barrier will not be in place for another 20 years. The Corps must consider projects that have a shorter implementation timeline.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits. With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are
						possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
E-2020DEIS-0020	-06	Jean Naples	Given the potential for serious environmental impacts, the final Coastal Texas Study must include a comprehensive analysis of all possible impacts to the ecosystem, including affects on fisheries, water flow, and marine migration patterns. Understanding the full scope of the project is vital for evaluating the impacts to people, property, and the environment, as well as the effectivenss of the proposed Coastal Barrier	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-0021	-01	Sarah Piwetz	[Summarized] Commenter provided details and maps of dolphin usage of Galveston Bay and potential impacts from construction. There are no plans for how marine mammlas would be monitored pre, during, and post construction/development or how potetial losses will be mitigated.	Environmental	Impacts	Thank you for your input, we will take it under advisement. Note that the Study Team is aware of potential affects to marine mammals. The Study Team is in coordination with NOAA regarding the health and safety of marine mammals and plans additional studies and analysis during PED at which time the public will have another opportunity to review and comment. Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-0031	-03	Jackie Tryggeseth	The gate system at Bolivar Roads will permanently change the natural function of Galveston Bay by modifying tides, increasing salinity, increasing velocity, and decreasing shrimp, fish, and oyster stocks.	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-0031	-04	Jackie Tryggeseth	The coastal barrier gates will cause changes in sediment deposition, erosion, residence time, and productivity of the Galveston Bay Estuary. This will negatively affect numerous endangered and threatened species including shore birds, sea turtles, marine mammals, as well as commercially important fish that move in and out of the bay throughout their life cycles. These species include brown shimp, blue crab, gray snapper, red drum, spec, sandies, southern flounder, Atlantic croaker, black drum, sheepshead, gafftop, gulf whiting, mullet, menhaden, and anchovies--all species that rely on this pass for foraging.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-0031	-05	Jackie Tryggeseth	The construction of the gates will restrict flow and increase velocity, allowing less flow to exterior marshes and creating eddies that will trap the larval stages of these marine organisms. Computer-generated modeling does not create a clear picture of the impacts of the numerous species with this life cycle.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-0031	-07	Jackie Tryggeseth	Your goal should be to protect important and ecologically-sensitive places in and around Galveston Bay. You want to minimize large, structural storm surge projects that have greater impacts on Galveston Bay while maximizing nature-based solutions. These include: raising evacuation routes on highways 87 and 3005 to 3-5 feet above current levels to reduce flooding from high tides; renourishing beaches and dunes to slow the energy of surge and waves as it moves inland; and building levees and responsive flood solutions on the backside of Galveston Island as well as on Pelican Island. These projects could be done much quicker and more cheaply if they are designed, permitted, and funded separately from the enormous $32 billion Coastal Barrier Project. This alternative approach allows for more rapid response and local solutions to coastal flooding which address the unique local needs of coastal communities	Planning	Alternatives	Congress authorized the USACE to determine the feasibility of Federal investment in a comprehensive solution that promoted a more resilient and sustainable Texas coast by reducing coastal storm risks and restoring ecosystems throughout the region. The primary goal was to produce a technically sound solution that reduced risks (not completely eliminated the risks). Risk minimization must also be balanced with environmental impacts avoidance (to the extent practicable). The solution must also be both socially acceptable and economically justified (refer to the dEIS, page ES-12). While risk reduction was a focus, tradeoffs amongst the engineering, environmental, societal and economic priorities across the system were necessary to meet the Congressional mandate and assure a comprehensive, long-term solution. Coordination with the cost-share sponsor, as well as local, state and Federal natural resource agencies was necessary to meet NEPA requirements, and gathering input from stakeholders and the public in general helped assure the comprehensive nature of the formulated plan. Therefore, evaluation of the "performance" of the Recommended Plan was thus conducted in terms of environmental, social, economic, and engineering feasibility taken as a whole. Moreover, USACE policy requires that a suite of storms be utilized to determine engineering performance of a plan (rather than a "worst-case" scenario analysis), and policy also requires that the return on the investment (benefit-to-cost) must be a positive factor that incorporates the minimization of environmental and societal impacts. A multiple-lines-of-defense strategy was determined to offer a net positive return on the investment while taking into account the environmental and societal impacts.
			like Bolivar Peninsula and Galveston Island and protects our quality of life.			
E-2020DEIS-004	-01	Walter Wolff	[Summarized] Residential drainage as a result of construction the two dune system does not appear to be addressed. Stormwater or floodwates would be trapped behind the dunes on the landward side in the neighborhoods that border the Gulf of Mexico resulting in very swampy and mosquito infested areas. The cross section drawings of the dune system, do not appear to have any way for water to drain into the ocean.	Engineering	Designs	Refer to Appendix D (Engineering), Section 5.5 that details the plans to address drainage issues associated with the construction and operation of beaches and dunes on both Bolivar Peninsula and West Galveston Island. As the text details, drainage structures (i.e., culverts, etc) have been proposed to remove water behind the dunes, and drainage systems have been proposed to draw the water off to these structures. More detailed designs will be developed during the PED phase once land surveys are conducted.
E-2020DEIS-011	06	Kent Hemphill	In evaluating the suite of alternatives, we must consider the long-term future effectiveness of the selected remedy as it relates to sea level rise, increased storm impacts (flooding, surge, and wind), and how communities will develop in the coastal areas.	Environmental	Impacts	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E-2020DEIS-0665	-01	Kendrick Miller	To protect the citizens, commercial and residential structures need to be removed from the coastal flood plain and people must move inland and to higher elevations.	Planning	Alternatives	Thank you for your suggestion, the Study Team has looked into some forms of retreat.
E-2020DEIS-0892	-01	Deidre Moderacki	The proposed barrier gates do nothing to protect our communities from wind or flooding events, and will not stop the storm surge in Galveston Bay. But the gate system at Bolivar Roads will permanently change the natural function of Galveston Bay by modifying tides, increasing salinity, increasing velocity, and decreasing shrimp, fish, and oyster stocks.	Environmental	Impacts	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time.
E-2020DEIS-1110	-02	Mike Pearson	[summarized] Consider a 30-40 ft wide navigable waterway in front of Fort Travis to provide access to the TPWD Pilsner boat ramp.	Project Management		The combi-wall structure in front of Fort Bolivar, that currently intersects the TPWD Pilsner boat ramp, is part of the Bolivar Roads Gate System which is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be revised for all Tier 1 features, and suggestions such as this, will be considered.

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E-2020DEIS-1127	-01	Laurie Etta Ortel	In order to save our lives, our beaches, and our property, I urge the U.S. Army Corps of Engineers (USACE) and the Texas General Land Office (GLO) to immediately restore the North Beaches of South Padre Island with on-shore placedment of sand and/or dredged material, and plantings, and sand fencing, and used Christmas Trees (after the holidays) in order to build back all the Dunes that were destroyed during the last 4 storms.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E-2020DEIS-1128	-01	Gabe Davis	The area between the combi wall, beach and Ft Travis will become a cesspool. This will consist of stagnant water, trapped pollution and unpredictable tidal flows. Given the shallow water in this area, sand build up may eventually render this area a muck pit.	Environmental	Impacts	Thank you for your concern. Note that the Recommended Plan's Tier 1 measures (Gulf-Defenses including the combi-wall of concern) will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-1128	-02	Gabe Davis	Wildlife in the area will be permanently altered. Fish, turtles and other aquatic animals without access to the bay along the jetty will vanish. North Jetty access itself will be eliminated.	Environmental	Impacts	Refer to response #E-2020DEIS-1128-01
E-2020DEIS-1128	-04	Gabe Davis	Many of the homes in the Ft. Travis area are rental properties. This provides income and taxes to the peninsula. What vacation plans include staring at a 22' wall? This will hurt tourism on the peninsula.	Environmental	Impacts	Refer to response #E-2020DEIS-1128-01
E-2020DEIS-1128	-05	Gabe Davis	Rollover pass was closed. The North Jetty is work known around the world for some of the best fishin in the Gulf of Mexico. This wall closes access to the North Jetty and access to fishing.	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-1128	-06	Gabe Davis	Ft. Travis is a wall. Why can't the plan continue the levee system to Ft Travis and then connect the combi-wall to Highway 87 on the Westside of the Ft. Travis?	Planning	Alternatives	Refer to response #E-2020DEIS-1128-01
E-2020DEIS-1128	-07	Gabe Davis	Nowhere in this entire proposal does it contain opinions, testimony or studies from the energy corporations that this gates is actually needed. Until such information is on record and published, this gate system is a solution in search of a problem…I urge you to immediately suspend any and all discussions on this system until it can be proven by testimony from the energy companies that a gate system or barrier is needed. Only the can viable alternatives be discussed.	Planning	Purpose and Need	Congress authorized the USACE to determine the feasibility of Federal investment in a comprehensive solution that promoted a more resilient and sustainable Texas coast by reducing coastal storm risks and restoring ecosystems throughout the region. The primary goal was to produce a technically sound solution that reduced risks (not completely eliminated the risks). Risk minimization must also be balanced with environmental impacts avoidance (to the extent practicable). The solution must also be both socially acceptable and economically justified (refer to the dEIS, page ES-12). While risk reduction was a focus, tradeoffs amongst the engineering, environmental, societal and economic priorities across the system were necessary to meet the Congressional mandate and assure a comprehensive, long-term solution. Coordination with the cost-share sponsor, as well as local, state and Federal natural resource agencies was necessary to meet NEPA requirements, and gathering input from stakeholders and the public in general helped assure the comprehensive nature of the formulated plan. Therefore, evaluation of the "performance" of the Recommended Plan was thus conducted in terms of environmental, social, economic, and engineering feasibility taken as a whole.
E-2020DEIS-1130	-01	Frank Eichstadt	The planning maps for the Clear Lake portion of the project fail to illustrate the planned configuration of SH146 as it will be at completion.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXDOT to incorporate updated configurations of SH146 at that time.

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E-2020DEIS-1130	-02	Frank Eichstadt	A second navigable waterway north of the current high-clearance Clear Creek/SH146 bridge would appear to provide alternative access for boats other than sail boats. But such boat passage will require bridge clearance that seems to have not been anticipated by the SH146 project currently underway.	Engineering	Designs	Refer to E-2020DEIS-1130-01
E-2020DEIS-1130	-03	Frank Eichstadt	Had Harvey's record-setting rainfall over the Clear Creek watershed been accompanied by a storm surge, there may have been no place to put the water even IF portions of the proposed project were already to have been in place. This observation reveals some issues that relate not only to the final configuration of the entire Coastal project, but to the interim configurations and relative schedules for the various and interrelated components of the overall plan…I have not seen information regarding the coordinated schedule for the plan's various elements…or about how the elements of the proposed overall flood control/mitigation system would be operated in a coordinated manner under various weather scenarios during the implementation phases of the project or once the project has been completed.	Engineering	Designs	In the event that a storm brings both significant rainfall and surge, the plan includes both frontline defenses to reduce surge risks and gates and pumping stations on the interior as a second line of defense. It will be a multi-process to operate the system (i.e., close the gates, turn on the pumps, etc). Operation manuals for these features will be written in the PED-phase of the project. Note that the Recommended Plan is designed to perform as a system, and therefore all features must be in place to assure the risk reduction benefits assumed under the proposed plan.
E-2020DEIS-1133	-01	Kate Lange and Tom Gotthold	…we belive it is vitally important to prioritize the restoration of the dunes to save our buildings, our homes, our beaches, and our island. The north beaches of South Padre Island need to be restored immediately with on-shore placement of sand and/or dredge material, planting, and sand fencing in order to build back all the dunes that were destroyed during the last four hurricanes.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E-2020DEIS-1135	-01	David Burkett	[Summarized] The movement of sediments from the Bolivar Coastline into the Houston-Galveston Ship Channel appear to NOT be addressed as a significant concern in the 2020 Coastal Barrier draft report. Sediment movement constitutes a significant threat to the operation of the proposed Barrier Gates and should be seriously considered and studied prior to proceeding with this plan. Sediment accretes on the north side of the North Jetty and is routinely dredged to eliminate and allow access. After Hurricane Ike, massive amounts of sediment swept across the North Jetty at a time when the surge gates would be closed and most vulnerable to damage or interference from sediment accumulatives.	Engineering	Performance	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-1241	-01	Tinna McGee	And the "cartoon" version of the "story board" that you put out and accompanying "fact sheets" don't include enough detail for citizens to see or know what you Army Corps of Engineers are doing.	General	Stakeholder Engagement	The National Environmental Policy Act (NEPA) of 1970 offers guidance with respect to the level of detail to provide information to the general public. The study team developed the StoryMap and Factsheets to be easily read and understood. These tools are considered supplemental to the Main Report/Environmental Impact Statement. Citizens are directed to review the materials provided through the website at CoastalStudy.texas.gov (including the actual report and appendices) to better understand (in greater detail) the recommended plan. Also note that the StoryMap and Factsheets will be updated as the plan progresses into Pre-construction, Engineering, and Design (PED) and into construction itself. The project team welcomes suggestions regarding presentation of materials and directs the commenter to visit the website and provide suggestions using the study's email box (CoastalTexas@usace.army.mil) or through Social Media (Facebook = CoastalTXStudy)

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-1318	-01	Nick Singleton	A more modest plan similar to the "Galveston Bay Park Plan" is a much more cost effective and rapidly executable plan that will generate a much higher cost-benefit than what is currently envisioned. I strongly urge the COE to adopt something similar to the "Galveston Bay Park Plan" and get to work implementing it immediately.	Planning	Alternatives	The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The notion that the plans are mutually exclusive is inaccurate - the designs are compatible and complementary. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou). Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
#E001697	-01	Jessica Jia	Assuming immediate funding in full and a steady construction schedule, this ridiculous Coastal Barrier won't be in place for another 20 years. We want projects that have a shorter implementation timeline, we are flooding now, and each year.	Project Management	Implementation Schedule and Cost	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
#E001697	-02	Jessica Jia	The USACE and GLO must consider practicable non-structural solutions, such as elevation of homes, preservation and enhancement of wetland prairies, riparian areas, and barrier islands, buyouts/strategic withdrawal from areas that cannot be adequately protected, and utilize appropriate land-use regulation to implement those concepts. Projects like these should be considered FIRST and implemented FIRST in bay and coastal communities, so that our homes and livelihoods are protected in the near-term from hurricane impacts.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of “Multiple Lines of Defense” to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps’ missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
E002023	-01	Pierre Catala	Given the potential for serious environmental impacts, the final Coastal Texas Study must include a comprehensive analysis of all possible impacts to the ecosystem, including effects on fisheries, water flow, and marine migration patterns. Understanding the full scope of the project is vital for evaluating the impacts to people, property, and the environment, as well as the effectiveness of the proposed Coastal Barrier.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002023	-02	Pierre Catala	The USACE and GLO must consider practicable non-structural solutions, such as elevation of homes, preservation and enhancement of wetland prairies, riparian areas, and barrier islands, buyouts/strategic withdrawal from areas that cannot be adequately protected, and utilize appropriate land-use regulation to implement those concepts.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
E002131	-01	Kevin Grice	[Summarized] As currently designed the Clear Lake gate system will significantly impede boating traffic access to and from Galveston bay and make transits less safe, requiring boats to congregate is areas of significant current while awaiting transit. Current conditions with SH146 bridge construction over the last year has proven that a single lane channel is unsafe as indicated by the Coast Guard requiring TxDOT to provide floating traffic signals and flagger boats to manage boat traffic whenever one of the two existing channel is closed, allowing only one-way traffic through the open channel, alternating every 5 minutes. A potential remedy could be that the current plan be amended to include a second 75 foot wide floodgate next to the proposed one, thereby preserving the two-channel traffic separation pattern in place prior to and after bridge construction is complete.	H&H/Engineering/ Planning	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002131	-02	Kevin Grice	The [Clear Lake Gate] design appears to eliminate the dry storage and crane launch facilities that are used by a group of very active sailors for access to both Clear Lake and the bay. The loss of this access is not addressed in the design documents. The plan must provide for similar bay access to members of the public at an alternative location. Other possible solutions for this concern might include moving the massive pumping stations further north alongside Hwy 146.	Engineering	Designs	Refer to response to Comment #E002131-01
E002132	-01	Larry and Marie Wise	[Summarized] The primary concern is that the 75 ft gate width at the Clear Creek Channel is insufficient for two way traffic as demonstrated during time when TXDOT has required a flagman be posted to enforce one-way traffic and ensure safe traffic flow when either of the current two channels is closed.	H&H/Engineering/ Planning	Designs	Refer to response to Comment #E002131-01

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E002132	-02	Larry and Marie Wise	[Summarized] The US Department of Defense Uniform Facility Criteria are cited as a source of recommended design parameters for navigation channels. Based on these parameters and a maximum vessel length of up to 132 ft presently mooring on Clear Lake, the guidelines would indicate the gate width should be between 198 and 231 ft. USACE EM-1110-2-1615 is also cited which indicates that a channel of 140 to 162 ft is needed for a vessel of up to 27 ft beam width currently mooring on Clear Lake to accommodate two-way traffic.	H&H/Engineering/Planning	Designs	The current Clear Lake gate design is sized based on the existing authorized width of the Clear Lake Channel, however ship simulations will be conducted in PED to determine requirements for safe navigation of the gated structures. Note that under the study's current authorization, the USACE does not have the authority to address widening the channel at this time. A separate feasibility study will be necessary to address the concerns highlighted in this comment.
E002132	-03	Larry and Marie Wise	We recommend that a navigation assessment be conducted to determine the minimum sector gate width to maintain safe navigation for all vessels which presently use the channel. This should include assessing the volume of traffic and appropriate design vessels based on the current and anticipated future vessels which would transit the barrier. The gate width should be sufficient to maintain two way traffic or, alternately, two gates with one-way traffic through each should be designed.	H&H/Engineering/Planning	Designs	Refer to Response E002132-02 and E-2020DEIS110-01
E02132	-04	Larry and Marie Wise	An additional concern is that the [Clear Lake] gate may not be aligned with the Hwy 146 bridge navigation channels. …Alignment is critical to allow for proper sight lines for vessels approaching the gates from either side to see each other and navigate accordingly. With the environmental flow gates in place it is anticipated that it will be difficult to see vessel traffic through them, even in open positions.	Engineering	Designs	Refer to Response E002132-02 and E-2020DEIS110-01
E002132	-05	Larry and Marie Wise	A two dimensional, or preferably three dimensional, hydrodynamic model should be developed, calibrated, and used to assess the currents in the proximity of the gates. These currents should be assessed to ensure that they will not cause navigation and/or safety issues for vessels which will use the gate. These vessels may include non motorized, sail or paddle propelled vessels.	H&H/Engineering	Designs	Concur - The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS), and during the PED phase , designs will be refined based on information gathered through 2D and 3D physical and computational models.
E002132	-06	Larry and Marie Wise	[Summarized] H&H should be updated with the latest estimates of future rainfall intensity, duration, and frequency curves obtained from NOAA and other published sources. A joint probability analysis shoud be conducted to ensure that there is no increase in flooding for the gates open condition with probable elevated Galveston Bay water levels which may be higher than MHW but less than the 100-year storm surge conditions.	H&H	Performance/Impacts	Concur - the gates systems throughout the plan are considered Tier 1 features (refer to Section 2.4.1 of the EIS), and during the PED phase, operation manuals will be written based on the results of joint probability analyses with a range return periods.

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E002132	-07	Larry and Marie Wise	[Summarized] The [Clear Lake Gate] pump system should be designed to ensure that in the gates open condition there is no increase in water levels within the Clear Creek watershed and Clear Lake as compared to the same rainfall and surge conditions without the project. With the gates closed, the system should be designed to adequately keep water level at or below the existing water levels which would be associated with the given rainfall intensity, duration and frequency along in the absence of any storm surge up to at least the 100 year return period rainfall event. The with project should be compared to these water levels, rather than storm surge levels to show that the pump system is effective. A scenario with riverine flooding within Clear Creek and Clear Lake which is equal to or only marginaly less than what would have been experienced due to storm surge without the project is unacceptable.	H&H	Performance	USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. The H&H modeling conducted thus far was used to size the pumping station capacity proposed under the Recommended Plan. Note that in the event that we experience a storm system that brings rain, but no surge, the gates and pumping could be deployed to reduce flooding in the watershed. Note that the capacity is 20,000 cfs for this system, which experts indicate is more than adequate to address the potential flooding risks.
E002132	-08	Larry and Marie Wise	[Smmarized] Appendix D, Annex 2 states a total pump capacity of ~45,000 cfs but Appendix D, Sec 2.7.5 says 20,000 cfs for cost estimating. There is concern that a reduced pump size would lead to increased rainfall flooding and induce water levels beyond what is documented in the Appendix.	H&H/Engi	Performan	A revised H&H analysis determined that the pumping station capacity should be reduced to 20,000 cfs. Changes will be made to the report to highlight this revised analysis. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities.
E002132	-09	Larry and Marie Wise	The currents within the Clear Lake Bypass Channel to the proposed new pump station need to be reviewed for navigation and safety concerts as well as impact on existing structures. There will likely be very high currents under conditions when pumps are running and measures need to be put in place to ensure navigation safety including notifying recreational mariners of operations including during testing of pumps.	H&H/Engi	Performan	The USACE (and its non-Fed Construction cost-share sponsor) will coordinate with USCG and other appropriate entities to establish navigational safety measures in and around the pumping stations.
E002132	-10	Larry and Marie Wise	The high currents created by the pumps may result in impacts on existing shoreline, dredged areas, and/or existing and proposed dock structures. The strong currents may result in restrictions placed on vessels which can be moored in slips adjacent to the channel and/or need to upgrade these facilities to accomodate the higher currents.	H&H/Engi	Performan	The USACE (and its non-Fed Construction cost-share sponsor) will conduct H&H model and revise the design to avoid and minimize impacts where possible and will mitigate impacts that cannot be avoided/minimized during the next phase of the project (PED).
E002132	-11	Larry and Marie Wise	There is indication that additional dredging may be required for the Clear Creek Bypass Channel. The impact of this dredging on adjacent structures should be addressed and mitigated.	H&H/Engineering	Performance/Impacts	Refer to response to Comment #E002132-10

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E002132	-12	Larry and Marie Wise	The Clear Creek structures are not outlined on the project schedule (Fig 12-2, Appendix D). We would urge that the relatively smaller, and shorter construction duration, Clear Creek portion of the project be completed in advance of the Bolivar Roads portion of the project. This would allow optimization of benefits early in the life of the project.	Project Management	Implementation Schedule	1) Clear Lake Gates and Pumping Station are included in Figure 12-2 in Section 12.1 (BOLIVAR ROAD SURGE BARRIER SYSTEM), but are referenced as "Coastal Texas - CCG&PS" in the figure. 2) The "Gates-first" approach in the project's implementation strategy assures system-level performance of all components. If any of the interior features were to be built in advance of the Bolivar Roads Gate System (at their current proposed scale), they would not afford the risk reduction level attributed to the system until the Bolivar Road Gates features were completed. In other words, to provide comensorate risk reduction, the Clear Lake features would need to re-designed and would in all likelihood need to be significantly scaled up, which would increase costs and could lead to an unjustified BCR. An increased footprint would likely lead to additional environmental and community impacts that could be avoided if the Clear Lake system is built as proposed.
E002200	-01	Richard White	Sand dunes are not strong enough to stop large storm waves. Repetitive waves will erode dunes and allow water to get into the bays. Sand covered concrete walls that are as high as the flood gates is one solution.	Engineering/Planning	Performance/Alternatives	Thank you for your suggestion, the Study Team will conduct further analysis in PED. Note that the sand features are proposed to interupt wave energy, and reduce the incidence of water entering the bay. Sacrificial sand dunes are proposed to reduce breaching potential without hardening the shoreline and unreasonably affecting coastal processes or impacting coastal habitats. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED and E002485-01 regarding erosion concerns.
E002200	-02	Richard White	San Luis Pass needs to be gated. Storm tides and storm surge will eventually flood the bays with the help of the Intracoastal Waterway which is very close to the pass.	H&H/Engineering	Performance/Impacts	Refer to Response to Comments #E-2020DEIS-2326-04
E002200	-05	Richard White	If and when this project is approved, because this is a very long project, I feel it would be more beneficial if the smaller independent projects were scheduled first. I believe this could prevent some storm losses, shorten the total project time and reduce the overall cost.	Project Management	Implementation Schedule and Cost	The "Gates-first" approach in the project's implementation strategy assures system-level performance of all components. If any of the interior features were to be built in advance of the Bolivar Roads Gate System (at their current proposed scale), they would not afford the risk reduction level attributed to the system until the Bolivar Road Gates features were completed. In other words, to provide comensorate risk reduction, interior features would need to re-designed and would in all likelihood need to be significantly scaled up, which would increase costs and could lead to an unjustified BCR. An increased footprint would likely lead to additional environmental and community impacts that could be avoided if the Clear Lake system is built as proposed.
E002261	-01	Susan Fennewald	[summarized] The Corps needs to start with small increments and add on to the plan doing a benefit cost analysis at each step. The Corps needs to publish benefit and cost data for separate components with and WITHOUT the Bolivar Roads gates. The current benefit and cost ratio analysis is so poor that it fails to justify the Bolivar Roads gates. If the Corps can justify the gates, after the levees are built – they should show that.	Economics/Planning	Benefits/C	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.

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E002274	-01	Carol Hollaway	Optimization has not been demonstrated between increasing performance of the smaller "interior" components compared with the larger coastal spine. There appear to be opportunities for efficiencies when optimizing the "interior" features of CSRM versus the coastal spine. A "last-added" incremental analysis should be performed with the smaller, localized "interior" components tested and optimized for performance and cost-efficiency with the coastal spine added last.	Planning	Alternatives	Refer to response to comments #E-2020DEIS-18 regarding Adaptability/Level of Protection/Optimization strategy for the Recommended Plan.
E002274	-02	Carol Hollaway	The smaller “interior” components of the Recommended Plan should be scheduled for construction while the coastal spine components are finalized in PED. Protection to the region, even if limited, is needed immediately. Waiting 20 additional years for the implementation of “interior” components is unsafe and unwarranted.	Project Management	Implementation Schedule and Cost	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002274	-05	Carol Hollaway	Insufficient justification is presented to deviate from Economic Guidance Memorandum, 09-04, Generic Depth-Damage Relationships for Vehicles, 22 June 2009. Present rationale for adopting the methodology presented in this economic analysis.	Economic	Impacts/B	In response to HQ policy comments, additional information about the depth-damage curves used was added to the “Depth-Damage Relationships” section of the economic appendix explaining the source of the depth-damage functions used and why the PDT believes they are the most accurate representation of the flooding conditions expected in the study area. The depth-damage functions used for both structures and vehicles in this final analysis come from one source and all represent long duration salt water flooding in a warm, humid environment. Additionally, Addendum A shows the results of a sensitivity analysis using the same depth-damage functions used at the time of the TSP selection (at which time the generic curve was being used for vehicles). The vehicle category is a very small contributor to the damages and benefits. In both the final model and the sensitivity model, the without-project and with-project vehicle damages account for less than 5% of the benefits.
E002274	-06	Carol Hollaway	Debris removal is usually reimbursed to local authorities by FEMA and is, therefore, considered a transfer and not a loss of GNP in the Federal perspective. Justification can be made for this category as an uncompensated expense if FEMA reimbursements are subtracted from the total cost of debris removal. Report FEMA reimbursements to the overall cost of debris removal and recalculate uncompensated losses.	Economic	Impacts/B	The debris removal included in this analysis reflects the burden on individual property owners, not the burden taken on by local authorities. Generally, FEMA reimbursement to private property owners is limited to clearing debris from public rights-of-way and does not cover debris removal in and around a structure. Since this analysis captures the loss to the property owner and not the local authority, it is not considered a transfer.
E002274	-07	Carol Hollaway	[Summarized] The indirect losses benefit category should be removed from the overall benefit estimation for the recommended plan as project performance cannot support its application. Pg 78 of the Economic Appendix assumes that damages are avoided at the less frequent events, but project performance indicates little chance that any of the less frequent events will not be exceeded with the recommended plan in place in the year 2035, with the exception of in Reach 81.	Economics	Impacts/Benefits	Refer to response to comments #E-2020DEIS-05 regarding inducements. New tables have been added to the economic appendix to report the net benefits and BCRs both with indirect losses and without. In the final report, tables 41 and 42 show the results of all sea level rise scenarios with and without indirect business losses incorporated. This benefit category is a very small contributor to overall benefits representing less than 9% of total benefits in all sea level rise scenarios. Even without indirect business losses, the project is justified with a 75% chance that benefits exceed costs in the intermediate sea level rise scenario.
E002274	-06	Carol Hollaway	No mention in the report or appendix is made of mitigation of induced damages in Reaches 37 and 38, just north of the Bolivar Navigation Gates in Galveston Bay. The Ports of Galveston and Texas City both are in Reach 37. The magnitude of these damages is significant, $19 M EAD in Reach 37 and $12 M EAD in Reach 38 along Bolivar Peninsula. These project-induced damages need to be acknowledged in the main report and addressed for mitigation.	Economics	Impacts/Benefits	Refer to response to comments #E-2020DEIS-05 regarding inducements
E002307	-01	Paul Cammarata	I object to the clear lake flood gate in the sense that is 1 gate. There needs to be at least two gates providing 150ft of passageway to and from clear lake otherwise it poses a danger to public safety.	Engineeri	Designs	Refer to Response E--2320-03 regarding the Clear Lake features

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E002311	-01	Teryl Crosson	[summarized] The single 75' opening for the Clear Lake Flood Gate will create additional problems for navigation. A narrow opening increases the potential for vessels contacting one another even with flaggers and lights which are not always obeyed.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002320	-01	Thomas Sharkey	A single 75 ft passage in the channel from Clear Lake to and from Galveston Bay is a hazard to navigation. In fact, the Coast Guard has determined that the single channel being used temporarily as a new bridge is being built on highway 146 over Clear Lake Channel is unsafe for two-way traffic and has required flaggers to control vessel The plan must not further restrict the width of this channel more than the new bridge does. At the very least, two gates of 75 ft or greater are needed.	H&H/Engineering/ Planning	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002320	-02	Thomas Sharkey	The proposed location of the wall and pumping mechanism will reduce the amount of dry boat storage in Clear Lake. Specifically, the plan seems to eliminate the dry storage and the hoist at Seabrook Marina. Dry storage is a relatively low-cost means by which the public accesses the water for recreational purposes, and this plan increases the barriers to the public access. The plan should increase public access, not decrease access.	H&H/Engineering/ Planning	Designs	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002320	-03	Thomas Sharkey	One unintended, but predictable, outcome should [75' Clear Lake Channel] is a reduction in both commercial and recreational boating in Clear Lake. Consequently, businesses supporting boating will have fewer customers and many would likely go out of business. Killing off viable businesses is not acceptable collateral damage.	Economics	Impacts	Refer to Response E-2320-03 regarding the Clear Lake feature refinement in PED.
E002325	-01	Michael and Jodie Lewis	As the USCG states, a single channel for two-way traffic is unsafe. We have experienced this issue for quite awhile now due to the temporary HWY 146 construction. If you continue with plans to restrict the channel to one 75' lane, you will make these dangerous safety issues permanent and exacerbate the problems that already occur on busy summer weekends. Please consider the installation of two channels (the current status quo) in order to best accommodate the hundreds of boats that call the Clear Creek Marinas their home.	H&H/Engineering/ Planning	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002327	-01	Carol Hollaway	One of the main risk drivers (page 117) overlooked in the Corps' draft report is that of Bolivar Navigation Gate operation. There appears to be no mention of operational risk and uncertainty in the main report. The economic appendix reports induced damages on the order of $31M in average annual equivalent values to Reaches 37 and 38 should the gates fail to open in the low sea level rise scenario. These induced damages are incorporated into the cumulative economic benefits reported for the project and are not apparent to the reader of the draft feasibility report. The operational risk should be thoroughly investigated and reported since Corps projects have failed in the past due to operational error.	H&H/Engineering/ Planning	Performan	Refer to response to comments #E-2020DEIS-05 regarding inducements

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002330	-01	Thomas Sharkey	A single 75 ft passage in the channel from Clear Lake to and from Galveston Bay is a hazard to navigation. In fact, the Coast Guard has determined that the single channel being used temporarily as a new bridge is being built on highway 146 over Clear Lake Channel is unsafe for two-way traffic and has required flaggers to control vessel The plan must not further restrict the width of this channel more than the new bridge does. At the very least, two gates of 75 ft or greater are needed.			The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002330	-02	Thomas Sharkey	The proposed location of the wall and pumping mechanism will reduce the amount of dry boat storage in Clear Lake. Specifically, the plan seems to eliminate the dry storage and the hoist at Seabrook Marina. Dry storage is a relatively low-cost means by which the public accesses the water for recreational purposes, and this plan increases the barriers to the public access. The plan should increase public access, not decrease access.			See E002330-01
E002339	-01	Angela Busceme	I am opposed to constructing gates at the entrance to Galveston Bay. I am concerned about the expense of construction and maintenance. I have serious doubts that the gates will function as intended and fear the results of any malfunction. I also believe the gates will have adverse effect on marine life and our seafood industry.	H&H/Engineering/ Environmental	Performance/Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002340	-01	Winifred Burkett	I am very concerned that the large gate system that is planned has the potential to severely damage the productivity of Galveston Bay by changing water flow rates and speeds and changing the bay's salinity. There has not been enough research into the potential impacts of the gates on fish and shrimp.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002340	-02	Winifred Burkett	The study states that the building of the gate system will require the use of cofferdams, the cofferdams will adversely affect water exchange in the bay and have the potential to reduce the bays productivity and hamper shipping during construction which will take many years. These impacts need to be thoroughly studied.	Environmental	Impacts	The construction plan will consider impacts to transit of the channel and water flow. A bypass channel is proposed to allow continued navigation during construction, and appropriate measures to reduce adverse water exchange will be proposed. The initial EIS has disclosed all known impacts considering the available information. Agency consultation and assessment of potential impacts will continue as additional modeling is completed and additional information is available.

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E002340	-03	Winifred Burkett	Operation procedures need to be determined immediately!!! How can you plan the huge gate system and not plan operations at the beginning of the plan? For example: NOAA data shows that the low tide before Ike was on Sept 10, 3 days before the storm surge hit. Can you close the gates 3 days before a hurricane makes land fall? Often meteorologists cannot determine the location of land fall even 24 hours ahead. It might be impossible to maximize rainwater storage which might mean additional flooding around the bay.	Engineering	Designs	Thank you for your comment. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. As the designs near completion, Operations Manuals will be developed in accordance with USACE policy, regulations, and guidance for each feature.
E002340	-04	Winifred Burkett	There is no evaluation of the maintenance needs that will require the gates be closed and the potential impact on natural systems or shipping this closure could have. Some gates in Scandinavia are closed twice a day. How many oysters are going to attach themselves to important parts of the gates? It seems unknown as to how often the gates will need to be closed to be cleaned to keep mechanisms operational.	Engineering	Designs	Refer to Response to Comment #E002340-03
E002340	-06	Winifred Burkett	Building the combi-wall across the mud flats, oyster reefs and salt marsh adjacent to the North Jetty will destroy productive habitat that is very important to birds and other coastal wildlife. There is no information in the study stating how many critical acres of coastal habitat will be destroyed and how this destruction will be mitigated.	Environmental	Impacts	Refer to response #E-2020DEIS-1128-01
E002340	-07	Winifred Burkett	I am concerned that reflection of energy from waves hitting the combi-wall might damage the North Jetty. Has anyone studied this?	H&H/Engineering	Impacts	Refer to response #E-2020DEIS-1128-01
E002340	-08	Winifred Burkett	The 3.03-mile earthen levee will destroy coastal prairie and wetlands in Bolivar Flats Shorebird Sanctuary deemed to be important enough habitat that Houston Audubon was able to acquire it ... The levee construction will destroy more than 100 acres of habitat! Will there be mitigation?	Environmental	Impacts	Thank you for your concern. Note that the Recommended Plan's Tier 1 measures (Gulf-Defenses including the levee identified here) will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002340	-10	Winifred Burkett	It also looks like the popular boat ramp at the end of 16th street in Port Bolivar will be blocked or destroyed by construction of the combi-wall. I found mention in the plan of moving the boat ramp and a map with a proposed new location close to the ferry landing. During the summer of 2020 this area was used for disposal of dredged material from the ferry landing and the water at this location is now shallow and it would not be a good location for a boat ramp.	Engineerii	Designs	Thank you for your concern and suggestion. Note that the Recommended Plan's Tier 1 measures (Gulf-Defenses including the combi-wall and boat ramp relocation of concern) will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002340	-12	Winifred Burkett	[Summarized] One of the proposed mitigation sites in the feasibility study is Horseshoe Lake in Port Bolivar, which is a wetland prairie complex that surrounds the very productive Horsehoe Lake. Productivity of the lake and surrounding marshes is shown by the large number of birds and fish species that use the area as foraging and nursery habitat and the extensive presence of oyster reefs on its bottom. Depositing dredged material in the lake will destroy the oyster reefs and most likely damage the salt marsh surrounding the lake resulting in the need for additional mitigation. The potentail to destroy the lake's important productive habitats needs to be carefully studied prior to any action.	Environmental	Impacts	Thank you for your concerns, we will take these under advisement. USACE policy and guidance mandates avoidance and minimization of impacts to natural resources when constructing features. For the mitigation sites in particular, the plans proposed are designed to generate a net benefit in order to offset impacts from CSRM features proposed in the near vicinity. In this location, care will be taken to restore and enhance ecosystem functionality with a minimum of temporaty disruption. Frequent monitoring of the mitigation activites will be used to identify problems early-on, and guide corrective measures to abate any problems, assuring an ecological success trajectory. Long-term monitoring will trigger adaptive activities to address both short-term disruptions and long-term changes in the environment. Mitigation will conform to all laws, regulations and policies. USACE and the cost-share sponsor will coordinate all mitigation activites with state and Federal agencies as we move into the next phase of the project.

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E002351	-01	Caroline Reichert	[Barrier Gate] system will permanently change the natural function of Galveston Bay by modifying tides, increasing salinity, increasing velocity, and decreasing shrimp, fish, and oyster stocks. If construction time is expected to take well over a decade, that is plenty of time to decimate our local shrimp and oyster fisheries, thus decimating our commercial and recreational industries. As the second most ecologically productive estuary in the United States, environmental harm to the Galveston Bay ecosystem will undoubtedly result in economic losses for our region.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002351	-02	Caroline Reichert	This gate system has not been fully assessed for its potential environmental impacts. The coastal barrier gates will cause changes in sediment deposition, erosion, residence time, and productivity of the Galveston Bay Estuary. This will negatively affect numerous endangered and threatened species including shore birds, sea turtles, marine mammals, as well as commercially important fish that move in and out of the bay throughout their life cycles. These species include brown shrimp, white shrimp, blue crab, gray snapper, red drum, specs, sandies, southern flounder, Atlantic croaker, black drum, sheepshead, gafftops, gulf whiting, mullet, menhaden, and anchovies—all species that rely on this pass for foraging.	Environmental	Impacts	Your concerns have been noted, and we will take them under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002351	-03	Caroline Reichert	Furthermore, this gate system will negatively impact our coastal wetlands that serve as important nurseries and habitats for fish, waterfowl, crustaceans and insects. We are losing wetlands at an alarming rate already. The current proposal does not fully explain how the proposed gate system may affect coastal wetlands and the ecosystems they support. These same wetlands also play an incredibly important role in carbon sequestration and as natural buffers to storm surge. By constructing a man-made gate system, we may destroy our natural flood mitigation and protections in the process. The Corps should focus on protecting and restoring our local wetlands as a flood protective measure.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002351	-04	Caroline Reichert	In addition, the proposed barrier gates do nothing to protect our communities from wind or flooding events, and will not stop the storm surge in Galveston Bay. This past year, the most devastating effects from hurricanes hitting our neighbors in Louisiana came from extreme wind speeds. Three years ago, the most damaging effects from Hurricane Harvey were caused by the record amount of rainfall. The Corps should consider a mitigation plan that accounts for storm surge, extreme winds, and extreme rainfall events.	Planning	POOCs/Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002351	-05	Caroline Reichert	The proposed project does not adequately explain where the sand to first build and then manage these dunes will come from. The most viable resources for sand exist far offshore in old river valleys and deltas. However, it will be very costly to dredge and relocate enough sand to first build and then maintain the proposed dune system. Additionally, I am concerned it could be very disruptive to both ecosystems where this sand may be first found and then relocated to build these dune systems. I believe the Corps should nourish our existing sand dune systems on a scale that is realistic and more time-sensitive.	Environmental/Planning	Impacts/ Alternatives	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach re-nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E002351	-06	Caroline Reichert	The current proposed project will not complete construction for several decades yet we need flood protection now. Instead of implementing the costly gate system proposed, I believe that the Corps should study local solutions to coastal flooding which address the unique needs of coastal communities like Bolivar Peninsula and Galveston Island, protect these communities' current way of life, and will provide flood protections in a much shorter timeline. I recommend that the Corps implement non-structural and nature-based projects including: - Elevating buildings and homes - Flood-proofing businesses and infrastructure, including raising highways - Nourishing our existing sand dune systems at a scale that is reasonable and does not deplete resources - Improving drainage and flood protections in Galveston and communities along the western edge of the bay	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
E002352	-01	Carl Bohannon	The berm and the floodgate provides protection to a very limited area, Clear Lake Shoreline, for and provides protection for infrequent event, Hurricane in Galveston Bay. I do not see any proof that that storm surge would not flow around the berm and will not protect the leeward shore from wind driven water. Even if this works, it will not do much.	H&H/Engineering	Performance	Thank you for your input. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002352	-02	Carl Bohannon	A single 75ft gate will make a dangerous situation in the Clear Channel worse. My current boat is 20 ft wide, negotiating the current restricted channel with 2 way traffic and people not obeying the rules is already difficult. Do not make it worse.	H&H/Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002352	-03	Carl Bohannon	Current flood control projects are increasing the flow of Clear Creek, making my house safer except for the Clear Lake Flood Control Wall and Gate. This restricts the flow of Clear Creek and depends on active pumps to handle rainwater. To me it looks like, in event of a Harvey level rain event you need all the pumps to compensate for restricted flow through the gate and if the gate fails closed you are 1 failure away from catastrophic all the way to Pearland.	H&H/Engineering	Performance	Refer to Response to Comment E002352-01

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E002360	-01	Azure Bevington	The simple fact that 'Nonstructural Protections' is literally the last component to be implemented, despite being the cheapest and most easily undertaken component in the entire proposal, as well as having almost no negative environmental impact, is unconscionable. Elevating and reinforcing homes and structures now, improving drainage now, doing reasonable scale beach and dune renourishment now (which the TX GLO is required to do) would save lives and property. That should already be happening and instead this monstrosity of a proposal is holding up good effective solutions that could have already been completed.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
E002360	-02	Azure Bevington	You need to build levee protection for the extremely vulnerable City of Galveston first, as well as elevate homes and flood proof buildings along the bay that are not already at an acceptable height. Restore the beaches and dunes that are lost every year on Bolivar and Galveston to a reasonable size to protect the property and natural environment behind them. Do these things and mitigate the flood risk at that level, reduce the risk from the increasing number of storms that head in our general direction each year.	Planning	Alternatives	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002360	-03	Azure Bevington	The US Army Corps of Engineers has failed to follow the requirements of the National Environmental Policy Act in soliciting public input into alternatives included in their original assessment. This was clear when their initial draft release was met with enormous negative response from across the region and it is still the case with this updated draft proposal.	General	Policy	In accordance with USACE planning guidelines and NEPA requirements, a proactive approach was taken to engage the public, resource agencies, industry, local government, and other interested parties in the Coastal Texas Study planning process. With respect to the scoping process in particular, refer to Appendix M of the EIS, which states, "The National Environmental Policy Act requires an early and open process for determining the scope of issues to be addressed in an EIS and for identifying the significant issues related to a proposed action. This process is referred to as scoping. Early scoping comments (2014) were considered in preparation of the Reconnaissance Report and of the project management plan (PMP) for the feasibility study. However, scoping input from Federal, state and local agencies, Indian tribes, and other interested private organizations and parties is also being solicited with the NOI. In addition to the request for scoping comments in the NOI, a separate Scoping Notice announcing the USACE's request for scoping comments was also sent via electronic mail to affected and interested parties. Scoping comments were requested, consistent with the NOI, to be provided between March 31, 2016, and May 9, 2016. Scoping comments were requested to: • identify the affected public and agency concerns; • identify the scope of significant issues to be addressed in the DIFR–EIS; • identify the critical problems, needs, and significant resources that should be considered in the DIFR–EIS; and • Identify reasonable measures and alternatives that should be considered in the DIFR–EIS."
						In response, the USACE received 20,357 individual comments that informed the decision making process. For a detail listing of public engagements, please refer to Section 1.7 of the Main Report and Chapter 7.1 of the EIS. Note that the USACE received a total of 10,954 multi-part scoping comments. A total of 2,050 comments were received during the public comment period (October 26th, 2018 - February 8th, 2019) for the first draft report and dEIS. Seven formal NEPA-compliant public meetings were held during this period. After the close of the public comment in February of 2019, the TXGLO establish Community Work Groups and held regular meetings (approximately every 6 weeks) to disseminate information and engage with the local communities. A series of Targeted Stakeholder Meetings were held to discuss the footprint of the Galveston Ring Barrier, the tie-ins in front of Port Bolivar, and the beach and dune systems on West Galveston in the Jamaica beach area. In advance of the release of the 2nd dFR and dEIS, the team held a series of face-to-face workshop in February of 2020 to engage the public. Given the constraints of the covid pandemic, the second of workshops were converted to virtual Q&A sessions held in Nov-Dec of 2020. Formal NEPA-compliant public meetings (6 in total) for the 2nd dFR/dEIS were also held virtually in November and December of 2020, and during the 75-day public comment period 764 multi-part comments were received.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002411	-01	David Ortega	The Rice SSPEED Center's Galveston Bay Park Plan is an alternative solution to the problem that the Coastal Barrier System Plan presented by the Army Corps of Engineers is attempting to solve. At a cost 5 to 10 times lower and backed with the experience of years of research in the ecological dynamics of the local area the Galveston Bay Park Plan seems like the more reasonable solution.	Planning	Alternatives	The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The notion that the plans are mutually exclusive is inaccurate - the designs are compatible and complementary. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou). Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
E002411	-02	David Ortega	1) The proposed plan only addresses one symptom of hurricane disasters: surge from the Gulf of Mexico. The proposal should include alternatives/projects that address wind and flood impacts to our communities.	Planning	POOCs/Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and GLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E002411	-03	David Ortega	Since its inception, serious concerns have been raised regarding the environmental risks to the health of Galveston Bay and the exorbitant cost for inadequate protection to our coastal and inland communities and industries, should the surge barrier be built. As the second most ecologically productive estuary in the United States, environmental harm to the Galveston Bay ecosystem will undoubtedly result in economic losses for our region.	Environmental	Impacts	Thank you for your comment. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002411	-04	David Ortega	It is estimated that the complete evaluation of impacts to the Bay and structural design of the completed Coastal Barrier will take 2-5 years at a minimum, once funds are appropriated by Congress, followed by another 10-15 years to construct. Assuming immediate funding in full and a steady construction schedule, the Coastal Barrier won't be in place for another 20 years. Why isn't the Corps considering projects that have a shorter implementation timeline.	Project Management	Implementation Schedule and Cost	The goals and objectives for the study focus on large-scale problems encompassing the entire Texas Coast - a handful of smaller scaled-projects would not meet the objectives of a comprehensive plan. Note that the plan includes a series of 8 ecosystem restoration sites that can be constructed while the larger features are in PED. Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002411	-05	David Ortega	Given the potential for serious environmental impacts, the final Coastal Texas Study must include a comprehensive analysis of all possible impacts to the ecosystem, including effects on fisheries, water flow, and marine migration patterns. Understanding the full scope of the project is vital for evaluating the impacts to people, property, and the environment, as well as the effectiveness of the proposed Coastal Barrier.	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002411	-06	David Ortega	The USACE and GLO must consider practicable non structural solutions, such as elevation of homes, preservation and enhancement of wetland prairies, riparian areas, and barrier islands, buyouts/strategic withdrawal from areas that cannot be adequately protected, and utilize appropriate land-use regulation to implement those concepts. Projects like these should be considered and implemented in bay and coastal communities first, so that our homes and livelihoods are protected in the near-term from hurricane impacts.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
E002449	-01	John Anderson	The current plan suggests that there is sufficient sand available on Sabine Bank and Heald Bank for this project. Having authored results from studies of both banks, including interpretations of seismic data and sediment cores from the banks (e.g. Rodriguez et al., 1999), I am concerned that the Corps has overestimated sand volumes available from these banks. In its current form, the report lacks specific reference to previous and current studies that would support sand volume estimates. I am aware of recent BOEM-funded field work aimed at assessing sand resources on the banks and in fluvial valleys, but I have to date seen little in the way of results that support the argument that the sand volumes needed for this project are readily available.	Engineering	Designs	Thank you for your comment, the Study Team identified sediment sources from the Sabine and Heald Banks offshore. However, additional sediment studies are being conducted by state and local entities. Additional sediment sources would be studied and considered during PED.
E002449	-02	John Anderson	There is also little consideration of the amounts of mud overburden that will require removal to access sands or the potential environmental impacts of dredging operations needed to remove this mud.	Engineering/Environmental/Cost	Designs/Impacts	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport, sourcing needs, source locations, source quality and quantity, and overburden. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002449	-03	John Anderson	Another concern has to do with the methods and data used to estimate the volumes of sand required to maintain beaches after completion of the project. Such estimates should rely on information about rates of sand transport along the coast and onshore and offshore sand flux during storm events. A detailed sand budget analysis that is supported by field observations is essential for estimating long-term sediment needs and this critical information is either lacking or was not included in the report. In fact, it appears that little work has been done to evaluate data and results that currently exist in the peer-reviewed literature.	H&H/Engineering	Designs	Refer to response to comment #E002449-03.
E002449	-04	John Anderson	[Summarized] The study proposal lacks a comprehensive evaluation of relevant scientific research and quantifiative information necessary for assessing construction and maintenance material requirements, as evidenced by use of a Morton study from the mid-1990s, which lacks sediment cores that would be necessary to make an assessment of offshore banks as sand resources.	H&H/Engineering	Designs	Refer to response to comment #E002449-03.

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E002449	-05	John Anderson	I am also concerned that the environmental impacts of this project are largely unknown, including impacts on tidal circulation within the entire Galveston Bay complex and impacts on fisheries caused by construction and mining sand from offshore areas. It does not adequately address results from storm surge modeling investigations from different academic institutions to address potential surge impacts from different storm scenarios and how different storms may impact the hydrology of the bay and sedimentation within the Bolivar Roads tidal inlet that could hinder operation of the storm surge gates.	H&H/Environmental	Impacts	Refer to response to comment #E002449-03 regarding the additional investigations and impact assessemnts to be conducted in PED and the release of supplemental NEPA documentation.
E002449	-06	John Anderson	I am also concerned that the report does not provide a comprehensive assessment of the socio-economic impacts on the region given the duration and magnitude of construction and its impacts on residents and on tourism.	Environmental	Impacts	Refer to Section 4.6 to review the socioeconomic assessments undertaken thus far for the Actionable Measures. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted (including socioeconomic effects). Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002449	-07	John Anderson	It is essential to obtain public input before proceeding with a project of this magnitude. But first the project plan must be vetted by experts in the field. I am unaware of any efforts by the Corps to vet this plan before an independent group of scientists and engineers selected for their expertise and contributions in the field. Failure to do this has resulted in a lack of clarity and uncertainty by concerned citizens that must be reconciled before this proposal, or any other for that matter, moves forward.	General	Public Input	With respect to engaging the public, please refer to E002360. With respect to engaging independent subject matter experts, the study team held monthly meetings with natural resource experts from state, local, and federal agencies. This group provided: 1) guidance on the selection and design of the eight ecosystem restoration sites included in the Recommended Plan; 2) recommendations on design criteria and changes to the CSRM features (specifically the Bolivar Roads Gate System) that ultimately led to minimizing and avoiding impacts with the refined designs. 3) input to the habitat evaluation procedures (including selection of species models, projections of future conditions, and quality control for habitat benefit calculations), and 4) direction on the use of the Particle Track Modeling technologies that were used to characterize the potential effects of the Bolivar Roads Gate structure on small species that depend on tidal flow regimes in the Galveston Bay. Also note that in March of 2019, the study team engaged the I-STORM group, an independent panel of internationally renowned surge barrier experts from around the globe, to review and make recommdenations for design modifications to the Bolivar Roads Gate System. The I-Storm panel provided expertise and feedback on a wide range of potential surge barrier options, and used their knowledge to refine the designs based on reliability, redundancy, flow blockage, environmental impacts, safety, constructability, and costs. The current plan includes their recommendations, and the I-Storm panel continues to provide input with respect to maturing designs and operations. Refer to Appendix D - Annex 15 for details on the I-STORM Gate Design Workshop.
						The study team also engaged the US Army Engineer and Research Development Center (ERDC) to perform coastal storm modeling, ship simulations, AdH modeling, Particle Track Modeling, and beach renourishment modeling. And finally, the study collaborated with Rice University's SPEED Center, Texas A&M University, and the Gulf Coast Community Protection and Recovery District (GCCPRD) througout the study process. Subject matter experts from these academic communities contributed professional input (and data) for the study and continue to provide important research and development in support of the Recommended Plan.
E002454	-01	Kenneth Teague	[Summarized] The Corps has vastly exceeded the scope of the project that Congress actually authorized, and boldly avoided pursuing the project that Congress did authorize. [cites WRDA 2007, PL 110-114] The Congressionally defined scope does not include the CSRM alternative plans, consisting of structural features that include levees, floodwalls, and surge barrier gates. The scope is clearly limited to protection, conservation, and restoration of natural habitat that protect critical resources, other habitats, and infrastructure from the impacts of coastal storms, hurricanes, erosion and subsidence. As well, the scope doesn't include protecting from the impacts of sea level rise.	Planning	Authorization	Non-concur. Refer to Figure 1.2 (*Water Resources Development Act (WRDA) of 2007, Sec. 4091)* to review the entire authority for the study, which states specifically the USACE must develop a comprehensive plan to determine the feasibility of carrying out projects for flood damage reduction, hurricane and storm damage reduction, and ecosystem restoration in the coastal areas of the State of Texas.

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E002454	-02	Kenneth Teague	While you provided an additional 30 days for public review, the size of the DEIS and supporting documents, and timing of your review, have not allowed me to conduct the kind of rigorous review this proposal deserves. Because of this, my review is incomplete, and my comments, at times, reflect this. In the future, I strongly recommend not conducting important public reviews during the holidays and during constitutional crises.	General	Public Input	Additional time was added to comment period in response to numerous requests by the public. Your comment regarding timing of document releases will be taken under advisement in future report/EIS releases.
E02454	-03	Kenneth Teague	While the additional work your agency conducted since the previous version of this DEIS, has resulted in more clearly defined alternatives with some environmental impacts having been reduced, it is still very unclear what environmental impacts the proposed [Alternative A] will have. These impacts are not properly assessed using the approach your agency took to estimating these impacts. Blocking an estuary's connection to the sea is a very serious fundamental change to any estuary. These potential impacts must be assessed by simulating the potential changes in the amount of water, salt, sediment, nutrients, organic matter, and organisms exchanged between the estuary and the coastal ocean, including the timing and duration of such changes, and determining the implications of such changes for the estuarine ecosystem. Instead, you somehow used a sophisticated hydrodynamic model to estimate	Environmental	Impacts/Policy	Your concerns have been noted, and we will take your suggestions under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			estuarine wetland loss as a result of this proposal, then you used simplistic biological “models” to “quantify” the impacts. The logic of this decision is lost on me, and I don't understand the basis for your linkage between the proposed gate and estuarine wetland losses. Because of this, I believe that NEPA requirements have not been met.			
E002454	-04	Kenneth Teague	[Summarized] While the actual impacts of Alternative A are very uncertain in my opinion, my sense and the DEIS acknowledges that Alternative D2 would have fewer environmental impacts, or at a minimum, those impacts are much more predictable, and may be acceptable if serious efforts are made to avoid and minimize impacts to aquatic habitats.as required by the Clean Water Act Section 404(b)(1) Guidelines.	Planning	Impacts/ Alternatives	Non-concur. Refer to Appendix A: Plan Formulation, Section 4.2.5 *Summary of Alternatives Comparison,* and specifically Table A-26 therein that offers a concise comparison of Alt A and D. Several broad performance comparisions have been made as well: 1) Under all RSLR Scenarios and cost ranges, Alternative A still obtains the highest net benefits; 2) Alternative A is set farther away from the developed areas of the study area and therefore has a lower residual risk in the event of extreme overtopping events, and 3) Alternative A takes a systems approach when reviewing the regions larger system context. Similar to the Multiple Lines of Defense approach it builds upon existing project and other proposed recommendation yet to be built (Figure A-48).
E002454	-05	Kenneth Teague	[summarized] The Multiple Lines of Defense concept could be adapted to the TX coast; however, the way in which the study attempted to do so does not make sense. SPI is consistent with the Multiple Lines of Defense concept. Bird rookery islands and oyster reefs may provide some level of storm protection but this has not been demonstrated as presented and is not consistent with the Multiple Lines of Defense concept.	Planning	Purpose and Need	The coastwide ER plan contibutes to the goal of resiliency by focusing efforts on restoring degraded ecosystems that buffer communities and industry on the Texas coast threatened not only storm losses, but erosion, and subsidence. Refer to Section 2.1 of the Final Report (2021) to explore the issues taken under consideration during plan formulation - specifically the concepts of Resiliency, Redundancy, and Robustness noting that the features questioned here contribute to each of these goals. Resiliency is multifaceted and can best be defined as the ability of a specific system to withstand, recover, and adapt to disturbances. Redundancy is the layering of critical components or functions of a system with the intent of increasing the reliability of the system, either in the form of a backup feature, or to improve actual system performance. Robustness is an opportunity to formulate measures within the alternatives that perform under various possible scenarios.

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			The assertion that bayhead deltas consititute a "third line of defense" has very limited validity and while they are ecologically important and should be protected and restored, they should not be under the guise that they represent some kind of storm protection. Lastly, dredging Mansfield Pass will increase storm surge risk rather than protect and Mansfield Island woud not provide protection to any other habitats or infrastructures and therefore is not consistent with the Multiple Lines of Defense concept.			
E002454	-07	Kenneth Teague	[Summarized] It is not reasonable or appropriate, and is dishonest, to dredge the navigation channel using ER funds. The term Beneficial Use of Dredged Material should not be used in this case because the intentional dredging of sediments for the purpose of creating or restoring wetlands or other coastal geomorphic features does not constitute beneficial use, a term which is reserved for environmental benefits ancillary to dredging for other purposes, primarily navigation. The correct term in [ER] cases proposed here is dedicated dredging, which in this case coincidentally results in a significant reduction in the funding required for maintaining the Federal navigation channels in Texas.	General	Policy	Even in the absence of the proposed project, regular dredging of the GIWW will continue to occur to assure the navigation mission. The study proposes to make use of this material rather than depositing the material in dredged material placement areas (DMPs). This is a unique opportunity to accelerate marsh restoration and recovery for these key sites. As dredging in these areas is a regular occurence, the term "dedicated dredging" for the ER sites is not accurate.
E002454	-08	Kenneth Teague	The approach of a Tiered NEPA analysis, while potentially doable, and potentially a good idea, in this case is fatally flawed. Your approach involves making critical decisions without proper analysis, and in a clearly biased manner. The tiered NEPA approach only makes sense if one can be reasonably assured that critical decisions at each step are being made correctly, and without bias. That is not the case here. Once you make the decision proposed in this Tier 1 effort, I can only assume that decision cannot, or will not, be reversed as a result of Tier 2 analyses, regardless of whether more detailed analysis supports the decision to adopt this alternative, or not.	Environmental	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002454	-09	Kenneth Teague	I did not see any indication that this DEIS had been reviewed for consistency with the Galveston Bay Plan. This consistency review should be conducted. If the proposed alternative is not consistent with the Galveston Bay Plan, it should not be approved by the USACE or the State of Texas	Planning	Consistency with Other Plans	Note that the GBPP plan has been discussed in the report (Refer to Section 5.4, Parallel Academic Efforts). The Study Team compared the SSPEED Center's Galveston Bay Park Plan (GBPP) to the Alternatives carried forward for detailed analysis (Alternatives A and D2) in this EIS. The GBPP was screened out for several reasons: First, the resource agencies pointed out that the GBPP would have numerous environmental impacts, including direct impacts to many oyster reefs and a large area of open bay bottom habitat. In the Galveston Bay system, oyster reef is considered a highly productive habitat that supports a broad diversity of species, the permanent loss of so much reef would be considered extremely detrimental. Second, the team determined that placing a barrier structure in Galveston Bay, without a Gulf-front system in place, would induce flood risks to Galveston Island and Bolivar Peninsula. Third, the GBPP and Alternative D2 would both have a higher levels of residual risk due to the proximity of the barriers to highly developed areas. The analysis performed in this study demonstrated that the Gulf-front alignment (Alternative A) provides a first line of defense that is key to a multiple lines of defense strategy. If SSPEED is able to obtain the environmental clearances and project funding to implement as a non-Federal action, we do believe it could be complementary to the recommended plan (Alternative A). The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou).
						Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.

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E002454	-10	Kenneth Teague	Blocking an estuary's connection to the coastal ocean is a very serious fundamental change to any estuary. These potential impacts must be assessed by simulating the potential changes in the amount of water, salt, sediment, nutrients, organic matter, and organisms exchanged between the estuary and the coastal ocean, including the timing and duration of such changes, and determining the implications of such changes for the estuarine ecosystem. Your impact assessment only deals with one aspect of changes in the amount of water exchanged.	Environmental	Impacts	Refer to Response to Comment #E002454-03
E002454	-11	Kenneth Teague	Initially, I did not understand your description of the potential effects of the reduction in cross section of Bolivar Roads pass, due to your proposed coastal barrier in the open position only (wetland loss). However, after reviewing your explanation a second time, I am tentatively willing to conclude that your approach to these potential impacts is reasonable. However, I still don't fully understand the approach. Specifically, I don't understand why you divided estimated acres by 6. In addition, it would seem important to determine whether closing the structure might have additional, similar impacts to wetlands. Note that while I tentatively accept this approach, I unequivocally assert that it is insufficient to comprehensively estimate all impacts of the proposed coastal barrier (e.g. changes in exchanges of salt, sediment, nutrients, organic matter, and organisms).	Environmental	Impacts	Thank you for your response. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002454	-12	Kenneth Teague	[Summarized] The impacts of not allowing runoff from land to exit Galveston Bay must be disclosed and the public given an opportunity to comment on the results. I strongly recommend that USACE specifically model what would have happened had the proposed gate/levee system been in place during the recent storm, Harvey.	H&H/General	Impacts/Policy	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002454	-13	Kenneth Teague	[Summarized] The proposed dune features (The Bolivar Peninsula and West Galveston Beach and Dune System (formerly ER measure G-5) and SPI) need to be reviewed for and comparisons completed on whether or not they are consistent with robust scientific guidance for barrier island restoration, such as Morton et al. (1995) and Rosati (2009), and disclosed in the DEIS. My preliminary review suggests they may not be. Dr. Rosati is a USACE employee, and should have been consulted regarding the beach dune feature design. If she was not consulted before, she must be consulted now. If the USACE continues to propose actions which are not consistent with the guidance, the DEIS must disclose the likley environmental implications of such inconsistency.	H&H/Engineering/Planning/Env	Design/Impacts/Policy	Dr. Rosati was consulted early-on in the process, and has continually provided QA/QC throughout the study.

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E002454	-14	Kenneth Teague	In general, [ring barrier] seems justified. However, considerable effort should be made to ensure that every opportunity to avoid and minimize impacts to aquatic habitats receives careful consideration. The Clean Water Act Section 404(b)(1) Guidelines require it. Only the Least Environmentally Damaging Practicable Alternative can be undertaken.	Environmental	Impacts	Concur that the Galveston Ring Barrier is justified. Note that this feature is a Tier 1 measure, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002454	-15	Kenneth Teague	[Sumarized] Concerns for [Clear Lake and Dickinson Bayou Gates] are similar to those for Bolivar Roads Gate System, but the scale and magnitude of concerns are much lower, since the environmental risks are comparatively lower. There is concern for changing the connectivity between the Clear Lake/Dickinson Bay systems and Galveston Bay, particularly with the proposed alignment of the Dickinson Bay gate system, which seems to involve considerable risk to aquatic habitats. I am concerned that only the gates' potential impacts on wetlands may have been estimated, although the gates will probably impact the exchange of water, salt, sediment, organic matter, nutrients, and organisms. Potential environmental impacts should be assessed comprehensively and disclosed in the DEIS.	Environmental	Impacts	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002454	-17	Kenneth Teague	For B-2, the very nearshore alternative sand borrow area needs to be carefully evaluated. Sand borrow too near the beach often undermines the beach nourishment intent. At a minimum, no sand should be borrowed landward of the zone of closure.	H&H/Engineering	Performance/Designs	Thank you for your suggestion and input, these will be taken under advisement in the PED phase.
E002454	-18	Kenneth Teague	Dredging of the lower San Bernard River will have negative environmental impacts that must be assessed and disclosed. While Bastrop Bayou is probably already dredged for barge traffic, dredging it would also have impacts.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002454	-19	Kenneth Teague	Breakwaters or living shorelines should include “fish dips” to maintain fishery access to the shoreline and wetlands, and to maintain material exchanges (sediment, organic matter, nutrients).	H&H/Engineering/Environmental	Designs	Thank you for your suggestion, this will be taken under advisement in the PED phase.
E002454	-20	Kenneth Teague	Any dredged material from the western portion of Matagorda Bay, or from Lavaca Bay, proposed to be used for marsh creation or marsh nourishment, must be tested appropriately for mercury. If mercury is detected, bioaccumulation testing must be conducted. Dredged material from this area must only be used if it is properly determined to be sufficiently free of contaminants, particularly mercury.	Engineering	Designs	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.

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E002454	-21	Kenneth Teague	Great care must be taken in the design and construction of shoreline protection and marsh creation features, to ensure that connectivity between smaller secondary bays, such as Powderhorn Lake, and Matagorda Bay, is maintained or restored. Recently, a significant hydrologic restoration project had to be undertaken to restore the Magic Ridge Marsh at Magnolia Beach, by restoring water flow through the Magnolia Inlet (Feagin and Huff). Although it is speculative on my part, I cannot help but wonder whether this serious estuarine/ wetland degradation was the result of mistakes in previous shoreline restoration and shoreline protection efforts here. This proposed project will certainly be a major failure if we have to undertake future hydrologic restoration efforts because this project degraded hydrologic connectivity.	H&H	Performance/Impacts	Thank you for your concern, this will be taken under advisement in the PED phase.
E002454	-22	Kenneth Teague	Why are breakwaters proposed for the south shore of the GIWW, when breakwaters on the north shore of the GIWW would protect many more acres of wetlands? Breakwaters should be placed on the north shore of the GIWW.	H&H/Engineering	Performance/Designs	Thank you for your input suggestion, these will be taken under advisement in the PED phase. Note that positioning of the proposed breakwater systems have been situated so as to provide maximum protection to the ER measure footprints.
E002454	-23	Kenneth Teague	If use of existing dredged material disposal sites for sediment results in wetlands being lost or degraded at the disposal site, losses must be mitigated.	Environmental	Impacts	Thank you for the comment, we will take this concern under advisement. Note that environmental evaluations and compliance will continue into PED. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Mitigation will conform to all laws, regulations and policies. USACE and the cost-share sponsor will coordinate all mitigation activites with state and Federal agencies as we move into the next phase of the project.
E002454	-24	Kenneth Teague	The DEIS must demonstrate/defend the assertion that unless [SP-1] islands are restored, seagrasses will be degraded. The DEIS must assess and disclose environmental impacts of the proposal, including burial of seagrasses, and indirect impacts to seagrasses due to reduction of light available to seagrasses due to suspended sediments following dredged material disposal, including resuspension of fine grained sediments.	Environmental	Impacts	A panel of subject matter experts (SMEs), including representatives for Federal, State, and local natural resource agencies provided input on the selection of proposed ER sites. Restoration initiatives in the area have proven successful in protecting and restoring the seagrass through similar means. Notably high wakes generated by navigation traffic in the using the nearby deep-draft channel (Corpus Christi Navigation channel), have significantly eroded the area over time, and the SMEs agreed that nature-based solutions, specifically the proposed islands, would attenuate waves and signficantly reduce the threat of shorelin erosion. Note that a Monitoring and Adaptive Management Plan accompanies the Main Report/EIS (Appendix C-2/Appendix K) describing sucess criteria for the SP-1 site that includes monitoring of the ecosystem to assure the SME's assumptions are correct, and that these barriers will provide protection for the ecosystem. The suggestion to monitor seagrass beds specifically, and water quality with respect to light penetration, will be taken under consideration in the next phase of the project.
E002454	-25	Kenneth Teague	The DEIS must demonstrate that the proposed dredged material to be used to restore the islands is compatible with existing natural sediment composing the islands.	Environmental	Impacts	Concur, sediment surveys are included in the list of investigations to be undertaken in PED. Materials for each feature will be determined such that restoration success criteria are achieved.
E002454	-26	Kenneth Teague	Mansfield Island is not a barrier island. Barrier islands are a very specific type of coastal island. Padre Island is a barrier island. Mansfield Island is not. It is a dredge material island in the lagoon. Please correct this error. concept or the congressional authorization. It does have value to birds apparently, and so protection and restoration may be worthwhile under another authority.			Concur. The description in the EIS (Section 3.5.2.1. Geology) has been revised to better reflect the description offered by the commenter.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002462	-01	De'Anne Meeh	[Summarized] The proposed flood gate and wall with pumping activities at Clear Creek will not allow for adequate passage of pleasure or work boats creating unsafe conditions that would permantly restrict boat traffic and usage of the channel. To date the U.S. Coast Guard (USCG) has deemed 2-way boat traffic through one channel unsafe and has required safety provisions including lights and flag boats when the channel is restricted to one lane during SH146 construction. Commentor recommends at least two channels with floodgates a minimum of 75 ft wide, which would allow for two way traffic along a crowded waterway during peak times allowing for safer travel for all those on the water, a reduction in the potential water traffic, and fair use of the waterway by all. As well, a second channel allows for more pump stations to be built and more flood-waters to be pumped out of an area that is	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			prone to flooding. This allows for mitigation instead of remediation.			
E002478	-01	John Barnett	[Summarized] Objects to only one 75 ft wide floodgate at the Clear Lake Channel because it will severely restrict the fishing and boating community of Clear Lake and the surrounding communities. With recent construction of the Hwy 146 Grand Parkway, conditions have included one 95 ft wide or one 65 ft wide channel open at a time, which the USGC regards as a single channel that is unsafe for 2-way traffic and have required traffic lights and flagger boats to control 2-way trafic through the "open channel." There is a need for at least 2 channel waterways each having floodgates with a minimum of 75 ft wide for each channel.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002478	-02	John Barnett	I would like to see the studies that have been done to show what happens when these proposed systems FAIL or do not work during a major storm or Hurricane. It never fails that one side of the dam needs work after a major storm and the whole channel could be closed off for months.	H&H/Engineering	Performance/Designs	Refer to Response to Comment #E002478-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED. Failure modes and OMRR&R will be addressed in the PED phase, and an Operations Manual will be developed for the system as well.
E002478	-03	John Barnett	Do the designers feel that too much “outflow” from the Clear Lake area will overload many restricted drainage areas in the Gulf Coastal wall project with their new wall and pump system, is that the reason for narrowing the Clearlake channel? I would like this issue addressed, because it will put new burdens on the homeowners in the Clear Lake drainage area that have never flooded before or homes that were recently raised to a higher flood standard’s and this situation may now cause the recently raised properties to be below the “new” flood level that is the result of Project. Currently, most of the Clear Lake area is at 14’ foot requirement for minimum height, but the installation of the new walls will retain water up to a minimum height of 17’ which will likely require properties below this new level to lose their property or need to raise their property an additional few feet. This of course, if there is a total failure	H&H/Environmental	Impacts	USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Also refer to response to Comment #E002478-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED.
			of the dam system and the rainwater is retained. In addition, this may require additional costly flood insurance due to the new height minimums.			

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E002478	-04	John Barnett	Has there been a study to show how the issues from the upstream water flowing to Clear Lake could be a problem and if the proposed Clear Lake Gate system fails to open the gates and/or the Pumping System fails? We have seen these types of failures before at the Clear Lake dam, during the recent dam opening in west Houston during Hurricane Harvey and pumps failing in New Orleans all causing major disasters. What will be the consequences of a Floodgate affecting hundreds of homeowners and business owners on Clear Lake and in the Clearlake area? Homeowner & Business Owners will need to know if additional flood insurance is required, what type of warning system will be installed, and what will be the economic cost to them if there is a failure of the Clear Lake dam or new proposed gate system and/or pumping station? What will be the future economic costs to the communities?	H&H/Environmental	Impacts	Refer to Response to Comment #E002478-03; effects on drainage will be investigated in the next phase (PED) of the project.
E002478	-05	John Barnett	Why build a flood gate system and pumping station at the Clear Lake Channel to keep water out of the Clear Creek watershed, when the Taylor Lake opening at the container terminal is not controlled? Surge water from Galveston Bay flows through and over the Hwy 146 structure into the Taylor Lake and then into Clearlake including all the other creeks and bayous that drains into the same area and then traversing your 146 damming areas.	H&H	Performance	Refer to Response to Comment #E002478-03; in PED, a drainage investigation will be undertaken that will include contributing tributaries and bayous in the watershed.
E002478	-06	John Barnett	Has the piping issue with the large amount of discharge that will be collected been reviewed? Recently Texas City has conducted tests on the discharge from the piping and the location of the discharge point. This issue could cause a longer piping requirement to transfer the discharge to a deeper water area. The depth at the end of the piping system may be lower depth at the exit point but as you move away from the discharge point it turns into a shallow island. A similar situation occurred from the Dam Project on Todville Road resulting in the waterflow pushing the silt into the Clear Lake Channel at Marker 4 and 5 due to the mixing of two currents. This situation occurs every time there was a major storm in the area. When the silt is deposited in one place from the mixing of these currents, it closes the channel to deeper draft boats thus, limiting the usage of the channel...Your present design of your discharge pipes	H&H/Engineering	Designs	Thank you for voicing your concerns. Refer to Response to Comment #E002478-01 regarding PED, and the need for future investigations (to answer questions such as this), design refinements (to address those concerns), and supplemental NEPA documentation releases (to allow for public engagement).
			will be filling up the navigation channel for the boaters of the Clear lake. I would like to know how this channel will remain open after a storm by this design and who will pay the dredging costs?			
E002478	-07	John Barnett	Has anyone looked at the soil quality for the building area of the proposed wall and pumping station? the piling requirements noted were way short and this should be reviewed as soon as possible which will increase the overall budget.	Engineering/Cost	Designs	Advanced geotechnical surveys and assessments will be conducted in PED for all features proposed under the Recommended Plan.

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E002483	-01	Pete Meeh	The proposed 75 ft. wide floodgate for the Clear Creek channel would permanently restrict boat traffic to one-way traffic, particularly during high channel traffic (every weekend in the summer months) This imputes a burden on the recreational boating community which is a significant income and tax revenue generator within the bay area. Not to mention the safety impacts to navigation which are also substantial. The current State highway 146 project temporarily blocks one of the two channels intermittently. USCG required TX DOT to provide traffic lights and flagger boats on weekends to control 2-way traffic through the open channel. This mitigation is poorly coordinated and rarely observed, I have witnessed it many times. We need at least 2 channels with floodgates a minimum of 75 ft. wide each	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002483	-02	Pete Meeh	The proposed pump station location (according to the attached illustration) will occupy (by eminent domain acquisition) the dry (trailered) sailboat storage portion of Seabrook Marina. This is the only such facility with a jib crane that is not within a private yacht club. This will increase the cost of the sport dramatically, and many will no longer be able to participate in local sailing events or own a boat needing this type facility in the Galveston Bay area.	Engineering/Environmental	Designs/Impacts	The footprint may be revised to balance feature performance and spatial and cost considerations with community and environmental impacts. Pump Station locations may be revisited as the feature is refined with more detailed impact information, or as area information is collected or as pump station capacity is refined. The interior storm surge gates are scoped at a conceptual level to ensure that performance and cost estimates are adequate to achieve study goals. The interio storm surge gates are Tier one features which will be reevaluated as the outer line of defense are refined.
E002485	-01	Jerry Mohn	I support a fortified dune system rather than a dune system with sand. Storms will tear the sand dunes and we need one that will with stand the storms.	HH/Engineering	Performance/Designs	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E002487	-01	John Barnett	…why are you allowed to build a pump building lower that what is required by law in the same area. Your pump engines per the design, as I viewed released prints, show these pumps at 17’ above sea level and I am required to build a house at 19’ on both sides of your IKE wall. What is sad you assume this wall and pumps work, but in 25 years from now and no repair budgets, this system will be worthless, because the pumps will flood and not work or the structure has subsided like in the 1970’s over 7’4’ on Todville road.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002490	-01	Raleigh Jackson	I would like to voice my displeasure at a single 75 foot wide floodgate. The Clear Creek Channel is very active and can get very crowded. At minimum we need two 75 foot wide boat traffic access flood gates. The flood gates are a great idea, but more maneuvering room is needed.	Engineering	Designs	Thank you for your concern. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002491	-01	Jim Miller	A single 75 ft wide channel through the gates is woefully inadequate. As evidenced by the channel closures required by construction of the 146 bridge, a single narrow channel not only creates a bottleneck, but is dangerous. Please look into the feasibility of a 100 ft wide channel, or perhaps 2 60 ft wide channels.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.

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E002495	-01	Brian Schmaefsky	The other options for protecting communities that cause less disruption to wildlife. The gate system will likely interfere with ecological dynamics that sustain commercial and recreational fishing waters...Successful alternative approaches such as constructed levees, heightened roadways, constructed wetlands catchment areas, and beach reconstruction should be considered in place of the gates.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002495	-02	Brian Schmaefsky	In addition, this project may also reduce the health of the Flower Gardens Banks National Marine Sanctuary located about 170 miles offshore of the project. It is well documented that the outflow from the Trinity Bay region impacts the FGBNMS coral reef formations	Environmental	Impacts	Refer to Response to Comment #E002495-01 regarding Tiered NEPA and future investigations that will need to be undertaken in PED with respect to the proposed Bolivar Roads Gate System.
E002495	-03	Brian Schmaefsky	The gate system at Bolivar Roads will permanently change the natural function of Galveston Bay by modifying tides, increasing salinity, increasing velocity, and decreasing shrimp, fish, and oyster stocks.	Environmental	Impacts	Refer to Response to Comment #E002495-01 regarding Tiered NEPA and future investigations that will need to be undertaken in PED with respect to the proposed Bolivar Roads Gate System.
E002495	-04	Brian Schmaefsky	The coastal barrier gates will cause changes in sediment deposition, erosion, salinity, and hydrologic dynamics of the Galveston Bay Estuary. This will negatively affect numerous endangered and threatened species including shore birds, sea turtles, marine mammals, as well as commercially important fish that move in and out of the bay throughout their life cycles. Each of the species mentioned above travel through the Bolivar Roads pass to lay eggs. Once hatched, the larval stages float to the water surface and must flow back into the bay with the currents to be deposited in nursery habitat. The construction of the gates will restrict flow and increase velocity, allowing less flow to exterior marshes and creating eddies that will trap the larval stages of these marine organisms. Computer-generated modeling does not create a clear picture of the impacts on the numerous species with this life cycle.	Environmental	Impacts	Refer to Response to Comment #E002495-01 regarding Tiered NEPA and future investigations that will need to be undertaken in PED with respect to the proposed Bolivar Roads Gate System.
E002499	-01	Norman Howard	We believe it would be in the best interest of all west end islanders to have a fortified dune system. A fortified system would be better able to withstand hurricane force winds and storm surges. In comparison, huge sand dunes can be more easily washed or blown away.	Engineering	Performance/Designs	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E002510	-01	Valerio Campione	... I am not in favor of the current proposal for the natural sand dune barrier. I do not believe it will be adequate to repel the damage caused by tropical storms in the long term (or possibly even the short term). I believe the reinforced sand dune construction design would be much more able to resist the sand and dune devastation of the tropical storms we have experienced recently.	Engineering	Performance/Designs	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.

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E002512	-01	Jessica Jia	This draft does not protect the bay soon enough and is too expensive. I would like to see greater emphasis and expedition of funding community structural improvements and small-scale projects. These need to start the first year the plan is implemented. Changing community building codes and subsidizing local restructuring is something I would like to see.	Project Management	Implementation Schedule and Cost	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002512	-02	Jessica Jia	I do not approve of the gate system across Galveston Bay. Instead of this gate, I would like to see the Coastal Barrier Plan incorporate and work together with the SSPEED center of Rice University which has proposed the "Galveston Bay Park Plan". Human recreation and enjoyment is important in our area, and the design at Rice protects the petrochemical tanks without closing the whole bay, and simultaneously creates recreational spaces. I would like to see the Galveston Bay Park Plan instead of the Gate system because it is a more affordable, faster, and lower impact plan. https://www.sspeed.rice.edu/gbpp	Planning	Alternatives	The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou). Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
E002514	-01	Michael Newton	Environmental concerns regarding the proposed project have NOT been sufficiently examined or addressed. I urge you to consult with the Galveston Bay Association and other involved environmental advocacy groups about the environmental impact this proposed project will have.	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002514	-02	Michael Newton	There are far more efficient ways to protect the Galveston Bay Watershed area from flooding. I urge you to very carefully study the work of Rice University Prof. Jim Blackburn and consult with him and his team about necessary modifications of the current proposal.	Planning	POOCs/Purpose and Need	The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou). Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
E002518	-01	Sara Rodriguez	I urge you to adopt the fortified sand dunes option as this appears to be a longer lasting measure.	Planning	Alternatives	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E002519	-01	Mark	I would recommend that the U.S. Corps of Engineers work on a flood gate at the mouth of Dickinson Bayou with pumps to pump the water into the bay. This would keep the water level down in the bayou for 4 to 5 miles before the City of Dickinson plus help the flooding between Dickinson and the flood gate.	Engineering	Designs	Section 3.4.2.3. of the draft Main Report (Dickinson Bay Gate System and Pump Station) describes features for this area. The pumping station would be utilized to move water out to Galveston Bay in the event that a coastal storm mandated the closure of the Dickinson Bay Gates. The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Finally, USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Refer to Response to Comment #E002478-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002521	-01	Curtis Tromm	[Summarized] The Galveston Ring Barrier is needed to protect the seiche in Galveston Bay during big storms, regardless of supposed protection by a gate across Bolivar Roads and the Sand Berms on West Beach and Bolivar Peninsula. The Ring Barrier can be started sooner in order to get a greater benefit sooner than waiting for the gate or dune structures. Sooner is better than later as is evidenced by a record year of hurricanes and storms in 2020. Climate change isn't coming, it is here and going to intensify rapidaly and upredicatbly.	Project Management	Implementation Schedule and Cost	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002521	-02	Curtis Tromm	So, instead of the Gates across Bolivar Roads and the Sand Berms on West Beach and Bolivar Peninsula, Fortify the various communities and Save tens of billions of dollars and decades of waiting to get the protections built.	Planning	Alternatives	Refer to Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation. Also note - Alternative D considered fortification of interior communities along the Bay. The gulfward alignment was shown to provide risk reduction for a larger area of the region, and place risk reduction features further from population centers. The Bay can absorb and contain storm surge and support the performance of gulfward features, while the interior alignment places structural solutions immediately adjacent to population centers, without a supportive feature to reduce risk to life saftety. Construction duration for fortification may be delayed by challenges to property acquisition for an interior alignment.
E002527	-01	Richard Dashiell	[Summarized] Since 2004, two channels have successfully separated approaching vessel traffic under the Seabrook-Kemah bridge and is needed as evidenced during periods when one of the channels must be closed due to SH146 bridge construction and USCG requires floating traffic signals and flagger boats to manage boat traffic. Please consider amending the current plan to include a second 75 ft wide floodgate next to the proposed one depicted. This will preserve the 2-channel traffic separation pattern in place when the bridge construction is complete and for generations to come after the Coastal Texas Protection and Restoration system is built.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			Having two floodgates will avoid creating a choke point, with limited visibility of oncoming traffic through the gate due to the floodwall and having a flotilla of boats maneuvering on either side of the gate in strong tides awaiting an opportunity to proceed through. The 2-gate approach will certainly be a safer and more efficient alternative.			
E002528	-01	Christopher and Marie Robb	[summarized] Commenter provides overview of damage received from Laura, Beta, and Delta in 2020 on the West End of Galveston Island in comparison to the dune type present. Most of the sane dunes were lost except for on the West End of th Island (west of the seawall at Beachside Village and the Holiday Inn Vacation Timeshare) which did not have any damage and were armored with sand sock fortified dunes and were mature, vegetated dunes. These dunes have been in place since Hurricane Ike and are examples of why a fortified dune works. the beaches west of the seawall to the end of the island should have a combination of fortified vegetated dunes along with nourished beachess to reduce the devastating impact of tropical depressions, hurricanes, and even high tides that are currently impaing the island.	Engineering	Designs	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.

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E002528	-04	Christopher and Marie Robb	We believe the ring levee that is proposed is stepping backward in the progression of dealing with the flooding and surge issue. It further excludes 60% of the residential tax base from protection. When you look at the cost benefit ratio, there is no better benefit than protecting 60% of the residential property tax base of our City.	H&H/Economics	Performance/Costs-Benefit	Refer to Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E001725	-01	Kemah Boardwalk Marina	[Summarized] The project may inadvertently cause storm surge to build up and flood property east of the seawall including the City of Kemah and the Kemah Boardwalk. An indepth study should be completed on how the project may impact commercial and residential properties east of the proposed seawall and SH146 in relation to increased flooding.	H&H/Engineering	Impacts	Thank you for the suggestion - Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E001730	-01	Dave Swindle, Jr.	[Summarized] The study did not employ or evaluate innovative technologies in addition to the 'standard fixed in-place' solutions. It is recommended that innovative technology such as the Active Marine Barrier System (AMBS) be evaluated for use as part of the final basis of design for the TSP. Innovation that can adapt and respond to changing storm threats and conditions will complement and add significantly to the multiple lines of defense strategy. Employing AMBS will increase the ability of the overall project to further increase the economic return on investment through its ability to provide protection to areas exposed to risk of damage during construction, shelter shipping traffic, reducing upstream flows and enabling lagoon effect allowing rivers to run off during high precipitation all while not introducing solutions that might impact/interfere with the fragile ecosystem or sea floor.	Planning	Alternatives	Thank you for your suggestion, will take it under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. As a caveat, in March of 2019, the study team engaged the I-STORM group, an independent panel of internationally renowned surge barrier experts from around the globe, to review and make recommdenations for design modifications to the Bolivar Roads Gate System. The I-Storm panel provided expertise and feedback on a wide range of potential surge barrier options, and used their knowledge to refine the designs based on reliability, redundancy, flow blockage, environmental impacts, safety, constructability, and costs. The current plan includes their recommendations, and the I-Storm panel continues to provide input with respect to maturing designs and operations. Refer to Appendix D - Annex 15 for details on the I-STORM Gate Design Workshop.
			Addendum to comment provides specifications for the AMBS.			
E001730	-02	Dave Swindle, Jr.	[Summarized] Reviews of the draft feasibility identify no considerations of how, during the 12 – 20 years that construction is underway, the in-progress construction might be protected or in-progress construction damage risks mitigated. This is an important gap in the Study as the probability suggests that it is not IF but WHEN a storm hits during the construction time frame.	Project Management	Implementation Schedule	Best management practices will be used to mitigate potential impacts to in-progress construction areas. If features (or segments of features as in the Galvest and/or Bolivar beaches & dunes specifically) are completed to the design specifications (i.e., design profile for beaches/dunes), emergency funds would be sought for repairs. If construction is still in progress on a feature (or segment of a feature), the repairs would covered under construction costs. This risk has been included in the cost and schedule risk analysis (CSRA) presented in the Engineering Appendix D, Annex 22 (Cost Estimate - Total Project Cost Spdshts - TPCS).
E002158	-01	Texas Association of Social Sailors	[Summarized] A single 75 ft wide floodgate west of the existing SH 146 bridges will be inadequate for normal boat traffic in Clear Lake Channel and could create a dangerous safety issue. Please consider amending the current plan in the Coastal Texas Study to include a second 75 ft wide floodgate next to the proposed one depicted in the public review documents. This will preserve the 2-channel traffic separation and avoid creating a choke point with limited visibility of oncoming traffic and having a flotilla of boats maneuvering on either side of the gate in strong tides awaiting an opportunity to proceed.	Engineering	Designs	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.

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E002219	-01	Seabrook Sailing Club	[Summarized] The Clear Creek Pump Station may have a negative impact on the harbor and shoreline due to silt deposition and shoreline erosion due to pump discharge. The Clear Creek Pump Station or similar structure should include a detailed study of the potential impact of currents, erosion, and silt deposition on surrounding shorelines.	H&H/Engineering	Impacts	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E-2020DEIS-2312	-01	Sierra Club, Houston Branch	[Summarized] The partial closure at Bolivar Roads will reduce the tidal flow greatly influencing the hydrology of the area and negatively impact the ecology of Galveston Bay and surrounding communities. Even with the updated proposal, the reduction in tidal amplitude could have irreversible impact on the environment including decreased water capacity, decrease in water quality, and the ecological environment of the sea and bays. See Zhu et al. 2016 reference in comment letter.	Environmental	Impacts	Your concerns have been noted, and we will take them under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-2312	-02	Sierra Club, Houston Branch	[Summarized] The gate structure could impact wetland ecosystems that are dependent on tidal flow. Marshes are already shrinking and this action would further destroy these ecosystems. There has to be a clear outline of how the marsh ecosystem could be affected by the structure and the efforts of how this natural resource will be protected.	Environmental	Impacts	Refer to Response to Comment # E-2020DEIS2312-01 regarding Tiered NEPA and subsequent feature refinements and investigations to be undertaken in PED. Note that the initial EIS has disclosed all known impacts considering the available information. Agency consultation and assessment of potential impacts will continue in the next phase of the project.
E-2020DEIS-2312	-03	Sierra Club, Houston Branch	Depleting the natural mitigation measures makes the barrier system unsustainable, potentially requiring more human intervention in the future.	Planning	Alternatives	Thank you for your comment.
E-2020DEIS-2312	-04	Sierra Club, Houston Branch	[Summarized] A change in hydrology may also affect the intertidal ecosystem of Galveston Bay, affecting all organisms within it. Fragmentation of aquatic habitats can degrade the quality of fish habitat available and create a seasonal trap that increases the risk of fish mortalities(Beatty et al. 2018). Fish populations in the bay may see a significant decline when combined with depletion of the fish nurseries in the marshes.	Environmental	Impacts	Refer to Response to Comment # E-2020DEIS2312-01 regarding Tiered NEPA and subsequent feature refinements and investigations to be undertaken in PED. Note that the initial EIS has disclosed all known impacts considering the available information. Agency consultation and assessment of potential impacts will continue in the next phase of the project.
E-2020DEIS-2312	-05	Sierra Club, Houston Branch	[Summarized] Short term closures can cause stress on the aquatic environment including inducing a heat spike and heat wave stress event (Alistar et al. 2016). Therefore even a short term closure can have negative impacts and with the predicted increase in hurricanes and tropical storms closing the gates will occur more frequently having a negative impact on the Galveston Bay environment for a larger portion of the season.	Environmental	Impacts	Refer to Response to Comment # E-2020DEIS2312-01 regarding Tiered NEPA and subsequent feature refinements and investigations to be undertaken in PED. Note that the initial EIS has disclosed all known impacts considering the available information. Agency consultation and assessment of potential impacts will continue in the next phase of the project.
E-2020DEIS-2312	-06	Sierra Club, Houston Branch	[Summarized] The concern with dune restoration is the source of the sand and the quantity of material that will be required to maintain these structures. The Corps should explain to the public how there is sufficient sand to maintain the project without disruption of ecosystems. The dune restoration plan is unsustainable.	Environmental	Impacts	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach re-nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.

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E-2020DEIS-2312	-07	Sierra Club, Houston Branch	[Summarized] The long construction duration makes an already vulnerable coastline even more vulnerable during the time of construction and even make other environmental problems arise. There is a high risk caused from the disruption of sediment and water because of the equipment needed (Yang 2017).	Environmental	Impacts	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".;
E-2020DEIS-2312	-08	Sierra Club, Houston Branch	[Summarized] There is a high chance of coastal depletion during construction, so there must be measures put in place to ensure a green construction plan where progress can be maintained to completion and avoid catastrophe to the coast.	Engineering	Construction	Thank you for your suggestion, we will take it under advisement as we move into PED. Best management practices will be used to mitigate potential impacts to in-progress construction areas. If features (or segments of features as in the Galvest and/or Bolivar beaches & dunes specifically) are completed to the design specifications (i.e., design profile for beaches/dunes), emergency funds would be sought for repairs. If construction is still in progress on a feature (or segment of a feature), the repairs would covered under construction costs. This risk has been included in the cost and schedule risk analysis (CSRA) presented in the Engineering Appendix D, Annex 22 (Cost Estimate - Total Project Cost Spdshts - TPCS).
E002328	-01	American Bird Conservancy	We do not believe that the Corps' DFR-EIS has met National Environmental Policy Act (NEPA) EIS requirements for a full and fair discussion of significant environmental impacts. The Corps' own tiered approach has allowed the DFR-EIS to be published without fully studying the complete environmental and ecosystem impact for the storm protection structures that will have adverse impacts to native birds and their habitats. We do not feel the Corps should move forward with the Galveston Bay Storm Surge Barrier System until all EIS documents have been provided to the public for comment. We request the Corps complete a supplemental EIS, not an EA for each tier of the Coastal Barrier System to allow the public to review and comment and to ensure an adequate analysis of environmental impacts. Each EIS should provide more certainty concerning the alternatives/alignments to be	Environmental	Policy	As the dEIS describes in Section 2.4.1, NEPA tiering is a permissible and preferred environmental review approach for large and complex civil works projects such as the Coastal Texas project, that encourages regular and repeated public engagement and maximizes transparency. In the next phase of the project [i.e., Pre-construction, Engineering, and Design (PED)], the refinements of the Tier 1 features will be made based on engineering performance, avoidance and minimization of environmental impacts, societal acceptability, and economic justification, and will be constrained by the scope of the project's Congressional authorization (and at the Chief of Engineer's discretion). Activities in PED (including all public outreach) will adhere to the laws, regulations, and policies governing projects such as this one. Disclosure of potential environmental impacts is not being deferred to PED. Rather, the known environmental impacts at this time have been disclosed in the current EIS based on the level of detail for the designs known thus far and presented in the current report. As designs are refined in PED, USACE will continue its efforts to avoid and minimize environmental impacts where possible, and develop and implement mitigation to offset unavoidable impacts when determined necessary. Additional investigations will be utilized to assess the direct, indirect, and cumulative impacts of the refined designs. Supplemental NEPA documents will then describe the design refinements, the added analyses, and the assessment of environmental impacts resulting from the matured engineering designs. Accompanying Engineering Design Reports (EDRs) will provide updated costs and benefits of the refined Tier 1 features as well. Note that a determination of the type of NEPA document (EIS vs. EA) to be generated, will be made on a case-by-case basis,
			considered; all such alternatives should includes a complete cost-benefit analysis and a complete list of protected lands that may be directly or indirectly impacted.			driven by the significance of any potential environmental impacts. As each feature's refinements are completed, these supplemental documents will have the appropriate public involvement, review, and comment periods that the laws, regulations and policies require and that result in maximum transparency throughout the tiering process.
E002328	-02	American Bird Conservancy	ABC is very concerned about the immediate and long-term environmental impacts the Bolivar Roads Gate System will have on the Galveston bay and on the Gulf side beaches, flats and wetlands, adjacent to the gate system. We are concerned with the substantial loss of protected land at Bolivar Flats Shorebird Sanctuary where the 500-foot scour pad will be constructed on either side of the combi-wall running through the northern reaches of the sanctuary. The combi-wall and scour pad will destroy an important oyster reef and mudflats used extensively by foraging birds, and palustrine wetlands, coastal prairie, and scrub-shrub habitat that are important to many bird species in decline, including the federally threatened Eastern Black Rail (Laterallus jamaicensis jamaicensis).	Environmental	Impacts	Your concerns have been noted, and we will take these under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002328	-03	American Bird Conservancy	[Summarized]The Bolivar Roads gate system operation will adversely modify the tidal regime of Bolivar Flats, and other flats in affected reaches and areas, thereby causing habitat loss or degradation. The tidal sandflats and mudflats of the Galveston Bay system and Bolivar Flats provide critical habitat and valuable food resources for thousands of shorebirds, including federally threatened species, during migration and winter seasons.	Environmental	Impacts	Refer to Response to Comment #E002328-02
E002328	-04	American Bird Conservancy	[Summarized] We are concerned the food chain of the Galveston Bay System will be negatively impacted and greatly reduced for the birds given the gates are predicted to impact ecosystem function.	Environmental	Impacts	The loss of ecosystem functions has been disclosed and mitigation to offset the loss of wetlands has been incorporated into the Recommended Plan. During PED, efforts will be made to further reduce the potential for tidal exchange and sediment transport impacts.
E002328	-05	American Bird Conservancy	[Summarized] Beach and dune improvements proposed on Bolivar Peninsula and West Galveston Island may result in habitat loss to breeding coastal birds. The proposed contiguous double-dune system does not represent existing natural dune systems in the region, and may cause species with high site fidelity to abandon their nest territory and to nest in a less suitable, higher-risk sites.	Environmental	Impacts	Natural dune fields can be found on West Galveston Island today. The design heights proposed under the Recommended Plan emulate average existing heights across the system. Best Management Practices will be utilized to avoid and minimize potential impacts to bird populations in the area. These impacts are expected to be temporary and localized, ending when construction is completed. Monitoring (described in the Montiroting and Adaptvie Management Plan) has been prescribed to avoid and minimize impacts. The USACE will continue to coordinate with state and Federal natural resource agencies in PED and during Construction.
E002328	-06	American Bird Conservancy	[Summarized] The [feasibility study/EIS] states that the constructed dunes will reduce overwash, the process by which water and sediment flow over a coastal dune or beach crest during storm events and sediment is deposited. The Recommended Plan proposes to reroute the majority of stormwater runoff to bayside outfall to minimize adverse impacts to the contiguous dune system. There is concern that these actions will disrupt the natural dune ecology causing vegetation overgrowth and altering nest-site availability for beach-nesting birds, as well as preventing adults from moving chicks through overwash areas into optimal foraging habitat behind the dunes. ABC and Houston Audubon Society have data illustrating the importance of storm and flood events in this coastal ecosystem. These events are necessary to maintain optimal habitat for birds and other coastal wildlife. It is critical to ensure the ongoing dynamic functionality of coastal areas as a holistic means to	Environmental	Impacts	Thank you for your input, we will take it under advisement. Note that potential impacts have been disclosed and the USACE will continue to coordinate with state and Federal natural resource agencies to avoid and minimize to the extent practical the potential impacts, and mitigate for unavoidable losses. Also note the Recommended Plan includes out-year nourishment to maintain the design profile for the dune/beach complexes.
E002328	-07	American Bird Conservancy	[Summarized] We are concerned that the estimated 22 million cubic yards of sand for the Bolivar dune system and 17 million cubic yards for the West Galveston Island dune system will negatively impact the available benthic community in the sediment for shorebird species that forage on invertebrates in the sand, particularly Piping Plover and Red Knot. Construction operations, as well as potentially benthic-starved sediment, may push Piping Plovers, and other shorebird species, into adjacent beaches where they will compete with other territorial shorebirds, or cause the birds to move into less suitable habitat with increased disturbances or threats.We ask the Corps to conduct an in-depth study before the next EIS is released to determine how long it takes for benthic recruitment after beach re-nourishment to match benthic availability before re-nourishment.	Environmental	Impacts	Thank you for your suggestion, we will take it under advisement as we move into PED. The potential impact to benthic communities as a result of sand placement has been disclosed in the EIS, and the USACE will continue to coordinate with state and Federal natural resource agencies to avoid and minimize to the extent practical the potential impacts, and mitigate for unavoidable losses. Note that no long-term impact to the ecosystem is anticipated as a result of the construction of the dune/beach features in the Recommended Plan. Best Management Practices during construction will be utilized to avoid and minimize potential impacts to bird populations dependent on the benthic communities in these locations.

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E002328	-08	American Bird Conservancy	[Summarized] We are concerned that the Offatts Bayou crossing of the Galveston Ring Barrier System (GRBS) will impact important bird nesting and feeding habitat at a critically important bird rookery island, named Struve Luci which has the only remaining nesting colonies of Black Skimmer in West Galveston Bay. We are also concerned there will be considerable erosion to the southern tip of Struve Luci from the proposed circulation gate of the GRBS, as well as increased erosion to the whole island from elevated storm surges during significant wind or rain events, and from the enclosed bay reflecting off the combi-wall and over the island.	Environmental	Impacts	Thank you for your comment, we will take this information underadvisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses, including the Offatts gate structure), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002328	-09	American Bird Conservancy	We are concerned that the GRBS and combi-wall will erode the important reef used by foraging birds, located directly outside of the GRBS on the western edge of Offatts Bayou. The reef is even closer to the combi-wall and circulation gate than Struve Luci island.	Environmental	Impacts	Refer to Response to Comment #E002328-08 with regards to the Offatts Bayou gate system/combi-wall and Tiered NEPA including future activities to be conducted in the PED phase in compliance with NEPA.
E002328	-10	American Bird Conservancy	[summarized] The updated GRBS footprint now routes the 14-foot concrete floodwall through Galveston Bay Foundation's (GBF) Sweetwater Preserve. The 450-acre nature preserve protects one of the few large tracks of undeveloped contiguous wetlands and coastal prairie habitat on Galveston Island and provides critical feeding and resting habitats for Sandhill Cranes. We are concerned the floodwall will create a visual barrier that may be perceived as a threat and cause them to abandoned the roosting site. As well, the floodwall will alter the hydrology of the wetlands throughout the property and increase erosion and flooding adjacent to the two proposed drainage/circulation structures.	Environmental	Impacts	The Study Team has coordinated closely with the Galveston Bay Foundation with regards to the proposed feature and have adjusted the alignment and configuration of the floodwall system at that location to avoid and minimize potential impacts where practicable. All impacts to these wetlands have been disclosed, and mitigation has been coordinated through the state and Federal natural resource agencies. As we move into the PED phase, the USACE will continue to coordinate with the GBF as the designs are refined. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002328	-11	American Bird Conservancy	The Mitigation Plan states that mitigation will be required for 1,577.6 acres of direct and indirect impacts to wetlands and oyster reefs, of which 1,148 acres are from indirect impacts from the tidal prism change. It states 1,328.0 acres of habitat will be mitigated to offset the direct and indirect impacts of the proposed plan, which is less than the total acreage impacted. We feel the mitigation acreage is significantly low considering the long-term impacts the Bolivar Roads Gate will have on the water quality, wetlands, and ecosystem. We feel the mitigated wetlands and oyster reefs needs to be double the amount impacted to ensure at least half the wetlands and oyster reefs survive the altered water quality caused from the gates.	Environmental	Mitigation	Assessment of mitigation requirements was based on certified modeling procedures and index models developed by the USFWS and subject matter experts. The application of the models was peer reviewed, and the resource agencies engaged directly in assessments themselves. The Habitat Evaluation Procedures (HEP) approach assess not only the amount of habitat being restored, but the quality of that habitat. As a result, mitigation ratios will vary based on functional lift over time. It is also important to note that the assessment of impacts to date has assumed a "worse-case" scenario, and the mitigation offsets can be considered conservative (possibly in excess of what is needed to fully mitigate the losses based on current knowledge). As we move into PED, more investigations will be made, and the mitigation plan will be reassessed. Note that the assessment of impacts and the subsequent development of the study's mitigation plan have been fully coordinated with all State and Federal natural resource agencies. As we move into the next phase of the project, this coordination will continue.
E002328	-12	American Bird Conservancy	ABC does support the Corps' decision not to place a closure across San Luis Pass as part of the recommended plan. The substantial negative impacts to the tidal shoals and wetlands would be detrimental to the thousands of birds that feed and rest in and around San Luis Pass.	Planning	Alternatives	Thank you for your comment.
E002328	-13	American Bird Conservancy	ABC does support the ecosystem restoration components of the recommended plan. However, we would like to see an expanded use of oyster reef creation/restoration, and where appropriate, the expanded use of wetland creation/restoration.	Planning	Alternatives	Thank you for your suggestions, the Study Team will take your suggestions under consideration during PED.

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E002328	-14	American Bird Conservancy	If new nesting bird islands are constructed, we ask the Corps and/or the construction sponsor work with appropriate state agencies to ensure the islands are designated as nesting bird islands and protected against recreational disturbance.	Real Estate		Thank you for your suggestions, we will take these under advisement as we move into PED. USACE will continue to engage and coordinate with all applicable local, state and Federal agencies throughout this next phase of the project.
E002328	-15	American Bird Conservancy	We encourage that all restoration activities be planned and implemented considering the best available science and that input from qualified and knowledgeable scientists, biologists, and other relevant stakeholders are incorporated into the process.	General	Involvement	Concur. USACE will continue to coordinate with all applicable local, state and Federal agencies as we move into the next phase of the project.
E002330	-01	Galveston Flood Defense Coalition	The 2020 Draft Report has not sufficiently compared the inherent benefits of the Galveston Ring Barrier to the benefits and costs of the Bolivar Roads gate structures and other components of the larger system. The ring barrier accounts for 60% of the benefits for the entire project, but the Bolivar Roads gate system accounts for 60% of the cost. The incremental benefit analyses shown in the Report do not compare how the localized CSRM components of the plan would perform if upgraded to function without a gate system in Bolivar Roads. A "last-added" incremental analysis should be performed with the smaller, localized "interior" components tested for performance and cost-efficiency with the coastal spine added last. The analyses have not yet considered that adding height to the Galveston Ring Barrier and other bay-side components of the project may achieve damage reduction benefits at a substantially	Economics	Benefits/ Costs	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
			reduced cost to the Recommended Plan. Even if the analyses conclude that a coastal spine is required, the large benefit of the Galveston Ring Barrier is offsetting the high cost of the Bolivar Roads gates. The USACE needs to ensure that its investment in developing and building the strategy for Galveston is in proportion to the return on investment that protecting Galveston gives to the regional protection and restoration plans for the entire Upper Texas Coast.			Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002330	-02	Galveston Flood Defense Coalition	[Summarized] Given the ring barrier's substantial contribution to the benefits of the entire project, the analysis, design and construction schedule for the Galveston Ring Barrier should be prioritized along with showing the high level of justification for protecting Galveston. The GFDC strongly urges USACE to construct the smaller components of the recommended plan while the coastal spine compoents are finalized. The USACE should work with the City of Galveston to integrate the Ring Barrier's design into the city's plans for upgrading its storm water drainage system.	Project Management	Implementation Schedule	Refer also to Response to Comment #E002200-05 regarding the sequencing strategy for the Recommended Plan and Response to Comment # E002330-01 discussing planning considerations and comprensive approach to plan formulation.
E002330	-03	Galveston Flood Defense Coalition	The people of Galveston need to participate in the design of its flood protection strategy so that the USACE plans reflect the city's important relationship to its surrounding environment. The USACE needs to work with Galveston residents on the Ring Barrier's design so it integrates with the historic fabric of the city.	General	Stakeholder Engagement	In months leading up to the release of the report/EIS, the USACE and its sponsor (TXGLO) held numerous targeted stake holder meetings, Community Work Group meetings, public workshops, and public meetings to encourage input. As the project progresses into final designs and construction, there will be additional opportuntities for the public to engage in the process.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002333	-01	Philip Kropf	[Summarized] The proposed Clear Lake Gate will impose severe navigation restrictions on the Clear Lake Channel in the vicinity of the Hwy 146 bridge. Vessels passing below the bridge currently use both the designated channel as well as un-charted "south channel" to reduce congestion. Restricting two-way traffic to a single 75-ft wide channel at the gate will force a large volume of vessel traffic into a narrow corridor, resulting in a dangerous, highly-congested passage.	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E002345	-01	Houston Audubon Society	[Summarized] We strongly encourage prioritization of nature-based solutions, such as the dune system and additioanl buffering habitat over hard structures so that reducing risks and protection of our coastal communities is done in a way that works with nature and doesn't sacrifice the natural infrastructure that helps make us more resilient. Research indicates that natural infrastructure such as dunes and wetlands that form the first line of defnse again damaging storms should be a primary and not secondary element in coastal protection.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002345	-02	Houston Audubon Society	[Summarized] The construction of hard infrastructure along the coast will destroy habitat. The financial and environmental effects are not sufficiently addressed and require more study. The construction of hard infrastructure as currently described will not only destroy habitat that is known to bolster the economic and ecological value of the region but also alter the natural movement and flow of sediment and currents, cause salinity changes, increased water velocity and flow, sediment build up on Bolivar Roads and elsewhere, and result in the loss and alteration of globally important habitat for birds and other wildlife on beaches, wetlands and riparian areas.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002345	-03	Houston Audubon Society	Houston Audubon opposes the Bolivar Gate system as proposed. The gate presents many concerns including the restriction of tidal flow, the additional restrictions and cost associated with the long construction process and maintenance after construction and aesthetic degradation of the coast.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002345	-04	Houston Audubon Society	We also have concerns that this gate system is only intended to alleviate a storm surge from a very specific type of storm. We believe that this gate system will offer no protection for storms like Alicia, Rita or Harvey where no storm surge was present, just enormous amounts of rain.	Planning	POOCs/Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E002345	-05	Houston Audubon Society	Construction of the gate system will take many years and since coffer dams will be needed to build many of the gates the channel flow will be restricted, this can have a negative impact on the productivity of the bay. There should be studies on how this reduced flow will impact shrimp, crabs and fish.	Environmental	Impacts	Refer to the response to Comment #E002345-03.
E002345	-06	Houston Audubon Society	If there happened to be a storm during construction, the restricted flow due to the coffer dams could cause increased flooding around the bay.	H&H	Impacts	Refer to the response to Comment #E002345-02.
E002345	-08	Houston Audubon Society	There is no evaluation of the maintenance needs that will require the gates be closed and the potential impact on natural systems or shipping this closure could have. Some gates in Scandinavia are closed twice a day.	Engineering	Designs -- Bolivar Roads Gate	Note that the Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. To date, potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. As part of PED, additional engineering performance and environmental analyses will be conducted. Gate operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Operations Manual) based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with industry, the Coastal Guard, and other Federal, state, and local agencies. Efforts to avoid, minimize and mitigate potential impacts will be included in the development of the Operations Manual, and supplemental NEPA documentation will be produced at that time and released to the public to encourage review and feedback.
E002345	-10	Houston Audubon Society	[Summarized] The combi-wall will cross a shallow tidal lagoon which is some of the most heavily used shorebird habitat in Texas. Commentor describes the valuable resources of the lagoon and adjacent Bolivar Flats Shorebird Sanctuary including system of shallow lagoons, mud flats, and salt marsh that supports thousands of resident, migrating, and wintering birds comprised of 75+ species including federally-listed Piping Plover, Red Knots, and Black Rail and its popular and productive fishing and crabbing site. The combi-wall and scour pad on each side of the wall will destroy the tidal lagoon and until the exact location of the wall is determined it is impossible to tell how many acres of mud flat, oyster reef and salt marsh will be lost. It is unlikely that any mitigation site could be as productive. The impact on bird populations by the potential descruction of this valuable habitat should be minimized. Yet the impact to	Environmental	Impacts	Refer to the response to Comment #E002345-02.
			this area has not been thoroughly studied nor the necessary mitigation contemplated.			
E002345	-11	Houston Audubon Society	We are also concerned about what kind of damage might occur on the Gulf side of the combi-wall if there is a storm surge. Waves reflected by the combi-wall have the potentail to damage the North Jetty and scour areas much further away than 500 ft.	Environmental	Impacts	Refer to the response to Comment #E002345-02.

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E002345	-13	Houston Audubon Society	It looks like the popular boat ramp at the end of 16th Street in Port Bolivar will be blocked or destroyed by construction of the combi-wall. In the Texas Coastal Study there is a plan to move the boat ramp and a map showing a proposed new location close to the ferry landing. During the summer of 2020, this area was used for disposal of dredged material from the ferry landing; therefore, this area would not be a good location for a boat ramp because of its instability.	Engineering	Designs -- Combi-wall	Refer to the response to Comment #E002345-02.
E002345	-15	Houston Audubon Society	[Summarized] The 3.03 miles of earthen levee proposed to be built across Bolivar Flats Shorebird Sanctuary will be possible only with condemnation and subsequent destruction of approximately 122 acres of valuable coastal prairie and wetland habitat. Construction will create an appalling amount of habitat damage and has the potential to introduce invasive exotic plants to the sanctuary unless care is taken to make sure equipment and fill is clean and uncontaminated before it enters the property. There are still many unknowns such as how heavy equipment will access the construction site, will an access road be needed next to the levee, how many dump trucks of material will be brought from borrow sites, and how will wetlands be protected during construction.	Engineering/Environmental	Designs -- Levees/Impacts	Refer to the response to Comment #E002345-02.
E002345	-17	Houston Audubon Society	Fortunately, the importance of Beacon Bayou to area drainage has been recognized in the Texas Coastal Study and appropraite plans have been made. Unfortunately, it appears the levee will be built on top of the pond just south of the Rettion Road intersection which drains some of Hwy 87.	H&H/Engineering	Design -- Levees	Refer to the response to Comment #E002345-02.
E002345	-18	Houston Audubon Society	Has there been any study of how the relection of storm surge off the hardened side of the levee would impact the adjacent wetlands? Beacon Bayou is close to the levee in several places such that reflected wave energy has the potential to scour the bayou and thus destroy more adjacent wetlands.	Environmental	Impacts	Refer to the response to Comment #E002345-02.
E002345	-19	Houston Audubon Society	There doesn't appear to be any gate/opening proposed for Rettilon Road which will make much of Houston Audubon's land difficult to access and also makes the beach in this area impossible to access.	Engineering	Design -- Levees	Refer to the response to Comment #E002345-02.
E002345	-20	Houston Audubon Society	The area for the earthen levee is documented nesting habitat for the federally threatened Black Rail and many more nesting marsh and prairie species. Any work that is conducted in this area should be restricted to the non-nesting season (Sept to Mar 15) and a thorough understanding of habitat requirements for this species should be completed prior to initiating the project. The Black Rail is poorly understood and the immediate Texas coast is the stronghold for the recovery of the species.	Engineering/Environmental	Design -- Levees/Impacts	Refer to the response to Comment #E002345-02.

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E002345	-21	Houston Audubon Society	The feasibility study shows the Bolivar Auxiliary Control Center being placed adjacent to or on Houston Audubon property in Bolivar Flats Shorebird Sanctuary, which is habitat protected for birds and other wildlife. We suggest the Control center be placed near the ferry landing on land owned by the Texas Department of Transportation or in Fort Travis, which si owned by Galveston County, where it would overlook the gate structure and would be more easily accessed in storm conditions.	Engineering	Design -- Bolivar Auxilary Control Center	Thank you for your suggestion, we will take it under advisement as we move into the PED phase.
E002345	-22	Houston Audubon Society	[Summarized] One of the proposed mitigation sites is Horseshoe Lake in Port Bolivar is in the middle of Houston Audubon's 680-acre Horseshoe Marsh Bird Sanctuary, a wetland complex that surrounds the lake and was established to protect productivity of Horseshoe Lake. Depositing dredge material in the lake will destroy the oyster reefs and most likely damage the salt marsh surrounding the lake resulting in the need for additional mitigation. The potential to destroy the lake's important productive habitat needs to be carefully studied prior to any action.	Environmental	Mitigation	Thank you for your concerns, we will take these under advisement. USACE policy and guidance mandates avoidance and minimization of impacts to natural resources when constructing features. For the mitigation sites in particular, the plans proposed are designed to generate a net benefit in order to offset impacts from CSRM features proposed in the near vicinity. In this location, care will be taken to restore and enhance ecosystem functionality with a minimum of temporaty disruption. Frequent monitoring of the mitigation activites will be used to identify problems early-on, and guide corrective measures to abate any problems, assuring an ecological success trajectory. Long-term monitoring will trigger adaptive activities to address both short-term disruptions and long-term changes in the environment. Mitigation will conform to all laws, regulations and policies. USACE and the cost-share sponsor will coordinate all mitigation activites with state and Federal agencies as we move into the next phase of the project.
E002345	-23	Houston Audubon Society	Houston Audubon approves of the concept of environmental enhancements contained in the plan. Beach nourishment, dune enhancement and marsh restoration are all good examples of people working with nature rather than against it...Given what we believe will be a tremendous amount of habitat degradation and destruction in one of the rarest habitats in Texas, the coastal prairie, we strongly advocate for the environmental enhancements to commence at the beginning of the project timeline and completed before habitat effects are inflicted on the vanishing coastal prairie and marshes.	Engineering	Design -- Beach and Dune	Thank you for your support.
E002346	-24	Houston Audubon Society	[Summarized]We have concerns that adequate sand sources may not be available for this massive restoration. We strongly encourage further assessment and identifiction of appropraite and adequate sand sources to provide the installation of the dune complex and natural beach slope along the entire 70+ miles of Galveston Island and Bolivar Peninsula prior to beginning construction on the Bolivar Roads Gate System. We have concerns that if sand resources cannot be identified, or the costs for installation rise to a point where less costly options are enacted, the current proposed plan will devolve to a clay-core dune system or concrete barrier system, neither of which Houston Audubon would support.	Engineering	Design-- Beach and Dune	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach re-nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.

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E002347	-25	Houston Audubon Society	Houston Audubon approves of efforts to raise and harden structures that may be in harm's way. Raising and making residential, commercial, and industrial infrastructure more able to handle storms, wind and surge is something that can be done without damaging the environment and at a fraction of the cost of the entire Texas Coastal Study.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002345	-26	Houston Audubon Society	Urge the application of lessons learned regarding the importance of building a strategy around the use of natural solutiosn in lieu of integrating natural elements as secondary and tertiary complements to a strategy that focuses on hard infrastructure that alters the natural function and balance of the coastal ecosystem.	Planning	Alternatives	Refer to Response to Comment #E002347-25
E002373	-01	Coastal Conservation Association	The conservation of and access to healthy fisheries in Galveston Bay is a concern of CCA, and construction of a Bolivar Roads gate system will alter or destroy non-tidal and tidal wetlands, effect sedimentation rates, alter water hydrology and water chemistry of the entire bay system and result in the loss of thousands of acres of bay bottom and open water. There remains lack of design detail, specific location, and alignment of structures for the gate system across Bolivar Roads. As such, the impact to specific species of concern have not been determined at this time.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002374	-02	Coastal Conservation Association	CCA Texas remains opposed to the plans to construct a gate system across Bolivar Roads without completely understanding its impact to the migration and movement of specific species of marine fishes (including southern flounder, red drum, Atlantic croaker and sheepshead), shrimp and blue crab.	General	Opposition	Refer to Response to E002373-01

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E002394	-01	Clear Lake Area Chamber of Commerce	While it should be emphasized that our membership is in strong support of the Feasibility Study's general proposal for surge protection for the Clear Lake Community, this public comment is to encourage further study in the project design of the following: (1) adequacy and ability of the current project design to prevent overtopping in areas of the City of Shoreacres that may reduce regional flood protection and the efficiency of the Clear Creek flood gates and pumps;	H&H	Performance -- Clear Creek Gate	Thank you for your support and for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002395	-02	Clear Lake Area Chamber of Commerce	(2) The adequacy and ability of the current project design to protect properties, including Kemah, Seabrook and the Kemah Boardwalk area, east of State Highway 146;	H&H	Performance -- Clear Creek Gate	Refer to Response to Comment #E002394
E002396	-03	Clear Lake Area Chamber of Commerce	(3) The adequacy of the current project design and its planned widths and fender protection to allow both large and small vessels to freely and safely navigate, in both directions through any gate structure and the State Highway 146 bridge structures;	H&H	Performance -- Clear Creek Gate	Refer to Response to Comment #E002394
E002397	-04	Clear Lake Area Chamber of Commerce	(4) The adequacy and ability of the current project design and its proposed gate and pump system to prevent flooding from the Clear Creek watershed due to upstream precipitation and rising water levels on Clear Creek and other water courses flowing into Clear Lake.	H&H	Performance -- Clear Creek Gate	Refer to Response to Comment #E002394
E002433	-01	Houston Pilots	[Summarized] Twin 650' sector gate design with an upper vessel beam limit of approximately 165' limits do not adequately account for vessels with overhanging cargo such as large cranes and oil field equipment. Additionally, the width and design introduces navigational safety risk and complicates vessel maneuvering in the area. A single-gate design of larger width is preferred as it does not include the risk of collision with the center island separating the vessel traffic lanes and presents no practical upper bounds on vessel beam.	Engineering	Designs -- Bolivar Roads Gate	The Bolivar Roads Gate system is a Tier 1 measure that will require additional study in the PED phase. Note that engineers from the I-STORM community have been consulted on the modifications leading up to a 2-gate solution, and these subject matter experts will continue to be consulted as the designs mature in PED. As the designs are refined in the next phase, ship simulations will be conducted in greater detail in order to assure navigational safety in accordance with USACE regulations and guidelines use state-of-the-art technology at the US Army Engineer Research and Development Center (ERDC). The USACE and its non-Fed Construction cost-share partner will continue to coordinate with the Houston Pilots, the Coast Guard, and storm surge gate experts to refine CSRM designs during the PED phase (as noted in Appendix D, Section 4.2.1).
E002433	-02	Houston Pilots	[Summarized] The gates have the potential to modify the tidal and wind driven currents in the main channel which then affects navigational safety. Hydrodynamic modeling needs to be performed to determine how a worst-case currents would affect ship maneuvering close to and through the gates prior to proceeding with the twin gate design.	H&H	Impacts	Refer to Response to Comment E002433-01 - Additional storm modeling, hydrologic modeling, hydrodynamic modeling, ship simulations, wind/current analyses, and sedminet transport modeling will be performed in the next phase to inform design refinements

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E002434	-03	Houston Pilots	[Summarized] The ship simulation modeling for the Feasibility study was based on a previous single gate design which does not match the current plan, and used low-resolution databases which do not accurately reflect real vessel behavior. The modeling should be updated to match the planned two-gate system and should use high-resolution databases prior to proceeding with the two gate design.	H&H/Engineering	Impacts	Refer to Response to Comment E002433-01 - Additional ship simulations will be conducted in the PED phase to inform gate design refinements and assess navigational safety. Coordination with industry and the Coast Guard will continue during the design phase and will include an additional series of ship simulations to further investigate navigational safety hazards. These analyses will be performed in accordance with USACE policy, regulations, and guidance (refer to ER 1110-2-1461 “Design of Navigation Channels using Ship-Simulation Techniques”; ER 1110-2-1403 “Studies by Coastal, Hydraulic, and Hydrologic Facilities and Others”).
E002433	-04	Houston Pilots	[Summarized] Vessel draft in the Houston Ship Channel continues to trend upward. The Bolivar Roads Gate proposed sill depth of 60' appears inadequate considering the increase in draft and the necessary under keel clearnance required for future deeply laden ships. Request consideration of a deeper gate structure.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment E002433-01 - The PDT coordinated with the Ports of Houston and Galveston, the Pilot's Association, the Coast Guard, and other entities associated with navigation and industry in the region to explore possible design constraints with respect to the sill elevations (aka sill depths) for the Bolivar Roads Gate System. the 60-foot depth was based upon reasonable foreseeable current and future navigation trends. Any significant additional depth below 60-feet would require significant reconfiguration of the Bolivar Roads Inlet including signficant modifications to the jetties and the entrance channel itself. As the project moves into the PED phase, the PDT will continue to coordinate with these stakeholders with respect to design modifications and their effects.
E002433	-05	Houston Pilots	Experience has shown that the approach to some type of structures such as the proposed navigation gate should have a straight course of approximately 1 mile (for ships with lengths of 1100'). This straight approach allows a vessel to ensure it is in the correct position for transiting through the structure. While the approach for inbound ships is greater than 1 mile the outbound approach appears to be approximately 1 mile. Request consideration for locating the navigation gate such that both inbound and outbound vessels have a straight line course of at least 1 mile prior to transiting the navigation gate.	Engineering	Designs -- Bolivar Roads Gate	Concur. Referring to Section 4.2 of the draft Engineering Appendix D (Oct 2020), the pre-TSP ship simulation assessments indicated navigation safety issues with respect to the original gate configuration and the Galveston Harbor Channel which led to a new alignment. As the project progresses into PED, the information provided will be incorporated into the assessment of any future modifications to the gate system and its alignment.
E002433	-06	Houston Pilots	[Summarized] Proposed barrier and gate system will reduce available inshore anchorage space. The proposed 12 mooring anchors which remain are insufficient for current and future anchorage demand. Request consideration for the construction of additional anchorage space to replace the anchorage space that will be occupied by the proposed barrier. This additional anchorage space is needed to accomodate future vessel husbandry activities that require sheltered water.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment E002433-01, and referring to Section 4.2.3 of the draft Engineering Appendix (Oct 2020) - Anchorage impacts (and forseeable future needs) will continue to be evaluated in the PED phase of the project as the designs are refined and mitigation will be adjusted accordingly. Locations and numbers of mitigation sites will be assessed based on navigational safety factors (winds, waves, currents, etc.), cost, environmental impacts, and long-term maintenance considerations.
E002433	-07	Houston Pilots	Anchorage sites B & C are designated anchorages, but are not included in the federal project for Galveston. Given the current hydrodynamics of the anchorage area, these anchorages are nearly self-scouring and do not need any maintenance dredging. Request that future anchorages be included in the Federal project as most likely the gate structure and barrier will alter the current hydrodynamics such that the remaining and new anchorages will require periodic maintenance dredging.	H&H/Engineering	Impacts	Refer to Section 4.2.3 of the Engineering Appendix D (Oct 2020) - Proposed mitigation sites for anchoraging have been identified and included in the cost estimate of the project (see specifically Figure 4-10). Note that the PDT has identified this concern and recommended it be carried forward into an analysis during the PED phase in Section 11.4 of the appendix as well.
E002433	-08	Houston Pilots	Vessels transiting the HSC experience difficulties with propulsion or steering on the average of 1-2 incidents/week. A comprehensive system of protection for the gate structure from vessels experiencing propulsion or steering casualties is essential to navigation. Request a comprehensive navigation risk assessment be conducted that includes evaluation of the consequences of a large vessel collisions with various portions of the gate structure.	Engineering	Designs -- Bolivar Roads Gate/Impacts	Concur. The I-STORM workshop participants voiced similar concerns, and gate protection considerations will be addressed in the PED phase of the project as the Gate Design Competition is undertaken (refer to Section 11.3 in the Engineering Appendix D (Oct 2020).

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E002434	-09	Houston Pilots	[Summarized] Request that existing port evacuation and reconstitution procedures and timelines be considered when designing the sector gate and its associated closure and reopening. Vessels are directed by the Coast Guard to leave port if a hurricane is forecasted; however hurricane track and intensity forecasts become increasingly more accurate within 72 hours of hurricane landfall. With the average number of ships in port it can take 24-36 hours to clear the port of deep draft vessels once the evacuation order is given and is ideally complete 24 hours prior to the onset of gale force winds; however, an evauation that is delayed due to changing track forecasts may delay the last ship from leaving port til less than 12 hours from the onset of gale force winds. Likewise, vessels with business in Houston and dock facilities and cargo operations would return quickly to the area.	Engineering	Designs -- Bolivar Roads Gate/Impacts	Per USACE Engineering regulations and guidance, an Operations Manual will be developed for the Bolivar Roads Gate System in the PED phase. Triggers/Criteria for gate closure and operations will be fully detailed within this manual. Coordination with industry, the Coast Guard, and other Federal, state and local entities will continue into the PED phase of the project, and input will be garnerd from these groups as the EM is advanced.
E002435	-10	Houston Pilots	[Summarized] The ring levee and Pump Station 4 will be located through and immediately adjacent to the Houston Pilots pilot boat facility on Harborside Drive. Vehicular access to the facility will be blocked by a gate in the levee system in the event of a surge event. Request consideration be given to minimizing operational impacts to the pilot boat facility by the level and pump station.	Engineering	Designs -- Bolivar Roads Gate/Impacts	As the project progresses into the PED phase of the project, the designs for the Galveston Ring Barrier will continue to be modified and an Operations Manual will be developed in accordance with USACE policy, regulations, and guidance. Operational impacts to the facility identified will be evaluated at that time, and the USACE will continue to coordinate with the Houston Pilot's Association to avoid, minimize, and mitigate potential impacts to this area. The Galveston Ring alignment is south and west of the Houston Pilots facility and and parking lot. As such, access to the facility during a storm would not be allowed. Their facility is elevated so the decision was made to leave it on the flood side rather than impact day to day operations by placing the floodwall between the building and the dock. The plan is to facilitate a above wall pedestrian access so they can reach the facility when the vehicle access gate is closed.
E002450	-01	Western Hemisphere Shorebird Preserve Network	[Summarized] The proposed beach and dune system will avoid Bolivar Flats WHSRN site, but affects important habitat found outside those boundaries. This massive dune and beach system would drastically alter the ecosystem, impacting invertebrate prey populations, overwash areas for nesting, and disturbance of feeding patterns. prevent the overwash and erosion areas which are necessary to provide essential bird habitat. As designed, the dunes prevent erosion and overwash areas which is necessary to keep vegetation low, creating ideal habitat for beach nesting birds. Further consideration should be gien to their design to ensure the availability of habitat for beach nesting birds.	Environmental	Impacts	Thank you for your suggestion, we will take it under advisement as we move into PED. The potential impact to benthic communities as a result of sand placement has been disclosed in the EIS, and the USACE will continue to coordinate with state and Federal natural resource agencies to avoid and minimize to the extent practical the potential impacts, and mitigate for unavoidable losses. Note that no long-term impact to the ecosystem is anticipated as a result of the construction of the dune/beach features in the Recommended Plan. Best Management Practices during construction will be utilized to avoid and minimize potential impacts to bird populations dependent on the benthic communities in these locations.
E002450	-02	Western Hemisphere Shorebird Preserve Network	[Summarized] The change in tidal range projected to result from construction of the Galveston Bay surge barrier system will be detrimental to shorebirds by changing the availability of mudflat foraging habitat.	Environmental	Impacts	Your concerns have been noted, and we will take them under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002451	-03	Western Hemisphere Shorebird Preserve Network	While the gates will be open the majority of time, in the event of a storm surge they would be closed, which would alter the water quality, dissolved oxygen, and nutrients within Galveston Bay. The magnitude of the impacts to the invertebrate and fish populations is unknown, along with the length of time needed for recovery from such an event.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002452	-04	Western Hemisphere Shorebird Preserve Network	Shorebirds are showing the most dramatic declines of any group of birds. They are increasingly under threat from human disturbance, habitat loss and degradation, overharvesting, increasing predation, and climate change. This Coastal Barrier project could contribute to these challenges by causing irreversible damage to important sites like Bolivar Flats and Anahuac National Wildlife Refuge. The cultural and economic impacts will be felt on the Bolivar Peninsula, but they will also be felt across the Americas where many sites receive cultural and economic benefits from diverse ecosystems that include the same shorebirds that stopover on the Bolivar Peninsula.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002453	-05	Western Hemisphere Shorebird Preserve Network	I strongly encourage the development of a supplemental Draft Environmental Impact Statement. This should include additional modeling of impacts on nearshore habitats including mudflats, strong monitoring requirements, an adaptive management plan that will mitigate impacts when they occur, and additional habitat consideration in the design of the dune replenishment.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002473	-01	Lone Star Harbor Safety Committee	[Summarized] The single 75-ft-wide Clear Lake sector gate is inadequate for normal boat traffic on weekends, and will be especially problematic during peak traffic periods during holiday events. Additionally, two-way traffic through a single 75 ft-wide opening will present very serious navigation safety concerns, especially if visibility for traffic on either side of the opening is obstructed or obscured by the adjacent flood retaining wlls, the gate structure itself, fog or other factors that limit visibility. A similar condition as anticipated under the proposed plan is currently being implemented as the SH146 bridge construction is being done, which has resulted in the US Coast Guard requiring traffic control measures, such as one-way traffic control, traffic lights, and flaggers, to provide safe passage on a "one-way only" basis. We recommend providing two gates, similar	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			to the one shown in the study, aligned if possible with channels under the SH146 bridge (100 ft-wid North channel for inbound and 70 ft-wide south channel for outbound). Such traffic separation has proven very successful in this location prior to the start of construction of the SH146 bridge.			

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E002473	-02	Lone Star Harbor Safety Committee	The twin 650' navigation gates (which allows for less than 650' of useable space for vessel navigation in each direction) appears inadequate for one way traffic of large beam vessels. Very large crude carriers with beams of nearly 200' and very large container vessels with lengths of 1100' currently make regular port calls in Texas City and Bayport, respectively. Further, the proposed sill depth of 60' appears inadequate considering the increase in draft and the necessary under keel clearance required for future deeply laden ships. Request that the project include a gate structure that is wide enough and deep enough to accommodate future ship sizes. A single larger gate is preferred.	Engineering	Designs -- Bolivar Roads Gate	During the initial ship simulation a large single gate did not perform well with two-way ship traffic. The Study team will continue to coordinate with the local pilots, the Coast Guard, and storm surge gate experts to refine CSRM designs during the PED phase. Additional ship simulations, modeling, and analysis will accrue as the design is refined.
E002473	-03	Lone Star Harbor Safety Committee	[Summarized] Proposed barrier and gate system will reduce available inshore anchorage space. The proposed 12 mooring anchors which remain are insufficient for current and future anchorage demand. Request consideration for the construction of additional anchorage space to replace the anchorage space that will be occuried by the proposed barrier. This additional anchorage space is needed to accomodate future vessel husbandry activities that require sheltered water.	Engineering	Designs -- Bolivar Roads Gate	(Same as E002433-229) Refer to Response to Comment E002433, and referring to Section 4.2.3 of the draft Engineering Appendix (Oct 2020) - Anchorage impacts (and forseeable future needs) will continue to be evaluated in the PED phase of the project as the designs are refined and mitigation will be adjusted accordingly. Locations and numbers of mitigation sites will be assessed based on navigational safety factors (winds, waves, currents, etc.), cost, environmental impacts, and long-term maintenance considerations.
E002473	-04	Lone Star Harbor Safety Committee	[Summarized] Request that existing port evacuation and reconstitution procedures and timelines be considered when designing the sector gate and its associated closure and reopening. Vessels are directed by the Coast Guard to leave port if a hurricane is forecasted; however hurricane track and intensity forecasts become increasingly more accurate within 72 hours of hurricane landfall. With the average number of ships in port it can take 24-36 hours to clear the port of deep draft vessels once the evacuation order is given and is ideally complete 24 hours prior to the onset of gale force winds; however, an evauation that is delayed due to changing track forecasts may delay the last ship from leaving port til less than 12 hours from the onset of gale force winds. Likewise, vessels with business in Houston and dock facilities and cargo operations would return quickly to the area.	Engineering	Designs -- Bolivar Roads Gate/Impacts	(Same as E002434-232) Per USACE Engineering regulations and guidance, an Operations Manual will be developed for the Bolivar Roads Gate System in the PED phase. Triggers/Criteria for gate closure and operations will be fully detailed within this manual. Coordination with industry, the Coast Guard, and other Federal, state and local entities will continue into the PED phase of the project, and input will be garnerd from these groups as the EM is advanced.
E002476	-01	Greater Houston Partnership	Important steps have been taken to achieve greater resilience across the region in terms of inland flood mitigation, but we must also act to protect our region from coastal flooding that would exponentially increase damages caused by riverine flooding. That is why we support the implementation of a coastal barrier to protect Galveston Bay, the Houston Ship Channel and the surrounding region from a catastrophic storm surge. Impacts to the Houston Ship Channel alone would disrupt the annual handling of nearly 250 million tons of cargo, over $800 billion in annual economic activity, and more than three million jobs, as well as the supply of approximately 60 percent of the nation's jet fuel and 30 percent of the nation's gasoline. Given the calculated benefit-to-cost ratio of nearly 2.0 and more than $2 billion in estimated annual benefits, we believe the approximately $23.5 billion it would take to implement a	General	Support	Thank you for your comment. The study team looks forward to continued collaboration and partnering with the Greater Houston Partnership.

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			coastal barrier system is a prudent investment to protect against losses that could total in the hundreds of billions.			
E002480	-01	Pirates Property Association	[Summarized] We have observed that the fortified dune system Beachside Village offered protection from the summer storms, but in Pirates Beach and Pirates Beach West, the same storms did significant damage to our vegetated sand dunes and many of our front row beach houses. Vegetated sand dunes are documented to be vunerable to storm damage. Local residents request consideration of fortified dunes at Pirates Beach and Pirates Beach West neighborhoods to ensure protection of these communities.	H&H/Engineering	Performance/Designs -- Beach and Dunes	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E002482	-01	BayTran	Protecting our industrial resources from potential storm surge is critical to our national economy. BayTran supports the building of a coastal barrier system to safeguard our petrochemical industry and our residential communities from future storm surge events. We encourage the Army Corps of Engineers and Texas General Land Office to continue engaging the most impacted stakeholders and citizens throughout the development of the coastal protection project.	General	Support	Thank you for your support. The study team looks forward to continued collaboration and partnering with the BayTran, other stakeholders, and citizens across the study area as the project advances.
E002468	-01	Environmental Defense Fund	Because of the reduction in the mixing of bay waters with the water from Gulf of Mexico and freshwater from the rivers, water column stratification can occur leading and decreased oxygen leading to fish kills and harmful algal bloom.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002468	-02	Environmental Defense Fund	Even though...the study accounts for the future effect of sea level rise on storm surge characteristics and the design of the features to meet the 0.1% storm over the lifetime of the project, it did not analyze how sea level rise and tidal, frequent flooding will increase water levels in the bay that could result in the lift gates being closed more often in the future than designed. This would result in growing and long-term environmental impacts that could include altering tidal flow/flushing and circulation, degrading water quality, restricting species movements, habitat degradation, altering sediment movement and inducing increased erosion.	H&H/Environmental	Impacts	Refer to the Final Report, Appendix D., Section 9.5, Bolivar Gate Operation and Section 9.6 Discussion on Gate Operation Frequency that address these concerns. Refer as well to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002468	-03	Environmental Defense Fund	The study objectives were limited and did not fully integrate the impacts and solutions to all three threats of flooding: storm surge, sea level rise and precipitation. Although effective for episodic storm surge events, we are concerned that the gates and barrier systems proposed are only authorized to alleviate storm surge caused by hurricane and tropical storm events but the effectiveness to mitigate future sea level rise and low-frequency precipitation events is not clear. While the hard structures (levee, gates, locks, etc.) may reduce the surge coming in from the gulf, they have the potential to impede the draining of water from the Galveston Bay after the event. The study clearly identifies rainfall events and relative sea level rise as residual risk, but it does not clearly evaluate the economic benefits or costs of these proposed solutions on sea level rise and low-frequency precipitation events.	Planning/ H&H	POOCs/Purpose and Need/ Performance	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
			Some projects, such as the Galveston Ring Levee, will likely reduce risk from sea level rise, but could increase risk from precipitation events. Other structures, such as the storm surge barrier, could increase risk of both.			
E002468	-04	Environmental Defense Fund	The solutions proposed and selected may differ if the objectives were expanded to manage the multiple flood threats of the region. For instance, the non-structural projects proposed depend on the barrier being in place, however what additional non-structural projects may be needed to address sea level rise...The grey infrastructure proposed is also very expensive and will take decades to finalize engineering and design, secure funding and construct these projects. During that time, communities and ecosystems are left exposed to all of the flood threats. Using natural infrastructure and non-structural projects can reduce the risk more quickly with less investment, protect against multiple flood threats and provide multiple ecosystem service benefits.	Planning	Alternatives	Refer also to the Response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA; Response to Comment #E002468-03 regarding the study's authoritation and how this reflects on interior flood risk management; and Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural
						measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features. Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.

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E002468	-05	Environmental Defense Fund	[Summarized] The study looks at avoided-cost methods for flood reduction benefits for the coastal storm risk management (CSRM) projects and recreation benefits for the SPI Beach Nourishment. For ER projects, benefits were calculated in habitat units but did not include ecosystem services calculations or recreation benefits. While it may be difficult to compare the cost of restoration projects in dollars with environmental benefits, there are numerous methods and tools (e.g. Natural Captial Project's Integrated Valuation of Ecosystem Services and Tradeoffs [InVEST]) Tool) that can help measure ecosystem services of natural infrastructure such as wetlands, beaches and dunes, etc.	Planning/ Economics	Benefits/ Costs	Benefits assessment for the ER features followed standard, certified Habitat Evaluation Procedures per USACE policy. We agree that ecosystem goods and services are generated by the proposed plan, and that these benefits can contribute to describing the return on investment for these features. To date, the metrics to capture these benefits have not been certified by USACE for use in this study.
E002468	-06	Environmental Defense Fund	[Summarized] The projects in the recommended plan are situated in an area with a high density of oil and gas related industries. This poses a huge risk of contamination in the project area from lead and asbestos during construction. We recommend thorough magnetometer surveys be conducted in these areas and included in the Tier 2 NEPA analysis.	HTRW	Impacts	Thank you for your suggestion, we will take it under advisement during the PED phase of the project.
E002469	-07	Environmental Defense Fund	EDF is currently conducting a research study, Development of Gulf Coast Resiliency Management Plan Using Sentinel Species and Natural Infrastructure, focused on Galveston Bay due to its proximity to vulnerable industrial sources. The goal is to understand human and ecosystem health risks from toxics potentially released from industrial facilities as a result of weather and climate-related events including flooding stormwater runoff, riverine, storm surge, and sea level rise. It will also examine the use of Natural Infrastructure, to mitigate these risks. We recommend that the Tier 2 analysis of projects in the Galveston Bay take the results of this research study into consideration.	HTRW/Environmental	Impacts	Thank you for your suggestion, we will take it under advisement during the PED phase of the project.
E002470	-08	Environmental Defense Fund	We are very supportive of non-structural solutions like elevation to manage flood risk in a community however we recommend a comprehensive floodplain management approach that includes updating building codes, managed retreat and ecosystem restoration of abandoned areas and addresses multiple threats of flooding.	Planning	Alternatives	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E002468	-09	Environmental Defense Fund	[Summarized] We recommend pairing USACE infrastructure projects with a true gap that exists – support for managed retreat projects in high flood risk areas. Managed retreat or strategic relocation efforts will increasingly be the best long-term option for the safety of communities as climate change impacts continue to grow.	Planning	Alternatives	Considerations related to “managed retreat” were formulated as part of the multiple lines of defense evaluation, however it was determined not to be a practicable and standalone solution. A standalone managed retreat scenario, whereby development retreats inland away from coastal risks, rather than addressing storm surge, inundation, and erosion through structural alternatives, is a significant challenge along the Texas coastline. For more discussion on the topic, refer to the Final Report, page 35, Panel Topic = Managed Retreat (Section 2.4, Approaches Considered).

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E002469	-10	Environmental Defense Fund	[Summarized] We also ask that you consider prioritizing buyouts that provide maximum natural hazard risk reduction and additional environmental benefits as a tactic when implementing the non-structural policy. Where strategic buyouts occur, funding should be provided to remove all infrastructure present on a site (i.e. roadways, underground utilities, lighting or other infrastructure) to maximize the restoration potential and reduce potential releases of toxics and other pollutants. Funding should also cover restoration work that maximizes flood risk reduction for neighboring communities and presents long-term environmental damage.	Planning	Alternatives	The USACE has determined real estate requirements for construction, operation and maintenance of this project. Refer to the Final Report's Real Estate Plan (Appendix F) to learn about our review of acquisition limits and the determination of type(s) of real estate interests (including the limited number of buyouts proposed) that will be required to implement the Recommended Plan. This information will be made available to the Non-Federal Sponsor (NFS) for construction and operation during PED. Note that the NFS is responsible for the acquisition of any real estate required for this project. Where strategic buyouts occur, funding should be provided to remove all infrastructure present on a site (i.e. roadways, underground utilities, lighting or other infrastructure) to maximize the restoration potential and reduce potential releases of toxics and other pollutants. Funding should also cover restoration work that maximizes flood risk reduction for neighboring communities and presents long-term environmental damage. Funding should also cover restoration work that maximizes flood risk reduction for neighboring communities and presents long-term environmental damage.
E002468	-11	Environmental Defense Fund	[Summarized] The study does not adequately address the issue that a proposed ring levee around Galveston would obstruct the drainage of stormwater. This would require additional hard structures which will modify hydrology of the area and create increased susceptibility to flooding from rains. Installing a forced drainage system with pump stations instead of gravity drainage could accelerate subsidence, thereby increasing future flood risks. We recommend further analysis of the drainage systems which are not currently included in the DEIS or FR.	H&H/Engineering/Environmental	Designs -- Ring Levee/Impacts	Refer to the response to Comment #E002328-01 regarding regarding the study's authority and how that reflects upon our approach to this issue. USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Thus, the proposed Galveston Ring System will not worsen the existing conditions (i.e. the risk of flooding from a rain event cannot be increased with the implementation of the proposed ring barrier). Pump stations will be implemented to expedite the release of water back into Galveston Bay and the Study team is working with the City of Galveston to determine potential solutions for the City's drainage system. The proposed pump station capacity is approximately 7,200,000 gallons per minute, or roughly 650 Olympic sized swimming pools per hour. Refer also to the Response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA for Galveston Ring System refinements and Response to Comment #E002454-14 regarding the creation of an Operations Manual in PED.
E002468	-12	Environmental Defense Fund	The reality is that the full extent of environmental effects from a project of this size cannot be known through modeling and science, uncertainties will be high specifically over the lifetime of the project and the need to adapt over time is essential. Currently the DEIS states (Appendix K) that monitoring and adaptive management for projects is only for 10 years of the 50-year life of the project and funding available for additional longterm and comprehensive monitoring is currently limited to 1% of the project cost, beyond which the NFS will have to shoulder the cost. Since the nourishment schedule for the Beach and Dune features extends till the end of project life at least, we strongly urge you to identify the responsible state and local partners and create a detailed Monitoring and Adaptive Management plan with projected costs to continue the monitoring and adaptive management until uncertainties can be	Environm	Monitoring and Adaptive Management	Refer to the updated Mitigation Plan (Appendix C-1) and Monitoring and Adaptive Manaement Plan (Appendix C-2) accompanyng the Final Report/FEIS. Note that these plans have fully coordinated with state and Federal natural resource agencies and have been certified legally sufficient and policy compliant. Also note, the Final Report has been updated regarding cost apportionments (refer to Section 6.2. Cost Apportionment Summary) - note that beach re-nourishment is cost-shared 50:50 between the USACE and the NFS.
			reduced to an acceptable level, and not just to an arbitrary time constraint.			
E002477	-01	Defenders of Wildlife	While the study considers myriad elements related to coastal resiliency, the proposed coastal barrier only mitigates for storm surge events and does not include sufficient actions to address the rainfall and winds that accompany tropical storms.	Planning	POOCs/Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.

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E002478	-02	Defenders of Wildlife	The proposed barrier gates could have a permanent negative impact on commercial and recreational scale fish, shrimp, and oyster fisheries dependent on Galveston Bay, whether they use the bay, estuary, and coastal waters for breeding, foraging, or larval production. The barrier system may also impact endangered and threatened species, including sea turtles, marine mammals, and sea birds. Changing salinity and water flows in the bay caused by the barrier gates could affect the life cycles of marine organisms that move between the bay and the gulf. This would also contribute to increased events of eutrophication and pollution in bays and estuaries already caused by discharges into the system from industry and coastal communities.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002477	-03	Defenders of Wildlife	(If) the 60 million cubic meters required for the double dune system proposed is mined in the Gulf or Atlantic, the extraction could negatively impact ecological systems at the original site.	Environmental	Impacts	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach re-nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E002478	-04	Defenders of Wildlife	Given the cost of the project, long-term construction schedule and variety of negative commercial and environmental impacts, it seems too costly a project to undertake and still not guarantee coastal flooding and storm mitigation. More feasible and timely alternatives should be explored that would be more effective at improving coastal resiliency. These include restoring natural coastal habitat systems marshlands, dunes, beaches, sandbars, improving evacuation routes and localized, industry-funded levee systems around vulnerable petrochemical sites, and other alternatives that would have less impact on fisheries and imperiled wildlife. The project as it stands will create havoc for the commerce and wildlife that depend on the bay for years to come.	Planning	Alternatives	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of “Multiple Lines of Defense” to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps’ missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical
						infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features. Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.

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E002481	-01	Gilchrist Community Association	Human safety also is a concern, but mandatory evacuations and better evacuation preparations would save most lives potentially in jeopardy. The level of public cooperation with regulations to combat the COVID pandemic suggests that most people would cooperate with evacuation orders carrying penalties for disobedience.	Planning	Alternatives	Refer to Section 2.8.2.2.4. of the Final Report where we note that the Interagency Performance Evaluation Task Force found that there will always be residual risk with any system, and we recognize that it will be imperative that flooding vulnerability from extreme events be factored into all planning decisions. We note that these decisions may require designing a system to allow for more-effective evacuations or emergency responses to extreme events (i.e., greater than the recommended 100-year level of risk reduction). In Section 2.11.4.Other Social Effects (OSE) of the Final rEport, we state, "Specific to coastal storm surge, evacuation planning is the primary means to reduce risk to life safety in the study area, which falls within the A, B and C Evacuation Zones of the state of Texas's evacuation plan. Well ahead of tropical force winds or surge, the State of Texas will make plans to evacuate the projected area of impact. Under the State of Texas's evacuation planning guidance and local government evacuation planning, residents should be well outside of the study area during hurricane events. Historically, there is limited loss of life when evacuation planning is implemented."
E002483	-04	Gilchrist Community Association	The underlying goal for the project really must be flood control, because nothing in the proposed plan will have an effect on wind damage. Planning for flood control needs to be examined on a regional basis, meaning consideration of entire watersheds. Other than the proposed ring around the city of Galveston, the coastal plan as proposed does not address flooding caused by water coming downstream.	Planning	POOCs/Purpose and Need	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E002481	-05	Gilchrist Community Association	The study takes note of the various natural forces at work on coastal erosion, but fails to acknowledge that they will continue and likely grow worse. The fact is that Texas beaches have, over a long period of time, consistently eroded. There is no reason to think that the ocean conditions which erode beaches will be changed by the plan.	H&H/Environmental	FWOP/Impacts	Refer to Secion 4.3.1.2 Shoreline Change, Sub-Section 1 - No Action Alternative which describes in detail the assumptions that, "Under the no action alternative, the ongoing shoreline retreat will continue due to erosion, subsidence, coastal storms, and RSLC." Read further into this section to be assured that these assumptions were factored into our anlayses.
E002481	-06	Gilchrist Community Association	Furthermore, the increasing population in Texas necessarily contributes to increased use of ground water. Loss of ground water promotes subsidence, making coastal areas more vulnerable to storm surges as well as ordinary beach erosion. The lower the ground, the more easily it floods. The proposed plan will not counteract subsidence.	Planning	POOCs/Purpose and Need/Alternatives	Concur. Refer to Section 1.4.3. Relative Sea Level Change in the Final Report that discusses the issue in detail. While the proposed Recommended Plan does not propose features to specifically stop subsidence, this driving force is taken into account in our plan's design criteria. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate (including the effects of erosion and sea level change attributed to various factors including subsidence) over the long-term (100+ years).
E002481	-07	Gilchrist Community Association	The dunes plan may diminish the value of existing beach front properties. By definition, such properties will no longer be "beachfront." It is simply more appealing to be within easy reach of the water than to be a long distance back. It would be even worse if new structures were built which would eliminate a water view for owners of parcels now having an ocean view. Under existing law, the State of Texas, through the General Land Office ("GLO"), owns the submerged beach areas, and has an easement over the dry portion of beaches up to the vegetation line. But long ago, much of what is now beach or ocean floor was platted and sold to private parties. Could old owners of record plausibly contend that their ownership was restored, entitling them to redevelop their parcels? For the plan to work, the "vegetation line" standard for private development might have to give way to a "dunes zone" standard. Some legal advice is in order.	Real Estate	Ownership	The USACE has determined real estate requirements for construction, operation and maintenance of this project. Refer to the Final Report's Real Estate Plan (Appendix F) to learn about our review of acquisition limits and the determination of type(s) of real estate interests (including determinations regarding the dune alignment) that will be required to implement the Recommended Plan. This information will be made available to the Non-Federal Sponsor (NFS) for construction and operation during PED. Note that the NFS is responsible for the acquisition of any real estate interests required for this project.

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E002482	-08	Gilchrist Community Association	How well would the dunes function? The single dune erected at Gilchrist, as part of the closure of Rollover Pass, was an expensive waste of money, both for the dune itself and for planted vegetation on the dune...the dune and the vegetation were gone in less than a year due to storm surges in 2020, and that was without the eye of any hurricane actually coming near Gilchrist. A series or cluster of dunes would have more effect as a barrier. An example of this approach exists at the Pointe West community on the far southwestern end of Galveston Island. However, the flat beach is expansive at Pointe West, so it would be fallacious to try to quantify the benefit of the dunes by themselves. Apart from what is observable at Pointe West and perhaps a few other locations, the reliance on dunes has to be based on theoretical modeling.	H&H	Performance	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach re-nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment. Best management practices will be used to mitigate potential impacts to in-progress construction areas. If features (or segments of features as in the Galvest and/or Bolivar beaches & dunes specifically) are completed to the design specifications (i.e., design profile for beaches/dunes), emergency funds would be sought for repairs. If construction is still in progress on a feature (or segment of a feature), the repairs would covered under construction costs. This risk has been included in the cost and schedule risk analysis (CSRA) presented in the Engineering Appendix D, Annex 22 (Cost Estimate - Total Project Cost Spdshts - TPCS). Refer to the Final Report, Appendix D., Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years).
E002483	-09	Gilchrist Community Association	The Pointe West dunes also come with a major disadvantage: rattlesnakes. A wooden fence on the dune area has signs which warn that the dunes are “rattlesnake habitat.” Rattlesnakes (and other poisonous snakes) are indigenous to the entire Texas coast, so the dunes area of any expanded beach would, over time, become infested with poisonous snakes.	Environmental	Impacts	Thank you for your comment, we will take this information underadvisement as we move into PED.
E002484	-10	Gilchrist Community Association	At Pointe West, it was necessary to build elevated wooden walkways across the dunes between the houses and the beach. Cost estimates for a dunes zone between housing and the beach need to include the costs of similar walkways, including pairs of pilings, railings, and walkways adequate for heavy traffic.	Costs	Costs	Currently there are 124 authorized beach access points in the Recommended Plan's footprint; 66 vehicle crossing and 58 pedestrian crossings within the proposed beach and dune systems. Existing authorized pedestrian beach access crossings will be replaced with dune walkovers to minimize impacts to the newly created dune systems. Pedestrian traffic volume will be investigated during PED to determine an appropriate walkover width for the location and all up and down ramps for the crossovers would be designed to be ADA compliant. Dune walkovers will be constructed of treated lumber and galvanized hardware. In general, the structure height would be at least one to one and a half times its width (3 ft minimum), to allow sunlight to reach vegetation underneath the structure. An example of a typical pedestrian walkover is shown in Figure 3.30. Also note that drainage features would be incorporated into these access points (where needed to mimic existing conditions). Note that the Certified Cost Estimate includes the costs for the featuress. Access to the beach under the Recommended Plan will comply with the Texas Open Beaches Act of 1959, which includes maintaining existing authorized pedestrian and vehicle access. Proposed modifications to existing authorized pedestrian and vehicle beach access points are shown in Annex 11 (Bolivar) and Annex 13 (Galveston) of the Engineering Appendix (Appendix D). Because all existing authorized access would be maintained, there is no anticipated long-term loss of recreational opportunities; however, during construction, temporary exclusionary zones would be implemented and result in a temporary loss of access and recreational opportunities in that zone for as long as construction in that zone is ongoing. As indicated in the EIS, the beach noursihment actions would increase the available beach width and utilize sediments that are beach quality and comparable to the existing sediments; therefore, we do not anticipate any direct, indirect, or cumulative losses to recreational opportunties or available habitat for wildlife.
E002485	-11	Gilchrist Community Association	[Summarized] Where will the dirt and sand needed for the reconstructed beach and dunes be obtained? The Corps report discusses the availability of beach quality sand which could be obtained by drilling at various locations including near the Bolivar Peninsula which was deemed too limited for the task but could be considered for marsh creation and restoration measures. “Shoreface material” on the Peninsula was also deemed to be “largely unsuitable for nourishing the adjacent beaches,” but could be used for marsh creation and restoration. The Corps’ intent as to the foundations for dunes is not clear. With a strong enough storm surge, those foundations could become exposed, producing beach front surfaces consisting of fill already believed to be “unsuitable” for that purpose. Major replenishment then would become necessary. The wildlife habitat of sand dunes rests upon sand, not much and silt.	Engineering	Designs -- Beach and Dune	Refer to Response to Comment # E002482-08.

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			Wildlife may be more sensitive to the composition of the habitat so artificially created sand dune, like natural sand dunes, should be made of sand. Is there enough sand, not just silt and muck?			
E002483	-19	Gilchrist Community Association	A diversity of inputs always is best. The live hearings and workshops in the comment period were impaired by the threat of the Coronavirus to group meetings. If recently released vaccines prevail, more expansive and detailed public hearings may be possible, later this year. Rushing to judgment here, on less than full information, would be a mistake. The Corps should take enough time to do the job right.	General	Public Input	Refer to responses in E-2020DEIS-1241-01 and E-002360-03
E002486	-01	Galveston Bay Foundation/ National Wildlife Federation	We still do not believe that the Corps has met National Environmental Policy Act (NEPA) EIS requirements for (1) a full and fair discussion of significant environmental impacts nor (2) has it informed decisionmakers and the public of reasonable alternatives which would avoid or minimize adverse impacts. We base this statement on our review of the DFR-EIS.	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002486	-02	Galveston Bay Foundation/ National Wildlife Federation	1. We are not convinced that the gate structures will function as described, given the natural forces they will be subject to in this location on the Upper Texas Coast, and more specifically, their location in Bolivar Roads. Problems with the gates function would in turn impact shipping and our economy, in additional to ecological impacts. We are also concerned that the cost of the gate structures is underestimated.	H&H/Cost	Performan	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-03	Galveston Bay Foundation/ National Wildlife Federation	2. We are not convinced that the dune levee system being proposed for the land portion of the Coastal Barrier can be constructed and maintained as is stated in the DFR, due to an insufficient amount of beach quality sand being available off the Upper Texas Coast. Even if built, we are concerned that it will not function to provide the level of protection described and will have unintended negative consequences on both ecology and quality of life. These issues must be addressed.	H&H/Engineering/ Environmental	Design -- Beach and Dune/Performance / Impacts	Refer to Response to Comment # E002482-08.
E002486	-04	Galveston Bay Foundation/ National Wildlife Federation	3. Related to [Gate structure] and [Dune Levee System], the cost-benefit analysis is based on calculations that underestimate the gate structure cost and on a land portion design that may change to some other form, such as an earthen levee or concrete seawall . Should the land portion of the Coastal Barrier change to a such a significant degree, stakeholders and the public will not have an adequate opportunity to review and comment on the revised cost -benefit figures unless those changes are re-posted on public notice.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. The Coastal Texas Protection and Restoration Feasibility study, as presented by Galveston District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. On 13 Apr 2021, the cost estimate received ATR Certification - this certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.
E002486	-05	Galveston Bay Foundation/ National Wildlife Federation	4. The Corps has still not provided an adequate analysis of the impacts to water quality and of the direct and indirect environmental impacts to habitat and the ecologically and economically critical living species of Galveston Bay, most notably to its oysters, fish, shrimp and crab species.	Environmental	Impacts	Your concerns have been noted, and we will take your concern under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002487	-06	Galveston Bay Foundation/ National Wildlife Federation	4. Given the likelihood that the Corps will not be able to construct or maintain a dune levee system which would necessitate a change to that portion of the Coastal Barrier to an earthen levee or seawall, the environmental impacts to habitats on Bolivar Peninsula and Galveston Island will fundamentally change.	Planning	Alternatives	Refer to Response to #E002486-05
E002488	-07	Galveston Bay Foundation/ National Wildlife Federation	4 The Corps [has not] provided detailed mitigation strategies including appropriate adaptive management for any of these impacts to habitat - other than jurisdictional wetlands - or living species.	Environmental	Mitigation	Refer to the updated Mitigation Plan (Appendix C-1) and Monitoring and Adaptive Manaement Plan (Appendix C-2) accompanyng the Final Report/FEIS. Note that these plans have fully coordinated with state and Federal natural resource agencies and have been certified legally sufficient and policy compliant.
E002489	-08	Galveston Bay Foundation/ National Wildlife Federation	5. The tiered NEPA approach is inappropriate for this project. It requires that the public comment on a project which may have major and irreversible impacts to the ecology and living species of Galveston Bay – before knowing all these impacts that can be detrimental to ecology, economy, and quality of life. In effect, the public is being asked to accept the initial go ahead for design and initial construction of a project before these impacts are fully known.	Environmental	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002490	-09	Galveston Bay Foundation/ National Wildlife Federation	6. The Corps did not appear to adequately develop or assess a stand-alone nonstructural storm surge risk reduction alternative.	Planning	Alternatives	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of “Multiple Lines of Defense” to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps’ missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical
						infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc).

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E002486	-10	Galveston Bay Foundation/ National Wildlife Federation	GBF and NWF request that the Corps (1) confirm its analysis of the feasibility of constructing a dune levee system in regard to the availability of sand in quality and quantity, (2) complete a Supplemental DFR-EIS that addresses the items above [numbered 1-6], most notably an adequate analysis of environmental impacts including those that would result from an earthen levee and/or seawall system, for public review and comment. The Supplemental DFR-EIS should provide more realistic alternatives in the Coastal Barrier land portion alternatives to be considered; all such alternatives should include a complete cost-benefit analysis and a complete list of protected lands that may be directly or indirectly impacted The Corps should include in the Supplemental DFR-EIS an adequate study of a non-structural based alternative to protect people and structures. For any new alternatives considered in a Supplemental DFR-EIS, impacts to environmental justice communities must be	General	Policy	(1-2) The Beach and Dune CSRM features are Tier 1 components that will require additional design refinements (including material sourcing) in PED, along with environmental impact analyses (including potential Environmental Justice effects), and accompanying NEPA documentation will be released to the public for comment at that time. Also refer back to response to Comment #E002328-01. Complementary non-structural measures, such as home elevations or floodproofing, have been included in the Recommended Plan to further reduce Bay-surge risks along the western perimeter of Galveston Bay (refer to Figure 3.35 of the Main Report and the accompanying descriptive text). Note that additional discussion has been added to the report to better capture these features (including, but not limited to, managed retreat).
E002486	-11	Galveston Bay Foundation/ National Wildlife Federation	The Corps should allow at least 120 days for public review of the Supplemental DFR-EIS and once again conduct public meetings to best inform the public of the project design and environmental impacts. We believe that a formal question/answer session, in addition to the public comment session, would be beneficial to those in attendance at future public meetings. In it, questions that are asked and the answers provided by the Corps could be heard by all. This could supplement the open house portion of the public meeting. At these meetings, we recommend more time than 1 minute for individuals to provide public comments.	General	Public Input	Thank you for your suggestions, and we will take these consideration going forward. Public engagements with the release of supplemental NEPA documentation will be announced at the time of each release.
E002486	-12	Galveston Bay Foundation/ National Wildlife Federation	GBF is in strong agreement with the statement on page 52 of the Draft Report that gate structures should not be installed at San Luis Pass … and its proximity to valuable habitats in West Bay and Christmas Bay, including remaining stands of seagrasses. That said we believe that the Corps must conduct a better assessment of the indirect impacts of the Coastal Barrier to San Luis Pass and local environs from (1) induced wave action from storms and increased storm surge volumes that would otherwise have been allowed to flow over the west end of Galveston Island and (2) induced erosional scour of the pass from increased flows owning to the constriction of flows through Bolivar Roads due to the gate structures.	H&H/Envi	Impacts	Thank you for your support in this instance. Note that additional engineering investigations will be conducted in PED with respect to all Tier 1 measures, and supplemental NEPA documentation will be produced to encourage public input and review. Refer also to response to comment #E-2020DEIS-2326-04 regarding SLP.
E002486	-13	Galveston Bay Foundation/ National Wildlife Federation	GBF and NWF support the ecosystem restoration components of the Coastal Barrier. However, we would like to see the expanded use of oyster reef creation/ restoration, beach/dune nourishment, and where appropriate the expanded use of wetland creation/ restoration as both a standalone measure and as a major component of a new non-structural alternative for storm surge risk reduction. This should include analysis of methods to reverse the man-made reduction of the transport of sediment and sand to and within the Upper Texas Coastal region caused by the construction of dams, jetties, groins and dikes. The Corps should also explore the use of creative, market-based land protection tools, e.g., Lone Star Coastal National Recreation Area and SSPEED's Texas Coastal Exchange.	Planning	Alternatives	Thank you for your support, and we will consider your suggestions as we progress into the PED phase.

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E002486	-14	Galveston Bay Foundation/ National Wildlife Federation	The disruption to traffic, neighborhoods, and ecosystems (both coastal and marine) of building the Bolivar Roads Gates is extremely concerning. The construction would take, at a minimum, 12 years. Additionally, the DFR makes little mention of the disruption to ship traffic, in one of the busiest shipping channels in the country.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-15	Galveston Bay Foundation/ National Wildlife Federation	Contractors who work with cement and aggregate have told us that the supply of cement ALONE for the Bolivar Roads gates would result in an astronomical cost to import. We do not find the cost of cement and other materials in the cost in the plan and we are not convinced that the project budget is sufficient to account for its cost. This will certainly affect the cost-benefit analysis.	Costs	Costs	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Refer to Response to Comment #E002486-04 regarding updated costs post-release of the 2020 Draft Report.
E002486	-16	Galveston Bay Foundation/ National Wildlife Federation	Another serious concern we have is about the effectiveness of the gates systems. The Corps does not address unexpected repairs and maintenance that might occur for the gates systems. Instead, the DFR details once a year closure of the gates for maintenance. Dutch engineer Marc Walraven, in a conference presentation regarding sector gates, made the statement that “it’s not an if, but a when [unexpected repairs and costly maintenance arise].” If sector gate complexes in other locations have run into problems, it is unacceptable that this DFR, with larger gates and systems than any other comparable flood gate, has not built into the budget such potentialities.	H&H/Engineering/ Cost	Performance/Costs	In March of 2019, the study team engaged the I-STORM group, an independent panel of internationally renowned surge barrier experts from around the globe (including Mr. Walraven himself), to review and make recommdenations for design modifications to the Bolivar Roads Gate System. The I-Storm panel provided expertise and feedback on a wide range of potential surge barrier options, and used their knowledge to refine the designs based on reliability, redundancy, flow blockage, environmental impacts, safety, constructability, and costs. The current plan includes their recommendations, and the I-Storm panel continues to provide input with respect to maturing designs and operations. Refer to Appendix D - Annex 15 for details on the I-STORM Gate Design Workshop. Also refer to the Final Report's Appendix D, Section 9.5 (Bolivar Gate Operation), which reference major storm surge barriers operations around the World and provides details on closure rates for those systems. These examples were used to establish the estimate at this time. Note that the Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. To date, potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. As part of PED, additional engineering performance and environmental analyses will be conducted. Gate operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Operations Manual) based on
						additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with industry, the Coastal Guard, and other Federal, state, and local agencies. Efforts to avoid, minimize and mitigate potential impacts will be included in the development of the Operations Manual, and supplemental NEPA documentation will be produced at that time and released to the public to encourage review and feedback.

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E002486	-17	Galveston Bay Foundation/ National Wildlife Federation	We are also concerned about the Bolivar Roads gates because the Corps has not considered the following: • What if the gates were stuck closed (needing specialized repair) and a storm was coming; would ships be able to leave? • What if the power systems to the gates were compromised from a storm or otherwise? • What if the storm season was especially active and the Port of Houston and the ship channel had to be evacuated multiple times? • What if all of the gates were closed and a Hurricane Harvey-like event occurred, flooding the bay with freshwater runoff? Wouldn't that create a catastrophic "fire hose nozzle" effect at San Luis Pass, exacerbating erosion and scouring of this natural pass? The DEIS states that if there were a problem with the gates, only one gate would be closed. We do not believe	H&H/Engineering	Performance	Refer to Response to Comment #E002486-16
			the Corps can predict this with certainty. The Corps must plan for such a contingency, should the gates become stuck or locked in some way.			
E002486	-18	Galveston Bay Foundation/ National Wildlife Federation	The Bolivar Roads gates design does not take into account the effect of increasing frequency and intensity of hurricanes. Nor does the design adequately address the needs of the myriad fish, plant and animal species that depend on Galveston Bay for some part of their life cycle. The Corps must complete an adequate DEIS to evaluate the full range of impacts from features like the Bolivar Roads gates complex.	H&H/Engineering/ Environmental	Performance/Impacts	Refer to the Final Report, Appendix D., Section 9.5, Bolivar Gate Operation and Section 9.6 Discussion on Gate Operation Frequency that address these concerns. Refer as well to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the
						available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-19	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Corps is proposing parallel "sand levees" down the entire coastline of Bolivar Peninsula and Galveston Island. The DFR has not discussed the dynamic features of natural dune, such as forming and eroding as a result of wind and wave (tide) action, winds water circulation, tides, and storms and establishment of vegetation to help anchor the dunes.	H&H	Performance	The depiction of the beach and dune complexes proposed for Bolivar Peninsula and West Galveston Island as "sand leveesr" is inaccurate, and the premise upon which this characterization is based is overly-simplistic and unsubstantiated. These nature-based solutions have been designed to emulate existing dune fields on these barrier systems, and re-nourishment cycles have been included in the plan specifically to address the dynamic nature of the gulf-facing systems that are constantly subjected to erosional forcings. The Main Report and accompanying EIS both describe vegetative plantings for the dune systems to anchor the features and provide incidental, but not insignficant, acres of quality habitat for wildlife. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-20	Galveston Bay Foundation/ National Wildlife Federation	[Sand Dunes] are not an effective solution for storm surge because they will degrade quickly. Experts independent of the Corps and GLO have cited extensively and repeatedly the lack of sand and sediment available for the beach face and the dunes.	H&H	Performance	The nature-based sand dune and beach features will maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.

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E002486	-21	Galveston Bay Foundation/ National Wildlife Federation	[Sand Dunes] will require an inconceivable amount of sand, which is probably not even available. Experts independent of the Corps and GLO have cited extensively and repeatedly the lack of sand and sediment available for the beach face and the dunes. The sand budget from the DFR is 61 million cubic yards, including replenishment schedules for the beach and dune systems (although Appendix D Annex 10 of the Coastal Texas Study lists more than 70 million cubic yards needed). This equates to more than 12 billion gallons. If sand were oil, 12 billion gallons would equate to about 286 million barrels of oil. This number is, from the geological surveys currently published, unachievable. [reference cited as Seimar regarding scientific review and environmental advocates response to the Coastal Texas Study 2020 Draft]. The amount of sand required for the DFR as it stands is astronomical	Engineering	Designs -- Beach and Dune	The amount of sand needed to construct and maintain the proposed beach/dune systems in the Recommended plan is not inconceivable, but rather has been clearly quantified as the commenter indicates. Section 5.4 (Sediment Source Investigation) of that same Appendix also indicates the Sabine and Heald Banks are considered a feasible source of beach-quality sand for the Bolivar and Galveston beach and dune systems. These deposits contain potentially 1.8 billion CY of sand considered compatible with the beach nourishment projects on the upper Texas coast. These sources were used for the cost estimate. However, the West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, their designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
			and is unlikely to be available even if mining of the Sabine and Heald Banks were approved.			
E002486	-22	Galveston Bay Foundation/ National Wildlife Federation	There will be effects from the dunes on residents and homeowners, from sand becoming deposited in their yards and on streets as a result of wind and water action pushing sand inland.	Environmental	Impacts	Refer to Response to #E002486-05
E002486	-23	Galveston Bay Foundation/ National Wildlife Federation	The DFR discusses sediment transport in the Hydrodynamics Appendix to the Coastal Texas Study (Appendix D Annex 1), but then the solutions laid out in the plan seem to ignore the findings such as sediment transport rates along the shore and beach historic shoreline change rates (Figure 1). The DFR ignores completely the topic of subsidence.	H&H	Designs -- Beach and Dune	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Also note that the use of RSLR takes subsidence into account in the analyses conducted thus far (and will also be included again in investigations conducted in PED).
E002486	-24	Galveston Bay Foundation/ National Wildlife Federation	The DFR vaguely outlines the sand sources for dunes and beach as Sabine Bank, Heald Bank, and the sediment just offshore of the existing beach face. The DFR does not state the amounts of sand available in each of these locations, and surveys have not been conducted to show the volumes of material available or the accessibility of sand within the Banks. It is entirely unclear that there is enough sediment in the Sabine and Heald Banks to supply the beach and dunes systems. [Cite: J. Anderson Seminar regarding scientific review and environmental advocates' response to the Coastal Texas Study 2020 Draft]	Engineering	Designs -- Beach and Dune	Refer to Response to #E002486-21
E002486	-25	Galveston Bay Foundation/ National Wildlife Federation	Mining sand from just offshore of the beach was mentioned as a sand source in a public meeting held by Corps and GLO in 2020. Geologists we spoke with were dismayed by this suggestion. This is not a recommended practice, especially for such a large amount of sand required.	H&H/Engineering	Designs -- Beach and Dune	Refer to Response to #E002486-21

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E002486	-26	Galveston Bay Foundation/ National Wildlife Federation	Rigorous geological sampling and sediment modeling has shown that, "sediment supply to the [North Texas] coast is not sufficient to keep up with the current rate of sea level rise", so the beach and dune system would be eroded ultimately. [Cite: Anderson and Wallace (2011). p. 13]	H&H	Designs -- Beach and Dune/Performance	Refer to Response to #E002486-21
E002486	-27	Galveston Bay Foundation/ National Wildlife Federation	Sediment supply and sea-level rise, in addition to subsidence, all play a part in determining coastal stability and erosion. The DEIS cites subsidence, sediment supply and sea level rise as contributors to erosion and land loss. However, the Corps does not discuss differential subsidence. Differential subsidence refers to one part of the land sinking faster than its neighbors. Subsidence and erosion could accelerate under gates, walls, levees and large dune structures if not placed properly at depth. Subsurface flow underneath the levee would create erosion. The maintenance and remediation costs of such events is not reflected in the DEIS. A full evaluation and assessment of differential subsidence throughout the area where a Coastal Barrier system would be implemented is essential.	H&H/Engineering/ Cost	Designs	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-28	Galveston Bay Foundation/ National Wildlife Federation	Subsurface erosion would contribute to accelerated local subsidence. Subsurface flow and remediation of unintended consequences should be evaluated and included in the cost-benefit analysis of a complete DEIS.	H&H/Environmental/Economics	Impacts/Cost-Benefits	Refer to Response to #E002486-27
E002486	-29	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Corps has underestimated cost to build and maintain the gate structure by not including costs for concrete, unexpected repairs and maintenance. Also it is very possible the sand levee system will not be able to be constructed or maintained thus necessitating a design change to an earthen levee or sewall which would greatly impact the cost-benefit analysis. The Corps must provide missing information on the cost to build the gate structures and provide assurances in the form of a scientifically defensible sand availability study that the dune levee system can be constructed and maintained before any cost-benefit calculation. If not enough sand is available, the Corps must develop an alternative strategy and perform a revised cost-benefit calculation.	Costs/Economics	Benefits/ Costs	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Refer to Response to Comment #E002486-04 regarding updated costs post-release of the 2020 Draft Report.

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E002486	-30	Galveston Bay Foundation/ National Wildlife Federation	The Corps and GLO have overlooked the longevity of the project components, especially when cost and length of time to design and build are considered... This issue generates questions that we do not believe have been answered sufficiently: • Have increased project costs been considered for the design and construction schedule? • After the initial 50 years, will the public investment be outdated and no longer viable? • What happens if some of the Plan is funded and completed, but not all of it? • Won't the effectiveness and benefit diminish as well? These issues must be addressed in the DFR.	Planning/ Costs	Benefits/ Costs	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
E002486	-31	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Corps has not provided an adequate analysis of the impacts to direct and indirect environmental impacts to habitat and the ecologically and economically critical living speices of Galveston Bay, most notably to its oysters, fish, shrimp, and crab species. The rudimentary particle modeling is not sufficient as it does not simulate known responses of larval transport and recruitment patters, movel project effects on adult fish or shellfish movement, and has not been adequately revied by fisheries biologists. The impacts to Galveston Bay's fisheries could be substantial, resulting in a loss of jobs, negative local economic impacts as well as a loss of quality of life. While the Corps states that additional modeling will be conducted in preliminary design phase once refinements are made to the gate design, at that point it will be too late to change the design appreciably.	Environmental	Impacts	Your concerns have been noted, and we will take them under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002486	-32	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The impacts to other important species such as dolphins has not been adequately addressed. For dolphins, the current document fails to address impacts beyond stressors such as noise, dredging, presence of the barrier, and prey source and has not addressed concerns raised in our 2019 letter.	Environmental	Impacts	Thank you for your input, we will take it under advisement. Note that the Study Team is aware of potential affects to marine mammals. The Study Team is in coordination with NOAA regarding the health and safety of marine mammals and plans additional studies and analysis during PED at which time the public will have another opportunity to review and comment. Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002486	-33	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] Since the Corps will most likely not be able to construct or maintain a dune levee system, the project component would change to an earthen levee or seawall, which would fundamentally change the environmental impacts and affect species depending on the beach/dune habitat such as sea turtles and piping plover.	Environmental	Impacts	Non-Concur. Refer to Response to #E002486-05
E002486	-34	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Corps has not provided detailed mitigation or adative management strategies for any of the impacts to marine or beach/dune dependent species and their habitats. Only jurisdictional wetlands have been mitigated. Wetland impacts from a reduction or cessation of sediment transport by aeolian forces and overwash events from the Gulf side of Bolivar and Galveston to the bay side of each as a result of a fixed levee system have not be addressed.	Environmental	Mitigation/Impacts	Refer to Response to #E002486-07

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E002486	-35	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The DFR indicates the mitigation is not required to remain protected in perpetuity. This must be corrected so that compensatory mitigation for habitat impacts remain protected in perpetuity through a conservation eavement held by a local land trust that adopted and adheres to the national standards and practices of the National Land Trust Alliance. Funding should be made available for a land trust which includes funds for monitoring in perpetuity.	Real Estate	Ownership	Refer to Response to #E002486-07
E002486	-36	Galveston Bay Foundation/ National Wildlife Federation	The Corps must work with the state and federal resource agencies to ensure that any mitigation plans do not impact or replace other critical habitats such as oyster reefs, seagrass meadows and mud flats. In general, restoration of any habitat such as wetlands or oyster reef should be coordinated with the state and federal resource agencies.	Environmental	Mitigation	Concur. Refer to Response to #E002486-07; The USACE will continue to coordinate with all state and Federal as the project moves into the next phase of the project (PED).
E002486	-37	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The indirect impacts to San Luis Pass from presence and operation of the Bolivar Roads gate structure are a concern. The Corps acknowledges the increased velocity, flow and scour through San Luis Pass would occur if the gate is closed during a storm, but we believe that if the gates malfunction and remain closed for longer than intended, the storm could affect freshwater inputs into Galveston Bay pushing water out of San Luis Pass. Even in the open position significantly more water would be shunted through West Bay toward San Luis Pass. Additioanlly, during a storm, the geomorphology, salinity and hydrologic regimes of San Luis Pass and West Bay would be significantly altered and likely cause sediment and fresher water to be entrained in West Bay or wetlands because of the bridge structure over the Pass. Very little information about these impacts are discussed and a full account including	H&H/Environmental	Impacts	Refer to response #E002486-17 regarding future investigations and refinements planned for PED.
			sediment modeling and budgeting is essential before an adequately comprehensive review of the DRF can be completed.			
E002486	-38	Galveston Bay Foundation/ National Wildlife Federation	[Reference to paragraph in the DEIS on page 4-77, which states that it is difficult to predict the long-term impacts of a gate structure and that the impacts to Galveston Bay are unceratin, therefore additional studies are needed] strikes at the heart of our objection to the project. We simply do not have the environmental impact analysis needed that would allow the public to provide informed comment. This project should not proceed until that information is available.	General	Policy	Refer to response to Comment #E002454-31

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E002486	-39	Galveston Bay Foundation/ National Wildlife Federation	We strongly object to the tiered NEPA approach which requires that the public comment on a project which will likely have major and irreversible impacts to the ecology and living species of Galveston Bay – before knowing all these impacts that can be detrimental to ecology, economy, and quality of life. In effect, the public is being asked to accept the initial go ahead for design and initial construction of a project before these impacts are fully known. As it is unlikely that the design of the gates would change once the Chief's Report is submitted to Congress, the public would be saddled with the design shown in the DFR regardless of unacceptable impacts that may be discovered years from now when adequate scientific studies have been completed. The DFR-EIS must comply with NEPA. The NEPA process is "intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." (40 CFR	Environmental	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002486	-40	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Tier One measures do not adhere to the spirit of NEPA and should therefore undergo additional review before approved because there was no Notice of Intent to draft a tiered environmental review. The March 2016 NOI had no mention of a tiered NEPA approach and the first mention was when the 2020 DFR-EIS came out. Due to lack of guidance on the subject, it is unclear if the Corps had to notify the public of its intent to undergo tiered NEPA; however, NOIs for other projects using tiered NEPA have been found. While it is unclear if the Corps had to notify the public about the change in procedure, this lack of clarity has lead to numerous procedural questions about the sufficiency of the Corps' notice.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002486	-41	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The DFR-EIS provides inssuficient information regarding overall impacts of Tier One measures for decision makers to make a reasoned judgment on the merits. While tiering may be desired for large "mega studies," it does not mean that decision makers should be able to approve plans and send to Congress for appropriation before environmental impacts are understood. The lack of information available in the 2020 DFR-EIS to understand the impacts of the Tier One measures causes significant concerns–and fails to address the deficiencies identified during the 2019 Independent External Peer Review (IEPR). It is our opinion and recommendation that: (1) the District Engineer does not have sufficient information to sign the Record of Decision on Tier One measures; (2) Tier One measures must not be submitted to Congress for authorization; and (3) the Corps should	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
			request release of funds to study the environmental impacts from the Tier One measures before Tier One measures are sent to Congress for appropriation.			

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E002486	-42	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The 2020 DFR-EIS must undergo Independent External Peer Review (IEPR) before a Record of Decision is made. The 2020 DFR-EIS does not mention the IEPR conducted in 2019—and many concerns outlined in that report (some of which are documented in the comment) were not addressed in the 2020 DFR-EIS. Further, the Corps' has not signaled that they are preparing additional IEPR, on the latest draft. As the 2020 DFR-EIS supersedes the 2018 DIRF-EIS, the Corps must undergo an additional IEPR for inclusion into the final Review Report. We believe that similar deficiencies reported in the 2019 IEPR would be identified under a new IEPR, showing that feasibility-level findings were not made, and that additional review must be made before congressional appropriation is sought.	General	Policy	A Final ATR and Final Policy Review have been completed on the FINAL Report/FIES and the documentation has been determined to be legally sufficient and policy compliant.
E002486	-43	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] The Corps did not adequately develop and assess a stand-alone nonstructural storm surge risk reduction alternative. The Corps considered buying out 64,000 high risk structures but did not look at a combination of buying out and raising structures. There is no data on the risk reduction and cost of elevating some structures and buying out other structures that are in the worst of the storm surge zones. Given the construction and O&M costs, plus the potential economic losses from recreational and commercial fisheries and ecotourism, the Corps must perform a robust cost-benefit analysis of the cost of elevating structures and buying out the higher flood risk structures. Such an alternative could be implemented in conjunction with ecosystem restoration efforts and smaller scale structural solutions to provide a reasonable level of risk reduction and avoid the high	Planning/ Real Estate/Economics	Alternatives/Cost-Benefits	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
			direct environmental impacts and associated costs. This alternative could also be combined with other non structural solutions, such as flood proofing of structures, implementing flood warning systems, flood preparedness planning, establishment of land-use regulations, and development restrictions within the greatest flood hazard areas.			Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002486	-44	Galveston Bay Foundation/ National Wildlife Federation	[Summarized] GBF and NWF cannot support the currently proposed structural CSRM alternatives at this time and we request that the Corps develop a Supplemental DFR-EIS that addresses our comments, to include: an adequate analysis of environmental impacts and feasibility of a non-structural/ER-based alternative. For any new alternatives considered, impacts to environmental justice communities must be assessed and addressed. The supplemental should have a 120 day public comment period and include public meetings with longer time limits than 1 minute to provide individual oral comments. The Corps should also provide Q&A sessions prior to public comments in which questions that are posed are answered for everyone to hear. This could supplement the open house portion of the public meeting, provide added value to these informational events, and perhaps decrease the number of individuals	General	Policy/Public Input	Refer to response to Comment #E002328-01
			needing to provide comments if they are better informed of the proposals.			

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E002486	-46	Galveston Bay Foundation/ National Wildlife Federation	GBF and NWF would like to see the expanded use of oyster reef creation/restoration, beach/dune nourishment, and where appropriate the expanded use of wetland creation/restoration to decrease risk from storm surge impacts and increase coastal resiliency. We recommend the DFR-EIS investigation into methods to reverse man made reduction of the transport of sediment and sand to and within the Upper Texas Coastal region caused by the construction of dams, jetties, groins and dikes.	Planning	Alternatives	Refer to Response to #E002486-05
E002489	-03	Audubon Texas	We hope the plan respects the decades of conservation work that local partners and NGOs have performed in the area and incorporates those investments into cost/benefit analyses, site selection, and alternatives analysis.	Economics	Benefits/ Costs	USACE will continue to engage with local stakeholders and coordinate with applicable local, state and Federal agencies throughout this process.
E002489	-04	Audubon Texas	Potential impacts to Bolivar Flats Shorebird Sanctuary should be minimized. This is a locally and globally important site for resident and migrating birds. The sanctuary is owned and managed by Houston Audubon and brings thousands of birders to the Texas coast each year to admire the wildlife and intact habitat. The value of this habitat both from a coastal tourism perspective and as a provider of ecosystem services cannot be overstated.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002489	-05	Audubon Texas	[Summarized] Impacts to threatened and endangered species should be avoided. We are concerned about the impacts to wildlife, especially threatened and endangered bird species such as the piping plover and eastern black rail occurring on Bolivar Peninsula. The 3.03 miles of proposed earthen levee will directly impact Bolivar Flats Shorebird Sanctuary and cause destruction of approximately 122 acres of coastal and wetland habitat Many of the dune construction projects have the potential to impact these species and permanently alter their habitats. We strongly recommending reducing impacts to known bird sanctuaries and avoiding construction on nesting grounds during nesting season (March 15 to September).	Environmental	Impacts	Refer to Response to #E002486-05
E002489	-06	Audubon Texas	Habitat for habitat mitigation is the right approach (p. 124), but pains must be taken to ensure that this happens at the ground level and priority must be given to maintaining, conserving, and enhancing existing and functional systems first. A “first, do no harm” approach must characterize these efforts, as expressly called out in areas such as the Bolivar Flats, where some proposed mitigation activities could imperil longstanding, healthy habitat, as at Horseshoe Marsh Bird Sanctuary.	Environmental	Mitigation	Thank you for your concerns, we will take these under advisement. USACE policy and guidance mandates avoidance and minimization of impacts to natural resources when constructing features. For the mitigation sites in particular, the plans proposed are designed to generate a net benefit in order to offset impacts from CSRM features proposed in the near vicinity. In this location, care will be taken to restore and enhance ecosystem functionality with a minimum of temporaty disruption. Frequent monitoring of the mitigation activites will be used to identify problems early-on, and guide corrective measures to abate any problems, assuring an ecological success trajectory. Long-term monitoring will trigger adaptive activities to address both short-term disruptions and long-term changes in the environment. Mitigation will conform to all laws, regulations and policies. USACE and the cost-share sponsor will coordinate all mitigation activites with state and Federal agencies as we move into the next phase of the project.

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E002489	-07	Audubon Texas	…we are concerned with the changes to Galveston Bay salinity gradients and tidal regimes as well as sediment transport, both during construction and after gates would be operative. Changes in these regimes will invariably yield unknown changes to the ecosystem and estuarine species in the bay and must be better understood. As acknowledged throughout the document, changes in water velocity, tidal exchange and open water habitat are expected and more research is needed to better understand the trade-offs.	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002489	-09	Audubon Texas	We applaud the inclusion and addition of dune enhancement, marsh restoration, and beach nourishment as tangible examples of how we can engineer with nature and agree with other commenters who have suggested that these sorts of activities proceed earliest. We agree—they are among the least expensive measures contemplated, they will provide necessary habitat and redoubts for species during the inevitably disruptive construction activities to follow, and importantly, they will continue to provide the valuable ecosystem services to people and wildlife, including storm surge mitigation, flood control, etc. over the multi-year construction schedule.	General	Support	Thank you for your comment.
E002501	-01	Surfrider Foundation	[Summarized] Surfrider is extremely concerned no local sponsor has been identified and that the process to establish a local sponsor has not been properly vetted. Surfrider believes the GLO should continue to be the non-federal sponsor, with support from a local entity, to carry out the projects within the RP. Based on experience with USACE handing off a project to a local authority in Montauk, NY not properly identifying and coordinating with a local sponsor causes many issues -- often leaving projects 'unattended' and languishing due to lack of local leadership and funding means.	General	Policy	As of April of 2021, the Texas Legislature is currently in session and have proposed bills to establish the Gulf Coast Protection District as the NFS for the project's CSRM Features (including the Beach/Dune complexes on Galveston Island and Bolivar Peninsula), and the Texas Legislature will determine the source of funding the entity's effort. The City of South Padre Island and Cameron County are considering partnering with TXGLO to cost-share the SPI CSRM Feature, and the TXGLO has submitted of Letter of Intent to become the cost-share sponsor for all ER features in the Recommended Plan. OMRR&R will be the responsibility of these NFS's. In the PED phase, an Operations Manual will be developed for each feature in the Recommended Plan detailing the day-to-day and emergency response operations of that particular feature. These decisions will be informed by subject matter experts to assure performance.
E002501	-02	Surfrider Foundation	Surfrider also believes it is problematic that the USACE will receive funding from Congress and seeks to do so before supplemental environmental analysis is conducted—which is clearly a dismissal of NEPA (which we discuss later). In terms of funding planning, we believe it is negligent to seek funding from congress (without proper and thorough environmental review) and then expect the local sponsor to shoulder maintenance costs.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.

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E002501	-03	Surfrider Foundation	There was no discussion in the DEIS on how funds will be continually acquired to maintain such large-scale projects. Given the anticipated costs for ongoing dredge and fill placement, maintenance of the gates and other identified/unidentified needs, it is unreasonable to ask local entities to foot the bill before calculating all the long-term costs and identifying realistic potential sources of funding.	Planning/ Costs	O&M	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
E002501	-04	Surfrider Foundation	The costs that were marginally identified in the DEIS are based on 2020 cost estimates, and as pointed out in the DEIS, construction will not begin for several years (the soonest time frame being 2025-2028 and could take up to 14 years). Therefore, a new analysis of costs needs to be conducted before the USACE appeals to congress for tax payer dollars.	Costs	Costs	The Coastal Texas Protection and Restoration Feasibility study, as presented by Galveston District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. On 13 Apr 2021, the cost estimate received ATR Certification - this certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.
E002501	-05	Surfrider Foundation	[Summarized] Surfrider is concerned about how the lack of a local sponsor will impact the enforcement of the Texas Open Beaches Act. If a local sponsor with the financial capability is not found, would USACE be the sole sponsor and if that happened would USACE be able to bypass, undermine and usurp the Open Beaches Act? If this happened, the Citizens of Texas and the visitors of Texas's Beaches will lose the dedicated free and unrestricted access to one of the largest unofficial state parks and recreational areas of Texas.	Planning/ Real Estate	Policy	As of April of 2021, the Texas Legislature is currently in session and have proposed bills to establish the Gulf Coast Protection District as the NFS for the project's CSRM Features (including the Beach/Dune complexes on Galveston Island and Bolivar Peninsula), and the Texas Legislature will determine the source of funding the entity's effort. The City of South Padre Island and Cameron County are considering partnering with TXGLO to cost-share the SPI CSRM Feature, and the TXGLO has submitted of Letter of Intent to become the cost-share sponsor for all ER features in the Recommended Plan. OMRR&R will be the responsibility of these NFS's.
E002501	-06	Surfrider Foundation	Surfrider takes umbrage with the fact that the USACE analyzed 'non-structure improvements' toward the end of project implementation. By doing so, the USACE has eliminated the chance of restructuring large-scale projects into smaller, more locally suited projects that would, in turn, create local jobs. Not only would multiple, smaller projects mean more jobs, and thus economic growth; smaller projects would be considerably less expensive than the massive gate systems, armoring, and sand replenishment projects currently proposed.	Planning	Alternatives	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study. Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical

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						infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features. Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002501	-07	Surfrider Foundation	…the engineering and technological approach to the gate system does not belong in the Gulf of Mexico. Massive floodgates as proposed in the RP, are usually used in closed, reinforced channels, not in open bodies of water such as the Bay of Galveston. From a pure engineering standpoint, we are concerned if the gates will function properly during storms. When the gates are closed during storms, how will impinged debris and sediment interfere with efficacy? We fear that if a storm is strong enough, debris and sediment will become impounded behind the gates causing the gates not to reopen and inadvertently causing a de facto seawall or breakwater.	Engineering	Designs -- Bolivar Roads Gate	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002501	-08	Surfrider Foundation	[Summarized] Coastal advocates and experts agree the USACE has haphazardly overlooked critical erosion variables such as rain, storm surge, and future sea level rise. Surfrider strongly believes that any proposed activities must look at these and other variables that cause coastal erosion/hazards when proposing such large-scale projects with hefty price tags. There is no denying that the coastal barrier proposed in Galveston Bay myopically addresses hurricanes, but will do very little to quell flooding associated with heavy rains (this barrier would have been ineffective during Hurricane Harvey), storm surges, and the regular 'sunny day flooding' that Galveston is already experiencing because of climate change.	Planning	POOCs/Purpose and Need	Refer to Response to Comment #E002501-07 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002501	-09	Surfrider Foundation	Per the DEIS, in order to mitigate impacts, new wetlands will be created in other parts of Galveston Bay, however, Surfrider is not convinced this mitigation will negate such large-scale impacts to wetlands and marshes.	Environmental	Mitigation	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002501	-10	Surfrider Foundation	The Coastal Barrier will result in a reduction in tidal connectivity which will clearly impact how Galveston Bay functions. Surfrider is concerned how tidal connectivity impacts will exacerbate erosion; especially given the DEIS acknowledges that the Coastal Barrier will increase Gulf-side erosion rates and shoreline retreat rates.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002501	-11	Surfrider Foundation	[Summarized] Surfrider is concerned the beach renourishment within the City Limits of SPI, the SPI City E.T.J and the unincorporated beaches of Cameron County will have negative effects on future development along one of the last undeveloped stretches of the SPI Barrier Island. With a possible second causeway landing north of the City of SPI, the unincorporated areas are set for a future developmental boom. A plan that depends on placing sand from unnamed sources and in an area that is already competing for sand source sediment, will only lead to an unmanageable development plan that will encourage the County or the City to “build first, worry about maintaining later” which is what got us into this mess in the first place. The desired outcome would be to have the Study adopt and promote the idea of coastal retreat that Playa Del Rey did voluntarily and use this model in areas of the Texas Coast that can	Environmental	Impacts	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
			accommodate this idea. This could become an example that Texas can lead the way for responsible, minimally public taxpayer backed development and still build the state’s tax base. [Commentor describes the history and policy of the Erosion Response Plan for the City/County and provides 2 examples of communities -- Sandbar Estates who in the commentor's opinion failed by building too close and is at significant risk and Play Del Rey who utilized managed retreat and built further bakc than required]			
E002501	-12	Surfrider Foundation	The Coastal Barrier will affect water and sediment quality throughout the Galveston Bay system. Surfrider is concerned about how these changes will also affect dissolved oxygen levels which can magnify problems associated with dead zones in the Gulf of Mexico. Moreover, the gates would alter the flow of water, leading to a decrease in water quality in these lagoons, allowing bacteria, pollutants and contaminants to accumulate. The Coastal Barrier could negatively impact the ability of water to flush from Galveston Bay, leading to the exacerbation of the loading to the bay of heavy metals such as mercury, and further hurting the oyster industry that was already heavily hit by Hurricane Harvey.	Environmental	Impacts	Refer to Response to #E002501-10

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E002501	-13	Surfrider Foundation	Leveeing in the area of the petrochemical infrastructure in the back bay as well would also quite possibly corral in contaminated water from runoff from said businesses…If protection of the petrochemical industrial infrastructure in the back bay is the primary objective of the floodgate, less costly and less impactful alternatives located in the back of Galveston Bay, sparing Galveston Island and Bolivar Peninsula would be preferable, and perhaps the GLO and USACE could enter into a public/private partnership with those industries for such a project.	Planning	POOCs/Purpose and Need/Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002501	-14	Surfrider Foundation	[Summarized] Tiering or segmentation of environmental review (dividing connected, cumulative, or similar actions into separate pieces under consideration or separate environmental analyses) in this project is being utilized as a means to downplay and minimize the appearance of the significance of the total action and overlook the potential disruptions to human and natural environment, habitat fragmentation, public safety risks, coastal resource damages, and recreational opportunity loss. While tiering of the NEPA process is encouraged in some instances to eliminate repetitive discussions, it is not appropriate where it is reasonably possible and required to analyze environmental consequences in an EIS (5 U.S.C. § 706(2)(A); 42 U.S.C. §4332(2)(C)). The unwarranted deferral of the design phase analysis and evaluation of the environmental impacts of CSRM structures, will lead to illegal tiering, segmentation, or	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
			deferral of environmental review. Analysis cannot be postponed to a forthcoming NEPA document and the current document must include analysis specific enough to be relevant for the decision at hand (Schultz 2012). This dangerous review method would take place in violation of NEPA, lacking site specific information about cumulative effects of the project.			
E002501	-15	Surfrider Foundation	Agencies must integrate NEPA into the planning process at the earliest possible time to ensure that planning and decisions reflect environmental values. 40 C.F.R. §§ 1501.2; see also 40 C.F.R. § 1502.5. Until an agency issues its final decision on a proposal, no action concerning the proposal may be taken that would have an adverse environmental impact or limit the choice of reasonable alternatives. 40 C.F.R. § 1506.1(a). By offering Congressional funding for a project when the reasonably foreseeable impacts on coastal resources have not yet been analyzed, the intent of NEPA is contravened.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.

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E002501	-16	Surfrider Foundation	The NEPA environmental review process is intended to facilitate public participation that leads to better-informed decisions, focused on avoiding, minimizing and/or mitigating potential negative impacts of the proposed action. The [USACE] and [GLO] would undermine the intent of the law through abuse of the tiered NEPA process. The tiered approach here threatens the entire project because the public and decision-makers alike are not able to review the environmental impacts of the full project before federal funds are appropriated by Congress.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002501	-17	Surfrider Foundation	[Summarized] The Texas Administrative Code includes coastal area planning rules administered by the GLO. Among the coastal and beach access protection provisions, the rules state that local governments may not issue permits or certificates authorizing erosion response structures except retaining walls with a setback. Although these rules apply to local government and not the federal project, this is an important regulation related to maintaining the character, safety, environmental resources and public access on Texas beaches that should be fully considered by the DEIS and implemented in the final plan.	General/ Real Estate	Policy/Imp	The GLO's coastal area planning rules have been fully considered by the EIS, and the USACE has determined that the Recommended Plan complies with these rules and is consistent with Texas Coastal Management Program (TCMP) beach/dune policies to the maximum extent practicable. See EIS Appendix F. As the design and engineering for each project proceeds, the USACE and GLO will continue coordinating to ensure compliance and consistency with the beach/dune rules and TCMP policies. TAC 15.6(c) says "Notwithstanding the general prohibition on constructing erosion response structures, a local government may authorize the construction of a structural shore protection project that conforms with the policies of the Coastal Coordination Council promulgated in 31 TAC §501.26(b)." Retaining walls are prohibited within 200 feet of the LOV but I did not think Texas Coastal Study included any retaining walls on barrier islands.
E002501	-18	Surfrider Foundation	The state's financial obligations for maintaining public access and beach health should also be disclosed explicitly. The RP calls for millions of cubic yards of sand to build dunes and beaches and the state has not been able to support this level of nourishment volumes in the past. The project should be specific about beach/dune maintenance and funding sources from state and federal obligations incurred by this project.	Project Management/ Planning	Cost-Share	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E002501	-19	Surfrider Foundation	Considering this cherished right of beach access in Texas, impacts on beach access and sandy beaches need to be further assessed including a study of the impacted coastal economy. The study should include an examination of discrete and cumulative loss of coastal recreation, habitat and water quality.	Real Estate/Environmental	Impacts	Currently there are 124 authorized beach access points in the Recommended Plan's footprint; 66 vehicle crossing and 58 pedestrian crossings within the proposed beach and dune systems. Existing authorized pedestrian beach access crossings will be replaced with dune walkovers to minimize impacts to the newly created dune systems. Pedestrian traffic volume will be investigated during PED to determine an appropriate walkover width for the location and all up and down ramps for the crossovers would be designed to be ADA compliant. Dune walkovers will be constructed of treated lumber and galvanized hardware. In general, the structure height would be at least one to one and a half times its width (3 ft minimum), to allow sunlight to reach vegetation underneath the structure. An example of a typical pedestrian walkover is shown in Figure 3.30. Also note that drainage features would be incorporated into these access points (where needed to mimic existing conditions). Note that the Certified Cost Estimate includes the costs for the featuress. Access to the beach under the Recommended Plan will comply with the Texas Open Beaches Act of 1959, which includes maintaining existing authorized pedestrian and vehicle access. Proposed modifications to existing authorized pedestrian and vehicle beach access points are shown in Annex 11 (Bolivar) and Annex 13 (Galveston) of the Engineering Appendix (Appendix D). Because all existing authorized access would be maintained, there is no anticipated long-term loss of recreational opportunities; however, during construction, temporary exclusionary zones would be implemented and result in a temporary loss of access and recreational opportunities in that zone for as long as construction in that zone is ongoing. As indicated in the EIS, the beach noursihment actions would increase the available beach width and utilize sediments that are beach quality and comparable to the existing sediments; therefore, we do not anticipate any direct, indirect, or cumulative losses to recreational opportunties or available habitat for wildlife.

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E002501	-20	Surfrider Foundation	[Summarized] Surfrider believes climate change analysis and discussion is lacking in the DEIS and must be thoroughly accounted for in order to properly plan for future conditions. In order to bolster the analysis and discussion of climate change in the DEIS Surfrider strongly suggests that GLO and USACE review and utilize information from the most recent climate reports (e.g. UN IPCC). In addition, the DEIS does a poor job of analyzing some future sea level rise, and other climate change impacts such as increased precipitation. Climate scientists have delivered stark warnings that global warming is inducing more precipitation because a warmer atmosphere holds more condensation and thus produces more rain. Surfrider strongly believes all coastal areas that are typically vulnerable to extreme rain events must be thoroughly evaluated in the DEIS.	H&H/Environmental	FWOP/Impacts	The Study Team complied with USACE policy and guidance with respect to incorporating the potential effects of Climate Change on the Recommended Plan. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years).
E002501	-21	Surfrider Foundation	[Summarized] Surfrider believes that "worst case scenario" planning should be used to analyze sea level rise. However, the DEIS is looking at Relative sea level rise (RSLR), as a combination of land subsidence and sea level rise. Surfrider purports the DEIS is underestimating future sea level rise projections by analyzing changes in eustatic sea level rise, or by using what climate scientists call the "bathtub model." The bathtub model woefully ignores several variables and how sea-levels can change at different scales of time and at different rates. Dynamic modeling is needed in order to provide accurate sea level rise predictions. Modeling at the bare minimum should focus on specific geographic/ocean conditions, coastal flooding, and long-term coastal evolution (i.e., beach changes, human development, bluff retreat, etc.). Rather than relying on the bathtub model, and static conditions, we strongly urge the GLO	H&H	FWOP/Imp	Refer to response to Comment #002501-20
			and USACE to use models that properly analyze oceanic and coastal dimensions in conjunction with the dynamics of a changing climate.			
E002501	-22	Surfrider Foundation	The Gulf is arguably one of the most vulnerable areas of America that will endure significant future climate change impacts and we ought to be proactively planning now. Proactive planning requires accurate sea level rise modeling and progress adaptation measures including: elevating infrastructures, dune restoration/living shorelines, managed retreat, buyout programs, rolling easements, removal of hard structures that are interrupting natural sediment flow, conservation easements, beneficial reuse of healthy sand dredging, remove dams and where possible, reservoirs that are impounding sediment that belongs along our beaches.	Planning	Alternative	Refer to response to Comment #002501-20

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E002501	-23	Surfrider Foundation	Climate change will undoubtedly continue to impact Texas beaches, and therefore it is unfortunate that key economic analysis and community impacts were ignored in the DEIS. As pointed out in our last comment letter we believe there must be deeper analysis of the following: • Costs associated with evacuation and reoccupation activities before, during and following a flood event incurred by property owners and governments; • Costs of cleanup of oil spills and restoration of petroleum storage tanks on industrial properties following a flood event; • Losses of protected lands and agricultural crops.	Economics	Costs	Refer to response to Comment #002501-20
E002501	-24	Surfrider Foundation	[Summarized] Surfrider urges the USACE and GLO to thoroughly consider managed retreat and voluntary buyout programs in the analysis of alternatives. Managed retreat and buyout programs, while politcally challenging, are some of the last, best options available in the face of sea level rise. Retreat strategies promote the ability of natural systems (e.g. beaches, dunes, wetlands) to respond to wave action and migrate landward, ensuring their survival; serve as protective buffers for coastal ecosystems against sea level rise and storm events, while providing access, recreation opportunities and other social benefits. Surfrider strongly believes managed retreat should be examined especially for the petrochemical industries considering much of the RP aims to protect the back of Galveston Bay where petrochemical industries reside.	Planning	Alternatives	Considerations related to "managed retreat" were formulated as part of the multiple lines of defense evaluation, however it was determined not to be a practicable and standalone solution. A standalone managed retreat scenario, whereby development retreats inland away from coastal risks, rather than addressing storm surge, inundation, and erosion through structural alternatives, is a significant challenge along the Texas coastline. For more discussion on the topic, refer to the Final Report, page 35, Panel Topic = Managed Retreat (Section 2.4, Approaches Considered).
E002501	-25	Surfrider Foundation	[Summarized] While buyouts were mentioned in the DEIS, we are concerned about the lack of analysis and the downplaying of this inevitable climate change adaptation measure. FEMA and HUD has set up funding programs to assist and Surfrider strongly believes the USACE and GLO should more thoroughly examine these programs. Surfriders believe it is shortsighted to not fully analyze what other important federal agencies believe will be a reality [referring to a National Climate Report that say 13 federal science agencies called the need for retreat unavoidable].	Planning	Alternatives	Refer to response to Comment #002501-24
E002501	-26	Surfrider Foundation	Surfrider fundamentally believes the trust behind the RP is to protect the petrochemical industry infrastructure and we do not think it is acceptable for taxpayers to foot the bill for a multi-billion-dollar industry. The petrochemical industry ought to be tasked with protecting their infrastructure and paying for it.	Planning	POOCs/Purpose and Need	Refer to response to Comment #002501-06 regarding the study's authority and planning approach.

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E002501	-27	Surfrider Foundation	[Summarized] Surfrider believes the USACE and the GLO should have analyzed 'green infrastructure' for vulnerable cities such as Houston, Clear Lake and Galveston, to name a few. Green infrastructure can help prevent flooding by capturing rain and filtering it into the earth where it can replenish aquifers and return to the atmosphere through evapotranspiration. This DEIS should be updated and include green infrastructure measures for vulnerable coastal cities including: elevating infrastructure, "green roofs," downspout disconnection, bioswales, green parking lots and streets, ocean friendly gardens, and updating building codes. [Commentor describes each in more detail]	Planning	Alternatives	Thank you for this suggestion. While we acknowledge these adaptations can potentially ameliorate or mitigate for climate change drivers (e.g., green house gas emissions) and their effects (rising ambient temporatures), unfortunately, these suggested "green infrastructure" solutions are not options that can address the overarching study goals and objectives, namely coastal storm risk reduction and ecosystem restoration.
E002504	-01	Galveston Texas City Pilots	The Galveston Texas City Pilots do not believe that the alternate anchorage proposal adjacent to the south jetty is adequate, even with the inclusion of moorirng buoys. The proposed site poses unacceptable risks of damage or grounding due to strong currents and proximate shoals and will increase costs by requiring tending tugs for vessels using the site. As well, placing the barrier and gates in the remaining deep-water achorage space guarantees a vessel strike on the barrier or gates as some point. The proposed site will severely hamper the usability of this alternate proposal, and it is by no means a suitable replacement for the existing Bolivar Roads anchorages. If the current location of the barrier and gates is the best place, we recommend creating a viable and communsurate dredged deep-water anchorage site wholly within the barrier between Pelican Island and Texas City.	H&H/Engi	Designs -- Bolivar Roads Gate	The Study Team will continue investigate the ship channel anchorage needs for vessels anchoring in the ship channel. Additional coordination with the federal, state, and local entities will continue during the PED phase of the project. The proposed mooring stations may be refined during PED.
E002504	-02	Galveston Texas City Pilots	[Summarized] Twin 650' sector gate design with an upper vessel beam limit of approximately 165' limits do not adequately account for vessels with overhanging cargo such as large cranes and oilfield equipment. Additionally, the width and design introduces navigational safety risk and complicates vessel maneuvering in the area. A single-gate design of larger width is preferred as it does not include the risk of allision with the center island separating the vessel traffic lanes and presents no pratical upper bounds on vessel beam.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment #E002433-01
E002504	-03	Galveston Texas City Pilots	[Summarized] The gates have the potential to modify the tidal and wind driven currents in the main channel which then affects navigational safety. Hydrodynic modeling needs to be performed to determine how a worst-case currnts would affect ship maneuvering close to and through the gates prior to proceeding with the twin gate design.	H&H	Impacts	Refer to Response to Comment #E002433-02
E002504	-04	Galveston Texas City Pilots	[Summarized] The ship simulation modeling for the Feasibility study was based on a previous single gate design which does not match the current plan, and used low-resolution databases which do not accurately reflect real vessel behavior. The modeling should be updated to match the planned two-gate system and should use high-resolution databases prior to proceeding with the two gate design.	H&H/Engineering	Impacts	Refer to Response to Comment #E002433-03

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E002504	-05	Galveston Texas City Pilots	[Summarized] Vessel draft in the Houston Ship Channel continues to trend upward. The Bolivar Roads Gate proposed sill depth of 60' appears inadequate considering the increase in draft and the necessary under keel clearnance required for future deeply laden ships. Request consideration of a deeper gate structure.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment #E002433-04
E002504	-06	Galveston Texas City Pilots	Experience has shown that the approach to some type of structure such as the proposed navigation gate should have a straight course of approximately 1 mile (for ships with lengths of 1100'). This straight approach allows a vessel to ensure it is in the correct position for transiting through the structure. While the approach for inbound ships is greater than 1 miles, the outbound approach appears to be approximately 1 mile. Request consideration for locating the navigation gate such that both inbound and outbound vessels have a straight line course of at least 1 mile prior to transiting the navigation gate.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment #E002433-05
E002504	-07	Galveston Texas City Pilots	[Summarized] Proposed barrier and gate system will reduce available inshore anchorage space. The proposed 12 mooring anchors which remain are insufficient for current and future anchorage demand. Request consideration for the construction of additional anchorage space to replace the anchorage space that will be occuried by the proposed barrier. This additional anchorage space is needed to accomodate future vessel husbandry activities that require sheltered water.	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment #E002433-06
E002504	-08	Galveston Texas City Pilots	Achorage B&C are designated anchorages, but are not included in the federal project for Galveston. Given the current hydrodynamics of the anchorage area, these anchorages are nearly self-scouring and do not need any maintenance dredging…Request that future anchorages be included in the Federal project as most likely the gate structure and barrier will alter the current hydrodynamics such that the remaining and new anchorages will require periodic maintenance dredging.	H&H/Engineering	Impacts	Refer to Response to Comment #E002433-07
E002504	-09	Galveston Texas City Pilots	Vessels transiting the HSC experience difficulties with propulsion or steering on the average of 1-2 incidents/week…A comprehensive system of protection for the gate structure from vessels experiencing propulsion or steering casualties is essential to navigation. Request a comprehensive navigation risk assessment be conducted that includes evaluation of the consequences of a large vessel allision with various portions of the gate structure.	Engineering	Designs -- Bolivar Roads Gate/Impacts	Refer to Response to Comment #E002433-08
E-2020DEIS-01473	-01	City of Morgan's Point	The City Council requests that USACE include as part of final chief's report the inclusion of a storm surge gate at San Luis Pass. Elimination of a storm surge gate at San Luis Pass will increase the volume of water in Galveston Bay by an estimated 10%, directly affecting structures on the west end of Galveston Island and increased flooding in the City of Galveston.	H&H/Planning	Alternatives	Thank you for your suggestion. The Study Team conducted modeling analysis and concluded that a gate and San Louis Pass was not required. The Gulfside defenses are Tier 1 measures and as such, will continue to be refined in the PED phase. Additional engineering investigations will be conducted at that time, and supplemental NEPA documentation will be produced to encourage public input and review. Refer also to response to comment #E-2020DEIS-2326-04 regarding SLP.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-01473	-02	City of Morgan's Point	The City Council requests that USACE include as part of final chief's report the inclusion of fortified dunes to a minimum of 17 feet elevation. Not constructing armored and/or fortified dunes of a minimum height of 17 feet will severely reduce storm surge defense and increased on-going maintenance costs with having to frequently rebuild dunes.	H&H/Engineering/ Planning	Alternatives/Performance	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E-2020DEIS-01473	-03	City of Morgan's Point	The City Council requests that USACE include as part of final chief's report the inclusion of an extension of the Clear Lake Gate System to protect the City of Shoreacres. The proposed gate system at Clear Lake is insufficient in size and will negatively impact the City of Shoreacres.	H&H/Engineering	Performance/Designs -- Clear Lake Gate	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01473	-04	City of Morgan's Point	The City Council requests that USACE completes further review of the ring barrier levee system for the City of Galveston, Texas. The Ring Barrier Levee for Galveston may create interface issues with the City of Galveston's active and planned drainage improvements.	H&H/Engineering	Designs -- Ring Levee/Impacts	Thank you for your suggestion, the Study Team will continue to coordinate with the City of Galvestion during the next phase of the project. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Gates, Pumping Stations, and overall Ring operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Engineering Manual) based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities.
E-2020DEIS-01518	-01	City of Houston	[Summarized] I strongly support the Coastal Texas Draft Feasibility Report and request that the USACE conduct additional review, consider and incorporate as part of the final Chief's Report the inclusion of a storm surge gate at San Louis Pass. A storm surge gate at San Louis Pass will decrease the volume of water in Galveston Bay by an estimated 10% directly affecting structures on the west end of Galveston Island and flooding in the City of Galveston.	H&H/Planning	Alternatives	Thank you for your support. The Study Team conducted modeling analysis and concluded that a gate and San Louis Pass was not required. The Gulfside defenses are Tier 1 measures and as such, will continue to be refined in the PED phase. Additional engineering investigations will be conducted at that time, and supplemental NEPA documentation will be produced to encourage public input and review. Refer also to response to comment #E-2020DEIS-2326-04 regarding SLP.
E-2020DEIS-01518	-02	City of Houston	[Summarized] I strongly support the Coastal Texas Draft Feasibility Report and request that the USACE conduct additional review, consider and incorporate as part of the final Chief's Report the inclusion of fortified dunes to a minimum of 17 feet elevation. Armored and/or fortified sand dunes should be considered to a minimum height of 17 feet which would reduce storm surge and the need to rebuild dunes.	H&H/Engineering/ Planning	Alternatives/Performance	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E-2020DEIS-01518	-03	City of Houston	[Summarized] I strongly support the Coastal Texas Draft Feasibility Report and request that the USACE conduct additional review, consider and incorporate as part of the final Chief's Report the inclusion of an extension of the Clear Lake/Dickinson gate system to protect the City of Shoreacres. The proposed gate system located at Clear Lake and Dickinson need to be fortified.	H&H/Engineering	Performance/Designs -- Clear Lake Gate	Thank you for your support and your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-01526	-01	HCFCD	Has the Galveston Bay Park Plan (GBPP) that is proposed by the Rice SSPEED Center been reviewed for incorporation into this plan? There are mentions of this plan in the report documents but very little evaluation of whether there are complementary or conflicting components of the GBPP and the TSP.	Planning	Alternatives	Note that this plan has been discussed in the report (Refer to Section 5.4, *Parallel Academic Efforts*). The Study Team compared the SSPEED Center's Galveston Bay Park Plan (GBPP) to the Alternatives carried forward for detailed analysis (Alternatives A and D2) in this EIS. The GBPP was screened out for several reasons: First, the resource agencies pointed out that the GBPP would have numerous environmental impacts, including direct impacts to many oyster reefs and a large area of open bay bottom habitat. In the Galveston Bay system, oyster reef is considered a highly productive habitat that supports a broad diversity of species, the permanent loss of so much reef would be considered extremely detrimental. Second, the team determined that placing a barrier structure in Galveston Bay, without a Gulf-front system in place, would induce flood risks to Galveston Island and Bolivar Peninsula. Third, the GBPP and Alternative D2 would both have a higher levels of residual risk due to the proximity of the barriers to highly developed areas. The analysis performed in this study demonstrated that the Gulf-front alignment (Alternative A) provides a first line of defense that is key to a multiple lines of defense strategy. If SSPEED is able to obtain the environmental clearances and project funding to implement as a non-Federal action, we do believe it could be complementary to the recommended plan (Alternative A). The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou).
						Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
E-2020DEIS-01526	-03	HCFCD	While it is understandable for the report to be split into a number of individual files in order to be accessible to the public, the organization of the sections and layout on the website for download made it difficult to determine whether all pertinent information was reviewed. The Draft Report and DEIS required 37 and 17 separate hyperlinks, respectively, in order to download their entirety. It would be useful to have an ftp site or other easier way for the public to download the entire document or a summary to better understand each what is included in each section before determining whether it was necessary to download. All downloaded reports or sections should also be electronically bookmarked in order to allow for easier reference and cross-reference between sections.	General	Misc	Thank you for comment. We will take these suggestions under advisement. Note the study team followed guidance for e-NEPA submission per OP-OFA-NCD (Version: VERSION: January 4, 2021) when producing the electronic files provided to the public.
E-2020DEIS-01526	-04	HCFCD	The Draft Report does not address how the Clear Lake Gate System will replace and integrate with the existing second outlet and gated structure managed and operated by the HCFCD. The District requests USACE provide further engineering discussion and analysis.	H&H/Engineering	Designs -- Clear Lake Gate	Concur. USACE has, and will continue to coordinate closely with the HCFCD in PED with regards to the decomission and removal of the existing "second" outflow system, and the replacement of that system with the newly designed Clear Lake Pumping Statation and Circulation Gates System.
E-2020DEIS-01526	-05	HCFCD	The Draft Report indicates that the non-Federal Sponsor will operate and maintain the Clear Lake Gate System and Pump Station, but is that a feasible approach when the critical nature of this system is considered? The report mentions that the Gate System will need to be operated based on intensity, track and orientation of approaching storms and the pump station will require extensive operations and maintenance to ensure that it will function when necessary. Has USACE identified the entity that would has the expertise to operate and maintain this system?	Project Management	Non-Federal Sponsor	As of April of 2021, the Texas Legislature is currently in session and have proposed bills to establish the Gulf Coast Protection District as the NFS for the project's CSRM Features (including the Beach/Dune complexes on Galveston Island and Bolivar Peninsula), and the Texas Legislature will determine the source of funding the entity's effort. The City of South Padre Island and Cameron County are considering partnering with TXGLO to cost-share the SPI CSRM Feature, and the TXGLO has submitted of Letter of Intent to become the cost-share sponsor for all ER features in the Recommended Plan. OMRR&R will be the responsibility of these NFS's. In the PED phase, an Operations Manual will be developed for each feature in the Recommended Plan detailing the day-to-day and emergency response operations of that particular feature. These decisions will be informed by subject matter experts to assure performance.

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E-2020DEIS-01526	-06	HCFCD	[Summarized] HCFCD has a number of projects that are fast tracked (Clear Creek Federal Flood Risk Management Project) for future development or are currently being studied (Lower Clear Creek Watershed Study and Dickinson Bayou watershed study) that will reduce flood damages in portions of Clear Creek and Dickinson Bayou watersheds. Any operation of the Clear Creek or Dickinson Bayou Gates and Pump Stations projects need to include the future improvements that are part of these projects to ensure that there is consistent operation and performance during all modeled storm events and that the projects are complementary and do not have any conflicting assumptions.	H&H/Engineering	Designs -- Clear Lake Gate/ Designs -- Dickinson Bayou Gate/Impacts/Performance	Concur. USACE has, and will continue to coordinate closely with the HCFCD in PED.
E-2020DEIS-01526	-07	HCFCD	In addition to the abovementioned projects, future study of the Clear Lake facility should be performed using models that have been updated and calibrated to more recent events, including Hurricane Harvey. HCFCD is currently undertaking a restudy of the Clear Creek watershed using a coupled 1D/2D model that incorporates terrain and development current to 2018. Use of this model (when available) will greatly enhance the accuracy and confidence in operation of the Clear Lake Gate and Pump system. This approach is discussed in the Suggested Future Analysis section of the Appendix DAnnex 2 report.	H&H	Performance/Impacts	Concur. USACE has, and will continue to coordinate closely with the HCFCD and welcomes any and all data and modeling that could inform refinements of the Clear Lake System during the PED phase.
E-2020DEIS-01526	-08	HCFCD	Appendix D, Section 2.7.5 mentions modifications made to the Clear Lake Pump Station after the original design in 2018 based on stakeholder input. These modifications use a more frequent coincident rainfall event and downgrade the pump capacity to less than half of the original design. What are the consequences of these changes on maximum protection levels within the Clear Lake watershed? The original design is included in the Hydrology and Hydraulics Annex without mention of the changes to the design capacity of the pump station.	H&H	Impacts	Refer to Response to Comment # E002132-08 regarding the updated H&H informing the current designs, and the note that investigations on this topic will be conducted in PED with the intent of informing design refinements for the Clear Lake features. Also refer to Response to Comment # E002132-07 indicating USACE policy with respect to inducements and pump capacity and our initial determination of consequences.
E-2020DEIS-01526	-09	HCFCD	Appendix D, Annex 2, Figure 15 [reproduced in comment], appears to show that the required pump capacity for the 10-year rainfall event now used for the plan is over 30,000 cfs. Has the planned 20,000 cfs capacity been evaluated to ensure that it does not cause impacts when compared to the current condition? The 20,000 cfs capacity does also not appear to include the overtopping estimate of 1,161 cfs included in Annex 2, Table 11	H&H	Impacts	Refer to Response to Comment # E-2020DEIS-01526-08
E-2020DEIS-01526	-10	HCFCD	Figure 17 in Appendix D - Annex 2 [reproduced in comment] seems to indicate that it is necessary for the pumps to operate in all rainfall events in order to prevent induced flooding in and around Clear Lake. Case 3 as shown in the figure (red bars) shows that if a failure of the pump station occurs (Gate Open, pumps off), then flooding could be induced by the Clear Lake Gate structure on the order of 1 foot or more when compared to the existing condition (blue bars). While maintenance and operation of the pumps will be a critical responsibility of a to-be designated non-Federal Sponsor, the gate system should be designed so not to induce interior flooding in the event of a pump system failure.	H&H	Impacts	Refer to Response to Comment # E-2020DEIS-01526-08 regarding the need for additional H&H modeling. Note as well the statement regarding USACE policy to not incur inducements. An Operations Manual will be produced in PED for the Clear Lake features which will detail the operational procedures for the pumping station as well as triggers dictating pump utilization at this site.

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E-2020DEIS-01526	-11	HCFCD	It is unclear if any analysis was performed on the Clear Lake Gate and Pump Station project with a non-surge condition. Was this analysis performed and do the gate and pump station structures impede riverine flood flows when open, thereby inducing flooding upstream in Clear Lake and/or Clear Creek?	H&H	Impacts	Refer to Response to Comment # E-2020DEIS-01526-08 regarding the need for additional H&H modeling. More specifically, the Clear Creek watershed modeling thus far (HMS & RAS) consider a wide range of conditions representing rainfall riverine forcing from 10- to 500- year return periods. These have been used to determine water surface profiles upstream, and at the junction of Clear Creek proposed gated structure. Note that the objective of the Clear Creek pump station is to prevent (mitigate) the raising of the water surface profile upstream in the event that the Clear Creek sector gates have to be closed. USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. The closure of the proposed sector gates and the operation of the pump station will dependent on the joint probability of storm surge and rainfall. Using that method, the pump station design considers 10- to 25-year rainfall events combined with 100-year surge events. These conditions are verified using gauge records. Note that in the event that we experience a storm system that brings rain, but no surge, the gates and pumping could be deployed to reduce flooding in the watershed. Consultation with SME's experts indicates the 20,000 cfs capacity proposed for this system will be more than adequate to address the potential flooding risks. However, these features will require further investigation in PED, and refinements could be necessary at that time.
E-2020DEIS-01526	-12	HCFCD	Appendix D – Annex 7 Pump Station Plates does not show the current recommended design for the Clear Lake Gate and Pump Station but instead show the previously recommended design.	Engineering	Designs -- Clear Lake Gate	Concur. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01526	-13	HCFCD	Appendix D - Annex 8, Design Criteria Pump Stations, Table 2-3 shows that the velocities produced through the Clear Lake sector gates to be over 13 feet per second in the 100 year event. How will mitigation of these velocities be addressed in the design?	H&H	Impacts	Assuming the commentor is referring to Table 3-2and 3-3 of Appendix D - Annex 8, Design Criteria Pump Stations - this graphic depicts water surface profiles under gate open and closed conditions using 1-D RAS model. The near structure velocity encounters eddies which need to be resolved with an advanced Fluid Dynamics Model in PED in order to gain higher fidelity in the approach velocities. However, it is expected that during a Hurricane Harvey-type event (> 100 year rainfall event), the Clear Creek Channel and sector gate juncture will encounter high velocities (e.g., it was above 8 fps in HSC during Harvey) which will be need to mitigated using an scour protection pad on the channel bottom. Again note that these investigations (and refinements based ont he findings) have been deferred to PED, but will be undertaken at that time.
E-2020DEIS-01526	-14	HCFCD	The USACE environmental models do not directly address impacts to water quality and habitat in Clear Lake as a result of the new gate system. Since one of the main goals of the existing Clear Creek second outlet gate structure is to prevent salinity intrusion and sediment inflow into Clear Lake through the second outlet channel, the District requests USACE provide additional environmental assessment and discussion of how these potential impacts will be mitigated with the proposed gate system.	Environmental	Impacts/ Mitigation	Refer to Section 4.3.2.1.2 of the EIS whic clearly states, "The gate structures and floodwalls at Clear Lake, Dickinson Bayou, and Offatts Bayou will impact tidal exchange, currents and water circulation. The hydraulic analysis provided in the AdH modeling shows minimal changes in the proposed vicinities of the structures." Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses (including hydrologic analyses) will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. If the future analysis identifies issues with water circulation, additional openings may be included in the project designs to reduce impacts to tidal exchange, salinity, and water circulation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01565	-01	H-GAC	We believe that a substantial federal investment in the resiliency of our region's vulnerable coastal communities and nationally vital energy and petrochemical industries is warranted. Our region's coastal areas also have a rich and economically productive natural heritage that supports local economies and diverse ecology. We support the Study's dual focus on flood resilience and restoring these natural ecosystems.	General	Support	Thank you for your comment
E-2020DEIS-01565	-03	H-GAC	We encourage upcoming environmental impact evaluations be adjusted, as appropriate, to incorporate concerns identified in the public meetings to avoid potential adverse impacts.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-01565	-04	H-GAC	The non-federal cost of ongoing operations and maintenance is crucial to the long-term sustainability of the storm surge/flood protection elements for Galveston and the Galveston Bay communities. We recommend that the GLO collaborate with state and local officials on a fair, sustainable maintenance funding strategy and gain commitments before initiating the development of final project elements.	Project Management	Non-Federal Sponsor	As of April of 2021, the Texas Legislature is currently in session and have proposed bills to establish the Gulf Coast Protection District as the NFS for the project's CSRM Features (including the Beach/Dune complexes on Galveston Island and Bolivar Peninsula), and the Texas Legislature will determine the source of funding the entity's effort. The City of South Padre Island and Cameron County are considering partnering with TXGLO to cost-share the SPI CSRM Feature, and the TXGLO has submitted of Letter of Intent to become the cost-share sponsor for all ER features in the Recommended Plan. OMRR&R will be the responsibility of these NFS's. In the PED phase, an Operations Manual will be developed for each feature in the Recommended Plan detailing the day-to-day and emergency response operations of that particular feature. These decisions will be informed by subject matter experts to assure performance.
E-2020DEIS-01565	-05	H-GAC	Even with the level of investment proposed, a substantial number of dwellings in areas along Galveston Bay remain vulnerable and will need to be elevated. This may inadvertently impact senior citizens and people with physical disabilities, among others. We recommend these impacts be considered and potential solutions identified to ensure continued access to residences for these vulnerable populations.	Environmental	Impacts	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E001710	-01	City of Gavleston	[Summarized] The City applauds the Corps of Engineers for addressing the displacement and other resident concerns by presenting the sand dune barrier system concept as an alternative to the levee/floodwall. However, Galveston Island faces constant challenges with beach re nourishment due to natural erosion experienced daily due to wind, waves, and storm water and as seen during the 2020 hurricane season, dune damage caused by high tides and related surge occurred. Modeling conducted by Dr. Merrell and TAMUG estimates the proposed dune design is a weakened land barrier defense system that could be wiped out by a 50-year storm. As well, the City suggests a fortified sand dune system is worthy of further examination as a more feasible and cost-effective surge protection barrier that presents a visually-appealing envirorunent. While still requiring formidable	H&H/Engineering	Performance/Designs -- Beach and Dunes	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
			maintenance efforts, a sand dune system fortified with clay composite as proposed by Dr. Merrill mitigates further erosion issues and reduces the cost of replenishing sand. The City urges the Corps of Engineers to continue examination of the design, construction, sustainability and envirorunental impact of sand-based fortified dunes as a more cost-effective surge protection system. A fortified dune system may approximate the same cost as the sand dune system within the same footprint.			
E001710	-02	City of Gavleston	The City is very apprehensive about the resources needed and maintenance costs associated with re-nourishment cycles (federal 50%/non-federal 50%) for a natural sand dune system when considered with other ecosystem restoration recommendations. As currently proposed, the Draft Feasibility Report does not estimate the maintenance costs for the anticipated re-nourishment cycles. The City is very concerned the non-federal share costs for sustaining annual natural sand dune nourishment maintenance will require a significant commitment of funds that is well beyond the financial means of the City.	Project Management/Cost	Cost-Sharing/Costs	Refer to responses to Comments #2501-18 and E-2020DEIS-1-01526 in response to costs of maintenance and responsibilities. Costs for re-nourishment (i.e., maintenance) of the CSRM beach and dune features are included in the Cost Annex (pages 14-15). Note that beach and dune features included in the B2 (Follets Island) ecosystem restoration site do not include re-nourishment costs for maintenance as USACE policy mandates ER sites be designed to be self-sustaining.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E001710	-03	City of Gavleston	[Summarized] The City wishes to acknowledge the re-alignment improvements of the proposed ring barrier in the Draft Feasibility Report; however, the City remains concerned the efficacy of the 14-foot ring barrier may rely upon low future sea-level rise estimates and a fully functioning new City pump and drainage system, which remains contingent upon yet to be identified funding sources. The City requests the Corps of Engineers to engage in frequent consultation with the City to ensure coordination of critical key ring barrier design elements and milestones with the City drainage system plan.	Engineering	Designs -- Ring Levee	Thank you for your support and your suggestion. The Study Team will conduct further analysis in PED and will continue to actively coordinate with the City of Galveston and local stakeholders as the project proceeds and designs are refined.
E001721	-01	City of El Lago	The Clear Creek Watershed Overtopping section of the study (Sec. 5.5 of Appendix D Annex 2) does not include areas of the City of Shoreacres where storm surge could flood the City of Shoreacres and flow into Clear Creek Watershed behind the protection provided by the Clear Creek flood gates and pumps. The City of El Lago hereby expresses its support for the Coastal Texas Protection and Restoration Feasibility Study's recommendations to alleviate flooding risk that include flood gates and pumps on Clear Lake and Clear Creek to mitigate storm surge. The City of El Lago hereby encourages further study in the project design phase of overtopping in areas of the City of Shoreacres that may reduce regional flood protection and the efficacy of the Clear Creek flood gates and pumps.	H&H/Engineering	Designs -- Clear Lake Gate	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E001722	-01	City of Taylor Lake Village	The Clear Creek Watershed Overtopping section of the study (Sec. 5.5 of Appendix D Annex 2) does not include areas of the City of Shoreacres where storm surge could flood the City of Shoreacres and flow into Clear Creek Watershed behind the protection provided by the Clear Creek flood gates and pumps. The City of Taylor Lake Village hereby expresses its support for the Coastal Texas Protection and Restoration Feasibility Study's recommendations to alleviate flooding risk that include flood gates and pumps on Clear Lake and Clear Creek to mitigate storm surge. The City of Taylor Lake Village hereby encourages further study in the project design phase of overtopping in areas of the City of Shoreacres that may reduce regional flood protection and the efficacy of the Clear Creek flood gates and pumps.	H&H/Engineering	Designs -- Clear Lake Gate	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E001722	-02	City of Taylor Lake Village	The current TXDOT expansion of SH146 over Clear Creek will create a 100 feet wide north channel and a 70 feet wide south channel for boats navigating between Clear Lake and Galveston Bay; the proposed floodgate on Clear Creek is only 75 feet wide; the floodgates will create a navigation bottleneck and potentially unsafe conditions for thriving recreational boating, fishing, and marined related businesses in Clear Lake area communities. The City of Taylor Lake Village hereby encourages further study in the project design phase of the Clear Creek floodgate width for small and large vessels to safely navigate in both directions through the gate structures, SH146 bridge piers and fenders to minimize an economic and recreational impact on the Clear Lake area communities.	Engineering	Designs -- Clear Lake Gate	Thank you for your suggestion. The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.

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E001723	-01	Cameron County Commissioners Court	[Summarized] The study lackes consideration of Cameron County Beaches as a suitable project location of beach nourishment and erosion mitigation projects under the Ecosystem Restoration Goal, despite the beaches protecting the Lower Laguna Madre and inland Cameron County. The SPI is a barrier island that is experiencing high erosion rates of about 3-14 feet per year within the county maintenance jurisdiction and is causing potential future damage to private property public infrastructure and hinder economic development. Cameron County request that SPI beach nourishment be considered in meeting the ER goal and requests that the study take into consideration the natural infrastructure such as dunes vegetation, wetlands, and all the ecosystem services they provide to our communities when evaluating projects in the SPI region. As well, the County requests that new sand sources be identified for the beach renourishment portion of the study.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E001723	-02	Cameron County Commissioners Court	[Summarized] Cameron County is requesting that the USACE and GLO include in the study beach renourishment and dune restoration projects on all County Beaches and County Public Beach Access Areas located on South Padre Island that are currently experiencing a high erosion rate. Expanding the scope of the beach nourishment efforts to the northern beaches of SPI would provide risk reduction for SH 100--the only evacuation route for future development, while expanding to Isla Blanca Park would provide risk reduction for businesses, educational institutions, recreational opportunities, and relgious institutions [Comment provides list] that are not currently considered protection. Vegetated dunes provide the best protection against any significant storms and high tides and should be a focus for SPI's unincorporated areas to further reduce erosion, prevent washouts on the Island, create long term benefits for various government agencies and property owners, create a more stable shoreline to protect the Laguna Madre and its wildlife, and continue public beach access and economic opportunities.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E002290	-01	City of Shoreacres	The Clear Creek Watershed Overtopping section of the study (Sec. 5.5 of Appendix D Annex 2) does not include areas of the City of Shoreacres where storm surge could flood the City of Shoreacres and flow into Clear Creek Watershed behind the protection provided by the Clear Creek flood gates and pumps. The City of Shoreacres hereby expresses its support for the Coastal Texas Protection and Restoration Feasibility Study's recommendations to alleviate flooding risk that include flood gates and pumps on Clear Lake and Clear Creek to mitigate storm surge. The City of Shoreacres hereby encourages further study in the project design phase of overtopping in areas of the City of Shoreacres that may reduce regional flood protection and the efficacy of the Clear Creek flood gates and pumps.	H&H/Engineering	Designs -- Clear Lake Gate	Thank you for your support and your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002346	-01	City of South Padre Island	[Summarized] The study lacks consideration of Cameron County Beaches as a suitable project location for beach nourishment and erosion mitigation projects under the Ecosystem Restoration Goal, despite the beaches protecting the Lower Laguna Madre, an essential ecological body of water and only one of six hypersaline lagoons in the world, and inland Cameron County. The SPI is a barrier island that is experiencing high erosion rates of about 3-14 feet per year within the county maintenance jurisdiction and is causing potential future damage to private property public infrastructure and hinder economic development.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E002346	-02	City of South Padre Island	[Summarized] The City Council requests that portions of the Island north of the City limits be included within the study's beach nourishment and dune construction measure footprint to reduce erosion, but also to protect the Laguna Madre, the Gulf Intercoastal Waterway, and Cameron County when flooding does occur. Expanding the scope of the beach nourishment efforts to the northern beaches of SPI would provide risk reduction for SH 100--the only evacuation route for future development and is currently not considered for protection. Vegetated dunes provide the best protection against any significant storms and high tides and should be a focus for SPI's unincorporated areas to further reduce erosion, prevent washouts on the Island, create long term benefits for various government agencies and property owners, create a more stable shoreline to protect the Laguna Madre and its wildlife.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E002358	-01	City of Nassua Bay	The Clear Creek Watershed Overtopping section of the study (Sec. 5.5 of Appendix D Annex 2) does not include areas of the City of Nassua Bay where storm surge could flood the City of Nassua Bay and flow into Clear Creek Watershed behind the protection provided by the Clear Creek flood gates and pumps. The City of Nassua Bay hereby expresses its support for the Coastal Texas Protection and Restoration Feasibility Study's recommendations to alleviate flooding risk that include flood gates and pumps on Clear Lake and Clear Creek to mitigate storm surge. The City of Nassua Bay hereby encourages further study in the project design phase of overtopping in areas of the City of Nassua Bay that may reduce regional flood protection and the efficacy of the Clear Creek flood gates and pumps.	H&H/Engineering	Designs -- Clear Lake Gate	Thank you for your support and your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002358	-02	City of Nassua Bay	The current TXDOT expansion of SH146 over Clear Creek will create a 100 feet wide north channel and a 70 feet wide south channel for boats navigating between Clear Lake and Galveston Bay; the proposed floodgate on Clear Creek is only 75 feet wide; the floodgates will create a navigation bottleneck and potentially unsafe conditions for thriving recreational boating, fishing, and marined related businesses in Clear Lake area communities. The City of Nassua bay hereby encourages further study in the project design phase of the Clear Creek floodgate width for small and large vessels to safely navigate in both directions through the gate structures, SH146 bridge piers and fenders to minimize an economic and recreational impact on the Clear Lake area communities.	Engineering	Designs -- Clear Lake Gate	Thank you for your suggestion. The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002358	-03	City of Nassua Bay	That the Clear Lake Gate System and Pump Station and associated infrastructure during preconstruction, engineering, and design take into account surrounding residential and commercial sustainability with any induced effects of the infrastructure in the system's overall protection.	H&H/Environmental	Impacts	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002358	-04	City of Nassua Bay	That more review and direct communication with city officials be a commitment in the preconstruction, engineering, and design phase to work in coordination with local development plans. That if authorization and funding is approved for this project, that the City of Nassau Bay shall not be burdened with any unfunded mandates.	General/ Project Management	Public Input/Cost-Share	Refer to response to Comment # E-2020DEIS-01526-05 regarding funding. Note that the USACE and the designated non-Fed Construction cost-share sponsor will continue to coordinate with Federal, state, and local entities as the project proceeds into PED
E002358	-06	City of Nassua Bay	The width and depth of the Bolivar Roads sector gate will limit future channel development. The Bolivar Roads sector gate placement will reduce the available deep draft anchorage by more than half and the proposed mitigation (mooring anchors) is unsuitable.	Engineering	Designs -- Bolivar Roads Gate	Refer to Section 4.2.3 of the draft Engineering Appendix (Oct 2020) - Anchorage impacts (and forseeable future needs) will continue to be evaluated in the PED phase of the project as the designs are refined and mitigation will be adjusted accordingly. Locations and numbers of mitigation sites will be assessed based on navigational safety factors (winds, waves, currents, etc.), cost, environmental impacts, and long-term maintenance considerations.
E002359	-01	City of South Padre Island Shoreline Department	Regional sediment management and the use of beneficial material should be prioritized as they both have shown how useful and cost-effective in providing a resilient coastline. Consistent beach renourishment utilizing dredged material along with the ten-year federal renourishment cycle will create cost-savings amongst the federal government. Additional sand sources within the South Padre Island area should also be identified to expand upon the options for beach renourishment.	Planning	Alternatives	Thank you for your suggestions, the Study Team will take you suggestions under consideration and conduct further analysis in PED.
E002359	-03	City of South Padre Island Shoreline Department	The addition of ecosystem restoration (ER) measures on South Padre Island should be studied and included to reduce erosion on our barrier island. All portions of the South Padre Island system should be explored and considered to support regional sediment management. Combating erosion within the northern Cameron County portion of South Padre Island through dune vegetation plantings would better protect the Laguna Madre, the Gulf Intercoastal Waterway, and Cameron County's mainland when shoreline flooding does occur.	Planning	Alternatives	Refer to Response to Comment #E002359-01
E002463	-01	City of Seabrook	That any final engineering and design of the Clear Lake Gate System and Pump Station given further review to limit real estate acquisition or impacts to parcels in the City of Seabrook given the non-structural impacts already anticipated to the city's east side with the preliminary design.	Engineering/Real Estate	Designs -- Clear Lake Gate	Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. More specifically, the footprint may be revised to balance feature performance and spatial and cost considerations with community and environmental impacts. Pump Station locations may be revisited as the feature is refined with more detailed impact information, or as area information is collected or as pump station capacity is refined. The interior storm surge gates are scoped at a conceptual level to ensure that performance and cost estimates are adequate to achieve study goals. The interio storm surge gates are Tier one features which will be reevaluated as the outer line of defense are refined.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002463	-02	City of Seabrook	That the Clear Lake Gate System and Pump Station and associated infrastructure during preconstruction engineering and design take into account surrounding residential and commercial sustainability with any induced effects of the infrastructure in the system's overall protection.	H&H/Real Estate	Impacts	Thank you for your suggestions, the Study Team will take it under consideration.
E002463	-03	City of Seabrook	That more review and direct communication with city officials be a commitment in the preconstruction engineering and design phase to work in coordination with not only SH 146 Expansion project but with local development plans. That if authorization and funding is approved for this project, that the City of Seabrook shall not be burdened with any unfunded mandates or actions resulting in the loss of sales tax due to the loss or relocation of businesses.	General/ Project Management	Public Input/Cost-Share	The Study Team will conduct further analysis in PED and will continue to actively coordinate with Federal, state, and local stakeholders as the project proceeds and designs are refined. Refer to response to Comment # E-2020DEIS-01526-05 regarding funding. Note that the USACE and the designated non-Fed Construction cost-share sponsor will continue to coordinate with Federal, state, and local entities as the project proceeds into PED
E002493	-01	City of Kemah	Based on the current study, I have grave concerns about the safety, physical impact, and economic effects of this gate system. It shows the potential to exacerbate flooding in the part of Kemah that is east of SH146, including key commercial and coastal residential properties, and also may impact other parts of the city as well as our commerce, boat ramp, and future development plans. In addition, we have experienced unplanned costs, economic impact, and continuous disruption to our residents, businesses, and citizens from other projects (e.g., expansion of SH146), and this project shows the potential to cause the same problems.	H&H/Real Estate	Impacts	Thank you for your concerns and suggestions, the Study Team will take it under consideration. Note that the Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) and the Bay-side defenses (Galveston Ring Barrier, Clear Lake, Dickinson, Non-structural measures), are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted, and supplemental NEPA documentation will be released for public review and feedback.
E002493	-02	City of Kemah	I will be recommending to the Kemah City Council in our 1/20/2021 meeting to pass a resolution that supports the study but expresses concern for the Clear Lake Gate System and a lack of support for that element of the plan unless and until our city can be fully represented in the planning process and our city leadership can sanction any planned development of this gate system (as well as any other component of the plan that may affect our city).	General	Lack of Support	Thank you for your support and your concerns. Refer to response to Comment # E-2020DEIS-01526-05 regarding funding. Note that the USACE and the designated non-Fed Construction cost-share sponsor will continue to coordinate with Federal, state, and local entities as the project proceeds into PED
M-2020DEIS-01	-01	Old Dominion University	[Summarized] Design the vertical lift gate and number of gate openings with tidal-flow turbines that would generate electricity to offset the cost of the project and solve the problem of funding the high cost of a storm surge barrier. Tidal flow velocities through the gate opening must be greater than 1.8 m/sec for the turbines to efficiently generate electricity [see Basco 2020 reference in comment]. Other areas such as on the East River between Manhattan and Queens, NYC and the Dutch have been generating electricity with "blue barriers" which combines the technology of a storm surge barrier with the generation of a tidal-flow "hydrokinetic" energy. Tidal energy is the most efficient renewable energey source with no downtown for no sun or no wind or no waves. Now is the time to adapt the design to include tidal-flow turbines.	Planning/ H&H/Engineering	Designs -- Bolivar Road Gate	Thank you for your suggestions. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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M-2020DEIS-04	-01	City of League City	The City Council requests that USACE include as part of final chief's report the inclusion of a storm surge gate at San Luis Pass. Elimination of a storm surge gate at San Luis Pass will increase the volume of water in Galveston Bay by an estimated 10%, directly affecting structures on the west end of Galveston Island and increased flooding in the City of Galveston and the regional area.	H&H/Planning	Alternatives	Thank you for your suggestion. The Study Team conducted modeling analysis and concluded that a gate and San Louis Pass was not required. The Gulfside defenses are Tier 1 measures and as such, will continue to be refined in the PED phase. Additional engineering investigations will be conducted at that time, and supplemental NEPA documentation will be produced to encourage public input and review. Refer also to response to comment #E-2020DEIS-2326-04 regarding SLP.
M-2020DEIS-04	-02	City of League City	The City Council requests that USACE include as part of final chief's report the inclusion of fortified dunes to a minimum of 17 feet elevation. Not constructing armored and/or fortified dunes of a minimum height of 17 feet will severely reduce storm surge defense and increased on-going maintenance costs.	H&H/Engineering/ Planning	Alternatives/Performance	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
M-2020DEIS-04	-03	City of League City	The City Council requests that USACE include as part of final chief's report the inclusion of an extension of the Clear Lake Gate System to protect the City of Shoreacres. The proposed gate system at Clear Lake is insufficient in size and will negatively impact the regional area.	H&H/Engineering	Performance/Designs -- Clear Lake Gate	Thank you for your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
M-2020DEIS-04	-04	City of League City	The City Council requests that USACE completes further review of the ring barrier levee system for the City of Galveston, Texas. The Ring Barrier Levee for Galveston may create interface issues with the City of Galveston's and regional area's active and planned drainage improvements.	H&H/Engineering	Designs -- Ring Levee/Impacts	Thank you for your suggestion, the Study Team will continue to coordinate with the City of Galvestion during the next phase of the project. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Gates, Pumping Stations, and overall Ring operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Engineering Manual) based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities.
M-2020DEIS-07	-01	Galveston Wharves	The Port of Galveston prefers the ring barrier be constructed on the northern edge of the Port property, as close to the water's edge, wherever possible so as to protect as many Port assets as possible. These assets are important to the City of Galveston, the Galveston Region, and the State of Texas.	H&H/Engineering	Designs -- Ring Barrier Levee/Benefits	Thank you for your suggestion. The USACE and its non-Fed Construction sponsor will continue to coordinate with the Wharves Board and other local entities (e.g., Coastal Guard, City of Galveston, etc) as we move into the next phase of the project.
M-2020DEIS-07	-02	Galveston Wharves	The Port urges that the design and construction of the barrier on Port property be accelerated as much as possible to avoid duplication of public resources as the Port implements its Strategic Master Plan. Ideally, it would be possible to leverage resources of both entities to more efficiently meet the needs of both entities. The Port requests the opportunity to coordinate with the USACE throughout the design process, as the ideal path for the barrier will change. This collaborated effort benefits all partners.	Project Management	Implementation Schedule	Thank you for your suggestion. The USACE and its non-Fed Construction sponsor will continue to coordinate with the Wharves Board and other local entities (e.g., Coastal Guard, City of Galveston, etc) as we move into the next phase of the project. Note that the sequencing of feature construction has been strategized using a Multiple Lines of Defense approach that takes system of system's perspective based on a series of decision-making criteria (refer to response to Comment #E002200-05).

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M-2020DEIS-07	-03	Galveston Wharves	In addition to its functionality with Port cargo and cruise operations, the aesthetics of the barrier should be a high priority because of its economic and social impacts on Galveston's Central Business Distric and Port property accessed by the public and adjacent to the Port.	Environmental	Impacts	We concur, The Study Team is collaborating with surge barrier experts. The surge barrier gates function, maintenance, and ascetics will be further addressed during PED.
M-2020DEIS-08	-01	Lakewood Yacht Club	[Summarized] The 75-ft Clear Creek gate width is insufficient for two way traffic in the Clear Creek Channel. While the designated federal navigation channel is only 75 ft wide, the actual channel is approximately 200 ft wide, with depths of more than 15 ft. Currently there are two navigable passages under the Kemah (SH146) with widths of 100 ft and 75 ft that allow one-way passage with traffic staying to the starboard side of the channel for their direction of travel. The recent SH146 construction has restricted traffic through one side of the bridge that has resulted in unsafe conditions that required flagman to enforce one-way traffic and ensure safe traffic flow. Following the DoD Uniform Facility Criteria for entrance and interior channels with marinas, the gate width should be 198-231 ft (assume max vessel length 132 ft presently mooring on Clear Lake). Following USACE design	Engineering	Designs -- Clear Creek Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			guidelines for small boat harbors, the gate width should be 140-162 ft to accomodate two-way traffic (assuming 27 ft beam width that currently moor within Clear Lake). We recommend that a navigation assessment be conducted to determine the minimum sector gate width to maintain safe navigation for all vessels which presently use the channel and should include assessing the volume of traffic and current and future vessels which would transit the barrier. The gate width should be sufficient to maintain two-way traffic or alternatively two gates with one-way traffic through each.			
M-2020DEIS-08	-02	Lakewood Yacht Club	…the gate may not be aligned with the Hwy 146 bridge navigation channels. From the drawings presented it is difficult to ascertain if the gate is aligned with the bridge. Alignment is critical to allow for proper sight lines for vessels approaching the gates from either side to see each other and navigate accordingly. With the environmental flow gates in places, it is anticipated that it will be difficult to see vessel traffic through them, even in open positions.	Engineering	Designs -- Clear Creek Gate	Refer to Response to Comment #M-2020DEIS-01
M-2020DEIS-08	-03	Lakewood Yacht Club	A two-dimensional, or preferably three dimensional, hydrodynamic model should be developed, calibrated, and used to assess the currents in the proximity of the gates. These currents should be assessed to ensure that they will not cause navigation and/or safety issues for vessels which will use the gate. The vessels may include non-motorized, sail or paddle propelled vessels.	H&H	Impacts	Refer to Response to Comment #M-2020DEIS-01 regarding additional investigations and design refinements in PED - these will include additiona H&H modeling.

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M-2020DEIS-08	-04	Lakewood Yacht Club	[Summarized] Additional H&H analyses should be conducted including: updating the models with the latest estimate of future rainfall intensity, duration, and frequency curves from NOAA and/or other published sources; analysis of what rainfall storm duration, and associated intensity, creates the maximum water levels within Clear Creek and Clear Lake with and without the project conditions at frequency of the level of projection (i.e. 100 year return period) which the project is designed to protect for; conduct a joint probability analysis to ensure there is no increase in flooding for the gates when open with probable elevated Galveston Bay water levels which may be higher than MHW but less than the 100-year storm surge conditions; and analyses should account for future development.	H&H	FWOP/Impacts	USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Refer to Response to Comment #E002478-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED.
M-2020DEIS-08	-05	Lakewood Yacht Club	[Summarized] The pump system should be designed to ensure that when the gates are open there is no increase in water levels within Clear Creek watershed or Clear Creek Lake as compared to the same rainfall surge conditions without the project as calibrated and/or validated for Hurricane Harvey including associated storm surge. With the gates closed, the pump system should be designed to adequately keep water levels in Clear Creek and Clear Lake at or below the existing condition water levels which would be associated with the given rainfall IDF alone in the absence of any storm surge up to at least the 100 year return period rainfall event (adjusted for latest IDF curves). Project conditions should compare to these water levels rather than storm surge levels to show that the pump system is effective. A scenario with riverine flooding which is equal to or only marginally less than what would have been experienced	H&H/Engineering	Designs -- Clear Creek Gate	Refer to Response to Comment #M-2020DEIS-08-04 regarding inducements and response to Comment #M-2020DEIS-08-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED.
			due to storm surge without the project is unacceptable. The pump size in Appendix D, Annex 2 says the total pump capacity was sized at 45,000 CFS, but for cost estimating it was reduced to 20,000 cfs. We are very concerned that the reduced pump sizing would lead to increased rainfall flooding induced still water levels, even beyond what is documented in Appendix D, Annex 2.			
M-2020DEIS-08	-06	Lakewood Yacht Club	[Summarized] The currents within the Clear Lake Bypass Channel to the proposed new pump station need to be reviewed for navigation and safety concerns as well as impact on existing structures. There will likely be very high currents under conditions when pumps are running which may require precautions put into place to ensure navigation safety, including for non-motorized vessels including paddle and/or sail propulsion, and that recreational mariners are advised of operations including test operations of pumps. As well, strong or high currents may impact existing shoreline, dredged areas, and/or existing and proposed dock structures that could result in restrictions placed on the vessels which can be moored in slips adjacent to the channel and/or need to upgrade these facilities to accomodate the higher currents.	H&H/Environmental	Impacts	Refer to Response to Comments M-2020DEIS-08-01 regarding additional investigations needed in PED to refine the designs for these structures to address navigational safety concerns.

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M-2020DEIS-08	-07	Lakewood Yacht Club	There is indication that additional dredging may be required for the Clear Creek Bypass Channel. The impact of this dredging on adjacent structures should be addressed and mitigated.	H&H/Engineering	Performance/Impacts	Concur. Refer to Response to Comments M-2020DEIS-08-01 regarding additional investigations needed in PED to refine the designs for these structures. A re-assessment of dredging will be undertaken at that time.
M-2020DEIS-08	-08	Lakewood Yacht Club	The Clear Creek structures are not outlined on the project schedule (Fig 12-2, Appendix D). We would urge that the relatively smaller, and shorter construction duration, Clear Creek portion of the project be completed in advance of the Bolivar Roads porti	Project Management	Implementation Schedule	Concur - Detailed construction schedules will be developed for every feature of the Recommended Plan in PED. The design and construction durations for these features will be fully assessed and optimized to assure cost effectiveness while taking into account the need to avoid and mimimize impacts to the environment, the surrounding communities, and navigational traffic to the extent practicable, and mitigation will be undertaken to offset unavoidable impacts.
M-2020DEIS-10	-01	City of Clear Lake Shores	The Clear Creek Watershed Overtopping section of the study (Sec. 5.5 of Appendix D Annex 2) does not include areas of the City of Shoreacres where storm surge could flood the City of Shoreacres and flow into the Clear Creek Watershed behind the protection provided by the Clear Creek flood gates and pumps. The City of Clear Lake Shores hereby expresses its support for the Coastal Texas Protection and Restoration Feasibility Study's recommendations to alleviate flooding risk that include flood gates and pumps on Clear Lake and Clear Creek to mitigate storm surge but strongly enourage further study in the project design phase of overtopping in areas of the City of Shoreacres that may reduce regional flood protection and the efficacy of the Clear Creek flood gates and pumps.	H&H/Engineering	Designs -- Clear Lake Gate	Thank you for your support and your suggestion. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
M-2020DEIS-13	-01	David Burkett	[Summarized] The entrance channel of the Galveston-Houston Ship Channel that has been selected for the Coastal Barrier surge gates has extreme sediment movement from shoreline erosion and transport both from the north and south. There is no reference to how sediment movements would be handled or even to state that this a potential problem in the area. Also there is no reference to what was learned of sediment movement during Hurricane Ike and if there are no such studies are there any analogs for how large sector gates have been designed in other areas with large sediment concerns?	H&H	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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M-2020DEIS-13	-02	David Burkett	[Summarized] Under the current proposed plan there is an increased probability for a failure of the North Jetty which would allow huge amounts of sediment to be washed into the area of the Bolivar Roads, causing impacts to the navigation channels and likely damage to the structures themselves. The North Jetty becomes more susceptible with the increase in sediment from the Beach and Dune Renourishment plans that would be carried southward by long-shore currents and pile up on the north side of the North Jetty. As well, changes to the geometry and orientation of the navigation channel and anchorage areas increase the velocity of tidal currents and increase the potential for undercutting of the jetty. Undercutting is the greatest weekness of the Jetty because there is no deep support. Placing the Surge Gate System in this area of extreme movement wiwth no initial design or operational plan to control or to even	H&H	Impacts	Your concerns have been noted, and we will take them under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			reduce the potential problems of sediment movement is totally illogical.			
E-2020DEIS-01484	-01	Brandt Mannchen	[Summarized] I am opposed to the study because storm surge, hurricanes, climate change, sea level rise, and rainfall are not the problem; people and human intervention in natural ecosystems and placement of human settlement and actions in vulnerable and dangerous places are the problem. Implementation of the CTS will not prevent climate change, sea level rise, subsidence, storm surge, rainfall flooding, erosion, sedimentation, or other natural functioning processes on the Texas Coast and the impacts they cause when humans try to live in places they should not. The CTS should be focused on two goals, “Do not assist and place people in harm’s way; keep people out of harm’s way”, and “Work with, and not against Nature.	Planning	POOCs/Purpose and Need	Thank you for your comment.
E-2020DEIS-01484	-02	Brandt Mannchen	[Summarized] I am skeptical that the Corps has found enough similar beach quality sand that can be used to renourish the beaches and feed sand dunes for 50 years, 100 years, and in perpetuity. Dr. John Anderson of Rice University has studied sand deposits for decades off the Upper Texas Coast and he has stated publically that he does not see that there is enough beach quality sand to renourish 60+ miles of beach for 50+years. I am concerned that later in the process, the Corps will determine that there is a lack of beach quality sand and will either use sand or sediments of the wrong size or reinstate the huge levee system which will help degrade Galveston Island and Bolivar Peninsula as barrier islands that protect the coastal mainland and migrate toward the shore in Galveston Bay.	Engineering	Designs -- Beach and Dune	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.

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E-2020DEIS-01484	-03	Brandt Mannchen	It is the construction of the CTS that endangers "natural environments" over the long-term. The gates at Bolivar Roads artificially restrict water, nutrients, organic matter, sediments, and organisms from moving or migrating as they normally would, in and out of Galveston Bay. I do not believe the restricted access that the CTS creates to Galveston Bay will be good for the Bay or is acceptable. I do not support these gates.	General	Lack of Support	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01484	-05	Brandt Mannchen	[Summarized] The Corps never spells out what the nonstructural improvements will be, where they will be specifically, how they will be paid for, how they will be implemented, and how they will be enforced. I support a significant program of buyouts, planning for when buyouts should occur, planning for where buyouts will occur, planning for where communities will move after they are bought out, planning for how this will occur with assistance to maintain community cohesion and reduce environmental injustice, planning to assist ecosystems to move as climate change effects manifest themselves more completely, etc. The Corps must tell the public what it will do or what other authorities will do if nonstructural improvements are not implemented or implemented poorly.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E-2020DEIS-01484	-06	Brandt Mannchen	While I support most of the ecosystem management proposals in the CTS the Corps ignores how many of these areas will be swallowed up by sea level rise in the future. The Corps does not provide any solutions about where mitigation lands will exist when this happens since these lands are supposed to be protected in perpetuity. Since humans cause much of the sea level rise now and most in the future these mitigation lands must be provided for (strategic withdrawal for ecosystems) in perpetuity by the Corps and other sponsors of the CTS.	Environmental	FWOP/Mitigation	In accordance with the Water Resources Development Act (WRDA) of 2016, Section 1161 and subsequent implementation guidance (CECW-P Memorandum dated October 19, 2017), the USACE prepared and included monitoring and adaptive management as part of the Mitigation Plan (Appendix J of the EIS). The mitigation plan incorporates a plan to track and improve restoration success through monitoring and adaptive management. The Mitigation Plan includes a description of the monitoring activities, the criteria for success, and the estimated cost and duration of the monitoring. It also specifies that monitoring will be performed until restoration success is achieved.
E-2020DEIS-01484	-07	Brandt Mannchen	the Corps mentions there are 114 miles of breakwaters. The Corps never provides studies that detail where the sediment that will be trapped by each breakwater goes now, what affect each breakwater will have on that existing sediment fallout zone, and what mitigation will be implemented to make-up for the sediment that no longer settles in the existing sediment fallout zone.	H&H	Impacts	The entire point of constructing the breakwaters as part of the ER measures is to retard the erosional forcing from barge traffic moving up and down the GIWW, allowing for sediment deposition and then natural recruitment and recovery of marsh ecosystems. Sediment deposition would be supplemented with the beneficial use of dredge material. [Refer to Section 2.3.2.2.2 of the dEIS] Breakwaters are a proven method to greatly reduce, and sometimes reverse, the loss of marsh habitat that erodes along the GIWW due to barge wakes and channel fetch. The shorelines and marshes in these areas would be restored and protected from storm surge and erosion and from the effects of sea level rise. Beyond the ecological lift just described, this project also would reduce maintenance dredging of the GIWW. Ancillary benefits can be expected when the ecological habitat is restored in this way. Aside from the ecological losses caused by the erosion along the GIWW, the erosion adversely effects navigation by reducing the channel's shelter from wind, waves, and fetch and by increasing operation and maintenance costs due to higher shoaling rates. No mitigation will be required as the recovery of the marsh systems will be a net positive condition.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-01484	-08	Brandt Mannchen	The Corps never looks at an alternative where oil/gas and petrochemical industries pay for their own hurricane storm surge protection, pay their own costs or most of their own costs, and tells the status of each industrial facilities storm surge protection today, how it would be affected by storm surge, and what can and should be done to improve that protection (new levees, strengthened levees, higher levees, etc.). The Corps should present an alternative that reduces public investment and increases private investment for storm surge protection. Companies are required to protect their assets and governments should require companies to protect the public from the residual liability they fail to cover via subsidized public liability and the CTS as proposed.	Planning	Alternatives	Refer to the response to Comment #E-2020DEIS-0184-05
E-2020DEIS-01484	-09	Brandt Mannchen	The Corps fails to give a detailed analysis of how ebb-tide of storm surge will affect the CTS. The Corps should tell the public where the ebb-tide will go, concentrate, what effects this will have on the CTS, what ebbtide effects will cost, and what mitigation measures can be implemented to reduce these effects.	H&H	Impacts	Refer to the response to Comment #E-2020DEIS-0184-03
E-2020DEIS-01484	-10	Brandt Mannchen	The Corps fails to give a detailed analysis of how rainfall flooding will affect the CTS. The Corps fails to give a detailed analysis of how sea level rise will affect the CTS. The Corps fails to give a detailed analysis of how sediment and erosion will affect the CTS. All of these natural processes or phenomena will affect how the CTS works and its maintenance.	H&H/Engineering	Impacts/ Designs	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01484	-11	Brandt Mannchen	The CTS will destroy bay-bottoms and the mouths of Clear Creek/Lake and Dickinson Bayou. How this environmental destruction and the degradation of these areas will be mitigated needs to be clearly stated in the Summary.	Environmental	Impacts	Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01484	-12	Brandt Mannchen	It is astonishing that the Corps still maintains that “Final cost apportionment subject to CBRA zone determination” cannot be calculated. At this late date, the public has a right to know what all parts of the CTS will cost, what its maintenance costs will be, and how these will be funded for the project’s life.	Costs	Costs	Costs associated with the construction of features in the CBRS Units were refined post-release of the Draft Report/Draft EIS in October 2020 and have since been certified in accordance with USACE policy and guidance. Please refer to Section 3.9 (total cost for the levee/tie-in on CBRS Units is $96.884M) in the Main Report. The Coastal Texas Protection and Restoration Feasibility study, as presented by Galveston District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. On 13 Apr 2021, the cost estimate received ATR Certification - this certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

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E-2020DEIS-01487	-01	Lee von Gynz-Guethle	[Summarized] The Sand Point Ranch, LP supports efforts to protect Keller Bay by retaining proposed measure CA-5 in the final report. Keller Bay is a unique and vital resource with 1,200 acres of wetlands, 250 acres of seagrass and 16 miles of shoreline serving a multidue of species. Keller Bay currently remains intact but faces significant immediate risk from erosion and breach as comfirmed by USACE in a 2009 FEIS for Matagorda Ship Channel Improvement Project and in the Texas Coastal Resiliency Master Plan.	General	Support	Thank you for your support, and we will consider your suggestions as we progress into the PED phase.
E-2020DEIS-01506	-01	Michael Zuteck	An Upper Bay Barrier would protect over 2/3 of the property and economic value (including NASA and the critical channel oil industry), for less than 1/3 the cost and environmental impact. Industry and citizenry would have a more focussed reason to fund it. It could be providing protection before the end of the decade. This is what we should do first. [Map includes with comment]	Planning	Alternatives	Refer to the Plan Formulation Appendix, Section 4.2.4, and specifically to Table A-18 which compares the Recommended Plan (Alt A) to a Galveston Bay rim alternative (D2). Also refer to Response to Comment #E-2020DEIS-2326-01 regarding tradeoffs and one of the primary objectives (minimization of residual risks). Alternative D2 comes with significant residual flood and lift safety risk, such that it could be classified as a nonpracticable alternative
E-2020DEIS-01509	-01	Bill Sargent	I don't believe that your double natural dune system will work in the long run. If you look at the before and after photos of what the dunes looked like on the west end of Galveston Island after the two hurricanes that hit Louisiana this hurricane season you will see that these natural dunes were decimated and this was without our having a direct hit (the hurricanes were about 100-150 miles to the east of us). For the system to work we must have fortified (Engineered) dunes! Failure to do this will create a false sense of security that we are protected when we actually are not without having to replace the dunes after every time there is a major storm.	H&H/Engineering	Designs -- Beach and Dune	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E-2020DEIS-01509	-02	Bill Sargent	We need to have gates added to San Luis Pass so we can plug the back door to coastal flooding. They have these in the Netherlands and they work. This could be added when the bridge between Galveston Island and Brazoria County is rebuilt in the next ten years.	H&H/Planning	Alternatives	Refer to Response to Comments #E-2020DEIS-2326-04
E-2020DEIS-01516	-02	Walter Wolff	[Summarized] Section 5 of Beachside Village is under development and there is now a new beach access point between 11379 Beachside Dr (Lot 514) and 111375 Beachside Dr (Lot 515), Beachside Village. Add this beach and access bridge to the plan.	Real Estate	Beach Access	Thank you for this input, we will take this under advisement as we move into the PED phase of the project.

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E-2020DEIS-01521	-01	No Name	Sending this e-mail to express my view of the wall that is planned in front of my neighborhood by the North Jetty on Port Bolivar. My opinion is no matter how much planning is put in to building the wall it will not only block our views but be unsightly! This will impact the value of our property. It will become difficult to sell a house without the view we have enjoyed for many years! If the Coastal Barrier and GLO continue to destroy my houses value I would like to hear news of a possible buyout of properties.	Environmental	Impacts	Thank you for your concern. Note that the Recommended Plan's Tier 1 measures (Gulf-Defenses including the combi-wall of concern) will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01528	-01	J. Bee Bednar	[Summarized] A single 75 ft wide floodgate is inadequate for the normal boat traffic in Clear Lake Channel, creating a dangerous safety issue for boat traffic. Since 2004 the SH146 bridge has had two channels, a North channel 95 ft wide used primarily for inbound boat traffic, and a separate 60 ft wide South channel used by outbound boats. The waterway at this point is more than 175 ft wide and about 20-25 feet deep, so there is room to maneuver boats into two single file lines. This has proven to be a successful vessel traffic separation system that has greatly increased the safety and convenience of navigating the channel under the bridge. Clear Lake boaters have nearly a year of experience with one of these two channels being closed at times due to construction to widen the existing SH146 bridge, as a result the Coast Guard requires floating traffic signals and flagger boats to manage	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			boat traffic whenever one of these channels is closed, allowing only one-way traffic through the open channel. Please consider a second 75 ft wide floodgate next to the proposed one. This will preserve the 2-channel traffic separation pattern in place and avoid creating a choke point, with limited visibility of oncoming traffic through the gate due to the floodwall and having a flotilla of boats maneuvering on either side of the gate in strong tides awaiting an opportunity to proceed through. The 2-gate approach will certainly be a safer and more efficient alternative.			
E-2020DEIS-01543	-01	Andrew Reiser	The proposed 75' navigation gate in the Clear Lake channel is totally inadequate for the volume of traffic that uses the channel. As suggested by the GBCA there should be 2 gates that size, one for traffic in each direction. Clear Lake is the 3rd largest recreational boating community in the US home to over 7,000 marina slips, a single 75' navigation gate is not big enough. The channel is regularly used by large groups of youth sailors being towed in an out of the bay by their coaches, and such a small gate for traffic going both directions would be very hazardous. Occasionally for large events the number of youth sailors in small boats using the channel can be as many as 200-300, all heading through the channel to reach their racing area at the same time. Considering the flood wall that will be attached will be 17 feet tall, such a narrow gate would have limited visibility to oncoming traffic which	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			would contribute to the hazard.			

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E-2020DEIS-01543	-03	Andrew Reiser	My neighborhood [western shore of Galveston Bay in Kemah] and many others are in the "nonstructural impacts" area shown, but not defined, in the Project's executive summary.	Planning	Alternatives	The Main Report has a section at the back labeled "Key Terms" which offers a definition of non-structural improvements. Also refer to the USACE's National Nonstructural Committee's (NNC) website for further information: https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/nnc/
E-2020DEIS-01555	-01	Chris Holley	Per USCG safety studies a single 75 ft channel would be unsafe for use during a high trafic time period and it would restrict users like myself [boat powered by wind propulsion] from accessing the bay or the lale during these times. It also would create undue risk for sailors who are sail only as it would create an extra bottle neck for us to have to traverse goung out of the lake as the prevailing wind is often through the bridges. We need at least 2 channels, or one large channel to permit traffic of all types through the bridges and floodgates.	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E-2020DEIS-01557	-01	Mike Johnson	One 75 ft channel for traffic going both ways will greatly restrict access and be a hazard to navigation. Two channels will be needed to accommodate the traffic.	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E-2020DEIS-01563	-01	David Dillehay	The proposed 75-foot wide flood gate in the Clear Lake Channel would be a disaster for the boating community, both pleasure and commercial, in the Clear Lake area. The expansion of TX-146 has required similar restricted-width at the proposed location and even at times of low traffic flow, the channel has become dangerous without constant supervision by flag-boats. During high traffic periods such as summer weekends, the restricted width channel is flat dangerous even with that supervision as impatient or incompetent boaters move through without due regard...I have no doubt that both property and lives will be lost should a 75- foot wide flood gate be permanently installed. It would appear that the US Coast Guard agrees with that assessment, as they have required TXDOT to have manned traffic control boats present while the bridge expansion restricts channel width. As a resident of the Clear Lake area who has been	Engineering	Designs -- Clear Lake Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			impacted by flood waters, I appreciate USACE's efforts to improve our safety. I must ask you, however, not to trade one danger for another, as this 75-foot wide proposal would simply swap an occasional danger for an ever present one.			
E-2020DEIS-01677	-01	Bob Ware	I am writing to express my concerns regarding the subject study proposing a flood wall and 75' floodgate across the Clear Creek channel just west of the Hwy 146 bridge construction. This proposal will not only severely restrict boat traffic in and out of the Clear Lake area but will be a terrible eyesore.	Environmental	Impacts	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-01677	-02	Bob Ware	During heavy rainfall periods this flood wall would also restrict large amounts of water from escaping through the existing channel, which is at least double the 75' width of the proposed floodgate. The study should be addressing how to move more water into Galveston Bay to prevent flooding in the surrounding areas rather than restricting flow and increasing flooding potential.	H&H	Impacts	USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. The H&H modeling conducted thus far was used to size the pumping station capacity proposed under the Recommended Plan. Note that in the event that we experience a storm system that brings rain, but no surge, the gates and pumping could be deployed to reduce flooding in the watershed. Also Refer to Response to Comment #E-2020DEIS-01677-01 regarding additional investigations and refinements to these features in PED.
E-2020DEIS-01681	-01	David Tansey	[Summarized] The Kemah flood wall channel plan is a death waiting to happen. The volume of novice boat and personal watercraft operators passing through that opening is significant. You are about to create a situation where those novices are going to pass through a channel ½ the size without separation. You're planning to put them in two-way traffic within feet of sailboats and large vessels. It will only be a matter of time before someone is grievously injured or killed. Please reconsider the consequences of your plan.	Engineering	Designs -- Clear Creek Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
E-2020DEIS-01682	-01	Mary Duke	My main concern is what will the cost of ongoing maintenance do to the property owners of Galveston County. Our taxes are already very high and this system sounds extremely expensive to maintain. For a county with a small population especially the Bolivar Peninsula how are we supposed to maintain it?	Project Management/Planning/Environmental	Implementation	As of April of 2021, the Texas Legislature is currently in session and have proposed bills to establish the Gulf Coast Protection District as the NFS for the project's CSRM Features (including the Beach/Dune complexes on Galveston Island and Bolivar Peninsula), and the Texas Legislature will determine the source of funding the entity's effort. The City of South Padre Island and Cameron County are considering partnering with TXGLO to cost-share the SPI CSRM Feature, and the TXGLO has submitted of Letter of Intent to become the cost-share sponsor for all ER features in the Recommended Plan. OMRR&R will be the responsibility of these NFS's. In the PED phase, an Operations Manual will be developed for each feature in the Recommended Plan detailing the day-to-day and emergency response operations of that particular feature. These decisions will be informed by subject matter experts to assure performance.
E-2020DEIS-01687	-01	Jay Brinkmann	[Summarized] The proposed 75-ft floodgate on Clear Creek will create significant problems for boats attempting to transit the already tricky passage out to Galveston Bay. The new 146 bridge is going to lengthen the constricted transit space, as boats will have to pass between the piers and fenders for two bridges instead of just one. Creating a 75-foot wide bottleneck immediately before the bridge passage in which skippers will have difficulty maintaining position in the narrow straits of the bridge passage in stiff cross winds while waiting for traffic to clear a 75-foot wide flood gate or make the sudden turns necessary to transition from the floodgate passage to the Highway 146 passage, as is being experienced with the alternate closing of the north and south channels during the bridge construction, and the need for signal lights and flagmen to manage the problems of the current constricted	Engineering	Designs -- Clear Creek Gate	The Clear Lake Gate and Pumping Station is a Tier 1 feature (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work to avoid, minimize, and mitigate impacts to the surrounding resources in the Clear Lake area. A supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. Engineering designs will be evaluated using ship simulations to address concerns surrounding vessel size and traffic patterns. The USACE (and its non-Fed Construction cost-share sponsor) will continue to coordinate with stakeholders as well as the Coastal Guard and TXDOT, and other Federal, state and local entities throughout the process.
			passage. The proposed 17-foot high structure will make it very difficult to spot oncoming vessel traffic in an area already congested with small fishing boats, with sufficient time to react even at dead slow speed. The gates cannot be allowed to choke off the usefulness of our lakes as important recreational and commercial assets, particularly since modifications to the plan can occur without degrading the flood protection aspect. My request is that the plan be modified to increase significantly the width of the proposed Clear Creek floodgate opening.			

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E-2020DEIS-01690	-01	Rebecca Gribben	This wall disrupts the lives of us full time residents between the north Jetty and Fort Travis on Port Bolivar Peninsula. We moved here to be walking distance from the ocean. We moved here from Nebraska knowing full well the risk of hurricanes. We made the decision to be ok with that risk. By having the wall built you are taking away my right to freedom of living in this area. At some point we need to let nature take it's course and humans can accept the risk or move to an area that doesn't have that risk. Now my property could end up being worth nothing.	Planning	Alternatives	Thank you for your concern. Note that the Recommended Plan's Tier 1 measures (Gulf-Defenses including the combi-wall of concern) will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01690	-02	Rebecca Gribben	[Concern about] amount of materials and sand needed for this project. Sand is already in shortage across the world and causing sand to be stolen from beaches in other countries.	Engineering	Designs -- Beach and Dune	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E-2020DEIS-01694	-01	Christopher Allison	I spent 100’s of hours working with the Region 4 Members and would greatly appreciate you considering to add the Cameron County managed beaches north of the City of South Padre to the plan. The addition is being requested as an Ecosystem Restoration project similar to the Restoration that will take place on the Southern end out the Padre Island National Seashore. This addition is critical for several reasons. *Hundreds of thousands of Valley Residents and tourist use these beaches as opposed to the very small fraction of 4X4 Trucks that can access the Southern End of the National Seashore. *The island in this area is much narrower and more susceptible to erosion affecting the Laguna Madre than the island is in the National Seashore area *South Padre Island is one island. Any gaps in protection defeat the purpose of the plan just as you recognize for the important Region 1 projects.	Planning	Alternatives	Thank you for your suggestions, we will take this under consideration as additional analysis are conducted during PED.
E-2020DEIS-01469	-01	NOAA NMFS Habitat Conservation Division	The NMFS HCD anticipates that any adverse effects, which might occur to federally managed fishery resources and their EFH, would be temporary and minimal. Therefore, NMFS does not object to the authorization of all of the actionable measures (including B-2 of the Tier One measures). The NMFS HCD concurs the proposed actionable measures of the recommended plan would provide an overall positive benefit to the ecosystem by increasing EFH quality and quantity, while also protecting existing EFH from storm surge, tidal energies, and relative sea level rise.	General	Concurrence	Thank you for your comment
E-2020DEIS-01483	-01	TWDB	Final DEIS Sections 4.3 and 4.4; Appendix D Engineering Annex 2: While we recognize that rainfall surge coincidence was considered, please consider including additional freshwater input when simulating water surface elevation. Omission of additional freshwater input, no matter how rare, could be problematic considering that recent extreme events showed compound effects of rainfall and storm surge. Concurrent, prior, or subsequent rainfall to storm surge could alter the functionality and operations of the gates and other protective measures.	H&H	Modeling	Refer to Response to Comment E002433-01 - Additional storm modeling, hydrologic modeling, hydrodynamic modeling, ship simulations, wind/current analyses, and sedminet transport modeling will be performed in the next phase to inform design refinements

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E-2020DEIS-01483	-02	TWDB	Final DEIS Sections 4 and 5; Appendix D Engineering - Annex 2: Please consider direct rainfall onto the surface of the bay in addition to the effect of riverine flow and storm surge. Rainfall on the bay surface is an important factor for bay hydrodynamics and should be considered when closing or opening the gates. For example, almost 40 inches of rainfall directly fell onto Galveston Bay during Hurricane Harvey. That amount of freshwater input to the system could cause significant changes in water surface elevation.	H&H	Impacts	Refer to Response to Comment E2020DEIS-01483-01
E-2020DEIS-01483	-03	TWDB	Final DEIS Sections 4 and 5: Please consider the potential impacts of all barrier structures on the local wind field. There is a potential for the barriers to cause changes in wind field and consequently alter wind-driven circulation patterns that influence bay hydrodynamics.	H&H	Impacts	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.
E-2020DEIS-01483	-05	TWDB	Final DEIS Section 4.3.1.1.2: As mentioned in the report, new structures in the Galveston Bay Entrance Channel might reduce the tidal exchange leading to changes in salinity. Please also consider the effect of such reduction in flux exchange and changes in salinity levels on sediment transport (for reference: https://doi.org/10.1016/j.margeo.2014.11.001).	H&H	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01483	-06	TWDB	Final DEIS Section 4.3.1.1.2: Please consider running a sediment transport model during an extreme event such as Hurricane Harvey to assess the impact of the proposed project on sediment transport.	H&H	Impacts	Refer to Response to Comment E2020DEIS-01483-01
E-2020DEIS-01483	-07	TWDB	Final DEIS Section 5.4: For the future scenarios, please consider projected changes in temperature and precipitation due to a changing climate. Although it may be difficult to predict with confidence what precipitation trends will be in Texas over the next half century, upper and lower bounds of multiple models can be examined to quantify uncertainty.	H&H/Environmental	FWOP	Refer to Response to Comment E2020DEIS-01483-01

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E-2020DEIS-01483	-08	TWDB	Appendix D Engineering Section 2.8: Please consider investigating the impacts of the proposed project on long term changes in salinity in Galveston Bay. The simulation results indicated that the salinity change was generally less than 2 ppt after one year; however, the addition of the structures could gradually change the salinity over time, which could be compounded by future changes in temperature and precipitation patterns.	H&H	FWOP/Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-01483	-09	TWDB	Final DEIS Sections 4 and 5: Given the projected changes in water velocity and sediment transport mechanisms, please consider the fate and transport of contaminates from Superfund sites should these locations loose integrity during flooding. For example, the San Jacinto River Waste Pit is prone to flooding which lost its integrity during Harvey (for reference: https://semspub.epa.gov/work/06/100003945.pdf).	H&H/HTRW	Impacts	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.
E-2020DEIS-01483	-10	TWDB	Final DEIS Section 5: Please consider with caution the reuse of dredged sediments in the Galveston Bay region. Both Galveston Bay and the Gulf of Mexico have a history of contaminated sediment (e.g., heavy metals, PCBs, Dioxins, and PFAS). Dredging such sediments could cause resuspension of toxic compounds from disturbed sediment to the water column. Please consider that reusing the polluted sediment could contaminate new regions with no history of water pollution and extensive sampling may be required prior to reuse.	Environmental	Impacts	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.
E-2020DEIS-01483	-11	TWDB	Appendix D Engineering Section 2.8: Please consider providing an assessment of how the Coastal Barrier Coastal Storm Risk Management System, particularly the gate structures proposed for Bolivar Roads Pass, may affect the transport of an oil spill in Galveston Bay.	H&H	Impacts	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.
E-2020DEIS-01483	-12	TWDB	Final DEIS Section 3.4: Please consider revising the relevant portions in this section (pages 3-18 and Table 3-7) to consider the most recent hydrologic events such as Hurricane Harvey (2017).	Environmental	Existing Condition	Thank you for your suggestion, we will take this under advisement and coordinate with the TWDB both in the closeout of the feasibility and continuing on into the PED phase of the project.
E-2020DEIS-01483	-13	TWDB	Final DEIS Section 4.4.2.1.2: The following statement, "…receives about 38 percent of the average combined freshwater inflow to the estuary." is supported by a TWDB 2018 citation referencing a webpage which is no longer valid. Furthermore, the citation is based on an outdated model (TxEMP; 2001) that is no longer used for freshwater inflow studies and an outdated coastal hydrology dataset (1941-1990). The TWDB recommends obtaining an updated estimate of freshwater inflow by request to coastal data@twdb.texas.gov.	H&H	Modeling	Thank you for your suggestion, we will take this under advisement and coordinate with the TWDB both in the closeout of the feasibility and continuing on into the PED phase of the project.

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E-2020DEIS-01483	-14	TWDB	Appendix D Engineering Section 2.3.2: Please include the period of record that was used to calculate the average annual freshwater inflow values in Table 2-3, as the long term average varies with the period of record. Please also include the period of record used to calculate the average salinity values presented in Table 2-4.	H&H	Modeling	Thank you for your suggestion, we will take this under advisement and coordinate with the TWDB both in the closeout of the feasibility and continuing on into the PED phase of the project.
E-2020DEIS-01483	-15	TWDB	Appendix D Engineering Section 2.8.2: The freshwater inflow values used in the salinity, velocity, and environmental modeling as referenced in Schoenbaechler and Guthrie, 2012 is outdated. The TWDB makes annual updates to the freshwater inflow dataset. Please specify the dataset version number or period of record used. Also, updated data can be obtained by request to coastal-data@twdb.texas.gov.	H&H	Modeling	Thank you for your suggestion, we will take this under advisement and coordinate with the TWDB both in the closeout of the feasibility and continuing on into the PED phase of the project.
E-2020DEIS-01483	-16	TWDB	[Summarized] Commentor states that the citations listed are no longer valid and need correction. As well there is one reference not cited in the text but in the references section of the DEIS and two references cited in text but not listed in the references section of Appendix D.	Environmental	EIS	Thank you for your suggestion, we will take this under advisement and coordinate with the TWDB both in the closeout of the feasibility and continuing on into the PED phase of the project.
E-2020DEIS-02005	-01	TPWD	[Sumarized] The Bolivar and West Galveston Beach and Dune System measure proposes to construct dunes and a wider beach face along the Gulf of Mexico shoreline within a64-acre area of Galveston Island State Park. The state park has ample space for dunes to naturally form inland. The USACE should considerbeach nourishment only (versus dune construction) within the boundaries of Galveston Island State Park. If dunes are to be constructed within the State Park, then the construction location and design should be flexible in order to utilize the park's existing natural dune system.	Planning/ Engineering	Alternatives/Designs -- Beach and Dune	Thank you for this suggestion, we will take it under advisement in PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-02005	-02	TPWD	[Summarized] The Beach and Dune Design and Drainage Report (Appendix D, Annex 18) provides a preliminary planting list which includes seacoast bluestem (Schizachyrium littorale). This species is only found from Copano Bay to the south. Recommend using little bluestem (Schizachyrium scoparium) instead. Also all planted vegetation on constructed dunes should be grown from propagules collected locally (within 150 miles from the point of installation).	Engineering	Designs -- Beach and Dune	Thank you for the input on species. We will continue work with the Interagency Team and GLO's Beach and Dune team to ensure the appropriate species are used for plantings prior to construction.
E-2020DEIS-02005	-03	TPWD	[Summarized] A 20-ft long drainage channel between dune crests that outfalls onto the beach at the southwest end of Galveston Island State Park is extremely important to maintaining the hydroperiod of interdunal swale wetlands occuring in the State Park. TPWD recommends that this drainage channel be left open to maintain the natural hydrology of the beach wetland system. If needed, a temporary sand plug could be placed in the drainage channel prior to projected landfall of a significant tropical cyclone an dthen removed from the draiange channel immediately following landfall.	Engineering	Designs -- Beach and Dune	Thank you for this suggestion, we will take it under advisement in PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-02005	-04	TPWD	The South Padre Island Beach Nourishment measure proposes to place dredge material along 2.9 miles of beach on South Padre Island and includes renourishment on a 10-year cycle. The USACE should develop a conservation plan in coordiantion with the US Fish and Wildlife Service to avoid and minimize impacts to nesting sea turtles during all construction, operation, and maintenance activities.	Environmental	Impacts	Thank you for the suggestion. Note that the USACE and TXGLO has, and will continue to coordinate with the USFWS to avoid and minimiize impacts to nesting sea turtles.
E-2020DEIS-02005	-05	TPWD	[Summarized] The northern portion of proposed oyster reef in CA-5 may overlap with TPWD's currently permitted oyster restoration area (USACE permit number SWG-2020-00097). The USACE should coordinate with TPWD regarding the location and design of the measure's oyster construction component to complement existing restoration projects and to avoid or minimize impacts to existing oyster restoration projects.	Environmental	Impacts	The USACE and NFS will continue to coordinate with TPWD (and all members of the Interagency Team) to ensure the oyster construction is complimentary to existing oyster restoration projects.
E-2020DEIS-02005	-06	TPWD	[Summarized] CA-6 is expected to complement proposed TPWD/GLO actions to implement shoreline and marsh habitat protection at Powderhorn Ranch State Park and Powderhorn Rnach WMA. Protection and restoration strategies along the Powderhorn Ranch State Park shoreline should incorporate features compatible with habitat conservation and outdoor recreation and include functional, accessible, and aethetic standards for development. Design elements should generally be consistent with TPWD's future development plans for public use and resource management at Powderhorn Ranch State Park.	Engineering	Designs -- ER	The USACE and NFS will continue to coordinate with TPWD (and all members of the Interagency Team) as we move forward into the next phase of the project (PED).
E-2020DEIS-02005	-07	TPWD	The multiple breakwatesr proposed along the Powderhorn Ranch WMA shoreline appear to be located "offshore" with gaps between them (DFR Appendix F, Annex 1, part 3). For shoreline along the Powderhorn Ranch WMA, TPWD recommends a contiguous rock breakwater adjacent and closer than depicted to the shoreline, not farther out in the bay. The only breaks should be located at historic natural water outlest (e.g. bayous or creeks) where the breakwater should be tied into existing land.	Engineering	Designs -- ER	The USACE and NFS will continue to coordinate with TPWD (and all members of the Interagency Team) as we move forward into the next phase of the project (PED).
E-2020DEIS-02005	-08	TPWD	[Summarized] Redfish Bay is designated as a State Scientific Area and any projects that would result in use or taking of any public land within a State Scientific Area requires compliance with 31 TAC 501.29 (CZMA regulations and Chapter 26 of Texas Parks and Wildlife Code (PWC). TPWD requests additional coordination as more project details become available.	General	Policy	The USACE and the designated non-Fed sponsor will continue to coordinate with TPWD and the Interagency Team as we move forward into the next phase of the project.
E-2020DEIS-02005	-09	TPWD	A maintenance dredging plan for the Port Mansfield Channel should be developed for W-3.	Engineering?	O&M	Thank you for this comment - this suggestion will be taken under advisement and provided to the USACE Operations Division.

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E-2020DEIS-02005	-10	TPWD	Construction activities associated with W-3 rookery island should be limited to outside of the main seagrass growing season (March 1 - October 31) and include best management practices for submerged aquatic vegetation. This will minimize the potential for sediment resuspension onto seagrass beds surrounding the rookery island site.	Engineering/Environmental	Designs -- ER	The construction windows and methods will be developed to avoid revised to avoid impacts where possible.
E-2020DEIS-02005	-11	TPWD	Placement of shell hash substrate material should be considered for the W-3 rookery island. The placement of shell hash on areas already consisting of this material could be used to raise elevations and potentially attract more nesting colonial waterbirds.	Engineering/Environmental	Designs -- ER	Thank you for the suggestion, we will take this under advisement as we move into the next phase of the project.
E-2020DEIS-02005	-12	TPWD	The rookery island, particularly the southern shoreline, would benefit from planting vegetation (e.g. Spartina alterniflora) at suitable elevations to provide extra stabilization and long-term protection of the island.	Engineering/Environmental	Designs -- ER	Thank you for the suggestion, we will take this under advisement as we move into the next phase of the project.
E-2020DEIS-02005	-13	TPWD	[Summarized] Cold stunned sea turtles foraging or resting in shallow waters within the W-3 project area are more vulnerable to construction and operation activities. TPWD recommends inclusion of several measures to reduce impacts to sea turtles including: advising construction and operation personnel of the potential for cold-stunned turtles; provide material to assist in turtle species identification; be instructed to not handle any turtle; and call the Sea Turtle Salvage and Stranding Network immediately upon observation of a cold stuned sea turtle.	Engineering/Environmental	Designs -- ER	Thank you for your concern and suggestion. Construction plans will consider all recommended practices to reduce impacts to species.
E-2020DEIS-02005	-14	TPWD	Section 3.8.1 of the DEIS references TAC section 65.175, 65.176, and 69.8. However, these portions of the TAC only contain lists of state-listed plant and animal species, not the actual regulations. This section should be revised to specifically reference PWC chapters 67 and 68 which include laws and regulations pertaining to state-listed endangered and threatened animal species and PWC chapter 88 which includes laws and regulations pertaining to state-listed endangered and threatened plant species.	Environmental	Policy	Thank you for the suggestion, we will take this under advisement.
E-2020DEIS-02005	-15	TPWD	State listed threatened and endangered species are not sufficiently identified in section 3.8.2.2, Chapter 4 and Chapter 5, or Appendix A of the DEIS. The state list contains an additional 46 species in addition to all of the ESA species, except giant manta ray. The EIS should be revised to list each state listed species based on the most current list generated by TPWD Rare, Threatenned, and Endangered Species of Texas online application for each of the study area's counties.	Environmental	Existing/Impacts	Thank you for the input, the EIS has been updated accordingly.

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E-2020DEIS-02005	-16	TPWD	[Summarized] Over 200 species of Species of Greatest Conservation Need (SGCN) have the potential to occur in the study area's coastal counties and should be identified if suitable habitat exists. Specific evaluations should be provided that predict project impacts to these species and their habitats and describe strategies to avoid or minimize negative impacts. TPWD recommends careful consideration of slender glass lizard and keeled earless lizard and included conservation measures to include habitat avoidance where possible. For keeled earless lizard, measures also include biological monitors on site during construction of temporary staging areas and in all dune restoration areas where suitable habitat exists, and relocation of individuals if the species is encountered.	Environmental/Engineering	Existing/Impacts/Designs -- ER	Thank you for the suggestion. Note that the USACE and TXGLO has, and will continue to coordinate with the USFWS to avoid and minimiize impacts to nesting sea turtles.
E-2020DEIS-02005	-17	TPWD	Section 4.9.2 of the DEIS does not include TPWD's upcoming oyster restoration effort in Galveston bay (20201 cultch placement on Todd's North, Resignation, and Dollar reef) or Keller Bay, nor does the DEIS include TPWD's current oyser restoration efforts on Noble Point Reef in Matagorda Bay and on Grass Island Reef in Aransas Bay. The USACE should coordinate with TPWD regarding oyster restoration and revised the EIS.	Environmental	Existing	Thank you for the input, the EIS has been updated accordingly.
E-2020DEIS-02005	-18	TPWD	[Summarized] Section 5.7.2.2 of the DEIS indicates that revegetation would occur in marsh areas after 1-2 years without seeding, but based on TPWD experience revegetation will not occur without planting or seeding efforts. TPWD recommends all constructed marsh areas should have a vegetation plan that includes planting or seeding or both.	Engineering/Environmental	Designs -- ER	Thank you for this suggestion, we will take it under advisement in PED.
E-2020DEIS-02005	-19	TPWD	[Summarized] Land that is acquired and used to compensate for impacts as mitigation should be required to remain in conservation in perpetuity. A perpetual conservation easement should be placed on all lands used for compensatory mitigation. A non-profit conservation organization should be selected as a third part to hold the perpetual conservation easement and should be a current member of the Texas Land Trust Council and/or a currently accredited land trust by the Land Trust Accreditation Commission. The perpetual easement should incorporate a detailed long-term maintenance and management plan and an adaptive management plan.	Environmental/Real Estate	Mitigation	Thank you for your input. Refer to the Final Real Estate Plan (Appendix F to the Final Report) which has been updated post-release of the Draft Report in October 2020 to address these issues. It is the policy of USACE to acquire, or to require a non-Federal sponsor to provide, the minimum interest in real property necessary to support a project. Federal regulations state fee taking for all fish and wildlife mitigation lands, ecosystem restoration, and environmental other environmental purposes. However, a lesser, or easement estate, may be appropriate based on the extent of interest required for the operation or requirements of a project. The USACE has determined real estate requirements for construction, operation and maintenance of this project accordingly. Refer to the Final Report's Real Estate Plan (Appendix F) to learn about our review of acquisition limits and the determination of type(s) of real estate interests (including the limited number of buyouts proposed) that will be required to implement the Recommended Plan. This information will be made available to the Non-Federal Sponsor (NFS) for construction and operation during PED. Note that the NFS is responsible for the acquisition of any real estate required for this project.
E-2020DEIS-02005	-20	TPWD	[Summarized] Various component projects of the study woud impact or potentially affect properties owned or managed by TPWD. Impacts to any natural resource, cultural resource, aesthetic resource, recration values, and/or operations on lands owned or managed by TPWD must be consistent with state law (PWC chapter 26 and TNRC chapter 34) and TPWD policy. The USACE should continue to coordinate with TPWD thorugh the planning, engineering, design, construction, operation and maintenance phases of any project with the potential to impact TPWD properties.	General	Coordination	The USACE and the designated non-Fed sponsor will continue to coordinate with TPWD and the Interagency Team as we move forward into the next phase of the project.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-02005	-21	TPWD	[2018 Comment] The current DIFR-EIS lacks the level of detail that TPWD recommended be included. TPWD is concerned that this lack of detail in the project plans prevents comprehensive evaluation of all the potential impacts to fish and wildlife resources and their habitats.	Enviiron mental	Coordinat ion	As the dEIS describes in Section 2.4.1, NEPA tiering is a permissible and preferred environmental review approach for large and complex civil works projects such as the Coastal Texas project, that encourages regular and repeated public engagement and maximizes transparency. In the next phase of the project [i.e., Pre-construction, Engineering, and Design (PED)], the refinements of the Tier 1 features will be made based on engineering performance, avoidance and minimization of environmental impacts, societal acceptability, and economic justification, and will be constrained by the scope of the project's Congressional authorization (and at the Chief of Engineer's discretion). Activities in PED (including all public outreach) will adhere to the laws, regulations, and policies governing projects such as this one. Disclosure of potential environmental impacts is not being deferred to PED. Rather, the known environmental impacts at this time have been disclosed in the current EIS based on the level of detail for the designs known thus far and presented in the current report. As designs are refined in PED, USACE will continue its efforts to avoid and minimize environmental impacts where possible, and develop and implement mitigation to offset unavoidable impacts when determined necessary. Additional investigations will be utilized to assess the direct, indirect, and cumulative impacts of the refined designs. Supplemental NEPA documents will then describe the design refinements, the added analyses, and the assessment of environmental impacts resulting from the matured engineering designs. Accompanying Engineering Design Reports (EDRs) will provide updated costs and benefits of the refined Tier 1 features as well. Note that a determination of the type of NEPA document (EIS vs. EA) to be generated, will be made on a case-by-case basis,
						driven by the significance of any potential environmental impacts. As each feature's refinements are completed, these supplemental documents will have the appropriate public involvement, review, and comment periods that the laws, regulations and policies require and that result in maximum transparency throughout the tiering process.
E-2020DEIS-02005	-22	TPWD	[2018 Comment] 2.3.3.3 Storm Surge Effects: The intention of this section appears to be to present human and monetary costs due to extreme hurricane storm surges, such as the surge that resulted in the death of 6,000 people during the 1900 Galveston Hurricane. However, the inclusion of $125 billion in damages caused by Hurricane Harvey is somewhat misleading, as a large proportion of that damage was the result of extreme rainfall and inland flooding, as the storm stalled, not storm surge. The proposed Coastal Texas TSP is not designed to ameliorate inland flooding due to extreme rainfall. Recommendation: This report should clarify that the bulk of Hurricane Harvey economic damages were due to extreme rainfall amounts on the upper coast, rather than storm surges that impacted the Coastal Bend. It	Environm ental	Existing Condition	Thank you for your suggestion, we will take it under advisement.
			should also be noted that increasing economic damages from coastal storms are due, in part, to increased land development in vulnerable areas.			
E-2020DEIS-02005	-23	TPWD	[2018 Comment, Summarized] 2.4.5.1 Protected Lands: The DIFR-EIS does not include a complete list of all known public and privately protected lands within the study area, particularly those lands that may be directly or indirectly impacted by the TSP. For example, TPWD has added Follets Island Coastal Management Area and Matagorda Peninsula Coastal Management Area to its holdings (see 31 TAC §57.1010). On its website, the Galveston Bay Foundation lists ten of its own conservation properties in addition to eight properties for which it holds conservation easements, some of which are mitigation sites. TPWD has been assisting Artist Boat, another NGO based in Galveston, in the acquisition of Galveston Island properties to build the Coastal Heritage Preserve. Houston Audubon operates several bird sanctuaries in the project area, including Bolivar Flats Shorebird Sanctuary, Smith Oaks Bird	Environm ental	Existing Condition	This has been rectified in the Real Estate Plan (Appendix F) of the Main Report.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			Sanctuary, Boy Scout Woods; and others that are listed on their website. The list of protected lands also does not include South Bay Coastal Preserve, Redfish Bay State Scientific Area, and Nine Mile Hole State Scientific Area nor identify the current correct status of the TPWD/TPW Foundation Powderhorn Ranch acquisition. There are additional mitigation banks in the area (e.g., Danza del Rio, Lower Brazos River, and Coastal Bottomlands) as well as numerous small, private mitigation and restoration sites.			
E-2020DEIS-02005	-24	TPWD	[2018 Comment] 2.4.5.4 Migratory Birds: The DIFR-EIS does not address state regulations regarding migratory non-game birds. State laws and regulations pertaining to state-protection of non-game birds are contained in TPW Code Sections 64.002 and 64.003. These regulations prohibit any take or possession of nongame birds, including their eggs and nests, with protection applicable to most native bird species, including ground-nesting species. Although not documented in the Texas Natural Diversity Database (TexasNDD), many bird species which are not listed as threatened or endangered are protected by Chapter 64 of the TPW Code and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.	Environmental	Existing Conditions	Thank you for the input, the EIS has been updated accordingly.
			Recommendation: The Protected Resources section of the EIS should include citation of regulations pertaining to State-protection of migratory and other non-game birds.			
E-2020DEIS-02005	-26	TPWD	[2018 Comment, Summarized] 3.0 No-Action/Future Without-Project Conditions: The sections of the DIFR-EIS that address the FWOP include many scenarios that the project itself would not attenuate (e.g. climate change, increasing temperatures of bay waters, potential for more extreme flooding or droughts, relative sea level rise, changes in salinity, increase of population, increase of freshwater demand and withdrawal, deepening and widening of shipping channels, continued wetland loss due to development, subsidence, and hydrologic alterations, etc.). However, implementation of the project may exacerbate some of the current environmental impacts both directly and indirectly. A system of gates and levees along a major bay system may engender a sense of security and lead to increased development, increased demand on natural resources (e.g., fresh water), and increased environmental	Environmental	No Action	Thank you for your suggestion, we will take it under advisement.
			degradation. The DIFR-EIS should clarify that thy proposed TSP will not modify potential climate change, temperature increases, extreme rainfall events, subsidence, population increases or resource demands. The proposed Coastal Barrier would maintain openings to inlets the majority of the time and would not prevent rising sea water levels from entering the bay system over time. TPWD recommends the DIFR-EIS clarify the number of factors listed for the FWOP will also occur in the FWP. The document should anlayze cumulative effects.			

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E-2020DEIS-02005	-28	TPWD	[2018 Comment, summarized] 5.3.1.1.1 Coastal Barrier Alternative: TPWD is concerned about the impacts levee barriers on Galveston Island and Bolivar Peninsula would have on the integrity of Bolivar and West Bay wetlands, San Luis Pass, Cold Pass, adjacent sand flats and islands, Follets Island, and the Christmas Bay Coastal Preserve. The barrier would prevent sediment overwash during storms; interrupt the more constant aeolian transport of sediment to the back sides of Bolivar Peninsula and Galveston Island; prohibit the natural landward migration of the landforms (Anderson 2007); transport sands away from the shoreface because of wave and surge reflection; and cause erosion within San Luis Pass and other adjacent landforms; and alter bay circulations all leading to wetland and beach habitat degradation. The EIS should include comprehensive bathymetric, hydrodynamic, and sediment-transport studies,	H&H/Environmental	Impacts	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental
			including evaluation of the short- and long-term impacts of the proposed project on bay circulations and all adjacent habitats and shorelines in the vicinity of San Luis Pass, including West Bay, the pro-grading beach on the SW end of Galveston Island, the beach on the west side of San Luis Pass, Cold Pass, Moody's Island, Mud Island, and Christmas Bay Coastal Preserve.			
E-2020DEIS-02005	-29	TPWD	[2018 Comment, summarized] 5.3.2.2.1: It was determined from the AdH model that the TSP Coastal Barrier would reduce surface and bottom water salinities throughout the entire Galveston Bay estuary by approximately 2 ppt during typical inflow conditions. However, the DIFR-EIS states reduced circulation and increased residence times in the bay upstream of the barrier would allow greater dilution by freshwater inflows, such that both surface and bottom salinities would be lower and remain lower for a longer time period. This increased residence time may have detrimental effects to the sustainability of oyster reefs following extreme rainfall events (e.g. Harvey depressed salinity levels causing ~50% on reefs in Galveston and East Bay). Conversely, prolonged drought leads to salinity increases within the bay that lead to increased oyster mortality as their predators proliferate. Reduced	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			circulation and flushing may lead to hypersaline conditions that exacerbate unfavorable conditions. While oysters are relatively resilient organisms, if extreme rainfall events or drought cycles become more frequent with climate change, as is predicted in the DIFR-EIS, reduced bay circulation and increased retention time becomes a significant concern. TPWD recommends the Final IFR-EIS adequately analyze predicted salinity regimes under a broad range of conditions and expected retention times to predict future viability of oyster stocks.			

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E-2020DEIS-02005	-30	TPWD	[2018 Comment, summarized] 5.3.4.1: TPWD is concerned that the reduced tidal exchange, reduced circulation, and increased retention time that is predicted to occur with the Coastal Barrier will promote increased eutrophication and contaminant levels within Galveston Bay system, especially in Dickinson Bayou and Clear Creek/Clear Lake where fish kills occur due to insufficient levels of dissolved oxygen. TPWD is concerned that an increased nutrient loading due to longer retention times may promote algal blooms (e.g., Karenia brevis, the organism that causes red tide (Brand and Compton 2007)), as well as other pathogens. It is generally recognized that bacteria levels in bay water increase following rainfall events due to increased wastewater and stormwater discharge. High levels of Dinophysis spp., Karenia brevis or bacteria can lead to closure of oyster harvest to protect human health.	Environmental	Benefits/ Costs	Thank you for your input - we will take these concerns under advisement in PED. Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			Reduced tidal exchange and increased retention times also may lead to extended impacts from oil or chemical spills. TPWD recommends a full analysis of the environmental costs and benefits of constructing barrier gates across Dickinson Bayou and Clear Creek, especially in light of the fact that each of these waterways is prone to flooding from upland run-off.			
E-2020DEIS-02005	-31	TPWD	[2018 Comment] 5.3.5.1: In assessing ER Measures for potential impacts to hydrological patterns, the DIFR-EIS states that revetments/breakwaters that block water exchange with tidal channels could cause flooding of land on the upstream side of the structure. Additionally, the evaluation for out-year marsh nourishment states containment levees built on uplands would probably change patterns of sheet flow from rainfall runoff towards the bay. TPWD recommends any breakwaters constructed for shoreline stabilization not block tidal channels and be designed with gaps for ingress and egress of aquatic organisms. Additionally, design and construction of intertidal marsh should retain natural hydrologic processes to the greatest extent practicable.	Engineering	Designs -- ER	Thank you for your suggestion, we will take it under advisement.
E-2020DEIS-02005	-32	TPWD	[2018 Comment] 5.3.7 Energy and Mineral Resources: According to the DIFR-EIS, numerous oil and gas pipelines and/or wells intersect the proposed TSP Coastal Barrier and ER measure sites. The DIFR-EIS should explain the potential impact this may have on the feasibility of completing proposed measures.	Engineering/Environmental	Designs	Pipeline relocations are addressed in the Real Estate Plan (Appendix F) of the Main Report.

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E-2020DEIS-02005	-33	TPWD	[2018 Comment, Summarized] 5.4.1.1: The potential impacts to wetlands and other special aquatic sites that may occur with construction for ER measures is not adequately assessed. The exact locations and acreages of wetlands that would be impacted have not been mapped and vegetative assemblages have not been delineated; however, palustrine wetlands likely include interdunal swale wetlands, prairie pothole wetlands, and Chenier plain wetlands. These freshwater wetlands are particularly critical to the success of migratory birds and waterfowl. Although the DIFR-EIS does not include detailed plans or footprint measurements, the East Tie-In of the proposed Coastal Barrier appears to traverse a portion of Chenier Plain renown for migratory bird fall-out. Construction of a levee across the plain also may disrupt the sheetflow hydrology that sustains these wetlands. TPWD recommends that the design and construction of any project for coastal protection and	Engineering/Environmental	Designs/Impacts	This has been rectified in the Real Estate Plan (Appendix F) of the Main Report.
E-2020DEIS-02005	-34	TPWD	[2018 Comment] 5.4.2.2.1 Coastal Barrier Alternative Construction time is estimated to be 10 years. The DIFR-EIS refers to the impacts and disturbance that this construction would cause to benthic organisms, plankton, and nekton assemblages as being localized and temporary. TPWD does not consider impacts that extend over a ten-year period to be temporary. The DIFR-EIS states: It's worth noting that numerous anthropogenic modifications have occurred in the Galveston Bay system (e.g., Causeway Bridge, Texas City Dike, Galveston Jetties, and the establishment of numerous dredge material placement areas), and while those modifications may have had adverse effects on fisheries, the ecosystem in Galveston Bay has proved resilient. No supporting documentation to substantiate this statement is provided.	Environmental	Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-02005	-35	TPWD	[2018 Comment, summarized] Concerned about the direct/ indirect impacts of constructing and operating the gates. Redirection of the tidal flow and continued construction activity may hinder the ability of post-larval stages of species from reaching the nursery refugia necessary for successful survival and growth. The loss of marsh edge from tidal amplitude changes will exacerbate potential reductions in recruitment as juvenile invertebrates and finfish require the sustenance and refugia provided by coastal marshes. The configuration of bottom supports and sills that extend beyond the bay bottom may create impediments to the passage of demersal stages of organisms. Changes in velocity may impact egg and larval transport and the swimming ability of post-larval juveniles, while changes in bay circulation and tidal amplitude are likely to influence the trophic structure and impact larval	H&H/Environmental	Impacts -- Gates	Refer to Response to Comment #E2020DEIS-02005-34

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			transport of oysters and fish distribution. Operation of the gate may affect fish, turtles, or mammals' ability to leave the bay system under unfavorable conditions. Recommend the impact on all species from tidal velocity alterations be modeled. Modeling should include: parameters of each species' respective swimming capability and behavioral patterns used during ingress and egress from the estuary, including selective tidal stream transport; larvae, post-larvae, juvenile, and adult stages; quantify the impact of 10 years of construction on species migration through the entrance channel; show seasonal variability; account for RSLR, freshwater inflows and other relevant factors; run for the FWOP and FWP.			
E-2020DEIS-02005	-36	TPWD	[2018 Comment] Questions that should be answered include, but are not limited to: • How will changes in flow rate and volume affect a species ability to successfully move in and out of Galveston Bay to complete life cycles? This should focus on all relative life history stages that utilize the Galveston Entrance Channel. • How will a change in ability to move in and out of Galveston Bay influence population size of each species? • How will these changes in species movement capability influence community dynamics of the entire bay? • How will changes in salinity gradients influence species distributions? • What effects will increased retention of nutrient rich water from terrestrial sources have on primary p	H&H/Environmental	Impacts -- Gates	Refer to Response to Comment #E2020DEIS-02005-34
			roduction, including the likelihood of algal blooms in the bay? • How will changes in phytoplankton and sedimentation related to greater retention of Galveston Bay water influence oyster health, growth, and landings? • What impact will the loss of 3,375 acres of bay margin wetlands have on the primary productivity of the Galveston Bay System and on the trophic webs within the bay? Interactions between trophic levels should be defined and quantified with regard to the No Action Alternative, The Bay Rim Alternative, and for the TSP. TPWD suggests that Ecopath with Ecosim may be an appropriate model.			

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E-2020DEIS-02005	-37	TPWD	[2018 Comment, Summarized] 5.4.3.1: The DIFR-EIS analysis of the potential impacts of the TSP to wildlife species is inadequate. The lack of detail hinders conclusive evaluation of impacts. A Coastal Barrier would: affect coastal ecosystems and reduce carrying capacity; limit and disrupt wildlife corridors and would force animals to travel more through roadwaysand cause increased mortality through vehicular collisions; reduce ecosystem function and services as native habitat because of manicured/mowing habits along the levee (e.g. snakes or amphibians impacted); and disturb critical habitats (e.g. tidal and paulstrine wetlands). An assessment of potential project impacts to wildlife should be done: 1) Describe vegetation communities (cover type) and "sensitive" ecosystems (e.g. springs, streams, bottomland hardwoods, etc., specifically impacted,	Environmental	Existing/Impacts	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			including total acreage of each cover type. 2) Describe the fauna that would be associated with the dominant vegetation cover types. 4) Describe the occurrence of threatened/endangered species (or their habitats) and unique or rare natural communities which occur in the study area to include: on-site inspection of the study area for permanent or seasonal occurrence and suitable habitat and interviews with recognized experts on potential species; literature review of data applicable to a potential occurring species concerning species distribution, habitat needs, and biological requirements. 5) Specify any revegetation/soil stabilization plans and utilize native, locally-adapted species; specify maintenances activities			
E-2020DEIS-02005	-38	TPWD	[2018 Comment, summarized] 5.4.4.1.1 The DIFR-EIS incorrectly categorizes the upland areas on Galveston Island State Park as habitat of insignificant value. Approximately 43 acres of the seawall/dike type structure would impact high quality coastal tall-grass prairie generally referred to as strand prairie that hosts very rare and highly valued pland and wildlife communities (Rosen et al. 2014; Rosen et al. 2018). Less than 0.1% of its original extent still remains in North America. The area to be impacted is 20% of the total prairie at Galveston Island State Park. This area also serves as a seed source for restroation via a multi-year, ongoing effort of collecting seed, germinating, growing, and installing native plants in other degraded areas.	Environmental	Existing/Impacts	Thank you for your input, we will take it under advisement.
E-2020DEIS-02005	-39	TPWD	[2018 Comment, Summarized] 5.4.4.1.1 The hard, permanently positioned sea wall or dike type structure across Galveston Island State Park, indirectly adversely affects the natural environment by restricting the movement of shorelines and barrier island and beach conservation. This loss should be noted and the impacts should not be discounted for when the project life (an artificial period of existence) is exceeded and the barrier reamins in place.	Environmental	Existing/Impacts	Refer to Response to Comment #E-2020DEIS-02005-37

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-02005	-40	TPWD	[2018 comment] The DIFR-EIS should discuss the environmental effects of project alternatives taking into account the projected sea levels beyond the current project life of 50 years. Without this, the DIFR-EIS is deficient in that it does not include discussion about how the project effects federally protected species (e.g., Kemp's Ridley Sea Turtle, Piping Plover, and Red Knot) as well as other shore life at Galveston Island State Park when the natural beach environment is extinguished as it ingresses against a proposed, fixed, barrier (TSP, DIFR-EIS). These effects should be contrasted with what has been observed on barrier islands that have moved significant distances inland due to rising sea level. For example, the undeveloped portions of Galveston Island have moved over 500 feet inland since 1930 (Anderson, 2007) and still provide excellent habitat for Piping Plovers as compared to non-natural beach areas	Environmental	Existing/Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			(Newstead and Vale 2014; Vale 2017). Beach nourishment does not fully counter this affect (Vale 2017).			
E-2020DEIS-02005	-41	TPWD	[2018 Comment, Summarized] The TSP appears to be located directly over the GISP's best coastal tall-grass prairie and freshwater fishing ponds. The TSP will block the view from the beach to the bay which will impact the GISP visitor experience. The recently completed park master plan proposes to create as large of an open space as possible for the preservation of the coastal tall-grass prairie and the species that live in it, and to give people a sense of what it was like before development changed the rest of the Island. For GISP visitors walking or biking from the beach to bay, and having them within sight of one another, is one of the Park's main attractions. As well losing teh freshwater fishing ponds will be a significant loss of recreational opportunities. Construction of a levee/floodwall will also adversely affect recreational and educational opportunities for the millions of visitors and the hundreds of thousands of	Environmental	Impacts	Refer to Response to Comment #E-2020DEIS-02005-37
			school-children who experience the park and hike trail through the GISP's high quality coastal tall-grass prairie.			
E-2020DEIS-02005	-42	TPWD	[2018 Comment, Summarized] A levee/flood wall would impact Galveston Island State Park in the following ways: • Increase response time for emergencies because of limited access, points off FM3005 allow staff to respond quickly • Hamper GISP habitat/maintenance needs by restricting prescribed burning and requiring different equipment for mowing and other maintenance needs that would need to be brought from an off-site location that could introduce non-native invasive species. • Reflect FM3005 roadway noises back into the beachside campsites and its visitors • Increase in damages to facilities from wave refraction and the piling up of storm surge toward and on the beach during tropical storms • Increases damage to the Park's natural environment if	Environmental	Impacts	Refer to Response to Comment #E-2020DEIS-02005-37
			a new drainage system is required to mitigate drainage from FM3005 to West Bay			

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E-2020DEIS-02005	-43	TPWD	[2018 Comment] Section 2.2 of the DIFR-EIS describes existing and future eustatic sea level rise as likely to exceed 0.07 to 0.09 inches per year. However, this is a long-term average that discounts the acceleration of eustatic sea level rise that has occurred in recent decades. The sources of this acceleration have been accounted for via measurements of mass loss from ice sheets and glaciers as well as steric increases from a warming ocean, and these have no known mechanism for deceleration in the coming centuries (Gardner, Moholdt, and Cogley et al., 2013). Therefore, the more accurate estimate used throughout this report should be 0.13 inches per year (0.32 mm/yr) (Church and White. 2011), even though the Texas Gulf coast is expected to experience greater than the global average. Sea level rise projections for Galveston Island must also include subsidence which this DIFR-EIS estimates as 0.26	H&H/Environmental	FWOP	The Study Team complied with USACE policy and guidance with respect to incorporating the potential effects of Climate Change on the Recommended Plan. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years).
			inches/yr (6.5mm/yr) derived from tide gage data. In 2009, this rate (0.26 inches/yr) was also derived from sediment cores at GISP (Ravens, Thomas, Roberts and Santschi 2009).			
E-2020DEIS-02005	-44	TPWD	[2018 Comment, Summarized] The rate of beach movement inland is well known along the Texas coast. This has been documented with aerial photos since the 1930's, though future rates will likely be much higher as sea level rise accelerates and sand supply from the offshore portion of the beach face is exhausted (Anderson 2007). [TPWD provides additional detailed information] The DIFR-EIS should include a discussion of the adverse impacts to beach and dune habitats when they've retreated to the foot of a levee or flood wall structure (TSP, DIFR-EIS), even though the shore face may not come into equilibrium until after the project life. Some work has been done estimating when this may occur (Gibeaut et al, 2004). The mitigation plan should detail methods of offsetting these impacts, for example, through conservation of undeveloped beach and nearshore habitats in locations where unfettered inland	H&H/Environmental	Impacts	Thank you for your input, we will take it under advisement.
			migration of the Barrier Island or beach could occur and preserve habitat for bird and turtle populations as sea level rise continues for the foreseeable future.			
E-2020DEIS-02005	-45	TPWD	[2018 Comment, Summarized] Overall the DIFR-EIS seems to disregard the breadth of recent research on what are now the unavoidable effects of global warming on future sea level and in turn the anticipated shoreward ingress of barrier islands and/or beaches. [Provides background of changes in Galveston area from ice age to now with several citations] Despite these variations in sea level, barrier islands and/or beaches have persisted throughout time as geologic features along with their flora and fauna because of their ability to migrate inland or seaward through erosion and accretion. Hard barriers (TSP, DIFR-EIS) inevitably result in these geologic features drowning in place with rising seas (Anderson, 2007). With the current level of greenhouse gases, a eustatic rise well beyond the useful capacity of the fixed barrier alternative is inevitable (Dutton et al. 2015). The impacts described in the DIFR- EIS section 3.3.4.1 for example, do not take into account the long-term effects of hardened barrier	Environmental	FWOP/Impacts	The Study Team complied with USACE policy and guidance with respect to incorporating the potential effects of Climate Change on the Recommended Plan. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years).

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			should cite the above research and give consideration to project alternatives that might best conserve habitat, property, and safety given these projections.			
E-2020DEIS-02005	-47	TPWD	[2018 Comment] TPWD recommends that the option for an engineered dune system (Section 4.3.4.4, Page 4-73 DIFR-EIS) be explored further versus a fixed, levee/floodwall system in the vicinity of Galveston Island State Park. TPWD also recommends that the proposed structure not be placed on the highly valued upland tall-grass prairie remnant located north of FM 3005, and that this important habitat type be fully recognized as such in the DIFR-EIS. The DIFR-EIS must also recognize that the proposed location and nature of the TSP (levee/floodwall) will be a major disruption and endangerment to the operation and purpose of Galveston Island State Park.	Planning/ H&H/Engineering	Designs -- Beach and Dune	Thank you for your suggestion, we will take it under advisement in PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-02005	-48	TPWD	[2018 Comment] Further, an evaluation of the environmental impacts and mitigatory needs of the project cannot be accurately assessed unless habitat suitability models are run for both upland (impacts to occur concurrent with initial construction), and dune and beach species (future impacts to occur with sea level rise and beach ingress). The DIFR-EIS conclusion that most, if not all, upland habitats have no significant environmental value is incorrect. Recommended upland, beach and dune species for HEP analysis include: Eastern Meadowlark (Sturnella magna), Black-shouldered Kite (Elanus axillaris), Kemp's Ridley Sea Turtle (Lepidochelys kempii) and Piping Plover (Charadrius melodus).	Environmental	Impacts	Thank you for your input, we will take it under advisement.
E-2020DEIS-02005	-49	TPWD	[2018 Comment, Summarized] The DIFR-EIS states the levee on Bolivar Peninsula would maintain the historical coastal dune habitat characteristic and provide nesting habitat for migratory plovers and sandpipers. The citation for this statement is from the TPWD website description of coastal dunes on Mustang Island State Park. The proposed levee barriers - which are proposed to be constructed from upland soil sources and then "maintained" - and floodwalls bear little resemblance to the sand dunes described for Mustang Island. This reference should be omitted from the DIFR-EIS in all places that it occurs.	Environmental	Impacts	Thank you for your feedback, we will take it under advisement.
E-2020DEIS-02005	-50	TPWD	[2018 Comment] 5.7.1.1: TPWD is very concerned that any measures that increase navigation hazards to all vessels, including those utilized in recreational/commercial fishing and ecotourism activities. The propensity for collision in the Houston shipping lanes will also increase the risk of a dangerous spill of oil or chemicals into the estuary. This is even more likely as vessels transporting these cargoes become larger. The increased risk for a contaminant spill into the Galveston Bay estuary that may result from implementation of the TSP must be fully evaluated and a contingency plan formulated.	Environmental	Impacts	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-02005	-51	TPWD	[2018 Comment] …a number of the impacts listed for the No-Action Alternative in Table 5-11 (Alternatives Comparison Table - Potential Impacts to Evaluation Criteria) will occur with the project alternatives as well. This should be included (i.e., transparent) in any analysis of cumulative impact. The report states that the cumulative impact analysis was scoped with a temporal boundary of approximately 100 years in the past (1918) from the beginning of the study, and approximately 50 years into the future (2085). However, the projects listed do not cover all the actions that have occurred over the past time period and do not capture industrial and residential development projects that are currently underway. In fact, the listed projects appear to be skewed toward those undertaken by various entities in an effort to restore habitat. Therefore, TPWD believes that the cumulative impacts analysis does not meet the	Environmental	Impacts	Thank you for your input, we will take it under advisement.
			spirit of NEPA and should be revised.			
E-2020DEIS-02005	-52	TPWD	[2018 Comment, Summarized] Mitigation Appendix: Direct and indirect impacts to oyster reef have not been evaluated, nor have potential direct impacts that may occur during construction of ER breakwaters to fringe marsh or SAV been assessed. Impacts that may occur due to the mining of on-shore and off-shore material sources have not been evaluated. For example, it is known that off-shore relic barrier islands such as Sabine Bank and Heald Bank are post-settlement nursery grounds for Lane Snapper (Mikulas and Rookery 2007), yet the impacts of off-shore sand mining to these habitats have not been addressed. All impacts to wetlands and other special aquatic sites should be thoroughly evaluated and preferably avoided. If avoidance is not possible, impacts should be compensated in-kind and at an appropriate level to directly restore or replace all services and values.	Environmental	Mitigation	Refer to Response to Comment #E-2020DEIS-02005-37
			This has not been done for the DIFR-DEIS.			
E-2020DEIS-02005	-53	TPWD	[2018 Comment] Impacts to wetlands and other habitats for this study have been estimated based on desktop review and have not been field-verified. Although it was mentioned that the scope of this project was immense and that the ecosystems under consideration are dynamic and complex, the study team was constrained to choosing representative species for the Habitat Evaluation Procedures model. This model is limited and as it is the only model approved for use by USACE Galveston, the assessment does not provide detail beyond predicted effects on select species from ER measures. Specifically, it does not assess the projected effect of the different rates of sea level rise.	Environmental	Impacts	Refer to Response to Comment #E-2020DEIS-02005-37

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E-2020DEIS-02005	-54	TPWD	[2018 Comment] In the Mitigation Plan, it is suggested that non-tidal wetlands may be mitigated through purchase of mitigation bank credits. Applicants for Clean Water Act Section 404 permits in the Galveston District are instructed to use only the Interim Hydrogeomorphic wetland evaluation models for assessment of physical, chemical, and biological wetland values and to calculate the necessary mitigation credits that would be needed for compensation. Area mitigation bank credits are evaluated under the same set of models. It is difficult to understand how the sponsor intends to calculate the necessary compensatory mitigation ratios without performing field studies and without utilizing the same set of models others are tasked with using. It is important to be assured that mitigated wetland habitat supports the same primary production rates and trophic webs as those that are being impacted. Declines	Environmental	Mitigation	Thank you for your input. Mitigation will conform to all laws, regulations and policies. USACE and the cost-share sponsor will coordinate all mitigation activites with state and Federal agencies as we move into the next phase of the project.
			in upper trophic level productivity in marine species due to the TSP need to be addressed and sufficiently mitigated.			
E-2020DEIS-02005	-55	TPWD	[2018 Comment] The DEIS should provide a comprehensive evaluation of all wetland and special aquatic habitat sites that would be impacted by the project. Compensation should be provided in accordance with the required components identified under 33 CFR 332.4(c)(2) through (c)(14) in Compensatory Mitigation for Losses of Aquatic Resources (73 Federal Register 19596, April 10, 2008).	Environmental	Mitigation	Refer to Response to Comment #E-2020DEIS-02005-37
E002341	-01	BOEM	Through the tiering process, BOEM recognizes that OCS analysis would occur if an OCS borrow site is selected during the development of tier two NEPA documents. To streamline federal actions, BOEM would plan to adopt tier two environmental analyses and be a participant in a Record of Decision (ROD). As such, it is important that the OCS borrow area impacts are evaluated and that, when appropriate, Federal and State agency consultations include OCS activities.	Environmental	Impacts	Concur. The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E002341	-02	BOEM	Documents should accurately reflect BOEM's role and authority as it relates to NEPA and leasing requirements for the projects which may utilize Outer Continental Shelf (OCS) minerals resources. BOEM suggests being full partners in all agency consultations including but not limited to Section 7, MMPA, and Section 106 consultations. BOEM lease issuance can be greatly expedited when we are able to fully participate in these consultations. As stewards of the Federal OCS, BOEM is uniquely situated to provide technical support, data, and other information that can assist in the development of these consultations and joint agency processes.	Environmental	Coordination	Concur. The EIS has been updated, and we look forward to continued coordination with BOEM as the project moves into the PED Phase.

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E002341	-03	BOEM	[Summarized] Commentor included a table of recommended additions and clarifications to the report that should be considered for inclusion to improve the overall accuracy of the DEIS and to fulfill BOEM's NEPA requirements so they can adopt the EIS when we request a permit.	Planning/ Environmental	General	Thank you for your comments - all changes to the report have been considered and the report has been modified where needed.
E-2020DEIS-2326	-01	TAMUG	[Summarized] USACE has taken the Ike Dike plan and made it much weaker to the point that the land barrier in the USACE plan provides minimal benefit in reducing damage flood risk. In contrast, a robust Ike Dike, with a strong land barrier and a western section having a gate system at San Luis Pass, substantially reduces residual damage and risk throughout the entire region as compared to the USACE plan.	Plan Formulation	Alternatives	The depiction of the Recommended Plan as a "weaker" solution is inaccurate, and the premise upon which this characterization is based is overly-simplistic and unsubstantiated. "Performance" judged solely on the basis of risk reduction under the "worst-case" scenario is not a policy-compliant approach to plan formulation per USACE policy and guidance. Congress authorized the USACE to determine the feasibility of Federal investment in a comprehensive solution that promoted a more resilient and sustainable Texas coast by reducing coastal storm risks and restoring ecosystems throughout the region. The primary goal was to produce a technically sound solution that reduced risks (not completely eliminated the risks). Risk minimization must also be balanced with environmental impacts avoidance (to the extent practicable). The solution must also be both socially acceptable and economically justified (refer to the dEIS, page ES-12). While risk reduction was a focus, tradeoffs amongst the engineering, environmental, societal and economic priorities across the system were necessary to meet the Congressional mandate and assure a comprehensive, long-term solution. Coordination with the cost-share sponsor, as well as local, state and Federal natural resource agencies was necessary to meet NEPA requirements, and gathering input from stakeholders and the public in general helped assure the comprehensive nature of the formulated plan. Therefore, evaluation of the "performance" of the Recommended Plan was thus conducted in terms of environmental, social, economic, and engineering feasibility taken as a whole. Moreover, USACE policy requires that a suite of storms be utilized to determine engineering performance of a plan (rather than a "worst-case" scenario analysis), and policy also requires that the return on the investment (benefit-to-cost) must be a positive factor that incorporates the minimization of environmental and societal impacts. A multiple-lines-of-defense strategy was determined to offer a net positive return on the investment while taking into account the environmental and societal impacts. Refer to Response to Comment #E-2020DEIS-23260-04 for response to the San Luis Pass concern.
E-2020DEIS-2326	-02	TAMUG	[Summarized] Inclusion of 43 miles of low, weak sand dunes in the USACE Plan unnecessarily allows water into the Bays. Dune destruction, which is expected during major hurricanes, would lead to a breach of the barrier islands much like during Hurricane Ike, allowing storm surge to enter Galveston and/or West Bays, which then increases internal surge generation and exacerbates flooding throughout the entire region.	H&H/Engineering	Performance	Refer also to the Response to Comment #E-2020DEIS-2326-01 regarding tradeoffs necessary to meet the goals and objectives of the project, particularly the goal to reduce (but entirely eliminate) risks of flooding. The team acknowledges residual risks remain under the Recommended Plan that could be attributed to breaching or overtopping of the beach/dune systems under significant storm intensities (e.g., greater than a 50-year return period or 0.5% AEP). Our current modeling indicates that the residual risk is acceptable and will be appropriately mitigated which has been accounted for in the cost estimates. Given the nature of the development in Bolivar and West Galveston (where houses are pile-supported and their ground floors are typically raised to an elevation above BFE or + 17 ft), it is anticipated that residual flood risks due to breaching/overtopping of dunes will be nominal and manageable. During extreme events, it is likely that these overtopping volumes will result in adjacent street flooding and the East and West Bays will ultimately absorb the runoff. In addition, the second lines of defense (Clear Lake and Dickinson areas) are included in the plan to address residual flooding on the mainland. These nature-based features are designed to mimic, enhance, and restore a natural stabilization system that will ensure natural coastal processes such as littoral drift, over wash, and erosion are improved to prevent breaching of the coastal system as a whole. As the Engineering Appendix D describes, the beach/dune system design profiles will continue to be explored in the PED phase, and if these risks can be bought down in a cost-effective manner that avoid and minimize environmental impacts as well as prove to be socially acceptable to the public, modifications can still be made. In PED, additional storm modeling will also be conducted to inform plan refinements, all of which will be presented to the public in supplemental NEPA documentation.
E-2020DEIS-2326	-03	TAMUG	[Summarize] The USACE plan contains no provisions for emergency dune and barrier island repair leaving the degraded system until the next scheduled renourishment, which could be as much as 5 or 6 years in the future or more if funding is unavailable leaving the entire region vulnerable to severe flooding if another hurricane strikes before the next renourishment.	H&H/Engineering	Adapative Management/O&M	USACE guidance and regulations (PL 84-99) direct recovery efforts in a post-storm environment. Segments of the beach and dune system that have been fully constructed to the design profile at the time of the storm and become degraded would be repaired by seeking emergency funding from Congress. For those segments still under construction and damaged at the time of the storm, repairs would be addressed immediately thereafter using existing construction funding appropriated for the project.

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E-2020DEIS-2326	-04	TAMUG	[Summarized] The USACE plan lacks continuity between the hurricane protection levee system at Freeport and the west end of Galveston Island, leaving open a "back door" that enables surge propagation into both West and Galveston bays. Omission of the western section, including a Gate at San Luis Pass, allows the surge forerunner and main surge to enter West and Galveston Bays which increases flood risk and the need for all second lines of defense and nonstructural measures.	H&H/Engineering	Performance	Section 11.5 in the Engineering Appendix D describes the Coastal TX team's analysis (thus far) of the tradeoffs in closing the San Luis Pass with a gated structure. At this time, the team has determined that closure of the pass is not economically justified, nor are the tradeoffs acceptable (significant environmental impacts are anticipated per coordination conducted amongst natural resource agencies at the beginning of the study). It should be noted that the storm modeling TAMUG used to characterize the forerunner event is not comprehensive - it does not capture the entire probabilistic storm environment for the region, and is in fact premised on a limited number of "worst-case" storm track scenarios. While the forerunner event outlined by the commenter does have the potential to add additional water to Galveston Bay under limited scenario simulations, we estimate the non-structural solutions and secondary lines of defense included in the Recommended plan will adequately offset and buy down residual risks to an acceptable level in a cost-effective manner that avoids the potentially significant environmental impacts (and the subsequent necessary mitigation thereof). As such, the assumed risk reduction asserted by the TAMUG team has not been shown to outweigh the significant costs or impacts of an additional gated system in this location. Note that the Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted. Gate operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Engineering Manual) based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with industry, the Coastal Guard, and other Federal, state, and local agencies. These operations could possibly be altered to take the forerunner event hypothesized in the comment into account, but more modeling is needed to fully understand the effects of the possible forerunner
						event over the full suite of probabilistic storms and considering implementable gate operations (e.g. it may not be possible to seal off Galveston Bay 36 to 48 hours in advance of the full storm impact, during which time the forerunner development may have already begun).
E-2020DEIS-2326	-05	TAMUG	[Summarized] USACE cites a number of reasons for not including a gate system at San Luis Pass. One reason cited is that there is little additional flood damage and risk associated with leaving San Luis Pass open. This claim is contradicted by information provided in USACE (2020); 55% of the $1.15B in average annual residual damage occurs in West Bay, much of which is due to omission of the western section, some due to the low weak land barrier.	H&H/Engineering	Performance	Our current modeling indicates that the residual risk is acceptable and will be appropriately mitigated and accounted for in the costs. There is no direct evidence that 55% of the residual risks identified in Table 22 of the Economic Appendix (E-1) of the 2020 Draft Report can be attributed directly to the San Luis Pass opening or the efficacy of the front-line defenses on the Gulf-side of West Galveston Island. Subject matter experts have performed an assessment of the residual risks identified in Table 22 since the release of the Draft Report in October of 2020, identifying several factors that will need further investigation in the PED phase including: 1) isolated observed inducements associated with small rises in water levels (<0.5 feet for $\leq$ 100-yr ARI) generated by probabilistic sensitivity issues with the storm models (Reaches 4/7/34); 2) inducements associated with the inability to operate the Bolivar Roads Gate System during storm modeling simulations (Reaches 36/37); and 3) false positives attributed to alignment adjustments of the Galveston Ring Barrier System made after the storm simulations were conducted (Reaches 36/37). Note that the Engineering Appendix D and the Final Report have been updated accordingly. As explained in the Response to Comment #E-2020DEIS-2326-02 regarding residual risks, additional storm, H&H, and economic modeling will need to be undertaken in the PED phase of the project to fully investigate the causality of residual risks highlighted by the reviewer. Results of these additional modeling efforts will then inform design modifications of the Recommended Plan, and the public will be informed through the release of
						supplemental NEPA documentation. {Reference: 2020 Oct Draft Main Report, Appendix E-1, Table 23, pages 54-55, Col 3, Assuming "West Bay" = Reaches 4, 7, 34, 36, and 37}
E-2020DEIS-2326	-06	TAMUG	USACE claims that the water exchange between West Bay and Galveston Bay is only 3-5%, with the implication that this magnitude is too small to make a difference in Galveston Bay. It is unclear if this magnitude of exchange refers to astronomical tide-induced exchange or to forerunner-induced exchange. Tidal exchange will be different from exchange for the forerunner; the latter has a much longer "period" and does not reverse direction every 24 hours like the tide does.	H&H/Engineering	Performance/Alternatives	The 3-5% value presented in the Oct 2020 Draft Report's Engineering Appendix (D) refer to tide-induced exchange. These values have been updated in the Final Report (value is <20%). For this comment specifically, and assuming that the commentor is referring either to Figure G1 or Figure 60 (Annex 1, Appendix D) (in reference to the "75% to 80%" concern), it is important to recognize that this illustration demonstrates the evolution of dune profiles over time for a single life cycle example. It was included to demonstrate the triggering condition and frequency over a typical life cycle. The wave climates include both tropical and/or extra-tropical conditions that move sand across the system irrespective of extreme conditions that would dictate the closure of the Bolivar Roads Gate System (BRGS) at the inlet. One must acknowledge the triggering mechanisms for BRGS closures and the frictional resistance offered by the deforming landforms (e.g., the double dune system) in order to fully understand the rationale behind using a 12-ft solid barrier in the surge modeling. The BRGS will remain open year-round to maintain continuous navigation and existing flow characteristics. These gates will only be closed in advance of a surge event, and will re-opened once the surge has attenuated. Although the exact trigger conditions (Total Water Level) have yet to be determined, a ~3.0 m surge (which correlates roughly to a 30- to 40-yr storm event under low sea level rise scenario) has been proposed as a potential triggering condition per subject matter expertise input attained thus far. This means that the BRGS would likely be operated one to two times during the project lifespan (analogy to buying insurance). In contrast, the dunes which serve as one of the tie-in features for the gated structures will need to be rebuilt every 5 to 7 years depending on the sea level rise conditions. Vegetation will slow the process. In addition, there are other mechanisms such as post-storm

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						emergency funds which are intended to fund rebuilds of the dune-beach system to match pre-storm conditions. In other words, it is not unrealistic to assume that dune conditions may be near "design conditions" at a given storm condition when the BRGS warrants a closure. Notably, the breaching potential and the frictional resistance provided by the deforming landform is important to recognize. USACE has assumed extreme (e.g., Hurricane Ike), that the proposed dune field of 14 ft high will likely be breached, and will generate residual flooding in adjacent areas. The residual flood risk due to overtopping will continue to be assessed in the next phase of the project (PED). Given the nature of the development in Bolivar and West Galveston, where houses are pile-supported and raised (Typically ground floor elevation are above BFE or + 17 ft), it is anticipated that residual flood risk due to breaching of dune and overtopping will be nominal and manageable. During extreme events (e.g., greater than 50-year return period or 0.5% AEP), it is likely that these overtopping volumes will generate adjacent street flooding and ultimately be absorbed by the large water body in East and West Bay. One solution is to raise the height of the dune system (e.g., +17 ft or above), which was included as a design component of the initial 2018 Tentatively Selected Plan (TSP). However, stakeholder engagement at that time indicated this solution was not acceptable, and USACE was encouraged to explore alternative solutions that mimicked existing/natural condition where possible. Tradeoffs between engineering performance, environmental impact avoidance, economic justification, and social acceptability governed the decision to switch to a more nature-based (sand-only) beach and dune system included within the Recommended Plan. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. For example, fortified dune options will be considered in PED – particularly in specified "vulnerable" areas where the intent would be to maintain design performance by protecting barrier heights at tie-in locations during an events that
						trigger gate closures. Note that supplemental NEPA documentation will be released at that time to encourage public review and feedback on all Tier 1 measure refinements.
E-2020DEIS-2326	-07	TAMUG	[Summarized] During hurricanes, the exchange between West and Galveston Bays depend upon forerunner amplitude, the main surge hydrograph, local winds, and sea level. JSU research indicates that propagation of surge forerunner into Galveston bay via West Bay is exacerbated by rising sea level. Even if propagation from West Bay into Galveston bay is such that peak surge in Galveston Bay is only increased by 1 or 2 ft this change can cause or exacerbate flooding and damage as demonstrated in Chap 4 of the comment letter.	H&H/Engineering	Performance/Alternatives	We agree, and intend to further investigate these concerns. Currently nonstructural measures have been included in the Recommended Plan to offset these residual risks. Tier 1 features in the Recommend Plan will continue to be refined in PED with the intent of further reducing residual risks while avoiding and minimizing environmental impacts in a cost-effective manner. Again, additional modeling and investigations will be undertaken in the PED phase on Tier 1 feaures to inform design refinements which in turn will be released to the public in supplemental NEPA documentaion.
E-2020DEIS-2326	-08	TAMUG	[Summarized] The western section and a gate at San Luis Pass has been dismissed with no rigorous economic analysis of cost and benefits to support the decision. Engagement with other modelers and their consensus is not enough justification especially given that Appendix B suggest that the full Ike Dike, including a gate at San Luis Pass and fortified dunes, are cost effective and will increase the benefit-cost ratio for the entire project.	Plan Formulation/ Economics	Alternatives/ BCR	Refer to Responses to Comments #E-2020DEIS-2326-01 through -04 regarding the decision-making approach and criteria (e.g., engineering performance, avoidance and minimization of environmental impacts, societal acceptability, and economic justification) utilized to determine the Recommended Plan. As described in the Engineering Appendix D (Section 11.5), a rough estimate of economic justification of the SLP closure was undertaken early-on in the feasibility study, and it was determined that the benefits were far outweighed by the costs and potential environmental impacts the proposed closure would incur. Refer to Responses to Comments #E-2020DEIS-2326-05 - The benefits claimed in the TAMUG report cannot be attributed to their proposed features without additional analysis. Moreover, there are issues surrounding the TAMUG cost estimate that include (but are not limited to) the following concerns: 1) The costs presented in the TAMUG Appendix B are not USACE policy compliant and have not been peer-reviewed and/or certified per standard USACE procedures. Note specifically that the costs do not include long-term OMRR&R, environmental impact mitigation, and do not include a Cost and Schedule Risk Analysis (CSRA) to characterize key risks and uncertainties within their estimate. 2) A simplistic extrapolation technique has been used to develop costs for the fortified dunes included in their plan that does not take into account the unique conditions of the Galveston and Bolivar Road barrier islands. Crossovers, walkovers, culverts, parking areas, and real estate costs have not been included in the estimate. Estimates of the additional quantities needed for the 17-ft profiles were extrapolated from the Recommended Plan, but do not take into account the need for additional material coverage to assure sufficient fortified core coverage. When asked, the region's natural resource agencies indicated core exposure was a significant concern that would need to be mitigated. Note that the exposed core concern is fully

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						illustrated in TAMUG report on page 31 (Figure 3-6) and again on page 33 (Figure 3-7c), indicating there is a significant potential for such an condition based on other deployed systems around the world, and yet these costs have not been included in their estimate. 3) It is unclear whether the design of the SLP gated structure will eliminate the hurricane evacuation route (County Road 257) that currently spans the Pass, and whether the costs provided in the TAMUG report account for this concern (either incorporating a roadway into the design or somehow mitigating for the loss of this critical evacuation route). 4) The 2015 TUDelft report referenced indicates the proposed design will permanently close off 40% of the inlet and will partially constrict the remaining 60% of the inlet reducing tidal exchange even further, and yet the cost estimate for the gated structure includes only a 25% contingency to offset the significant environmental losses likely to be caused by this structure which will require extensive mitigation planning, monitoring, and adaptive management. Moreover, the gates would likely require tie-ins on both sides of the inlet (connecting to the dune systems) to attenuate reflected surge, incurring additional impacts on both sides of the inlet to critical Threatened and Endangered Species habitat that would require refiniments to avoid and minimize impacts and mitigate unavoidable impacts. Note that consultation early-on in the USACE study with Federal and state resource agencies clearly indicated closing off this inlet would require significant environmental offsets. 5) The TAMUG fortified dunes concept has not been sufficiently socialized with the general public. As such, the potential impact on viewshed of a 17-ft dune to the Gulf side beach communities has not been discussed nor mitigation for this impact been characterized in their report.
						6) Adaptive management for either feature (SLP gate closure or Fortified Dunes) is not included in the TAMUG estimate. The costs of adapting a fixed structure will likely be significantly larger than a more natural structure such as the unfortified beach/dune complexes in the Recommended Plan. The TAMUG cost estimate does not include adequate contingencies for adaptation of the fortified system (if/when needed) in the future in response to forcings such as climate change and RSLR. Note that the USACE has proposed a significantly higher structure for the Bolivar Roads inlet and included significant contingency in the cost estimates for the Bolivar Road Gate system under the assumption that it will be cost prohibitive to modify in the future. Following similar logic, the costs for the two large artificial structures (SLP gates and fortified dunes) in the TAMUG plan would need to be increased to offset cost prohibitive adaptative limitations in the future. One last thing to note: The Coastal Barrier Resources Act (CBRA) compliance prohibits the expenditure of federal funds to construct features that affect the nature or extent of the 1% floodplain encouraging development on the CBRS units (behind the structures). If fortified dunes affect the nature or extent of the 1% floodplain encouraging development on the CBRS units, construction of these features in these areas will need to be 100% paid for by the non-fed cost share partner.
E-2020DEIS-2326	-09	TAMUG	[Summarized] San Luis Pass is not a natural inlet as it has been influenced by engineering activities such as shoaling induced by bridge construction and construction and maintenance of the navigation channel and jetty system at Bolivar roads and subsequent formation of tidal shoals which have altered longshore sediment transport of sand towards Pass. As well, it is expected that the very large volume of sand placed on Galveston Island as part of the USACE plan will be transported west and strongly influence the Pass.	Plan Formulation/ H&H/Engineering	Plan/Measure Justification	Concur that longshore sediment transport will occur and these factors will be modeled and the implications will be assessed in the PED phase. The Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) are characterized as Tier 1 measures, and as such, their engineering designs can thus be informed by these additional pieces of information. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses.
E-2020DEIS-2326	-10	TAMUG	[Summarized] A gate at San Luis Pass has been dismissed for environmental reasons with no serious rigorous analysis to quantify the environmental impacts and no identification of environmental impacts of adding a gate. If the Bolivar Gate system can be modeled and impacts minimized, the same could occur for San Luis Pass.	Plan Formulation/ Environmental	Alternatives/Impacts	Refer to Responses to Comments #E-2020DEIS-2326-01 and -04 regarding the decision-making approach and criteria (e.g., engineering performance, avoidance and minimization of environmental impacts, societal acceptability, and economic justification) utilized to determine the Recommended Plan and SLP. As described in the Engineering Appendix D (Section 11.5), a rough estimate of economic justification of the SLP closure was undertaken early-on in the feasibility study, and it was determined that the benefits were far outweighed by the costs and potential environmental impacts the proposed closure would incur. Tier 1 measures (Gulf-side defenses) will continue to be investigated and refined in the PED phase. We welcome TAMUG's future research intiatives (particularly with respect to fortified dunes and the SLP closure), and will continue to engage with the research community as the study moves into the next phase. Again, refinements of these features will be disclosed to the public in supplemental NEPA documentation in PED.
E-2020DEIS-2326	-11	TAMUG	[Summarized] Commentor recommends inclusion of the western section and gate system at San Luis Pass in the recommended plan to minimize the amount of water in the bays at the time of hurricane landfall which then reduces the potential for internal surges.	Plan Formulation	Alternatives	Refer to Responses to Comments #E-2020DEIS-2326-01 and -04.

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E-2020DEIS-2326	-12	TAMUG	[Summarized] Sealing the bays early is essential for minimizing the amount of internally-generated storm surge. Waiting until the total water level reaches nearly 10 feet before closing the gates would be disasterous and lead to severe flooding for the region and lead to much larger internal surges. The hurricane surge forerunner will be extremely important in the decision of when to close the gates. Closing the gates when the surge forerunner amplitude is small and at low tide is critical.	H&H/Engineering	Operation	Refer to Responses to Comments #E-2020DEIS-2326-04 regarding establishment of an Engineering Manual dictating gate operations in PED and the analyses and coordination necessary to do so.
E-2020DEIS-2326	-13	TAMUG	[Summarized] The USACE coastal spine provides limited protection for the region (less than 50 years). The stage frequency curve in Figure 2-22 of Appendix D shows that 50-yr and 100-yr water levels just offshore of Galveston are 13 and 16.5 ft, respectively, for present sea level (compared to dune elevations of 12 and 14 ft for the USACE land barrier). The proposed weak land barrier will breach and overflow at 50- and 100-year conditions, resulting in significant inundation, damage and risk. Both Galveston Island (the portion that lies outside the Ring Barrier) and Bolivar Peninsula are completely inundated, as is the entire West Bay north shore and multiple areas of the Galveston Bay periphery. Poor performance of the low dual dune land barriers in the USACE coastal spine, and omission of the western section, leads to poor performance in reducing damage and flood risk. Despite an expenditure of $26.17B, the	Planning/Economics	Benefits/Costs	Refer to Responses to Comments #E-2020DEIS-2326-01 and -04.
			USACE Plan decreases average annual damages by only 60% for the intermediate sea level rise scenario. Even with the USACE Plan in place, residual average annual damage is predicted to be very high, $1.15B (split this way: 55% in West Bay and 45% in Galveston Bay). For the high future sea level rise scenario, the Plan performs even more poorly, decreasing average annual damages by only 44%. A higher level of protection is needed, which achieves greater risk reduction for both present sea level and possible higher future sea levels. A stronger more robust Ike Dike can provide the higher level of protection. The very high amounts of residual damage are a significant shortcoming for such a major investment.			
E-2020DEIS-2326	-14	TAMUG	The region should experience even more damage than predicted because of USACE failure to fully account for their own modeling that predicts the frequent loss of dune protection through erosion and breaching of the low weak sand dunes on Galveston Island and Bolivar Peninsula. In the with-project storm surge modeling, the dual sand dune system is represented as a solid barrier having an elevation of 12 ft. However, results of the USACE life cycle beach/dune response modeling in Annex 1 to Appendix D of USACE (2020) indicate that the dune is below 12 ft for 75%-80% of the time. Once this flaw is corrected in the surge modeling, we expect even higher residual damages throughout the entire region and a decrease in the project's benefit-cost ratio. Because of the flaw, all second lines of defense and nonstructural measures are probably under-designed; and their costs are probably underestimated. A strong Ike Dike can	H&H/Engineering/Planning	Modeling/Performance/Designs/Alternatives	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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			substantially reduce residual damages throughout the region; improve the project's benefit-cost ratio, and lower costs for all in-bay measures including the Ring Barrier.			
E-2020DEIS-2326	-15	TAMUG	For major hurricanes, in essence, the USACE Plan stops only half the surge, the half that propagates through Bolivar Roads Pass; but it allows half the surge to enter into the bays over the degraded and breached barrier islands and by flanking the western end of the coastal spine. The USACE Plan fails to meet the crucial objective of keeping water out of the shallow bays, leading to much higher in-Bay surge. Its performance lies somewhere between the Ike Dike coastal spine concept and previously eliminated, ill-conceived alternatives that sought to defend against the surge by locating the first line of defense inside Galveston Bay. The weak first line of defense in the USACE Plan means that the second lines of defense and non-structural measures inside the bays must be more widespread, stronger and higher, and therefore more costly.	H&H/Planning	Performance/Alternatives	Refer to Response to Comment #E-2020DEIS-2326-01.
E-2020DEIS-2326	-16	TAMUG	[Summarized] The text [Plan formulation Appendix A Sections 4.3.1 and 4.3.2] acknowledges that the low dune system "does not provide a comparable scale of risk reduction as compared to the levee;" however, no thorough quantitative evaluation of the adverse impact of this major change on flood damage reduction throughout the region was done. We recommend that such an analysis be done, and that results are clearly communicated to all regional stakeholders.	Planning	Performance	Refer to Response to Comment #E-2020DEIS-2326-01 .
E-2020DEIS-2326	-17	TAMUG	[Summarized] It appears that the nature of the USACE Plan has fundamentally changed, from a regional flood risk reduction project with local ecosystem restoration features to more of a regional ecosystem restoration project with local flood risk reduction features. The concept of a strong regional-scale coastal spine as a first line of defense to reduce flood damage has been abandoned and replaced with the previous ER feature (G5) maintained for the 50-yr economic life of the project. It is quite clear that the land barrier in the USACE Plan is primarily an ER feature, having minimal benefit in reducing damage and flood risk for the region. Omission of an emergency dune repair component in the USACE Plan is another clear indicator that the proposed beach/dune system is little more than a long-term ecosystem restoration measure, and not an effective flood risk reduction element of a coastal spine.	Planning/Economics	Alternatives/Benefits/Costs	Refer to Response to Comment #E-2020DEIS-2326-01.
			In light of the very high residual damage and risk associated with the USACE Plan, the apparent shift in focus for the important land barrier, we recommend a return to trying to minimize flood risk, and maximize net benefits and the benefit-cost ratio, consistent with USACE National Economic Development guidelines. Stakeholder preferences are certainly important. However, compromise will be required because of the regional nature of this project, and the overriding importance of the coastal spine in reducing flood risk for everyone and everything behind it.			

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E-2020DEIS-2326	-18	TAMUG	[Summarized] The use of different and inconsistent design approaches/standards for different project components is of concern, and can lead to different levels of protection and uneven performance. Appendix D states that the 1% AEP overtopping threshold is used along with the 10-yr and 25-yr rainfall rates to conduct drainage analyses and determine pump capacities and considers an intermediate rate of sea level rise as part of the design standard. However, a lower design standard has been used. • Elevation of the dual dune system (14 ft) is set far below (probably 10+ ft lower) than the elevation that would adhere to the design standard • Improvements to the Galveston Seawall have not fully accounted for future sea level, which impacts pump selection and project performance. • Elevation of the Galveston Ring Barrier (14 ft) was	H&H/Planning	Performance/Alternatives	Thank you for your comment, and we concur that the individual features of the Recommended plan provide a varying level of risk reduction. This was intentional - a phased design approach was taken to facilitate development of an interdependent system of CSRM features that achieve engineering performance and balance construction and maintenance costs, social acceptability, and environmental considerations. (Refer to Responses to Comments #E-2020DEIS-2326-01). We are confident (and supported by the USACE Vertical Team) in stating that the "system" we are recommending (the Gulf and Bay defenses together) is the NED plan. Phased analysis of the performance of the Bolivar Roads Gate System (BRGS) was required to designs of the remaining features in the system such that once the BRGS were in place, the Bayside defenses could be designed at a corresponding performance level and cost effective scale. Adaptability then became a factor. Strategically speaking, the BRGS is considered the least adaptable component of the Recommended Plan, and as such it was intentionally designed to provide maximum performance from the onset, as retrofitting in the future was assumed to be cost prohibitive. Those features that could be more readily be adapted in the future (floodwalls and beach/dune systems) were designed to provide a targeted level of risk reduction under the FWOPC, and to scope potential adaptations over time per policy guidance. USACE policy allows flexible design modifications of beach and dune features over time as conditions warrant. As such, we are accepting higher residual risk because of CBRA limits, environmental impacts, and impacts to the local residents' coastal lifestyle if a hardened structure were to be used. By sticking with a nature-based solution (sand only) we are consistent with CBRA intent, and we are keeping options open to adopt a hardened structure in the future if conditions worsen and the community and our partners are willing to accept the costs and impacts of hardened structures. The Galveston Ring Barrier System has adaption features built into the initial design. The triggers for implementing these measures are overtopping rates during a storm that increase
			selected in an effort to address concerns with stick-up heights for the proposed floodwalls and elevation and pump design uses present sea level conditions, not the intermediate sea level rise scenario which would indicate an 18-ft elevation and greater stick-up heights. • Pump station capacities at Clear Lake and Dickinson Bay were scaled back from 25-yr (+ 30%) rates to 10-yr rainfall rates to reduce the size of the pump station footprints.			the likelihood of exceedance of the pumping capacity of the interior drainage system. After construction of the GRBS the sea level rise will be monitored, and overtopping rates will be updated as part of the routine activities under the Inspection of Completed Works (ICW) program. These calculations will allow for continuous monitoring of the anticipated performance of the GRBS under updated design storm conditions and will trigger a modification study to recommend adaption measures, as needed. The adaptation measures are focused on increasing the height of the floodwalls, which can be constructed without requiring a complete rebuilding of the floodwalls, and adding additional pumping capacity to target areas of concern due to excessive overtopping along a given reach of the GRBS. The system is thus adaptable to sustain the performance level, but the timing and cost to adapt to those updated conditions are unknown at this time and will be subject to a modification study. Once the system is constructed, the NFS and USACE will continue to conduct Inspection of Completed Works (ICW) to maintain structural integrity and design capacities that provide stated coastal storm risk reduction benefits to the surrounding communities. The NFS in conjunction with the USACE will monitor RSLC trends, and 10 years in advance of the triggers described above, General Re-evaluation Reports (GRRs) will be developed if future modifications of the various structures are needed. In addition, we would pursue other authorities to address adaptations beyond the 50-year period of analysis. Additional text has been provided to the Final Report and supporting appendices detailing the basis for the design of the individual components of the system, the level of performance for each, the level of adaptability for each, and how that informed the basis for design. Refer to the new section entitled, "Future Adaptation and Resiliency" in the documentation that details adaptation triggers, thresholds, and lead times for each of the Recommended Plans CSRM features.
						& surge varied widely across gauges in the area, and new research indicated the 100-yr surge was correlated with the 10-yr rainfall event (the designs were adjusted accordingly), thereby informing design modifications in the Recommended Plan. To conclude, it should again be noted that the CSRM features (i.e., Bolivar Roads Gate System, Beaches/Dune complexes, Galveston Ring Barrier, Seawall Improvements, Clear Lake, and Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted.
E-2020DEIS-2326	-19	TAMUG	[Summarized] In the USACE coastal spine, heights of different elements comprising the spine vary considerably (Bolivar Roads Storm Surge Barrier at 21.5 ft, slightly lower Seawall at 21 ft, much lower sand dunes at 14 ft). The variation seems illogical in terms of storm surge reduction and protecting life and property. We recommend much more consistency in elevation for all elements of the coastal spine, increasing the height of the land barrier, thereby avoiding weaknesses in the level of protection provided by the critical first line of defense. The crest elevations of the Bolivar Roads Surge Barrier and the land barriers should complement the elevation of the Galveston Seawall. We recommend that the crest elevations of both the gate system and land barriers be less than the elevation of the Galveston Seawall, by 1 or 2 ft. In the event of storm surge that approaches	H&H/Engineering	Designs	This is an interesting concept, but inconsistent with the previous comments submitted by this group that have emphasized that any extra water added to the Bay would be detrimental (i.e., overtopping of the Bolivar Roads Gate System due to a lowering of its currently designed height of 21.5 feet would introduce more water into the Bay). The question of whether enough pressure can be relieved such that all of the water would be diverted to the Bolivar Roads Gate System, bypassing the barrier islands and keepig water out of the City of Galveston remains unaswered and would need to be investigated further. Structural integrity of the BRGS if water starts pouring over it would be one of many structural integrity concerns that would require further study. We re-emphasize again that adaptation of BRGS will be cost prohibitive in the future. Moreover, this approach does not meet the overarching goals of the project to provide cost-effective risk reduction across the entire system (for both for the populations on the barrier islands as well as those on the mainland).

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			the crest elevation of the Seawall, a Bolivar Roads Surge Barrier and land barriers that are lower than the Seawall help divert water away from the Seawall. This diversion in turn helps reduce the volume of overtopping that enters the City, and reduces the potential for damage. A Bolivar Roads Surge Barrier that is higher than the Seawall, as is presently the case in the USACE Plan, would tend to divert water toward the City, which is undesirable. The Bolivar Roads Barrier can be overtopped without much harm. Variability in heights of different components of the coastal spine, and inconsistency in treating future sea level, leads to varying levels of protection.			
E-2020DEIS-2326	-20	TAMUG	[Summarized] From a regional perspective, a higher level of protection is needed from the coastal spine, the first line of defense; and it can be achieved in a cost effective manner. A robust Ike Dike, comprised of a fortified sand dune, enhanced with a solid core, and gate systems at Bolivar Roads and San Luis Passes can remedy many of the shortcomings associated with the USACE coastal spine. Implementation of the Ike Dike concept is referred to here as the 17-ft Ike Dike; it has been the subject of extensive research that is documented in the JSU (2018) report and elsewhere in this [submission]. The 17-ft Ike Dike is far superior to the USACE Plan in reducing flood risk for the entire region. It will significantly reduce residual damages throughout the region, along the peripheries of both bays; reduce the extent of, and the required height, strength and cost of all in bay measures or eliminate the	H&H/Engineering	Designs	Refer to Response to Comment #E-2020DEIS-2326-01.
			need for many of them; and reduce the required elevation and cost of the Galveston Ring Barrier and the wall/gate systems at Clear Lake and Dickinson. We expect that a 17-ft Ike Dike will enable compliance with the 100-yr design standard (and for future sea level) for a Galveston Ring Barrier having an elevation of 13-14 ft. The 17-ft Ike Dike will not met the 100-yr design standard for the land barrier that would require elevations approaching 24-25 ft under the future intermediate sea level rise scenario, but it is a compromise to address preferences for a lower barrier. With 1-2' of sand cover over a 17-ft solid core, the crest elevation is roughly equal to the current base flood elevation for FEMA VE Zones and is more consistent in elevation and protection level with the 21-ft Seawall than the 12 and 14-ft dunes in the USACE Plan.			

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E-2020DEIS-2326	-20 (cont)	TAMUG	[continued from previous] We recommend lowering the height of the Bolivar Roads Storm Surge Barrier to 19 or 20 ft, so that its less than the height of the Seawall which avoids having to raise the Bolivar Roads Barrier if the land barrier needs to be raised to accomodate a higher rate of sea level rise and meets the 100-yr design standard for still water level and the intermediate sea level rise scenario. The design would not meet the overtopping standard, but with water behind the gates and the large water retention capacity of Galveston Bay, it seems unnecessary to meet the overtopping design standard. In addition, we recommend investigating the benefits, consequences, and potential cost savings that are associated with reducing the crest elevation of the floating sector gates of the Bolivar Roads Storm Surge Barrier. Because of the short duration of very high surge levels during hurricanes	H&H/Engineering	Designs	Refer to Response to Comment #E-2020DEIS-2326-19.
			and the large water retention capacity of Galveston Bay, JSU research suggests that overtopping/ overflow of lower Bolivar Roads gates does not appear to cause large increases in water levels inside the Bay. Reducing navigation gate elevations, and perhaps other gate elevations, will reduce the likelihood and magnitude of negative heads which is a design concern for the sector gates, reduce the magnitude of wave loadings, might improve gate operability, enable some water to exit the Bay under negative head conditions, and reduce costs of the gates.			
E-2020DEIS-2326	-21	TAMUG	[Summarized] Davlasheridze et al (2019) showed that the Ike Dike concept is cost effective. Commentor presents a simple analysis of the cost effectiveness of strengthening the USACE coastal spine [presented in Appendix B of submission], replacing the dual sand dune system with a higher fortified dune, and adding a western section including a gate at San Luis Pass using costs and residual damage data provided in USACE (2020). The simple analysis suggests that full implementation of a 17-ft Ike Dike concept, having a fortified dune and a western section of the coastal spine, is cost effective and will improve the benefit-cost ratio for the project.	Economics/Costs	Benefits/ Costs	Refer to Responses to Comments #E-2020DEIS-2326-01 through 05 and 08.
E-2020DEIS-2326	-22	TAMUG	The cost estimate for the Bolivar Roads Surge Barrier, $13.8B, seems very high, $7B to $10B higher than international experience suggests. We are concerned that the overly high cost estimate adversely skews the overall project cost, and led to limited consideration of other means for reducing residual damage throughout the region. In light of the overestimate of Surge Barrier cost and information provided in [commentor's analysis of 17-ft Ike Dike], we believe that the cost of improvements to the USACE coastal spine that are needed to fully implement the Ike Dike concept will not change the current total project cost.	Costs	Costs	The cost estimate provided in the 2020 Draft Report (Engineering Appendix D, Annex 22) will undergo USACE Agency Technical Review, USACE Policy Review, and a final review by the USACE Cost Engineering Center of Expertise and be certified in advance of the 2021 Report's finalization. A full Cost and Schedule Risk Analysis (CSRA) will be performed to assure policy compliance and legal sufficiency. In PED, refinements of the Recommended Plan's components will require adjustments to the estimated costs. Contingencies have been included in the current estimate (and will be updated in response to these reviews) to assure compliance with USACE policy. Also note that subject matter experts from the I-STORM community have provided input and review of the proposed costs for the large barrier gate features, and will continue to engage with the team in PED.

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E-2020DEIS-2326	-23	TAMUG	A western section of the coastal spine provides considerable reduction in storm surge and wave energy that can damage the wetlands that lie behind Follets Island as well as wetlands located elsewhere around the periphery of West Bay, much more so than the USACE Plan provides. The USACE Plan includes an ER dune on Follets Island (measure B-2). Compared to measure B-2, a western section of the Ike Dike provides the same ER benefits as B-2 and far superior protection to the wetlands behind it; and it provides long-term protection not short-term protection like measure B-2. The western section precludes the need for the B-2 measure and avoids its cost. A western section also provides damage reduction benefits to ER measure G-28, much more than does the USACE Plan. Implementing the full Ike Dike concept, including the western section, helps preserve the integrity of the entire G-28	H&H/Environmental	Alternatives	Concur that an analysis of fortified dune performance and environmental impacts/benefits will be necessary before these types of features could be incorporated into the Recommended Plan. No direct evidence has been provided that supports the statements of fortified dune benefits compared to either G-28 or B-2 as the commenter suggests. In order to assess the benefits of these fortified systems, a standardized assessment using an appropriate methodology (i.e., Habitat Evaluation Procedures) would be needed. Note that stochastic coastal storm threats to wetlands is only one concern for wetland ecosystems along the Texas Coast. Erosive forces due to navigation traffic on the GIWW, subsidence, sea level change, invasive species encroachment, and direct habitat loss due to urbanization are of more concern. Note that the Beach/Dune components on Bolivar and Galveston are Tier 1 measures and as such, and refinements are anticipated in PED. Continued investigations regarding fortified dune impacts/benefits will occur in PED to inform these design refinements. We welcome TAMUG's future research initiatives into these conceptual features, and will continue to engage with the research community as the study moves into the next phase. Supplemental NEPA documentation will be produced to engage the public's feedback on these efforts.
			ecosystem restoration measure, which includes elements in both West and Galveston Bays. Ike Dike implementation helps preserve its function and capital investment. These environmental benefits associated with Ike Dike have not been considered and thoroughly analyzed. We recommend doing this particular analysis, along with a comparison to the same types of benefits provided by the USACE Plan, as part of a rigorous and thorough analysis of the benefits and costs associated with implementation of the full Ike Dike concept.			
E-2020DEIS-2326	-24	TAMUG	Future sea level appears to be treated inconsistently in the design of different elements of the USACE Plan. It appears to have been considered in all gate designs. However, it is not adequately addressed in design of the Galveston Ring Barrier and Seawall improvements, or in design of the dual sand dunes. Consistency in approach and/or clarification of reasons for the inconsistency is needed.	H&H/Engineering	Designs	Refer to Response to Comment #E-2020DEIS-2326-18
E-2020DEIS-2326	-25	TAMUG	[Summarized] USACE needs to communicate visually and quantitatively to stakeholders what their level of residual risk is with the USACE Plan, in terms of water levels, inundation and residual damage. Clear communication is necessary because the USACE Plan results in very high residual damages, and because inconsistent design standards are applied to different project elements. We recommend a dedicated section in the feasibility report that describes in great detail, and with highly informative and effective graphics, how the entire Houston-Galveston region responds to a "direct-hit" hurricane that most closely produces the 1% AEP (90% CL) still water level at Galveston (Gulf side). Illustrate with maps of the residual water level, inundation and residual damage. Graphics should be of sufficient quality and scale to enable making reasonably accurate quantitative estimates using them.	General	Stakeholder Engagement	Thank you for this suggestion. Our current modeling indicates that the residual risk is acceptable and will be appropriately mitigated and accounted for in the cost estimate. In PED, additional storm modeling will be conducted to inform plan refinements, supplemental NEPA documentation will be completed allowing the public to provide comments at that time..

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			We also recommend detailed views of Plan performance in the following key sub regions: western Galveston Island, north shore of West Bay, City of Galveston, Bolivar Peninsula, west side of Galveston Bay, and areas along the Upper Houston Ship Channel. Also, show the water levels, inundation and residual damages for a hurricane that exceeds the design-level event, such as a hurricane that produces a peak water level that is closest to the 0.2% AEP water level and the the different sea level rise scenarios that are considered. See Figure 1-7 of the USACE main report as a good starting point for the type of graphic to use for this purpose. The Coastal Texas Study web site provides some nice features (e.g. surge maps that can be swiped), a capability that can be utilized as well.			
E-2020DEIS-2326	-26	TAMUG	[Summarized] The USACE is to be commended for selecting a land barrier along the open beach instead of levee solutions further back. Beach nourishment efforts supporting the dune component of the land barrier bolster regional sediment supply and helps reduce wave energy that reaches the dune line during surge events. The dual-dune system instead of a single dune adds a needed level of resiliency against storm impact and erosion and is viewed as a positive aspect of the plan, providing additional buffer capacity. The choice of 1V:5H slopes for the dunes is a good choice to mimic the slopes of existing "healthy" dunes on Galveston Island and to aid vegetation advancement. Selecting native Texas dune vegetation species for planting efforts is also a great feature of the proposed plan. The USACE is to be commended for their special consideration of drainage from rainwater runoff toward the Gulf through the dunes via culverts and flap gates. If runoff drainage is not	Engineering	Designs -- Beach and Dune	Concur. Thank you for your comment
E-2020DEIS-2326	-27	TAMUG	The proposed plan to start construction of the whole system with the dune and beach is a good idea, as long as the construction of the Bolivar Roads Gate System commences in parallel. The gates reduce inflow of water into the bay even without the land barrier in place as soon as they are functional and can be closed at the appropriate time. The proposed idea to start land barrier construction with the Bolivar Peninsula dunes and beaches adjacent to the Bolivar Roads north jetty working outward is good and should be mirrored on Galveston Island starting at the west end of the seawall working outward toward San Luis Pass.	Project Management	Implementation Schedule	Refer to response to Comment #E002200-05 regarding sequencing strategy.

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E-2020DEIS-2326	-28	TAMUG	[Summarized] The desire to balance residual flood risk due to overtopping and breaching of natural dunes during storm impact with some stakeholder recommendations to mimic existing/ natural conditions as much as possible creates a dangerous situation that compromises the entire system during the time of need. The assumption that a fixed 12-foot dune elevation during ADCIRC storm impact simulations is a proper representation of the degraded dune and/or wave overtopping before surge levels reach the actual 14- foot crest ignores the actual dune moropdynamics during storm impact. A 12-foot high solid wall is much more efficient at reducing flooding from storm surge and wave overtopping than a dune breached completely at multiple locations. A more realistic assumption for a fixed elevation of this dune system to be used for ADCIRC computations should be closer to 9 ft	Planning/ Economics	Alternatives/Benefits/Costs	Refer to Responses to Comments #E-2020DEIS-2326-01
			considering the life-cycle analysis and breaching underrepresentation. It is also not clear how the USACE design dune crest elevations are based on a damage overtopping limit state with annual exceedance probability of 1% as stated in their report. [Commentor includes discussion of life-cycle modeling, SBEACH, CSHORE, etc results]			
E-2020DEIS-2326	-29	TAMUG	SBEACH runs utilize offshore NOAA buoy data on waves to drive model simulations. It is not described in detail how the transformation of these waves as they approach the shoreline (refraction, shoaling, diffraction) is handled (i.e. what bathymetric assumptions were made) and whether nonlinear effects and effects related to infragravity waves were considered. These processes can increase runup and erosion levels at the shore- and dune-line significantly, especially in such a shallow slope environment as the Texas coast.	H&H	Modeling	Concur. USACE agrees that the surf zone encompasses a broad range of dynamic processes (e.g., wave and current motions related to breaking waves, translator waves, reformed waves, infragravity waves and surf zone current), and the dominant processes include both wave orbital motions and shoaling waves. The SBeach model incorporates deepwater wave climate inputs and accounts for wave refraction within the wave model itself. USACE used a combination of both the SBEACH and the CSHORE models to characterize the system because they can simulate beach profile change (i.e., including the formation and movement of significant morphologic features, such as bars and berms, under varying storm waves and water levels) which served as a main driver for evaluation itself. The CSHORE model, with it's probabilistic modeling capability to assess long-term responses, was determined to be suitable for analyzing beach nourishment frequency. Like many cross shore models, SBeach has limitations in representing some nonlinear processes including an inability to represent rip currents or accurately represent the accretion process and onshore recovery with irregular waves. USACE will continue to conduct investigations along htese line in the PED phase of the project.
E-2020DEIS-2326	-30	TAMUG	The current dune morphodynamic simulations under storm impact using SBEACH do not include RSLC scenarios. PED phase recommendations include life-cycle analysis probabilistic modeling accounting for background erosion and RSLC. A comment is made in the USACE report that this may require updates to the dune design to accommodate new findings. It seems strange that a wide range of dune geometric parameters were tested with the SBEACH model, but potential water level increases were not accounted for. This would be an easy addition to the modeling, especially since the relative elevation of the dune crest to peak surge levels is one of the most critical components in the evolution (or destruction) of a dune during storm impact. Another aspect that is not yet considered is the effect of gradients in alongshore sediment transport and how they may affect renourishment volumes and frequencies.	H&H	Modeling	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-2326	-31	TAMUG	[Summarized] The proposed natural dual-dune system with 14 ft and 12 ft crest heights, respectively, is only shown to be able to withstand (with significant erosion of the seaward dune) storm impact produced by TS Francis at present sea level conditions based on SBEACH results, which is stated as a 20-yr ARI, but in fact surge levels are closer to the 5-yr ARI based on NOAA water level data from Pleasure Pier. The ERDC CSHORE models suggests complete dune destruction during Hurricane Ike which was only a 30-yr ARI. This simply seems too weak of a protection level, especially in light of the fact that such a weakness in the overall system will compromise the intent to keep surge waters out of Galveston Bay and thus render all other features less effective (Bolivar Roads Gates) or under-designed (in-bay measures).	H&H	Performance	Your concerns have been noted, and we will take your suggestion under advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-2326	-32	TAMUG	[Summarized] One viable alternative to a compromised dune system is a core-enhanced dune (hybrid coastal structure) (Almarshed et al. 2020). The USACE did not pursue further due to model limitations and other arguments not further elaborated or substantiated including aesthetic and environmental concerns, toe scour, and internal stability due to seepage flows between different materials. Core-enhanced dunes consist of a hard core covered by a layer of sand [schematic and examples of success in comment]. Benefits include: •Look and feel like natural dune that maintains ecosystem function (e.g. sea turtle nesting, vegetation growth, bird nest) •Dual-dune could include landward core-enhanced dune to help alleviate the restraints on dune elevation due to viewshed concerns • Guarantee a fixed level of protection without the risk of	H&H/Engineering	Designs -- Beach and Dune	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E-2020DEIS-2326	-33	TAMUG	[Summarized] The dual dune system design proposed for the land barrier segment on Galveston Island and Bolivar Peninsula does not provide adequate protection against storm surge and wave impact. The dune system consisting of a 12-foot seaward dune and a 14-foot landward dune does not withstand a 100-year return value event or even Hurricane Ike, a 30-year water level event. SBEACH and CSHORE numerical modeling confirm the complete destruction of both dunes during an event similar to Hurricane Ike. It is clear that the land barrier needs to be more robust against storm impact to guarantee the integrity of the entire system. We recommend the use of core-enhanced dunes (i.e., hybrid structures) as part of a hybrid dual-dune system, potentially with a seaward natural dune and a landward core-enhanced dune. With this recommendation the following scenario can be avoided: A hurricane of	H&H/Engineering	Designs -- Beach and Dune	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.

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			magnitude similar to Ike or even less, breaches and obliterates the dune system at multiple locations along the Bolivar Peninsula, leading to relatively uninhibited overland flood flow into Galveston Bay right next to the very expensive 21.5-ft high Bolivar Roads Storm Surge Gates. In such a situation, high strong gates are not needed and even though the gates will prevent a significant portion of flood waters from entering Galveston Bay through the Bolivar Roads inlet, the breached dune system will provide the path of least resistance for flood waters to enter the Bay and lead to flood damages that can be avoided with a stronger land barrier. [comment includes several pages of modeling analysis of natural dual-dune, hybrid dune, and dual-dune hybrid].			
E-2020DEIS-2326	-34	TAMUG	[Summarized] Omission of the western section leads to large increases in peak storm surge throughout West Bay and lesser, but still significant, increases in Galveston Bay. It does so by: 1) allowing the hurricane surge forerunner to propagate through San Luis Pass into the Bays, in the days leading up to hurricane landfall, and 2) allowing the main storm surge to flank the western end of the coastal barrier, initially via San Luis Pass and then via an inundated Follets Island, as the hurricane approaches and makes landfall. Increases in peak surge lead to greater flood risk and damage to most, if not all, areas of the Houston-Galveston region fronted by the coastal spine. Adverse impacts are substantial for communities and industries in Brazoria and Galveston Counties that ring West Bay, including all of Galveston Island, as indicated by the high residual damage that remains even with the USACE Plan.	H&H/Engineering	Alternatives	Refer to Response to Comment #E-2020DEIS-2326-04
			Impacts can extend into Galveston Bay and far up the Houston Ship Channel, as surge penetration from West Bay into Galveston Bay occurs. As discussed in JSU (2018) and in the comment, rising sea level will exacerbate adverse impacts associated with leaving the “back door” open, throughout the entire Houston-Galveston region. We recommend that the USACE conduct a thorough analysis of the benefits and costs associated with a western section of the coastal spine, which includes a gate at San Luis Pass. Benefits include direct reduction in damage as well as cost avoidances that arise from being able to reduce design water levels and wave conditions for all in-bay second lines of defense and non-structural measures, which in turn reduces the required extent strength, height and cost of all in-bay measures. [Comment includes significant discussion and results from storm surge model simulations, upon which			
			conclusions regarding omission of a western section are based.]			

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E-2020DEIS-2326	-35	TAMUG	[Summarized] We believe that the importance and prediction of the hurricane surge forerunner is underestimated in the work that has been done to arrive at the USACE Plan. Generation of the hurricane surge forerunner is not a completely understood process; and accurate simulation of the forerunner is challenging. Relatively little is known regarding the forerunner amplitude on the Texas coast, specifically, the distribution that characterizes its probability of occurrence. We recommend that the USACE pursue model improvements that lead to better skill in simulating the forerunner. We recommend validation of model skill in terms of how well the forerunner build-up and maximum amplitude is simulated for Hurricane Ike, and perhaps other major land falling hurricanes in southwest Louisiana where the potential for a significant forerunner exists, as well. We recommend using the	H&H	Modeling	Refer to Response to Comment E002433-01 - Additional storm modeling, hydrologic modeling, hydrodynamic modeling, ship simulations, wind/current analyses, and sedminet transport modeling will be performed in the next phase to inform design refinements
			improved surge model to examine the distribution of forerunner amplitudes for the Texas coast, including an estimate of the maximum forerunner amplitude that is possible. We recommend using the improved model in the investigation into quantifying benefits of a western section of the coastal spine, and in the beach/dune erosion modeling. Improved understanding of the forerunner climate will undoubtedly prove beneficial in formulating a plan to guide operations of gate systems at both Bolivar Roads Pass and San Luis Pass. [Comment includes discussion of possible amplitudes to use and support for the values.]			
E-2020DEIS-2326	-36	TAMUG	[Summarized] Even for relatively frequent hurricane events, omission of the western section leads to inundation within communities on western and central Galveston Island, inundation that is avoided with a western section in place. The adverse effects of flanking are much more widespread for more severe hurricanes. Peak storm surge maps for Hurricane Ike, for present sea level, with and without a western section clearly show that the peak surge is much higher in West Bay with the "back door" open and are greatest near San Luis Pass and decrease from west to east within West Bay and even extend into Galveston Bay although the magnitude of increase is not as great. The effect of leaving the "back door" open on peak surge extends to the City of Galveston, which is influencing the design of the Galveston Ring Barrier. While some of lowest-lying areas on western Galveston Island closest to West Bay	H&H/Planning	Performance/Alternatives	Refer to Response to Comment #E-2020DEIS-2326-04

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			are inundated even with the western section in place, without it inundation surrounding West Bay is much more widespread and western Galveston Island is nearly completely inundated [model did not include ring barrier in place]. Similar model results are shown for Storm 023 a hypothetical 100-yr water level and Storm 019 a 10-yr water level where increased flooding and inundation is most extreme near San Luis Pass and decreases moving east within West Bay and into Galveston Bay. The USACE Plan provides very little protection for parts of western Galveston Island that lie outside the Galveston Ring Barrier. As sea level rises, the adverse effects of leaving the "back door" open do not appear to be restricted to West Bay or the western side of Galveston Bay. [Comment shows the effect of surge flanking the western end of the coastal spine in the USACE Plan compared to closing San Luis Pass using peak surge and inundation maps with-/without-RSLR.]			
E-2020DEIS-2326	-37	TAMUG	[Summarized] Instead of the proposed Ring Barrier, we recommend consideration of a design approach that incorporates city functions into the protection using urban landscape architecture best practices. Surge protection from sea level rise probably won't be needed for a number of years, so it would be best to take an adaptive managment approach aimed at defending the City of Galveston from increasing nuisance flooding caused by higher tides and increaes rainfall as well as from major surge events. It is important to integrate major surge protection with protection from the issue of ever-increasing nuisance flooding. Galveston will see nuisance flooding much more often as sea level and associated king tides increase. And it will see nuisance flooding much more often than major surge events from hurricanes. A ring barrier that requires the securing of many road, railroad and bayou gates is not feasible as a	Planning/ Engineering	Alternatives/Designs -- Ring Barrier	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
			defense against constant small floods. Implementing the barrier would most likely be more disruptive than the small flood itself. We recommend that the USACE continue to work closely with landscape architects, City departments, and local stakeholders to optimize implementation and quality of the solution. A goal should be to use fewer unappealing concrete walls; and, where walls are required, incorporate them into the urban landscape as unobtrusively as possible.			Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E-2020DEIS-2326	-38	TAMUG	[Summarized] While we support a different design concept, even with a coastal spine in place, there is a residual risk of flooding from the bay side due to internal surge generation within the Bay and to the low elevation of the City adjacent to the Bay. If the coastal defenses are improved as we have suggested [hybrid dune, closing San Luis Pass] the Bay measures could be much less intrusive and costly.	H&H	Performance	Thank you for your input, we will take it under advisement in PED.

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E-2020DEIS-2326	-39	TAMUG	[Summarized] We do have concerns with the Ring Barrier's elevation, its composition and intrusiveness, and its performance for higher future sea level. The series of pump stations are likely to have the same problem as New Orleans especially if the interface with the City's interior draiange system is not welll coordinated, planned and designs.	H&H/Engineering	Designs--Ring Barrier/Performance	Thank you for your comment, and we concur that the individual features of the Recommended plan provide a varying level of risk reduction. This was intentional - a non-traditional optimization approach was taken to ensure resiliency that considered and balanced engineering performance, construction and maintenance costs, social acceptability, and potential environmental effect (Refer to Responses to Comments #E-2020DEIS-2326-01). We are comfortable (and supported by the USACE Vertical Team) in stating that the "system" we are recommending (the Gulf and Bay defenses together) is the NED plan. Analysis determined that the performance of the Bolivar Roads Gate System (BRGS) to generate economic benefits influenced the designs of the remaining features in the system such that once the BRGS were in place, the Bayside defenses could be designed at a lower performance level at a cost savings. Adaptability then became a factor. Strategically speaking, the BRGS is considered the least adaptable component of the Recommended Plan, and as such it was intentionally designed to provide maximum performance from the onset, as retrofitting in the future was assumed to be cost prohibitive. Those features that could be more readily be adapted in the future (floodwalls and beach/dune systems) were designed at a lower level of risk reduction per policy guidance. USACE policy allows flexible design modifications of beach and dune features over time as conditions warrant. As such, we are accepting higher residual risk because of CBRA limits, environmental impacts, and impacts to the local residents' coastal lifestyle if a hardened structure were to be used. By sticking with a nature-based solution (sand only) we are consistent with CBRA intent, and we are keeping options open to adopt a hardened structure in the future if conditions worsen and the community and our partners are willing to accept the costs and impacts of hardened structures. The Galveston Ring Barrier System has adaption features built into the initial design. The triggers for implementing these measures are overtopping rates during a storm that increase the likelihood of exceed the pumping capacity of the interior drainage system.
						After construction of the GRBS the sea level rise will be monitored, and overtopping rates will be updated as part of the routine activities under the Inspection of Completed Works (ICW) program. These calculations will allow for continuous monitoring of the anticipated performance of the GRBS under updated design storm conditions and will trigger a modification study to recommend adaption measures, as needed. The adaptation measures are focused on increasing the height of the floodwalls, which can be constructed without requiring a complete rebuilding of the floodwalls, and adding additional pumping capacity to target areas of concern due to excessive overtopping along a given reach of the GRBS. The system is thus adaptable to sustain the performance level, but the timing and cost to adapt to those updated conditions are unknown at this time and will be subject to a modification study. Once the system is constructed, the NFS and USACE will continue to do Inspection of Completed Works (ICW) which are conducted to maintain structural integrity, design capacities, and continue to provide stated flood coastal storm risk reduction benefits to the surrounding communities. The NFS in conjunction with the USACE will monitor of RSLC trends, and 10 years in advance of the triggers described above, General Re-evaluation Reports (GRRs) will be developed if future modifications of the various structures are needed. In addition, we would pursue other authorities to address adaptations beyond the 50-year period of analysis. Additional text has been provided to the Main Report and supporting appendices detailing the basis for the design of the individual components of the system, the level of performance for each, the level of adaptability for each, and how that informed the basis for design. Refer to the new section entitled, "Future Adaptation and Resiliency" in the documentation that details adaptation triggers, thresholds, and lead times for each of the
						Recommended Plans CSRM features. On a side note - the pumping station capacity at Clear Lake and Dickinson Bay locations highlighted in this comment was not established solely on the basis of reducing footprints, but rather in response to an assessment that showed the correlation between rainfall & surge varied widely across gauges in the area, and new research indicated the 100-yr surge was correlated with the 10-yr rainfall event (the designs were adjusted accordingly), thereby informing design modifications in the Recommended Plan. To conclude, it should again be noted that the CSRM features (i.e., Bolivar Roads Gate System, Beaches/Dune complexes, Galveston Ring Barrier, Seawall Improvements, Clear Lake, and Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted.

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E-2020DEIS-2326	-40	TAMUG	[Summarized] The overall design and implementation approach for the Ring Barrier and Seawall improvements is unclear and needs further clarification. The current design for both components was done for present sea level, but the design standard is for the intermediate scenario. The FR mentions raising the Ring Barrier in the future to accommodate rising sea level. What about the Seawall? What pumping capacities are required in the future that are dependent upon future elevations of the Ring Barrier AND the Seawall? Does the approach involve design/construction for present sea level and then adapting the entire system as sea level rise unfolds? Protection associated with a future sea level rise will not be needed for a number of years, so it might be best to take an adaptive management approach that incorporates actual rates of increase of threats, changes in the built and natural environment,	Engineering	Designs -- Ring Barrier	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			and new technologies in an evolving protection scheme. This puts added demands on the current design, to enable future adaptions of the Ring Barrier, pump stations and Seawall, which isn't addressed much, if at all, in the Report. The Ring Barrier elevation is uniform along its entire length. Is this an important design criterion, even though the overtopping threat varies around the Ring Barrier? Is the 100-yr overtopping rate the design standard, or something else? Is the “ultimate limit” overtopping rate of 1 cfs/ft the standard or a lower value? What is the ultimate limit value of overtopping for the inverted T-wall and how was it determined? Can the overtopping design standard be increased by extending/strengthening the scour pad, or adding armoring to the pad?			
E-2020DEIS-2326	-41	TAMUG	[Summarized] We recommend a design approach that thoroughly incorporates city functions into the protection using urban landscape architecture best practices. Present plans call for a concrete floodwall (inverted T-wall) for most of the Ring Barrier perimeter, but this would be visually unappealing, obtrusive and divisive in some areas such as the historic downtown area but woudl be fine in heavily industrialized areas, such as the Port. In open less developed areas, naturallooking turf covered earthen/ clay levees could be an attractive alternative. More work needs to be done to select the best solution for the area in which it is to be implemented.	Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-40

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E-2020DEIS-2326	-42	TAMUG	[Summarized] A uniform Ring Barrier elevation of 14 ft is proposed for the entire perimeter, but the rationale for this design is unclear given the variability of overtopping rates. Overtopping rates near the historic downtown area are much smaller than rates calculated for the other reaches by as much as a factor of 20 or more under current conditions and a factor of 10 or more for future sea level. This occurs because of the low water surface elevation (WSE) and low wave energy due to sheltering by Pelican Island. Overtopping rates suggest that a lower barrier elevation might be possible in the historic downtown area, which is desirable and should be investigated further. As WSEs and wave energy increase and the sheltering effect of Pelican Island decreases, overtopping rates are highest and warrants a higher barrier or another land-based measure to reduce overtopping in this area to an acceptable amount. A	H&H/Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-40
			higher wall in the industrial area west of the Port might be acceptable. The transition from the 14-ft Ring Barrier to the 21-ft Seawall at its western end needs to be carefully examined and designed to avoid an abrupt transition in elevation and should take into account the gradient of storm surge/wave conditions as surge levels decrease from the Gulf side to the bay side where high and turbulent flow directed toward the bay is likely. Missteps could lead to vulnerabilities and unanticipated leakage of storm surge into the Ring Barrier's interior. The transition may require armoring of the front side of the Ring Barrier. [Results/discussions of overtopping rates and volumes for each reach of the ring barrier based on 100-yr wave heights and WSE for each reach included]			
E-2020DEIS-2326	-43	TAMUG	[Summarized] The additional 4' vertical wall on the landward side of Seawall Blvd to reduce the rate of overtopping would be quite disruptive to businesses along the seawall. Alternatives could be attractive such as small berms. Also, the structural integrity of the Galveston Seawall in the (new) design condition has to be verified. We concur with the plan to ensure that the Galveston Seawall has a uniform crest elevation over its length, eliminating any non-uniformities (vulnerabilities) that exist, which could serve as conduits for unanticipated overtopping and overflow into the City. However, we recommend the elevation be 1 or 2 ft higher than the adjacent land barrier and Bolivar Roads Surge Barrier, to help divert storm surge away from the City.	Engineering	Designs -- Seawall	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E-2020DEIS-2326	-44	TAMUG	[Summarized] In the USACE Plan, design of pump stations assumes that overtopping of the Galveston Seawall is negligible, but this has not been demonstrated and assumes that if overtopping is non-negligible, then pump capacities would have to be increased. It will be important to design improvements to the Seawall such that overtopping is reduced to an amount that is consistent with assumptions made to size the pumps. We recommend laboratory scale modeling be done to aid the design of Seawall improvements. We also recommend that scale modeling be done to quantify how much overtopping occurs for hurricane events that exceed the design standard, which are used to assess resiliency of the entire system, such as a 500-yr overtopping event.	H&H/Engineering	Designs -- Seawall	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E-2020DEIS-2326	-45	TAMUG	Some places in the Feasibility Report indicate that the Seawall raising is a “future adaption” but the main report says the seawall be one of the initial focusses for design and construction. Clarify when construction of the seawall raising is to begin. If planned for the future, what will trigger the construction? The current elevation of the Seawall is 17 ft, and the with-project 100-yr water level is 16.5 ft for present sea level (from Figure 2-22 in the Feasibility Report). The current seawall is quite vulnerable to substantial overtopping for the 100-yr design standard. If raising is to wait, it is of concern that sizing of the pump stations for present sea level assumes negligible overtopping of the Seawall.	H&H/Engineering	Designs -- Seawall	Refer to Response to Comment #E-2020DEIS-2326-39
E-2020DEIS-2326	-46	TAMUG	[Summarized] We recommend consideration and analysis of other alternatives to the detached breakwaters, and evaluation of their benefits, costs and acceptability to local stakeholders. Detached breakwaters are an expensive option to reduce overtopping in the area just to the west of the Port, which is unprotected by Pelican Island and experiences the highest overtopping rates among all reaches. Why isn’t raising the height of the Ring Barrier in this area being considered, or if it was considered, why was it rejected as a way to reduce overtopping? There are other land-based options for dissipating wave energy and reducing overtopping that have a lower cost, such as … •other wall types, e.g. a recurved wall face to reduce overtopping •a low rubble dike in front of the inverted T-wall to trip	H&H/Engineering	Designs -- Seawall	Refer to Response to Comment #E-2020DEIS-2326-40

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			and break the waves, e.g. elevating a rail line bed on a small rubble dike •use more natural features such as grass covered berms or dikes, in concert with dense vegetation. e.g. Dutch technique of excavating soil to increase water storage capacity and using excavated soil to construct a berm; here excavation could be done to enhance movement of water toward Offatts Bayou, with the material used to construct the berms; or build an erosion- resistant vegetated clay-core dike, such as those in the Netherlands or New Orleans, where the wave action will not last very long so severe erosion potential is reduced, and the overtopping threat is addressed by the inverted T-wall •A line of readily available precast concrete forms that are filled with sand or soil and capped with concrete or soil and vegetated			
E-2020DEIS-2326	-47	TAMUG	Following the lessons of New Orleans, where walls are used, it is important to armour on the land side to withstand overflow/overtopping without breaching (a resilience requirement). All elements of the Ring Barrier need to be able to withstand the effects of overtopping and steady overflow, for the system to be resilient and remain robust when design conditions are exceeded. We recommend evaluating overtopping and overflow for a hurricane from the simulated set of storms that produces the highest overtopping conditions along the Ring Barrier periphery and the Seawall, and using these conditions to design scour protection for all elements of the Barrier, to ensure its resiliency. Lessons learned from Hurricane Katrina also indicated that failures can occur where there are abrupt changes in elevation of walls/levees and at transitions between walls and levees. Failures at such locations generally occurred	Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-40
			because of flow concentrations and/or overtopping and steady overflow that caused scour and subsequent breaching. Perhaps this a reason for the uniform elevation for the Ring Barrier in the USACE Plan. We expect that well-designed scour protection can be implemented at transitions involving small changes in barrier elevation, avoiding any potential scour problems.			
E-2020DEIS-2326	-48	TAMUG	The Galveston Ring Barrier needs to deal with coupled hazards, i.e. rainfall and surge during a hurricane. Over the long term, this is a difficult project to design and operate, with both major flood threats increasing – sea level and rainfall rates. Drainage and retention systems need to be designed to accommodate this. The co-occurrence (i.e. dependence) between rainfall and surge need to be further studied and characterized for inclusion in the design process. This also applies to the Clear Creek and Dickinson gate and pumping systems that are also affected by rainfall, runoff and surge simultaneously.	H&H/Engineering	Designs -- Ring Barrier and Clear Lake/Dickinson Gates	Refer to Response to Comment #E-2020DEIS-2326-40

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E-2020DEIS-2326	-49	TAMUG	The updated H&H work examined the newly published NOAA precipitation rates, but they have not yet been included in the modeling. The 25-yr rainfall rates used previously (12.7 in) is approximately 10% higher than the new NOAA rate (11.5 in). How much do the 50-yr, 100-yr, and 500-yr rates used before differ from the new NOAA rates?	H&H	Modeling	Refer to Response to Comment E002433-01 - Additional storm modeling, hydrologic modeling, hydrodynamic modeling, ship simulations, wind/current analyses, and sedminet transport modeling will be performed in the next phase to inform design refinements
E-2020DEIS-2326	-50	TAMUG	The New Orleans' experience with rain-induced flooding inside their ring barrier teaches us that their city's drainage system cannot efficiently get the water to the ring, to be pumped over the barrier. The City of Galveston, like New Orleans, is responsible for its internal drainage. The City has active and planned drainage improvements. We are not convinced that these improvements have been adequately interfaced to the USACE Plan. It is not clear that all the areas within the proposed Ring Barrier will be able to drain efficiently to the ring boundary and reach the USACE-planned pumps. Proper interfacing is essential for the project to protect from rain-induced flooding. The USACE Plan relies on considerable lengths of large buried enclosed channels/conduits for transporting water to the pump stations. Feasibility of this aspect of the Plan has not been demonstrated. In light of possible	H&H/Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-40
			obstructions posed by utilities or other factors, the feasibility of constructing such channels should be evaluated.			
E-2020DEIS-2326	-51	TAMUG	[Summarized] The 100-yr design standard is not a particularly high one. What back-up systems or redundancies are planned in the event pumps are overwhelmed or inoperable? It will be critical to make sure the gates leading to Offatt's Bayou can be operated during the widest possible range of head differences that can exist between interior and exterior water levels in order to dewater the ring interior. The water levels inside the bays could be increased by several feet and change tail water elevations as teh Bolivar Roads gates are reopened. How might this process influence pump operations and a desire to reopen the gates leading to Offatt's Bayou? What about the pump stations at Dickinson and Clear Lake? Most of the H&H modeling assumes a tail water elevation of MHW. However, seasonal steric effects, which vary from hurricane season to season, and within a season, and the surge forerunner that accompanies an approaching major hurricane might	H&H/Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-40
E-2020DEIS-2326	-52	TAMUG	Removable floodwalls are proposed. How long does it take to install and remove them, and what equipment/manpower is required? Where are they stored in relation to the deployment site(s)? What is the risk of encountering a problem with such a measure? It seems preferable to have something "inplace" that just has to be closed by swinging, dropping, or lifting. Suggest the USACE reevaluate the design if it cannot be operated in this manner.	Engineering	Designs -- Ring Barrier	OMRR&R will be the responsibility of these NFS's. In the PED phase, an Operations Manual will be developed for each feature in the Recommended Plan detailing the day-to-day and emergency response operations of that particular feature. These decisions will be informed by subject matter experts to assure performance.

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E-2020DEIS-2326	-53	TAMUG	[Summarized] It is important that the Ring Barrier be resilient for rising sea level and for extreme hurricanes that exceed the design standard. The Ring Barrier should experience minimal damage and remain robust and operational for extreme hurricanes, including for another hurricane that occurs later during the same hurricane season. With rising sea level the City becomes increasingly more susceptible to greater amounts of overtopping and overflow. What is the plan for evacuating water from within the Ring Barrier when the pump capacity is exceeded and possibly overwhelmed? Resilience in the face of increasing future sea level and extreme events that exceed the design standard should be assessed and planned for, and the plan clearly communicated, including an assessment of the residual risk. This topic should be addressed in the Feasibility Report.	H&H/Engineering	Designs -- Ring Barrier	Refer to Response to Comment #E-2020DEIS-2326-39
E-2020DEIS-2326	-54	TAMUG	[Summarized] The City of Galveston would benefit greatly from a stronger coastal spine. With a robust 17-ft Ike Dike the 100-yr water surface elevation along the bay side of Galveston would be 3 ft compared to the current USACE plan. Wave conditions would also be reduged because of a reduction in surge levels, which also considerably reduces the overtopping threat. Because of this, the ring barrier could be designed with a lower elevation which reduces the overall cost and meets the desires of stakeholder to minimize stick-up heaights and make the barrier less intrusive.	H&H/Engineering/ Planning	Alternatives	Refer to Response to Comment #E-2020DEIS-2326-01.
E-2020DEIS-2326	-55	TAMUG	It is unclear what rationale was adopted by USACE for selecting certain areas to receive second lines of defense and nonstructural methods, and not others. Without a clear rationale, choices appear to be arbitrary and illogical, particularly in light of the magnitude and wide distribution of residual damage throughout both bays. The current USACE Plan for in-bay measures appears to only focus on certain areas of Galveston Bay, despite the split in residual damages between Galveston (45%) and West (55%) Bay, with more damage in West Bay. Second lines of defense, short wall/gate systems, are proposed at Clear Lake and Dickinson, but not in other areas with high residual damage. Non-structural methods are only proposed for the western side of Galveston Bay and in a single community adjacent to the Galveston Ring Barrier, and not in other areas where residual damage is even higher.	Planning	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of “Multiple Lines of Defense” to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps’ missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.

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E-2020DEIS-2326	-56	TAMUG	[Summarized] Because of the very high residual damage associated with the USACE Plan, the need for and desirability of in-bay measures increases along with the likelihood that many measures are cost effective, more than have been proposed by the USACE. We recommend careful consideration, with analysis of benefits and costs, of potential second-lines-of-defense and non-structural measures around the periphery of both Galveston and West Bays to reduce residual risk further. Possible measures include a similar wall gate system, and/or a levee, or other temporary flood defense system that might reduce residual flood risk for industrial or port facilities, or more densely populated communities, further. Is does not appear that such a region-wide analysis was done.	Planning	Alternatives	Refer to Response to Comment #E-2020DEIS-2326-40
E-2020DEIS-2326	-57	TAMUG	It does not appear that flanking of either short gate/wall system by the storm surge was considered in its design. Based on 2008 LIDAR data, it appears as though terrain elevations adjacent to both gates (8 to 10 ft) are significantly lower than the still water level used to design them (12.8 ft at Dickinson Bay and 13.5 ft at Clear Lake), and the low terrain extends for considerable distances. While high, the wall/gates at both locations are relatively short in length compared to the expanse of terrain that has elevations less than 10 ft. In light of their relatively short length (1.5 miles at Clear Lake and 0.7 miles at Dickinson), and their apparent susceptibility to flanking by a storm surge that is even less than the 1% AEP SWL, we recommend further investigation into the optimal length and height for both of these wall/gate systems. The issue of length for both systems is discussed in Chapter 12 of the Jackson State University, JSU (2018)	Engineering	Designs -- Clear Creek/Dickinson Gates	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			report. In addition, it does not appear that flanking of the Dickinson and Clear Lake wall/gate was considered in sizing of the pumps. If not, we recommend this investigation be done as well.			
E-2020DEIS-2326	-58	TAMUG	Surge model results presented in USACE (2020), and JSU (2018) surge modeling, reveals an apparent overland pathway by which Galveston Bay internal surge can propagate over low-lying terrain and enter the northeast side of the Clear Lake area. This pathway is located near the Shoreacres community. This is a different pathway than that addressed by the proposed wall/gate system at Clear Lake. This pathway appears to be a significant contributor to the high residual damage that remains in the Clear Creek area (Reach 9) even with the second line of defense at the entrance to Clear Lake. The presence of such a vulnerability, and measures to eliminate or reduce the flooding impacts of this pathway, should be carefully investigated.	H&H/Engineering	Impacts/ Designs -- Clear Creek Gates	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-2326	-59	TAMUG	[Summarized] In light of the very high residual damage associated with the USACE Plan and its wide spatial distribution, we recommend consideration of, and analysis of, costs and benefits associated with second lines of defense and/or nonstructural methods for other areas around the periphery of both West and Galveston Bays. A focus for other possible second lines of defense should be urban, port and industrial areas where residual damages are highest and/or are concentrated. A focus for non-structural methods should be on these same areas, as well as more sparsely populated areas. Commentor provides a ranked list of potential cost effective locations that should be examined for second line of defenses (in-bay measures or non-structural measures as a whole community and/or on a property-by-property basis) and includes rationale and potential solutions for several locations. In West Bay, economic	Planning/ H&H/Economics	Alternatives	Thank you for your inpute, we will take this under advisment as we move into PED.
			reaches 37 and 4 should be closely examined to identify opportunities (e.g. levees or levees with gates) as these reaches comprise the bulk of the residual damage and are roughly twice as much as residual damage in any other reach in either West Bay or Galveston Bay. Induced damages in reaches 37 and 38 should be mitigated through structural or non-structural in-bay and/or nature-based solutions to reduce wave-induced damages.			
E-2020DEIS-2326	-60	TAMUG	Every contribution to water height in Galveston and West Bays increases the surge in the bays and the need for and height/ strength of every single in-bay second line of defense and non structural measure. For the USACE Plan, the weak land barrier and the absence of a western section to the coastal spine including a gate at San Luis Pass lead to significant storm surge entry into both bays, increasing the need for in-bay measures. The size and cost of all in-bay measures is inversely related to the strength of the coastal spine. Improving the coastal spine would help lower water levels everywhere in the bays and should be a priority. A robust 17-ft Ike Dike lowers the 1% SWLs in the bays by 3 to 6 ft, compared to the USACE Plan. With the 17-ft Ike Dike, the elevation and costs for all in-bay measures will be reduced significantly. We expect that many in-bay measures that are cost-effective with the USACE Plan will not be	Planning/ H&H	Alternatives	Thank you for your inpute, we will take this under advisment as we move into PED.
			needed with a robust 17-ft Ike Dike.			

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E-2020DEIS-2326	-61	TAMUG	[Summarized] Nature-based solutions provide a means for reducing damage caused by storm surge and waves. Even where nature-based solutions cannot significantly reduce storm surge levels, they can reduce wave energy, which can lead to a reduction in wave induced damage and overtopping. A study by Godfroy et al. (2019) has shown that marshes on the bay side of Galveston Island can lead to a 60% reduction in significant wave heights in 100-year conditions. Nature-based features can reduce wave energy and overtopping potential, leading to reduction in required elevation for more hardened second lines of defense and nonstructural measures. We recommend an investigation into using nature-based features to: •Replace portions of the G-28 beakwaters without and with improvements to the USACE coastal spine •Mitigate induced damages in Reach 38 through	Planning/ H&H	Alternatives	Thank you for your inpute, we will take this under advisment as we move into PED.
			additional marsh creation or implementation of other nature-based measures perhaps in conjunction with second lines of defense or nonstructural measures. •Reduce damage to communities on western Galveston Island (those outside the Ring Barrier), as well as communities and industrial facilities along the north shore of West Bay.			
E-2020DEIS-2326	-62	TAMUG	[Summarized] The reported cost estimate of the Bolivar Roads barrier is 13.8 B$. This seems (very) high. A cost estimate of the same barrier design has been made using a recently developed method which is based on the costs of existing barriers around the world, and the dimensions of the various barrier features. This leads to a cost estimate of 4.6 B$ (bandwidth 2.4 B$ - 6.8 B$). It is recommended to (re)consider the costs of the storm surge barrier, and compare various cost estimation methods. It is noted that cost estimates are uncertain as these are unique projects, and costs will be much dependent on the exact design, market circumstances, material prices etc. [Comment includes formula used and assumptions to develop the commentor's estimated cost]	Costs	Costs	The Coastal Texas Protection and Restoration Feasibility study, as presented by Galveston District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. On 13 Apr 2021, the cost estimate received ATR Certification - this certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.
E-2020DEIS-2326	-63	TAMUG	[Summarized] The proposed floating sector gate is vulnerable for back surge (higher water level on the back side: here Galveston Bay than on the Gulf of Mexico). This situation can occur due to the rapidly rotating wind fields associated with hurricanes and is seen in Figure 2-34 of the USACE engineering appendix where negative values on the vertical axis indicate negative head. In case of back surge the sector gates could be “pushed out” of their hinges. The ball joint hinge is strong for pressure, but less strong for tensile forces associated with back surge. Therefore the barge gate was selected as a preferred concept in previous design studies for the coastal spine concept (Jonkman et al., 2015). Such a gate could “self-open” (or at least be more easily controlled) in case of a back surge. It is recommended to consider alternatives, such as a barge gate.	H&H/Engineering	Impacts/ Designs -- Bolivar Roads Gate	Note that the Recommended Plan's Gulf-side defenses (Bolivar Gate System + Beach and Dunes) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. To date, potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. As part of PED, additional engineering performance and environmental analyses will be conducted. Gate operations (specifically closing/opening triggers before and after storms) will be established (and formalized in an Operations Manual) based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with industry, the Coastal Guard, and other Federal, state, and local agencies. Efforts to avoid, minimize and mitigate potential impacts will be included in the development of the Operations Manual, and supplemental NEPA documentation will be produced at that time and released to the public to encourage review and feedback.

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E-2020DEIS-2326	-64	TAMUG	[Summarized] In the current plan two main navigation channels with navigational gates (each 650 ft wide) are proposed. This creates an island between the two channels thus increasing likelihood of ship groundings and collisions and significantly increases costs. The main arguments for this solution focus on the added redundancy and reducing the risk of not opening after a storm. Recommend a one channel barge gate, which will reduce the risk of not opening and maintenance of gates can be done in dry docks if needed, thereby reducing the overall cost. It is noted that a one barrier solution has been chosen for the Maeslant barrier which has a total channel width of about 360m (1080 ft).	Engineering	Designs -- Bolivar Roads Gate	Refer to Response to Comment #E002433-01
E-2020DEIS-2326	-65	TAMUG	[Summarized] It is required to further address longer term management, funding and maintenance of the surge barrier system, ring barrier, and dune system. The management, maintenance and operation of storm surge and ring barriers is important and complex and these roles still need to be assigned. The design life of a movable barrier is generally 100 years and during this period, it is important to keep the barrier in good condition and meet the level of safety at an acceptable cost. Besides aging, the mechanical parts and the electrical systems (short life cycle of software) and the relatively short memory of the O&M organization form major challenges. Changing circumstances during the lifetime of the barrier, including environmental changes (i.e. changing intensity of hurricanes, sea level rise) and other developments (e.g. changes in available funding and organization) makes O&M a more complex task,	Engineering	O&M	Thank you for your input, we will take it under advisement in PED.
			which requires a careful and object specific approach. Experiences from other barrier and flood protection systems (New Orleans, Netherlands and other locations) can be utilized to develop the management schemes. It is also important to secure and plan longer term funding streams which based on previous barriers could be up to 0.5% of the construction costs. Given the above factors (need for expertise, longer term funding, national and international exchange), USACE seems most suited to manage storm surge barriers.			
E-2020DEIS-2326	-66	TAMUG	It is stated on the project website that barriers will not likely be closed for a 50 year storm. This is surprising as it is expected that a barrier (in combination with a good dune system) could prevent a lot of surge and damage for more frequent hurricanes (anywhere in the 5 – 50 years return period range). As a comparison, the Maeslant barrier in the Netherlands is expected to close every 5 to 10 years and the Eastern Scheldt barrier on an annual basis. No further gate closure levels or frequencies have been stated in the Engineering Appendix or elsewhere in the Report. This is an important aspect for operation, navigation and ports. It is recommended to give an indication by considering the expected number of hurricanes that lead to storm surge in the Galveston Bay area and gate closure. The closure procedure should be optimized to keep the hurricane surge including the forerunner out of the bay.	H&H/Engineering	O&M	Refer to Response to Comment #E-2020DEIS-2326-63

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E-2020DEIS-2326	-67	.	Scour protection needs further attention as it is also an important cost driver. This is important as very high flow velocities (~10 m/s) can occur below the floating sector gates, and when lift gates fail to close. So robust scour protection may be needed to withstand such flows and to avoid failure of support structures.	Engineering/Costs	Costs/Designs -- Bolivar Roads Gate	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002357	-01	LSLA	[Summarized] Commenters disagree with the determination that "none of the actionable measures would be expected to contribute to the status of any environmental justice indicators" [EIS pg 5-63] because the USACE did not identify appropriately the minority and low-income populations impacted by the project, particularly with respect to the Tier One measures [EIS pg 4-107, 4-108], as required by EO 12898. The USACE inappropriately calculated the aggregate demographic makeup of the entire study area rather than taking a more localized approach to identifying and assessing EJ concerns as provided in CEQ and EPA guidance. The component parts of the TSP will have discrete and unique impacts on particular communities within the study area and thus, EJ analysis should be more granular and localized to accurately evaluate whether a component project or projects together will have	Environmental	Existing/Impacts -- EJ	Thank you for your comment and suggestion. The Actionable (ER) Measures in the Recommended Plan occur in locations largely far removed from human populations. The intent of these features is to improve and restore the natural habitat; therefore, if any impacts were to occur in or near an EJ community it would be beneficial through an improvement in recreational opportunities and reduction in habitat loss that would prevent open water encroachment onto their properties and provide additional levels of protection during storm events. No real estate aquisition is required to implement these actions, so there would be no loss to individuals or communities. Additional clarification has been added to the FEIS. For the Recommended Plan's Tier 1 measures, additional engineering design and analyses in the PED phase will be necessary. As part of that effort, additional engineering performance and environmental analyses will be conducted and wil include an EJ assesment consistent with the suggested format of looking at more localized effects rather than taking a study area level approach. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			disproportionately high and adverse effects on minority and low-income populations. Taking a study area look avoids any consideration of known EJ census tracts in the overall region that are more heavily minority or lower income populations than the demographics for region's counties as a whole. While the DEIS indicates some level of EJ review of the Tier One measures would be done it does not explain what the USACE intends to do to identify specifically impacted EJ communities and to what extent the USACE intends to assess localized EJ concerns. The USACE must correct its methodology in the FEIS for the actionable measures and in any additional draft environmental reviews of the Tier One measures.			
E002357	-02	LSLA	Proper implementation of EO 12898 should also include "[d]emographic, geographic, economic, and human health and risk factors" as they "all contribute to whether the populations of concern face disproportionately high and adverse effects."[CEQ 1997] "Potential environmental impacts encompass both the natural and physical environment and can include ecological, aesthetic, historic, cultural, economic, social, or health impacts to minority populations and low-income populations."[EPA 2016] Importantly, the USACE should remember and reflect throughout its analysis "that what is considered a beneficial impact to some communities may be considered an adverse impact to others." [EPA 2016]. Thus, the USACE must respect the diversity of the Texas Gulf Coast and use sufficiently granular and localized analytic geographies so that it accurately understands and accurately presents the	Environmental	Impacts -- EJ	The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted, to include an EJ assessment consistent with the suggested format of looking at more localized effects at the census block or tract rather than taking a study area level approach. Efforts to avoid, minimize and mitigate potential adverse impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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			presents the complex and varying benefits and harms of the TSP. Failure to do so will dilute the impacts of the TSP and undermine the intent of EO 12898.			
E002357	-03	LSLA	[Summarized] The USACE should engage in a "meaningfully greater analysis" given the complexity and diversity of impacts across the study area. This analysis involves selecting a reasonable threshold for a demographic characteristic, comparing the geographic unit of concern with a reference geographic unit, and determining whether the difference between the two areas meets the selected threshold. "If the percentage of minorities residing within the geographic unit of analysis is meaningfully greater (based on application of the threshold) either individually or in the aggregate", then there likely is a minority, low-income, or otherwise at-risk population which deserves further scrutiny. [EPA 2016] The EPA suggests considering using a threshold amount of 10 or 20%.	Environmental	Existing -- EJ	Refer to Response to Comment #E002357-02
E002357	-04	LSLA	[Summarized] Using all of Harris County is inappropriate as many of the wealthy, white communities are 30+ miles to the west of the nearest TSP component, but many minorities and low-income individuals live in east and southeast Harris County and are more likely to be impacted by the TSP in one way or another.	Environmental	Existing/Impacts -- EJ	Refer to Response to Comment #E002357-02
E002357	-05	LSLA	It is also deeply concerning that the areas meant to be most protected by the surge gates and pumps at Dickinson Bay and Clear Lake may include pockets of wealthier, white populations while poorer, minority populations are left just outside the footprint and possibly at risk of induced flooding and other negative effects. Areas near the Dickinson Bayou and Clear Lake surge gates and pumps and associated waterways are largely below the threshold while the communities outside the area expected to be protected by this new infrastructure are largely above the threshold. The USACE should evaluate how these communities will be affected by the TSP—both positively and negatively—and ensure the public is provided a full and complete analysis of what effects they will bare by their inclusion or non-inclusion in the "protection zone" of the surge gates and pumps at Dickinson Bay, Clear Lake, as	Environmental	Existing/Impacts -- EJ	The multiple lines of defense approach was part of the plan formulation strategy and CSRM features like the Clear Lake and Dickinson Bayou gate and pump stations were sited to protect as much of the landforms as possible from storm surge. The feasibility level of design presented for these features follows the Hurricane and Storm Damage Risk Reduction System (HSDRRS) design guidelines (USACE 2012) which requires appropriately sized and situated pump stations to offset inducements. There are several other Federal initiatives that are working to address Flood Risk Management challenges for the interior potions of these watersheds, where many of the idetnified EJ communities reside, including the Clear Creek FRM project and the Houston Metro Watershed Assessment. USACE works closely with County Drainage Districts to ensure new infrastructure is complementary to existing and planned system features. The socioeconomic considerations for the CSRM measures can be found in Section 4.6 of the EIS. During the Tier 2 analysis of the gate features, localized impacts to census level EJ communities will be assessed for induced flooding impacts along with other beneficial and adverse impacts and will be disclosed in subsequent NEPA documentation. If induced flooding is identified, per USACE policy, the area of impact would be mitigated to eliminate the risk to the affected area when economically justified, there are overriding reasons for safety, economic or social concerns, or a determination of a real estate taking has been made.
			Clear Lake, as well as those at Bolivar Roads. [Comment includes racial make-up figures].			

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E002357	-06	LSLA	[Summarized] The cities of Pasadena and La Porte and neighborhoods of Galena Park, Cloverleaf, Baytown, South and others along Buffalo Bayou and the HSC have been left out of the beneficial footprint but may be subject to induced flooding and other important and serious adverse effects. Based on the EJSCREEN Mapping Tool, Pasadena residents remain disproprotionately burdened by a host of environmental hazards and face significant socioecomic challenges including close proximity to superfund and risk management project sites and portions located in floodplains or near major industry which is located in floodplains (industrial pollutant releases during severe flood events pose serious health and safety risks for those living nearby [Morse 2008]). The racial makeup of SE Harris County and portions of northern Galveston County are majority-minority as shown on figures	Environmental	Existing -- EJ	The purpose of this study is to investigate potential solutions to risks associated with coastal storms and to look at improving the study area's resiliency to those storms. The issues raised in the comment are for communities in more interior portions of the watersheds. USACE is working with the Harris County Flood Control District on several initiatives to address flood risk management from riverine and pluvial flooding for the region including the Buffalo Bayou and Tributaries Feasibility Study, the Houston Metro Watershed Assessment, the White Oak Bayou project, the Hunting Bayou project, the Greens Bayou project, and the Brays Bayou project. The Coastal Texas Study did investigate the risks that storm surge poses to these industrial areas and superfund sites. The communities closest to these areas have the highest probability of adverse impact from such spills and the Recommended plan would reduce the risk from storm surge to these facilities and sites. Appendix D, Section 2.6.4 discusses potential inducements from the Recommended Plan. Based on current designs no inducements were modeled for any areas along Buffalo Bayou or the HSC. The potential for inducements will be reassessed during the Tier 2 studies. The Tier 2 studies will also reassess impacts, both beneficial and adverse, to EJ communities at a localized level and disclose the impacts in subsequent NEPA documentation.
			minority as shown on figures provided in the comment.			
E002357	-07	LSLA	The USACE must also expand on cursory statements in the DEIS, Section 4.6 "Socioeconomics" that "as nonstructural measures are further developed in future planning and design phases, additional considerations related to community cohesion and environmental justice concerns along the west side of the Galveston Bay will be reviewed."Based on the current proposed footprint of nonstructural measures, significant populations within the La Porte area in the north and several neighborhoods and communities in northern Galveston County will be impacted. LSLA appreciates the USACE noting "[t]he ability of lower income groups to participate in these programs could be impacted by out-of-pocket expenses", but the USACE must do extensive further analysis at a localized level to ensure environmental justice communities are not disproportionately harmed nor prevented from	Environmental	Impacts -- EJ	Refer to Response to Comment #E002357-02
			participating in the TSP's nonstructural measures.			
E002357	-08	LSLA	[Summarized] There are clearly clustered groups of minority populations along Galveston Bay and in the Texas City and La Marque area in relation to Dickinson Bay, near the southern end of Galveston Bay. Multiple census blocks in the areas are among the 90th or higher national percentile for poverty. In addition to much of Texas City, Bacliff and San Leon are also communities with significant poverty. As well, Texas City is in the 90th+ national percentile for proximity to risk management project, superfund, and wastewater discharge sites and air quality indexes are in the top 30% of census blocks nationwide for exposure to PM, ozone, diesel PM, and air toxins associated with cancer risks. These defined areas of impact call for localized analysis to ensure compliance with EO 12898. Generally, the DEIS and the online materials do not clearly indicate whether minority populations in Texas City, La Marque,	Environmental	Existing/Impacts -- EJ	The areas in question all would benefit from reduced storm surge as a result of the Bolivar Roads Storm Surge Barrier System. Appendix D, Section 2.6.4 discusses potential inducements from the Recommended Plan. Based on current designs potential inducements are limited to areas immediatly near the HSC Navigation Gate at Bolivar Roads and at the Ring Barrier. The potential for inducements will be reassessed during the Tier 2 studies. If induced flooding is identified, per USACE policy, the area of impact would be mitigated to eliminate the risk to the affected area when economically justified, there are overriding reasons for safety, economic or social concerns, or a determination of a real estate taking has been made. The Tier 2 studies will also reassess impacts, both beneficial and adverse, to EJ communities at a localized level and disclose the impacts in subsequent NEPA documentation.

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			and nearby communities will be protected by the TSP, while possibly being at risk of induced flooding. The USACE should specifically consider the effects of the TSP on these communities, including La Porte, Texas City, and La Marque and any other similarly situated communities in the area, which are fence-line communities in EJ parlance; they are all bordered by large industrial chemical and refining complexes and much like Pasadena, face immense environmental threats in addition to economic challenges. [Figures of minority distribution and table of census blocks with % low income and minority are included in comment]			
E002357	-09	LSLA	Demographic analysis at a more local level—such as census block groups or census tracts—would be appropriate and likely trigger the requirements of EO 12898 because (1) there is a possibility of dislocation and other nonstructural measures; (2) there is a likelihood that nonstructural measures will affect the cultural and social makeup of minority communities; (3) members of these communities may find it difficult or impossible to participate in nonstructural measures even when they want to; (4) there is a likelihood that already vulnerable fishing communities will be impacted by the surge gates located at Dickinson Bay, Clear Lake, and Bolivar Roads; and (5) the possibility of induced flooding of those communities not protected by proposed TSP component projects.	Environmental	Impacts -- EJ	The beneficial and adverse impacts of EJ communities will be further assessed at a census block or tract level during the Tier 2 studies. The results of those assessments will be fully disclosed in subsequent NEPA documentation that will be made available for public review. When considering communities that may be in an area identified for nonstructural measures, the nonstructural measure best suited for the structure and the community, while taking into account the economic benefits and hardships, will be recommended and could include anything from raising the structure in place, wet/dry floodproofing, building retrofits, to property acquisition and relocation. The recommended nonstructural footprint includes EJ communities and non-EJ communities alike. Appendix D, Section 2.6.4 discusses potential inducements from the Recommended Plan. Based on current designs potential inducements are limited to areas immediatly near the HSC Navigation Gate at Bolivar Roads and the Ring Barrier. The potential for inducements will be reassessed during the Tier 2 studies. If induced flooding is identified, per USACE policy, the area of impact would be mitigated to eliminate the risk to the affected area when economically justified, there are overriding reasons for safety, economic or social concerns, or a determination of a real estate taking has been made.
E002357	-10	LSLA	[Summarized] Communities on Galveston Island (City of Galveston, Jamaica Beach, and others) and nearby communities on Bolivar Peninsula, Pelican Island, Tiki Island and elsewhere are examples of communities which will clearly be uniquely and distinctly affected by component projects of the TSP with some greatly benefiting, while others bear significant harms without a requisite share of benefits. The USACE thus must ensure low income, minority, and otherwise at-risk populations in the Galveston Island area will not bear disproportionately high and adverse effects.			Refer to Response to Comment #E002357-02
E002357	-11	LSLA	[Summarized] Low-income and minority populations near the Port of Galveston and “harborside” of Galveston Island, as well the tendency of low income and minority populations that live near the seawall may face disproportionate adverse effects from construction of the Galveston Ring Barrier and Galveston Seawall Improvements. Possible harms include air pollution, noise, interruption of cultural and social activities, and increased direct and induced traffic congestion near construction zones and along Galveston’s main thoroughfares. And while the USACE has labeled construction impacts as “temporary”, the suggested 12-20 year timeline will hardly feel “temporary” or would be considered “temporary” by any resident or frequent visitor to Galveston Island. Those who live outside the footprint of the Ring Barrier may suffer from induced flooding without benefiting from the barrier itself. The	Environmental	Existing/Impacts -- EJ	Construction of the entire Recommended Plan could take 12-20 years; however, components of the plan would likely take much less time, on the order of 5 years of less for the Ring Barrier or Seawall Improvements. Additionally, construction in or near these communities would not occur over the entire period of construction for the specific feature. Once a specific portion of the feature is complete, construction would end at that site and begin at another, resulting in even less total construction disturbance time to each community. Depending on the type of work being completed, it could be several months to a couple of years of disturbance. It is unlikley that any one community would experience construction disturbance from multiple features of the recommended plan (e.g. communities affected by the ring barrier wouldn't experience the construction disturbance of the navigation channel within their community. They could be affected if they commute through or work near other construction sites, but that is too speculative to assess.) Additional analysis during the Tier 2 studies will be completed to fully assess and disclose the temporary and long-term impacts of construction of the Tier One measures.

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			USACE must evaluate this, present this to the public, and be mindful in how it plans and carries out construction. [Figures and tables show how low-income populations tend to live along Harborside Drive and the Port of Galveston, Pelican Island, and also near the gulf side and the Galveston Seawall, as well as along SH 87/Broadway/Avenue J.]			
E002357	-12	LSLA	[Summarized] LSLA reiterates the need for localized analysis of environmental justice impacts—both beneficial and adverse—for Freeport and Port Arthur, two "industry towns" located along the Texas coast outside of the Houston metropolitan area. Freeport is a small industrial city whose population is estimated to be 64% Hispanic and 14% Black or African American and has a substantially low income population with a per capita income of $19,635 and 24.3% are classified as low income. This minority, low-income population is surrounded by mammoth sources of air and water pollution as Freeport is home to large petrochemical manufacturers and import and export terminals. Port Arthur is alos a fence-line industrial city with large minority and low-income populations where 27.5% of the population lives in poverty and the median household income in 2018 was	Environmental	Existing/Impacts -- EJ	While Port Arthur and Freeport were both originally part of the study area, they were subsequently removed from the scope of the Coastal Texas Study upon initiation and completion of the Sabine Pass to Galveston Bay Coastal Storm Risk Management Feasibility Study. None of the CSRM measures in the Coastal Texas Study would benefit or adversely impact the communities of Freport or Port Arthur.
			$34,987.42. Port Arthus is an EPA Region 6 EJ Showcase Community due to its at-risk population's proximity to some of the nation's largest refineries and petrochemical producers. West Port Arthur is a historic African-American neighborhood that is of particular concern as the census blocks of the area have a black population that average at least 83.9%, while most are 95%+. Both communities have been severely affected by hurricanes and hurricane-related high tides and storm surges.			
E002357	-13	LSLA	The information contained in the current DEIS simply is not complete enough to show that affected low-income and minority populations will not be adversely affected by the massive TSP. The USACE should revisit environmental justice concerns to ensure that our most vulnerable citizens do not bear a disproportionate burden for this project.	Environmental	Existing/Impacts -- EJ	Refer to Response to Comment #E002357-02
E002357	-14	LSLA	[Summarized] The USACE should issue at least one more draft EIS for the Tier One and actionable measures and associated alternatives, which incorporates the public comments received during the current public comment period and supplement this information with additional reports to help keep the public informed over this multi-year study. After issuing additional DEISs, the USACE must conduct additional public comment periods that are not scheduled during the winter holiday season and is long enough so that the public has the opportunity to review lengthy environmental documents in full and formulate and provide meaningful comprehensive comments. Commenters understand the tiered NEPA approach, but the current DEIS is seriously insufficient and provides far too little information for the Tier One measures and concerns and questions for the actionable measures still. As is, the DEIS does not provide the public	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.

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			actionable measures still. As is, the DEIS does not provide the public the ability to review and adequately comment on the environmental impacts of the measures. The USACE must complete a full and proper NEPA analysis of every single component of the TSP and the identified alternatives, including the no action alternative and strictly fulfill NEPA's requirements and purpose. The USACE cannot piecemeal into a final document technical information omitted from or left incomplete in draft documents. NEPA's mandate must be interpreted and applied "to the fullest extent possible." Commenters believe that not only are additional EISs necessary in this case, but that the USACE should also comply with: [Comment includes excerpts/requirements from 40 CFR §1500.1(a), 1502.1, 1502.6, 1502.15, 1502.16, and 1508.1(g) and 42 U.S.C. §4332(2)(C)]			
E002357	-15	LSLA	[Summarized] The USACE should not seek Congressional funding of the TSP and its component parts until it has issued sufficient NEPA documents and provided for further public comment periods. Commenters wish the make clear to the USACE that the USACE should not go "too far down the road" in seeking a Congressional mandate or funding for building and maintaining TSP components—especially the Tier One Measures—before completing a much more thorough and complete NEPA analysis. The USACE will undermine the purpose of NEPA if it seeks and receives a Congressional mandate to construct the TSP components without previously completing a much more thorough and complete NEPA analysis. 40 CFR §1501.2 state the following principles: (a) "Agencies should integrate the NEPA process with other planning and authorization processes at the earliest reasonable time to ensure that agencies	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
			earliest reasonable time to ensure that agencies consider environmental impacts in their planning and decisions, to avoid delays later in the process, and to head off potential conflicts;" (f) "Agencies shall not commit resources prejudicing selection of alternatives before making a final decision," and (g) "Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."			
E002357	-16	LSLA	[Summarized] The USACE must incorporate, in future environmental documents, further discussion regarding the "intensity" and "significance" of impacts. There are several factors that are to be considered when determining an impact's intensity and how to rate significance [10 intensity factors and 4 rating of significance as listed in 40 CFR §1508.27 are included].	Environmental	Impacts	Tier 2 NEPA documentation will follow the applicable CEQ regulations at the time of preparation of those documents and include as necessary information regarding significance of a resource or action.

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E002357	-17	LSLA	[Summarized] The DEIS description of impacts on sediment transportation and water quality are merely qualitative. With regard to sediment exchange, there is minimal discussion on the impacts from the Clear Lake and Dickinson Bayou gates and neither a discussion on the intensity of the impact nor a discussion of the impacts' significance is included. Without such discussions, the DEIS' analysis on the possible detrimental effects on sediment exchange is incomplete and the USACE has not complied with its obligations under NEPA. Commenters appreciate that the USACE recognizes it must perform more analysis, but are concerned the USACE will continue in future documents to rely on the difficulty of obtaining precision in order to avoid analysis. The USACE must perform and present a more exacting study and estimate of how each aspect of the TSP's permanent	Environmental	Impacts	While it is true the impacts of the recommended plan on sediment exchange was qualitativly described, Advanced Circulation(ADCIRC), Adaptive Hydraulyic (AdH), and Particle Transport (PTM) modeling outputs were used to inform best professional judgement in the absence of sediment modeling. All of these models take into account existing hydraulic conditions and simulate future with and without project hydraulic conditions. Each provide outputs, such as circulation patterns, water velocity changes, tidal amplitude and prism, and particle movement, that can then qualitatively inform anticipated changes in sediment exchange or movement. During the Tier 2 studies, the USACE will preform additional bathymetric, hydrodynamic (H&H), and sediment transport modeling on the final designs to quantitatively determine the level of change anticipated. If localized accumulation of sediments is identified, the impact to those areas and the surrounding habitat would be assessed in subsequent NEPA documentation and the need for mitigation to sensitive habitats will be informed by ecological modeling,
			presence will impact sediment transport in and out of Galveston Bay, Dickinson Bayou, Clear Lake, Offatts Bayou, and other wetlands and waterways that reasonably are expected to be affected by the TSP's component parts. The USACE's future analysis of the TSP's component parts should also provide: •localized evaluation of sediment accumulation in the immediate waters and wetlands near the TSP's component parts (increase turbidity and water temperatures, reduce available oxygen, and harm absorption of oxygen by local fish species; loss of viable habitat for aquatic species or threatened and endangered species and CH); •detailed, specific study predicting how often each of the components would be closed (realistically accounting for loss of power and jamming of mechanical mechanisms) and how that affects			
			sediment transport under different scenarios; •evaluation of impacts from reduce oxygen levels and how to mitigate			
E002357	-18	LSLA	[Summarized] The USACE must follow up on its promise to provide a more detailed review of the TSP's effects on shoreline change and resources in a future study. The USACE must complete more specific analysis for effects on shorelines, including the direct and indirect impacts on shoreline resource, including at Port Bolivar, Galveston Island, and other portions of the project. The USACE should provide more information both for the Tier One Measures—which clearly require further analysis—and Actionable Measures. The USACE should ensure its detailed review provides an honest and full evaluation of whether the Galveston Seawall's improvements will impact shorelines and clarify the ambiguous statement on pg 4-15. Impacts of the Galveston Seawall improvements should take into account that a taller seawall will affect wave patterns and hydrology during	H&H/Environmental	Impacts -- Seawall	The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate potential adverse impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Specifically in regards to the concerns about the Galveston Seawall Improvements, the seawall extension is along the North side of the Seawall Blvd and not directly connected with the existing shoreline. Because of this disconnection, the presence of the improvement will not increase wave energies or turbulence in the immediate area of the seawall and would therefore not effect the beach, except in rare and very extreme events where the existing seawall would have been overtopped under a future without project condition. Additional assessment of the nearshore effects detailed surveys and nearshore modeling will be conducted during the Tier 2 studies to better understand the interaction of the near shore environment with seawall extension when the shape of the structures are finalized.

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			periods of high storm surge. While these events may occur only a few days per year, the USACE should model whether this dynamic will effect shoreline change in a measureable way. Will there be increased wave energy and turbulence in the immediate area of the seawall, causing effects on the beach? In other words, if more water will not move onto Galveston Island, but rather, crash against a taller seawall and turn back into the Gulf, will shoreline erosion increase along the Galveston Seawall?			
E002357	-19	LSLA	Analysis of the "Actionable Measures" impact on shoreline erosion is lacking. The USACE states "shorelines will continue to retreat due to RSLR and interrupted longshore sediment transport along the Gulf Coast" (pg 5-21) but does not provide information on how shoreline erosion may or may not change under the massive beach nourishment and other proposed environmental restoration projects. Specifically, if the slope of the Gulf bed changes, will wave energy patterns change, affecting erosion rates? The USACE needs to study and present to the public how changes to beaches and in waters near the shore will effect wave energy and erosion patterns.	H&H/Environmental	Impacts -- Beach and Dune	Shoreline erosion and protection of interior habitats has been incorporated into the ecological modeling for each of the actionable measures. The assumptions for how shoreline erosion was calculated is available in Appendix I of the EIS. Additionally, brief descriptions of how shoreline erosion would be modified with breakwaters and beach nourishment are discussed sections 5.5.2.1 and
E002357	-20	LSLA	The USACE should identify how many days a year it expects the various CSRM components of the TSP to be closed, including scenarios where power loss or mechanical problems cause longer than expected closures. The USACE should then model these scenarios and present their impacts to the public. This is especially important when it comes to salinity and tides, as even short-term changes can negatively impact health of ecosystems, negatively affect breeding and migration patterns of wildlife in and out of Galveston Bay, Offatts Bayou, and other waterways, and harm wetlands and other marshes.	H&H/Environmental	Impacts	Appendix D, Section 9.6 of the Main Report discusses the anticipated frequency of gate operations. These assumptiosn were then qualitatively incorporated into the impact discussions for various resources through Chapter 4 of the EIS. For this phase of the study, gate closures for operations and maintenance needs and storm events were modeled but they were modeled as an absolute worst case scenario, where the gates would be closed for every storm for the full duration of the storm. In actuality, the gate would have operational triggers that would determine when the gates would close and open based on storm track and still water levels for storm events. During the Tier 2 studies, more detailed designs will be developed and include more specificity on when and for how long anticipated gate closures will happen. At that time, the level of detail and anlaysis required for developing the Water Control Manual for the system will be developed and incorporated into future hydrodynamic, sediment, and environmental modeling efforts. The impacts of the refined gate operations will be incorporated into the Tier 2 NEPA documentation for the various resources potentially impacted and made available for public review.
E002357	-21	LSLA	Commenters are concerned the USACE has not fully evaluated the impact of induced eddies on the backside of the TSP's structures. The USACE acknowledges this possibility and how this may impact the transit of organisms through the structures, but fails to provide analysis of what those impacts would be. Transit in and out of Galveston Bay and other waterways which will be affected by the TSP is critical to the short and long-term health of wildlife and local ecosystems.	H&H/Environmental	Impacts	A larval tranport model (Appendix D, Annex 6 of the Main Report) was completed during this phase of the study which shows where and how aquatic organisms move in and out of Galveston Bay with and without the project. This analysis was the basis for the disclosure of impacts to aquatic organisms and wildlife in Galveston Bay in the EIS. Additional modeling will be completed during the Tier 2 studies which will incorporate refined designs that would attempt to address any identified concerns with extreme velocities or formation of eddies. If significant impacts are found, mitigation may be warranted to avoid and minimize the overall impact to the ecosystem.

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E002357	-22	LSLA	[Summarized] Commenters are concerned increased water velocities in and out of waterways will prevent organisms from transiting those areas, especially smaller or younger organisms. The USACE predicts water velocity magnitudes will drop slightly in "most locations, " but acknowledges increases in water velocity in some locations in West Bay and the western side of Galveston Bay. Commenters are also troubled about increases in velocities through the Bolivar Roads Gates—physics says that reducing the cross-sectional area of the entrance to Galveston Bay will increase water velocities in that area. The USACE must study and present to the public more details regarding how these changes may affect aquatic wildlife particularly how aquatic organisms will move in and out of Galveston Bay with the changed velocities, how it will affect migration of species and populations in Galveston Bay and the Gulf. fishery will be forever and	H&H/Environmental	Impacts	The Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat is identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration (Appendix D, Annex 6 of the Main Report). The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses, including additional fish passage modeling, will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			irreversibly harm. If water velocity at and near the proposed Bolivar Roads structures prevent or decrease the ability of this migration, the health of the Galveston Bay and Gulf fishery will be forever and irreversibly harm.			
E002357	-23	LSLA	Commenters appreciate the DEIS's Tier One section leaves open the opportunity for "additional openings…in the project designs to reduce impacts on tidal exchange, salinity, and water circulation."(pg. 4-29) The USACE should make this a priority and must ensure its final designs minimize adverse impacts on physical oceanography (and other impacts, as well.) Changes of the tidal prism of "14 to 16" percent inside Clear Lake and Dickinson Bayou are simply unacceptable and unwarranted.88 Changes of "about 16 percent" inside Offatts Bayou are similarly unacceptable and unwarranted.89 While Commenters appreciate design changes to the Bolivar Roads Barrier System have lowered impacts on tidal prisms, estimated changes of "3 to 7" percent still risk severe negative impacts on Galveston Bay.	H&H/Engineering	Designs -- Gates/Impacts	Refer to Response to Comment #E002357-22
E002357	-24	LSLA	The USACE states it has not modeled salinities "upstream" of the Clear Lake and Dickinson Bayou barriers, even though "the barriers at Clear Lake and Dickinson Bayou are predicted to reduce the tidal prism by 14 to 16 percent." The USACE must do this and present findings in a Tier Two draft EIS. Brackish water in Clear Lake and Dickinson Bayou are known to be home to various varieties of saltwater fish, especially during periods of dry weather when salinities increase. Similarly, freshwater fish appear more frequently during wet periods. The USACE must study and provide to the public expected impacts on salinity, so that the public can understand and comment on how various aquatic flora and fauna may be impacted.	H&H/Environmental	Impacts -- Clear Lake/Dickinson Gates	Thank you for your suggestion, we will take this under advisement in the PED phase. Refer to Section 4.3.2.1.2 of the EIS whic clearly states, "The gate structures and floodwalls at Clear Lake, Dickinson Bayou, and Offatts Bayou will impact tidal exchange, currents and water circulation. The hydraulic analysis provided in the AdH modeling shows minimal changes in the proposed vicinities of the structures." Note that the Recommended Plan's Bay-side defenses (Galveston Ring Barrier System + Clear Lake + Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses (including hydrologic analyses) will be conducted. Design refinements will be based on additional data collection (i.e., storm, hydrodynamic, and environmental modeling), and in coordination with Federal, state, and local entities. If the future analysis identifies issues with water circulation, additional openings may be included in the project designs to reduce impacts to tidal exchange, salinity, and water circulation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002357	-25	LSLA	Commenters are very concerned by the USACE's statement explaining that modeling predicts "salinity from surface to bottom would be lower and remain lower for a longer time."(pg. 4-29) The USACE should make a priority reducing the TSP's crosssection at Bolivar Roads, and elsewhere, to minimize impacts on salinity inside Galveston Bay, Dickinson Bayou, Clear Lake, and other waterways.	Environmental/Engineering	Designs -- Gates/Impacts	Refer to Response to Comment #E002357-24
E002357	-26	LSLA	The DEIS does not adequately address how the expected reduction of tidal flow and diminished flushing may alter both phosphorus and nitrogen levels in the Bay. Excess or diminished levels of either nutrient can increase bacterial levels in Bay waters, which can adversely affect oysters, one of the Bay's keystone species. Specifically, changes in the levels of phosphates and nitrogen can alter the plankton communities that filter feeders like oysters rely on for food. The TSP should address this important issue as over half of the Texas oyster harvest comes from Galveston Bay.	Environmental	Impacts	Refer to Response to Comment #E002357-22
E002357	-27	LSLA	The USACE's Tier Two study must provide more detailed information on the effects of the TSP on water and sediment quality. Commentary in the current DEIS is general, unexacting, and largely does not provide enough information for the public to comment on the USACE's methods and weigh the harms on water and sediment quality with the benefits of the TSP. The USACE must provide more detailed analysis of effects on water and sediment quality, including impacts on wildlife, possibility for algal blooms, and effects on oxygen levels.	Environmental	Impacts	Refer to Comment #E002357-24 regarding investigations, design refinments, and the avoidance, minimization, and mitigation of potential impacts as well as Tiered NEPA and supplemental NEPA documentation in PED
E002357	-28	LSLA	The USACE dangerously minimizes the consequences of even small and "temporary" increases in turbidity when stating the localized increase in turbidity at the sediment borrow locations and at the beach placement locations [and] releases of low oxygen water and nutrients…would be expected to be temporary and associated with actual periods of construction for beach nourishment Tier 1 measures. First, it is well established that even small increases in turbidity can have substantial negative impacts on aquatic life. Second, it is well established that within just days of minimal increases in turbidity can lead to reduced feeding rates and respiration problems among fish. Third, larger increases in turbidity can have serious health consequences for fish and aquatic life including long-term reductions in feeding success, delayed hatching rates, and reduced growth rates. [Department of	Environmental	Impacts	Refer to Comment #E002357-24 regarding investigations, design refinments, and the avoidance, minimization, and mitigation of potential impacts as well as Tiered NEPA and supplemental NEPA documentation in PED
			Environmental Conservation. State of Alaska Frequently Asked Questions: Turbidity in Surface Waters]			

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002357	-29	LSLA	The USACE must provide a much more detailed hydrologic analysis in future environmental review documents for the TSP and provide the public opportunities to review and comment on that analysis. The current DEIS is brief and extremely general with regards to the Tier One measures, making statements such as "[t]he Coastal Barrier and proposed barriers at Clear Lake, Dickinson Bayou, and Offatts Bayou (Galveston ring levee/floodwall) may impact" various watersheds.103 The DEIS then provides no more analysis or information. This is wholly insufficient for NEPA purposes.	Environmental	Impacts	The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses, including additional fish passage modeling, will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002357	-30	LSLA	The current DEIS is equally brief and extremely general with regards to the possibility that the "ring levee around urbanized areas of Galveston would block some rainfall runoff from drainage channels and sheet flow from the watershed into the bay."(pg 4-34) The possibility of some level of "bathtub effect" is of primary concern for LSLA's Galveston Island client. The USACE absolutely must study this possible impact in detail and provide the public with detailed information regarding interference with Galveston's current gravity based drainage system. The possibility of induced flooding by the Galveston Ring Barrier and Seawall improvements have the possibility to undermine the purpose to the Coastal Texas Study when it comes to urban Galveston Island.	Environmental	Impacts	Refer to the response to Comment #E002328-01 regarding regarding the study's authority and how that reflects upon our approach to this issue. USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Thus, the proposed Galveston Ring System will not worsen the existing conditions (i.e. the risk of flooding from a rain event cannot be increased with the implementation of the proposed ring barrier). Pump stations will be implemented to expedite the release of water back into Galveston Bay and the Study team is working with the City of Galveston to determine potential solutions for the City's drainage system. The proposed pump station capacity is approximately 7,200,000 gallons per minute, or roughly 650 Olympic sized swimming pools per hour. Refer also to the Response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA for Galveston Ring System refinements and Response to Comment #E002454-14 regarding the creation of an Operations Manual in PED.
E002357	-31	LSLA	The USACE merely states the Actionable Measures will produce "temporary, minor impacts" on water quality. (pg 5-24) The USACE needs to provide more details regarding what those impacts will be, even if minor. Further, claiming they are "temporary" is questionable, considering that Actionable Measures may take decades to complete and will require routine maintenance for decades after their construction.	Environmental	Impacts	Construction of the entire Recommended Plan could take 12-20 years; however, components of the plan would likely take much less time, on the order of a couple of years for completion of all segments and components of the restoration action. Within each restoration unit, the actual impact on turbidity would be limited to the immediate area of disturbance. Once sediment or rock is placed in that area, the plume causing turbidity would settle and return to baseline conditions, which has been shown to only take a couple of hours. The area of disturbance would then be shifted to another site and the previous site would not be disturbed again as part of the restoration actions.
E002357	-32	LSLA	The USACE must perform a more detailed analysis of reasonably expected impacts on energy and mineral resources in a future draft environmental impact statement. "The Energy and Mineral Resources analysis is preliminary" and its "conclusions are very broad."(pg 4-40) Protection from industrial spills and pollution during storms is important, but Commenters also believe the USACE should not narrowly focus on Texas' energy industry rather than focusing on the area's most vulnerable low-income and minority populations. Industry largely has the ability to protect itself, and the USACE can work with industry to identify meaningful projects to perform. Private citizens, especially low income and minority residents, do not have such ability and opportunity. The USACE should prioritize this latter group rather than the former.	Environmental	Impacts	The purpose of this study is to investigate potential solutions to risks associated with coastal storms and to look at improving the study area's resiliency to those storms. A multiple lines of defense approach was part of the plan formulation strategy and CSRM features were sited to reduce water elevation throughout Galveston Bay and not target any one community or industry at risk. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses, to include additional assessment of the impacts to the energy and mineral resources, will be conducted. Efforts to avoid, minimize and mitigate potential adverse impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002357	-33	LSLA	[Summarized] Commenters are concerned with the cursory analysis of the high number of HTRW sites within the study area, the high populations near these sites, and the high potential for these sites to be disturbed and impacted both during construction of the TSP and after its construction due to induced impacts. The USACE must provide much more detailed analysis of HTRW sites which goes beyond the desktop analysis of geospatial cataloguing of HTRW sites into the hierarchical nature of the sites and must be built upon and consider more than simply the raw number of sites within the studied geographies. It is improper for the USACE to only study in detail those sites with a potential REC simply because there are so many sites.110 Relatedly, in order to ensure the USACE's choices in TSP components, staging areas for construction, and other actions related to the TSP, its analysis should take into account the number of	HTRW	Existing/Impacts	Refer to Response to Comment #E002357-29
			workers, students, and residents, including low-income and minority residents, who live near individual sites, the potential for storm surge, flooding, and other targeted impacts to affect individual sites, the potential for construction of the TSP's component parts to encounter and disturb HTRW sites, and the type and level of potential harm individual sites could cause. As noted in the DEIS, even with the Actionable Measures, the USACE admits it did not study most of the areas surrounding individual HTRW sites.(pg 5-75) Without understanding these dynamics, the USACE cannot conduct a proper cost-benefit analysis.			
E002357	-34	LSLA	[Summarized] The DEIS doesn't mention or evaluate dredge materials in terms of HTRW risks. The USACE must evaluate dredge material related to the TSP to determine whether or not it is HTRW. Commenters oppose any reading of regulation or law which results in the USACE failing to designate dredge material as HTRW during the construction and maintenance of the TSP. While ER No. 1165-2-132 maintains that dredged material and sediments are exempted from being considered a hazardous substance, this should not absolve the USACE of designating and evaluating dredged material as HTRW due to the risks and history of toxic and hazardous dredge materials in the area as demonstrated by the levels of toxins in Galveston Bay and its tributaries which have led authorities to establish various seafood consumption. According to the latest Galveston Bay Report Card published by Houston	HTRW	Existing/Impacts	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.

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			Advanced Research Center (HARC) and the Galveston Bay Foundation, "[t]he danger of legacy pollutants such as PCBs and dioxins is that they can persist in the sediment for decades" and as such can continue to present a danger to human health and the environment. This danger will be augmented in circumstances where the USACE is permitted to dredge material from in and around Galveston Bay and areas of the Gulf of Mexico but not treat such material as possible HTRW simply because it does not meet the narrow criteria set out in the Regulation. The USACE should perform an initial inquiry and study into the safety of dredge materials, present results to the public, and allow the public to comment on the risks and need for further evaluation.			
E002357	-35	LSLA	[Summarized] Without further analysis, Commenters and other members of the public cannot provide substantive comments on the TSP's likelihood to protect them from HTRW-related harms nor on the nature of improvements to the TSP which would better protect them from potential harm. Therefore, Commenters believe the USACE should ensure future draft NEPA documents provide a much more thorough evaluation of HTRW sites. The DEIS does not consider how staging areas that will be necessary for the construction of the TSP may be affected by, or may affect, existing HTRW areas. The USACE must consider where construction materials will be stored and what steps will be taken to ensure that such storage will not compromise nearby HTRW sites. The USACE must address this issue by conducting a detailed survey of the study area and identify and specify in detail an implementation plan	HTRW	Existing/Impacts	Refer to Response to Comment #E002357-29
			meant to address ACM and LBP that may be encountered and disturbed as part of the TSP. The DEIS' Appendix L also recognizes that "unregulated facilities may also be located within and adjacent to the project area where large commercial and industrial complexes mayinclude additional potential sources of petroleum hydrocarbons, organic chemicals, and regulated substances."113 The USACE must address this issue by conducting a detailed survey of the study area and identify and specify in detail an implementation plan to address unregulated facilities which may be sources of those environmental hazards. (Includes citation of Appendix L)			

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E002357	-36	LSLA	The DEIS does not discuss mitigation and minimization of risks related to HTRW sites; it merely does a preliminary job of identifying where HTRW sites are located. While it might be USACE's policy to avoid the use of project funds for HTRW removal or remediation activities, the USACE still must propose a plan, guidelines, or best practices that would be implemented if the project was to impact in some way a known or unknown HTRW site, including when removal or remediation is appropriate for an HTRW site. When it comes to mitigation of HTRW, the USACE should assume a proactive leadership role in assessing and planning for both expected and unexpected disturbances of HTRW sites during the construction of the TSP. Such a leadership role would entail coordination with other Federal, State, and local authorities about the possible impacts and coordination with such authorities regarding contingency plans	HTRW	Existing/Impacts	Refer to Response to Comment #E002357-29
			and funding for emergency responses to HTRW disturbances.			
E002357	-37	LSLA	The USACE must examine impacts of the various alternatives on air quality and lay out mitigation measures to offset those impacts. However, the DEIS states in the Tier One section that the "details necessary to estimate the air containment emission rates for the Coastal Texas Study alternatives are not available at the time of this report."114 This, of course, makes it impossible for the public to understand the impacts of the TSP on air quality and for the public to offer its fullest and most robust commentary on the various alternatives' air quality impacts. The USACE must correct this deficiency, and provide a detailed and full understanding of air quality impacts in one or more future DEISs. And then, open those future documents to a new public comment period.	Environmental	Impacts -- Air	Refer to Response to Comment #E002357-29
E002357	-38	LSLA	The DEIS states construction of Alternative A and Alternative D2 would cause "temporary increases in air pollution…result[ing] from the equipment associated with the construction" of those alternatives. However, as it noted throughout these comments, any time the USACE uses the word "temporary", the USACE is referring to construction periods of potentially 15 years, or more. 15 years will not feel temporary to residents nearby, and 15 years of increased pollution—even if unequal across that timeframe—is more than enough time to have lasting, severe health consequences on nearby esidents. Relatedly, the DEIS states "[b]ecause the greenhouse gas emissions from the construction phase of the project alternatives are relatively short-term in nature, the associated adverse impacts on global climate change would be anticipated to be minor." First, 15 plus years of emissions are hardly	Area of Concern	Implementation Schedule	The FEIS has been revised, and an updated CAA analysis has been included in Appendix G of the EIS.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			insignificant. Second, in a project aimed at addressing sea level rise and global climate change, it is only proper and fitting that the USACE do everything in its toolkit to minimize or eliminate greenhouse gas emissions. Given the extraordinary costs associated with climate change—as illustrated by the price tag for the TSP's component parts—"minor" impacts cannot and must not be taken lightly or only given a cursory view.			
E002357	-39	LSLA	The USACE should also conduct a longer-term review of the effects of climate change on the TSP. Given the long-term timeline of implementation, the USACE needs to consider a timeline out to at least 100 years. This extended review will be important for both Tier One measures and the many environmental restoration measures considered Actionable Measures. It will also give the public more knowledge of expected conditions when the TSP is constructed and during the TSP's expected lifetime. The 50?year study period is thus clearly inadequate to address a problem that is likely to get increasingly worse for at least the next 300 years. It is possible that by the time construction is completed sea level will have risen multiple feet and rendered many of the coastal spine improvements ineffective. The public deserves to know whether this entire project will need to be raised in 50 to 75 years, and whether we will	Planning	Modeling /Impacts	The Study Team complied with USACE policy and guidance with respect to incorporating the potential effects of Climate Change on the Recommended Plan. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years).
			face ever more costly engineering projects to protect people and infrastructure along the coast. To more effectively respond to climate change, the USACE should expand the study period to a minimum of 100 years.			
E002357	-40	LSLA	The USACE must also provide a mitigation plan for GHG emissions for CSRM that is more detailed than a single proposal to use electric powered gates, even more so when the source and related generation emissions of that electricity are not defined.	Environmental	Impacts	Refer to Response to Comment #E002357-38
E002357	-41	LSLA	The USACE should also estimate indirect air pollution due to increased population growth and development that occurs due to perceived protection from storm surge after construction of the TSP.	Environmental	Impacts -- Air	Construction of the recommended plan is not expected to induce development, so there woud be no anticipated increase in emissions from increased population and development as a direct result of constructing the system.
E002357	-42	LSLA	The DEIS identifies a variety of construction equipment will be used, both on land and at sea. The DEIS states "marine vessel emission sources would be primary diesel-powered engines" and "on-road equipment may be assumed to be a mix of gasoline and diesel-powered vehicles." These sources will "result in air emissions of particulate matter (PM10 and PM2.5), SO2, CO, NO2, VOC, and CO2." However, the DEIS does not provide any actual estimates for these air pollutants, but only makes prospective descriptions of how these emissions "will be estimated." The USACE must provide actual, detailed descriptions for all of these pollutants across the study area in order to fulfill the requirements of NEPA. This analysis must evaluate all expected construction, operating emissions, and maintenance emissions from all sources, including dredge and support equipment,	Environmental	Impacts -- Air	Refer to Response to Comment #E002357-38

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			non-road construction equipment, on-road and employee vehicles, maintenance dredging activities, landside maintenance, diesel-fueled generators, and other maintenance activities. This analysis should include localized evaluations, so to ensure each member of the public can understand how they, individually, will be affected. Localized analysis is also necessary to evaluate whether minority or low-income populations will bear disproportionate adverse impacts due to construction of the TSP's component parts.			
E002357	-43	LSLA	[Summarized] The USACE states in the DEIS it will provide a more detailed summary of emissions from the operation of emergency generator engines in a "Final IFR-EIS." The USACE must provide these in another draft EIS so the public has the opportunity to review and comment on the proposed emissions. The USACE only briefly mentions emissions from maintenance activities, but does not even propose to provide more details in a future NEPA document as it does for operating emissions. The USACE must provide more details in a draft EIS so that the public has the opportunity to review and comment on the proposed emissions. The DEIS also fails to complete a full and proper mitigation analysis for air quality. As it stands, the DEIS only makes very broad and prospective statements regarding possible mitigation measures in its Tier One section.	Environmental	Impacts -- Air	An updated Clear Air Act appendix has been included in the FEIS based on the information available (Refer to Appendix G of the FEIS). Note again Response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			Especially considering the Texas coast already suffers from poor air quality, the USACE should choose to use robust technologies which will lower emissions at every chance possible. These measures may include fuel-efficient engines, electric engines (as long as the USACE accounts for emission related to power plants), and robust, best available technology to prevent leaks of gas, oil, and other forms of pollutants such as methane gas... Commenters note similarly broad mitigation measures are listed in the Actionable Section with no actual commitments. Other important information which is not included in either the Tier One or Actionable sections of the DEIS include estimates of air contaminant emissions rates for alternatives including non?road construction equipment, dredging and other equipment discussed in the DEIS.			
			The USACE must also talk about the leaks of methane and other climate change gases that occur with the use of compressed natural gas or liquefied petroleum gas, what cleaner, more fuel?efficient diesel engines there are, what newer vehicles with more fuel efficient engines there are, and what non?road ultra?low sulfur diesel fuel exists and its availability. The entire issue of realistically requiring these mitigation measures must be discussed so the public know how likely they are to be used and the costs of their use. The USACE must provide detailed information for how the various alternatives compare to each other, rather than make generalized statements such as "the impacts will be similar" for each alternative.			

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E002357	-44	LSLA	The DEIS states the no-action alternatives would have no direct impacts on air quality in both the Tier One and Actionable sections.128 However, it does not take into account the 3-to-4 million person population increase simultaneously project with this alternative, which will necessarily involve more development and a corresponding increase in pollution. The DEIS should consider this dynamic in its analysis of the No-Action Alternative. Similarly, the DEIS should consider induced population and commercial and industrial growth due to the TSP, as asserting the TSP will better protect areas from flooding and rising sea levels will certainly induce growth in some areas. This growth will necessarily involve a corresponding increase in pollution.	Environmental	Impacts -- Air	Refer to Response to Comment #E002357-43.
E002357	-45	LSLA	The DEIS states "many of [the homes near construction] are likely to be weekend homes that may not be continuously occupied during peak times of construction (weekdays) or during completely overlooks the fact that the City of Galveston has some 50,000 residents131 who largely live within the boundaries of the proposed Galveston Ring Barrier and seawall. While it is true that many of the residences and accommodations along the seawall—in the form of hotels, condominiums, and a few scattered homes—are more likely to be busy and occupied on weekends and the summer months, the residential areas near the proposed Ring Barrier, which seemingly will require relatively more work and create relatively more noise, are not seasonal homes.	Environmental	Impacts	Thank you for your input, we will take this under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002357	-46	LSLA	The DEIS assessment of noise impacts also completely fails to acknowledge the Strand Area of Galveston Island. The Strand area is important economically and culturally to the Island but is close and will be impacted by construction of the Ring Barrier. The USACE also needs to consider that the Strand and other areas on the Island host visitors and residents year-round. While it hosts many visitors during the summer months, important events take place in cooler months—these include, among others, Dickens on the Strand in December, Galveston Mardi Gras (which takes place both on the Strand and along the Seawall) in the late winter/early spring, and fall's "Lone Star Rally." These events hundreds of thousands of visitors to the island, take place year-round, and are vital to the economic and cultural success of Galveston Island and the City of Galveston.	Economics	Impacts	Thank you for your input, we will take this under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002357	-47	LSLA	The USACE should also consider and study how many workers on Galveston Island work atypical hours (such as evening or night shifts) due to the Island's robust tourism industry and/or nearby oil, gas, petrochemical industries. The Island is also home to a thriving medical center, which operates 24/7. These all require work around the clock or later into the evening, meaning the USACE's statement that "[n]oise impacts associated with construction would be temporary and would typically take place during normal working hours (daytime), and therefore, are considered minor" is likely incorrect.132 The USACE should account for the unique economy of Galveston Island and reassess this finding.	Economics	Impacts	Thank you for your input, we will take this under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002357	-48	LSLA	The USACE wrongly ignores all protected lands as "noise?sensitive receivers" and should include with residential areas. Shorebirds (nesting, feeding, loafing, hunting, etc.), sea turtles, and other wildlife are affected by human noise. The USACE's statement that "The long?term reduction in noise would be from the expected decrease in infrastructure damage and subsequent decrease in infrastructure damage and subsequent construction/rehabilitation activities" ignores the development and the noise that will be generated and probably increase on the bayside of the levees.	Environmental	Impacts -- Noise	Thank you for your input, we will take this under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002357	-49	LSLA	The DEIS also does not provide any information on mitigation of noise impacts. The USACE must correct this. And Commenters hope that when the USACE completes a more thorough and accurate study of noise impacts, the USACE will realize it needs to use robust noise mitigation technology during construction of the TSP. Limited noise is expected from construction of Actionable Measures.133 The USACE should acknowledge two facts. One, noise on beaches will impact the viability and success of local tourism economies as well as those seeking quiet enjoyment of beaches, wetlands, and other affected areas. Two, construction of measures will last years followed by many incidences of maintenance. The USACE should provide more detailed estimates of how much noise, and how often, particular areas along the coast will suffer	Environmental	Impacts -- Noise	Thank you for your input, we will take this under advisement as we move into PED. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			during completing and maintenance of the Actionable Measures.			
E002357	-50	LSLA	The USACE needs to be specific about where wetlands affected by the TSP will be, including the 122 acres of estuarine wetlands, 128 acres of palustrine wetlands, and, notably, the 1,148 acres "expected to be indirectly impacted as a result of altered hydrology leading to eventual deterioration of those habitats." The USACE should disclose more information on where these specific affected wetlands are located, and the likelihood and severity of impacts on the various affected areas. Both the main body of the DEIS and materials in the Appendices are not clear as to exactly where impacted areas are. Without doing so, the public cannot properly comment on wetland loss. The DEIS and Draft Mitigation Plan only describe in broad terms possible wetlands mitigation and possible benefits due to the environmental restoration projects. The USACE must provide detailed explanations of mitigation	Environmental	Impacts -- Wetlands	Refer to Response to Comment #E002357-29

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			plans and evaluate their long-term viability. Specifically, Commenters are concerned that mitigation projects may result in fragmented habitats for wetland species and ecosystems. Commenters are also concerned that mitigation projects will not be viable as they will also be affected by changes to tidal patterns and salinity. In other words, new wetlands behind or in front of the Coastal Barrier's components would likely be subject to the same harmful dynamics creating the need for mitigation in the first place. Because the USACE has not provided information on where mitigation projects may take place, it is impossible for the public to comment on their usefulness, resiliency, and overall long-term viability. Future mitigation plans should also include timelines associated with wetland mitigation, so that the public understands what gaps there may be in wetland ecosystem areas along the Coast and			
			understand how this may affect the viability of wetland species. Commenters and the public also need to know specific timelines as far as development of wetlands intended to protect against storm sure and floods because wetlands can take years to reach their maximum potential as protection against floods and storm surge.			
E002357	-51	LSLA	Commenters are also concerned about how construction of the TSP—both Tier One and Actionable Measures—will interfere with natural processes that are essential to maintaining existing freshwater marshes and wetlands. In the Tier One Section, the DEIS states "[construction activities associated with the levee/floodwall features on Bolivar Peninsula and Galveston Island and the reduced flow and reduced tidal amplitude resulting from the navigational and environmental gates would have long-term effects on the estuarine habitats."138 However, it does not provide further details so it is difficult to understand what the USACE is trying to tell the public. And it is impossible for the public to formulate robust comments. The USACE must report precise, quantifiable in future environmental documents.	Environmental	Impacts	Refer to Response to Comment #E002357-29
E002357	-52	LSLA	Regarding beach and dune renourishment in both the Tier One and Actionable sections, windswept sediment that provides sand to wetlands might become impeded because of the construction of the TSP' component parts. This construction will work to degrade these freshwater wetlands due to erosion. Yet the Study ignores the fact that there are wetlands near dunes that are slated to be improved upon, and any operations to augment them would absolutely affect the health of nearby dunes. The report also fails to mention any consideration about the possible effects on those wetlands do that remain after construction due to operation and maintenance activities. The USACE must give due consideration to these effects, quantify them, provide a narrative, and allow the public to comment. Without such information the report is deficient.	H&H/Environmental	Impacts -- Beach and Dune	Refer to Response to Comment #E002357-29

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002357	-53	LSLA	The DEIS states the "design and positioning of the Coastal Barrier and environmental gates along with barriers at Dickinson Bay, Clear Lake, and Offatts Bayou has not been decided at the time of this writing."139 Thus, the DEIS evaluation of impacts on both freshwater and estuarine aquatic habitats and communities is severely lacking—and it cannot be done properly without being informed by the design and location of the various components of the TSP. As the DEIS admits, for example, "[i]t is not known if Alligator gar movement around the proposed structures for each measure would be affected."140 The USACE needs to produce a DEIS based on one or more specific designs of the TSP's component parts and provide an accurate and detailed study of the impacts of those design and placement possibilities on freshwater and estuarine aquatic communities.	Environmental	Impacts	Refer to Response to Comment #E002357-22
E002357	-54	LSLA	Commenters are highly concerned that "reduced flow and high velocities through Bolivar Roads could impede the migrations and movements of various life stages of fish into and out of the Galveston Bay complex." The Galveston Bay fishery is critically important both commercially and recreationally to the people and economy in the immediate area. Harming this fishery, which the DEIS appears to admit, will bring meaningful economic harm to the area. With that said, Commenters are disappointed that the USACE's modeling of aquatic migrations and movement in and out of Galveston Bay is so lacking and insufficient. The particle track modeling referred to in the DEIS helps provide some information regarding the movement of larval and juvenile aquatic life, but completely fail to study the movement of adult aquatic life. As the DEIS recognizes in Table 4-11, adult shrimp, snapper, red	Environmental	Impacts	Refer to Response to Comment #E002357-22
			drum, flounder, and other aquatic species migrate offshore to spawn. Thus, modeling of impacts on their migration is vital to measuring and understanding the impact of the TSP on the life cycle and long-term viability of aquatic species in the Galveston Bay area. The DEIS states "wetland mitigation described…is expected to offset the losses to salt marsh habitat to reduce any potential long-term impacts that would occur from" the loss of marsh habitats. However, as noted above, the DEIS only refers to possible mitigation but fails to provide details on where and how large mitigation projects may be. The DEIS also fails to establish proposed mitigation projects would be viable in the long-term, as they will presumably be subject to changes in salinity and tidal prisms in the same way existing marsh areas will be by the construction of the TSP.			

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E002357	-55	LSLA	The DEIS is very much a broad, prospective, and provides very little detail of how the USACE would prevent and mitigate impacts to threatened and endangered species. The DEIS acknowledges the proposed Coastal Barrier could impact sea turtles and manatees around Galveston Bay, piping plovers, red knots, least terns, and eastern black rail in various ways.148 Yet, the DEIS only states "work in [various areas] and the potential impacts to this habitat will have to be monitored and mitigated to minimize potential impacts to the species."149 The DEIS makes a similar statement for the Bay Rim alternative and the work on and around Follet's Island.150 Simply stated, this is not nearly good enough. The USACE should provide a detailed analysis of expected impacts on threatened and endangered species and detailed analysis of various methods of avoiding and mitigating impacts on those	Environmental	Impacts	Refer to Response to Comment #E002357-29
			species. The DEIS cannot assert confidence that threatened and endangered species will not be adversely impacted by the TSP. The proposed DEIS makes much ado about preserving beach habitat and endangered species, and even dedicates space to describing how beach habitats aid biodiversity, yet omits specifics about how the TSP will actually protect the habitat and nesting grounds of these endangered or threatened species. As a rule, it must be noted that the Study mentions but does not really address the cumulative impacts of this project on endangered species except by way of comparing the TSP to the No?Action Alternative and Bay Rim Alternative plans.151 Further, the Study defines what habitat will be lost, but fails to delineate with specificity the Ecosystem Restoration (ER) measures utilized to replace the lost habitat, or where and when it will be restored. Without			
			such an assessment the USACE cannot assert with any degree of confidence that endangered or threatened species will not be adversely impacted by this project.152 Here, the USACE acknowledges that construction activity and increased water turbidity caused by dredging can impede visual predators like sea turtles, piping plovers, red knots and least terns, yet concludes that these effects will be temporary without showing data to support this conclusory statement.			

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E002357	-56	LSLA	It is not clear why the USACE must "regularly mow" tie-in structures to the Bolivar Roads Surge Barrier System. Further, the USACE seems to slip this in and does not provide the impacts on wildlife and the localized ecosystem. In fact, the USACE slips this claim in after claiming "[o]nce construction is completed, terrestrial wildlife displaced from construction activity would be able to recolonize the adjacent habitat."153 The USACE states that "ER measures are expected to have a net positive effect on threatened and endangered species."154 However, without any real analysis of the impacts of the TSP and design, material, and construction choices, the USACE has provided no basis for this statement. A mere "hunch" is totally inappropriate. The Study generally does not address whether the proposed hard structures will hasten beach erosion and subsequent degradation of nesting grounds	Environmental	Impacts	Refer to Response to Comment #E002357-22
			for endangered Kemp's Ridley Turtles. Neither does the Study adequately address habitat loss on the seaward side of the proposed levee/floodwall for the threatened Piping Plover and Red Knot populations which utilize Bolivar and Galveston Island's west end beaches for winter foraging habitat. Here, a study should be performed to ascertain whether the rate of beach erosion increases due to the presence of a hard structure, and to determine what the rate of erosion is. The construction of any levee through the state park will likely have a profound affect all the wildlife in the park including any threatened or endangered species which may use the area because the park is only about 1.5 miles wide at the beachfront.			
E002357	-57	LSLA	Removing sand can impact ecosystems, and the USACE does not talk about sand only the sources for potential dirt fill. Moreover, the USACE does not discuss the problems with removing sand. The sand soil is far offshore and can be difficult to access. Using dredge material includes a risk of contamination. The USACE does not appear to have done any studies or analysis of these risks for wildlife species inhabiting restored beaches and other areas. In its Tier One section, the USACE only makes reference to study of grain size and its effects on wildlife. Commenters note that grain size is of paramount importance to nesting turtles, birds, and certain other species. Specifically, both the Red Knot and Piping Plover found on Bolivar Peninsula and Galveston Island's West end require a specific sand grain size for habitat and nesting. The current plan contains no oversight provisions to ensure that the correct grain	Environmental	Impacts	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
			size of sand will be used or even available to replicate the destroyed habitat. Moreover, the lack of data to show that the necessary sand grain size will be available now and in the future casts serious doubts as to the viability of the replacement habitat. In the Actionable Section, the USACE either does not provide any details on sand size and quality.155 Further, the USACE often assumes sand composition will return to previous, natural levels while providing no details on why this is a reasonable expectation.156 If sand fails to do so, the negative implications for various wildlife species may be catastrophic.			

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E002357	-58	LSLA	Additionally, the Study does not address the loss of winter foraging habitat for Piping Plovers on the seaward side of Coastal Spine both on Bolivar and Galveston Island. As stated in previous comments, the USACE has not accounted for populations of the Piping Plover near Galveston Island State Park. Research by the University of Houston—Clear Lake indicates this is the largest Piping Plover population on Galveston Island157 but the DEIS does not address how this population may be affected by construction and maintenance activities, and design choices (including sand grain size, etc.) for beach nourishment activities.	Environmental	Impacts	Refer to Response to Comment #E002357-29
E002357	-59	LSLA	The Draft Feasibility Study briefly mentions the High Island and the Coastal Heritage Preserve on Galveston Island as impacted areas and/or "complimentary" environmental projects but the DEIS fails to present expected impacts on these areas and other natural areas.The DEIS does discuss similar State and Federally owned lands, such as Galveston Island State Park, but should also evaluate impacts non-state and non-federal lands as they are also important ecosystems and habitats for important wildlife species.	Environmental	Impacts	Refer to Response to Comment #E002357-29
E002357	-60	LSLA	The USACE repeats a common mistake when it states construction impacts will be "temporary." Years of construction has the potential—due to years of habitat destruction, light pollution, noise, and vehicle and boat traffic—to significantly, adversely affect threatened and endangered species. Years of disruptive activity may not, itself, be permanent, but it can have permanent impacts on the survival and success of coastal species. The USACE must acknowledge this and develop construction plans which are sensitive to the reality of a multiyear construction project. This lack of detail is made only more concerning considering the DEIS provides no provisions to ensure compliance with best practices, guidelines, and other rules so to ensure minimal disruption during construction. Similarly, the USACE has not provided any type of plan for future repopulation. The USACE must consider	Environmental	Impacts	Refer to Response to Comment #E002357-29
			how construction may require significant repopulation activities in the future, develop a plan, and present it to the public for review and comment.			
E002357	-61	LSLA	The USACE needs to further address and evaluate the effects of habitat fragmentation. Crossing the various components of the TSP will be difficult if not impossible for many wildlife species. Impediments to movement will effect feeding cycles, reproduction cycles, and effect the spread of windblown seeds, insects, and sand. All of these dynamics have the ability to harm wildlife, but have not been addressed in the DEIS.	Environmental	Impacts	Refer to Response to Comment #E002357-29

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E002357	-62	LSLA	Commenters object to the USACE's failure to provide any substantive analysis of effects on wildlife, including protected and threatened species, of the no-action alternative. Continued population growth and encroachment of development into the environment certainly will have substantial effects on wildlife. Continued population growth will necessitate additional homes, roads and infrastructure, while placing additional demands on the Bay area ecosystem in the form of increased noise and air pollution, increased water usage and wastewater discharge, and reduced habitat availability. Adverse impacts generated by the area's population growth should not be so casually dismissed, whether they take the form of growth under the No-Action Alternative or induced growth due to construction of the TSP. For instance, the Bay's aquatic resources, wetlands and essential fish habitat are	Environmental	Impacts	Refer to Response to Comment #E002357-29
			currently, and will continue to be affected by the dredging of Bay area ship channels which impact salinity and erosion. Migratory birds and wildlife resources also stand to be adversely and directly impacted as available habitat is utilized for housing and commercial development. This is significant because as the area's ecotourism continues an upward trajectory (Covid-19 issues notwithstanding), local governments now recognize that our migratory birds and wildlife resources are a valuable attraction for visitors. Patterns of growth under the various alternatives should be studied and their estimated impacts presented to the public in future environmental documents.			
E002357	-63	LSLA	Indeed the Galveston Bay Foundation's Report Card for 2020 shows just how critical of an area it is and why a more in depth analysis of the effects on tidal exchanges, currents, and water circulation is urgent. The Report Card rated the various componen ts of the bay by category, focusing on a number of environmental health indicators. An "A", the highest rating, corresponds to "excellent"; a "B" to "good"; a "C" to "adequate for now"; and a "D" to "requires action". The Report Card gave saltwater wetlands within the Galveston Bay region a grade of "C" and a rating of "D" to freshwater wetlands with the same region. Underwater grasses were given a rating of "C." Given these less than excellent ratings, the USACE should have done a more thorough analysis of the plan's potential to affect this critical habitat with regard to sediment exchange, tidal exchanges, currents and water circulation. Until the	Environmental	Impacts	Refer to Response to Comment #E002357-29
			DEIS provides more information about the actual, expected, long-term consequences to tidal exchanges and the like, the USACE has not complied with its duties under NEPA. CPC's members have a similar observation regarding salinity and dissolved oxygen levels in nearby waters. CPC looks forward to the USACE publicizing detailed mitigation measures to address water and sediment quality in Galveston Bay and associated waters, such as Dickinson Bayou and Clear Lake.			

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E002357	-64	LSLA	The DEIS states that dredged material is to be put to a beneficial use to construct environmental restoration measures or that it would be placed in approved placement areas. CPC takes issue with the last stated use of the dredged material—the placing of it in approved placement areas. The DEIS does not seem to designate where those placement areas would be other than stating that they would be placed, "in an upland or in-bay placement area."167 CPC is concerned that the placement areas may be locations next to residential communities, especially the type that already overburdened with environmental hazards. CPC commented on this issue in its previous set of comments and does so again here, given that the DEIS does not specify with any certainty the location of these placement areas. CPC requests that the USACE state where these upland placement areas are to be and they	Environmental	Impacts	Refer to Response to Comment #E002357-29
			the USACE speak to the testing to be realized on such dredged material to ensure that any toxins are managed before being placed on land. Without this information, the DEIS is too vague and the USACE has not complied with its obligations and duties under NEPA.			
E002357	-65	LSLA	First, Ms. Dergin is not confident that the Galveston Ring Barrier System will, in the long run, not fail and induce flooding. Ms. Dergin is informed by history of USACE projects along the Gulf Coast that large man-made projects are not 100% reliable. They will surely fail at some point, in some way. Due to the design of the Galveston Ring Barrier and because it will prevent Galveston Island's gravity-based drainage, its failure means water will be trapped within the Barrier's footprint and flood the City of Galveston. Because Ms. Dergin and her neighbors are so close to the barrier, it is likely they would be among those who flood the quickest and the most in the event that the Ring Barrier fails to properly pump out all water from the City of Galveston. The USACE should do three things if it chooses to move forward with the Galveston Ring Barrier. One, admit their proposed solution is not fail-proof. Two, design the	H&H/Engineering	Design-Ring Barrier	Refer to Response to Comment #E002357-29
			Ring Barrier in a way which will minimize opportunities for mechanical, electrical, or other failures. Three, design the Ring Barrier in a way which will minimize interference with Galveston Island's gravitybased drainage system.			
E002357	-66	LSLA	Third, Ms. Dergin shares concerns with other residents of Galveston Island that the Ring Barrier will unduly harm the natural environment and natural aesthetics of Galveston Island. Most specifically, it is unclear how necessary the west side of the Galveston Ring Barrier is necessary as currently design.	H&H/Engineering	Design-Ring Barrier	Refer to Response to Comment #E002357-29

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E002357	-67	LSLA	Fourth, the USACE must acknowledge and present to the public the effects of the Seawall "improvements" and Galveston Ring Barrier will have on scenic views and the overall aesthetic of Galveston Island. For example, by raising the Galveston Seawall by several feet, views of the Gulf of Mexico will be harmed and the area made less appealing and attractive for both residents and visitors alike. If visitors find Galveston less appealing and attractive, and take their business elsewhere, the Galveston economy will suffer. So that residents can evaluate whether they support the various components proposed for Galveston Island, the USACE must be realistic about the benefits and open and precise about potential harms.	Economics	Impacts	Refer to Response to Comment #E002357-29
E002357	-68	LSLA	In general, the USACE should model and consider how much damage each individual stretch of the Ring Barrier would be expected to avoid, rather than lumping it into an aggregate estimate for the entire ring barrier and seawall modifications. LSLA's client contends the USACE should evaluate the effectiveness of each stretch or component of the proposed ring barrier separately, while being mindful of induced effects, so that every aspect of it is clearly justified. Or, if not clearly justified, can be dropped, replaced, or modified so to better protect the human and natural environment of Galveston Island. The USACE should look, wherever possible, to use natural systems and nonstructural improvements and avoid as much possible the addition of large, intrusive, unattractive, and imperfect man-made structures to the Island.	Environmental	Impacts	Refer to Response to Comment #E002357-29
E002357	-69	LSLA	Ms. Dergin has lived with mold and leaks for years, due to her inability to address the problem or afford to move and pay for another apartment. Thus, Ms. Dergin is concerned that induced flooding—within the Ring Barrier due to failures of the system to work property or outside the barrier and footprint of other structures (such as the Dickinson and Clear Lake gates)—will lead to increased costs for homeowners and personal property losses and difficulties for renters. This issue is particularly acute for low-income homeowners and renters who cannot afford adequate insurance, if they can afford insurance at all. The USACE should be transparent about these risks and potential costs due to induced damages. While the USACE is confident the Galveston Ring Barrier will work as planned, the USACE should model failures so the public can understand, in tangible dollar amounts, that there are risks associated with the proposed structure.	Environmental	Existing/Impacts -- EJ	Refer to the response to Comment #E002328-01 regarding regarding the study's authority and how that reflects upon our approach to this issue. USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Thus, the proposed Galveston Ring System will not worsen the existing conditions (i.e. the risk of flooding from a rain event cannot be increased with the implementation of the proposed ring barrier). Pump stations will be implemented to expedite the release of water back into Galveston Bay and the Study team is working with the City of Galveston to determine potential solutions for the City's drainage system. The proposed pump station capacity is approximately 7,200,000 gallons per minute, or roughly 650 Olympic sized swimming pools per hour. Refer also to the Response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA for Galveston Ring System refinements and Response to Comment #E002454-14 regarding the creation of an Operations Manual in PED.

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E002357	-70	LSLA	This fishery is vitally important to the livelihood of many commercial fishermen, including Mr. Cannon. In 2016, for example, the Galveston Bay commercial fishery generated approximately $66 million in personal income and $111 million in direct business revenue.172 To the extent the TSP will harm this ecosystem, the TSP will directly harm the livelihoods and economic opportunity for many thousands of residents and harm the economy of the larger Houston-Galveston region—a region with many millions of people. Galveston Bay also is an important center for tourists and recreational fishermen who enjoy the area for its many natural wonders, including wetlands and open water, and the boating, fishing, birding, and other activities they support. The economic impact of recreational and tourism activity is significant. The USACE stated in its 2018 materials that the recreational marine fishery alone generated 1,607	Economics	Impacts	Refer to Response to Comment #E002357-29
			jobs near Galveston Bay, $55.7 million in wages, and$152.1 million in economic activity.173 Over the course of the lifetime of the TSP, the commercial and recreational impacts on nearby communities would be in the tens of billions of dollars.			
E002357	-71	LSLA	Mr. Canon has noted the virtual disappearance of these once common species of aquatic life from the Bay, including juvenile Red Snapper, Mangrove Snapper, Tripletail, and various tropical reef and exotic fish of any size. The addition of hard structures to prevent storm surge such as levees, seawalls, tidal gates and other impediments to the exchange of fresh and salt water will fundamentally alter the characteristics of the bay and threatens this important commercial and recreational fishery. Further, the implementation of the TSP will likely worsen the anthropomorphic environmental degradation inflicted upon the bay area ecology and fishery.	Environmental	Impacts	Refer to Response to Comment #E002357-29
E002357	-72	LSLA	The identified adverse environmental impacts created by the Delta Works include: (1) an increase in hypoxic or dead zones caused by the overload of nutrients flowing downstream and impounded by gates, levees and dams; (2) drastic decreases in salinity that killed marine aquatic life including shellfish, caused by a combination of restricted salt water inflows and excess fresh water inflows; and (3) wildlife habitat loss caused by sand bar and marsh erosion due to the interruption of natural sedimentation processes imposed by the construction of dams and levees. The adverse environmental impacts associated with the Delta Works are identical to many of the negative consequences feared by Commenters and other members of the public. In the name of transparency, the USACE should admit the deficiencies of the Delta Works and utilize alternate methods of storm surge protection instead of moving forward	Environmental	Impacts	Refer to Response to Comment #E002357-22

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			with a plan that is perceived to be seriously flawed. Further, the Dutch are currently redesigning components of the Delta Works. The USACE should avoid this situation and learn from firsthand experiences the environmental consequences associated with the Dutch Works. As Arnold van der Wees, an environmental engineer with the Dutch Government, said "if we knew then what we know now, we probably would have found other solutions to create safety."180 The USACE would do well to understand this lesson to be learned from the Dutch experience that allowing natural processes to continue is now a preferred solution Dutch than trying to engineer a solution.			
E002357	-73	LSLA	This information is insufficient for the public. The DEIS is otherwise silent regarding the OBA and provides no specific information as to how the USACE intends to comply with the OBA. LSLA notes this because compliance will not be simple and straightforward, in part because the USACE may need to acquire and compensate landowners for what is existing private property. The USACE should develop more robust guidance and plans to ensure Texans continue to enjoy their right to beach access and use of publically owned beaches.	Local Law	Compliance	Refer to Response to Comment #E002357-29
E002357	-74	LSLA	Construction and the inability to enjoy stretches of beaches will put a financial squeeze on local businesses, including restaurants, hotels, motels, and resorts, and other industries which depend on beach-driven tourism. When beaches are closed due to construction efforts, these businesses will inevitably suffer. Loss of economic activity will have the induced effect of hurting tax revenues for the City of Galveston, Jamaica Beach, Surfside Beach, and many other affected communities along the Gulf Coast. While many appreciate the appeal of wide beaches, the USACE should highly consider scaling back beach improvement and other projects to more realistic scales, such that they may completed faster yet still provide protection to the coast. This will help minimize disruptions along the coast and lower project costs.	Economics	Impacts	Refer to Response to Comment #E002357-29
E002357	-75	LSLA	The proposed restored beach and dune systems design features a 400-foot wide berm that is 12 feet high for 10 miles. For these 10 miles of ecosystem restoration, 2.5 million square feet of sand will need to be mined from the ocean. Currently sand is the most-consumed natural resource on the planet besides water. The world at-large is already mining enormous amounts of sand from rivers, lakes and the seashore because those sand grains are eroded by water and will lock together easily to form strong concrete. 189 Dredging, however can erode beaches, destroys deltas, and wreaks havoc on marine habitats for fish and birds, as well as potentially increases water pollution. First, offshore sand deposits have not yet been clearly identified. As a result, the USACE acknowledges that a Tier Two NEPA study will be required "to finish environmental compliance" and ultimately to identify the exact offshore borrow source.	Environmental	Impacts -- Beach and Dune	Refer to Response to Comment #E002357-57.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			Commenters in Galveston and Freeport are concerned that the potential deposits which have been identified may be too close to the shore. Sand mining too close to the seashore causes beach erosion. Borrow sources identified in the DEIS and shown in Figure 11, below, are extremely close to the shoreline, and sourcing sand this close to the shoreline will likely cause the beach erosion that the ER seeks to guard against. Research shows that borrow sources should be located more than five miles from a shoreline. As this project contemplates and understands, beaches and wetlands can protect and buffer coastal communities against tropical storms. However, removing large amounts of sand from coastal borrow sources may destroy wetlands and lead to cyclical beach erosion. Erosion can occur from near-shore marine sand mining. Additionally, dredging can create sediment plumes for miles, and may trigger coastal erosion			
E002357	-76	LSLA	Sand mining will cause major Ecosystem Degradation. Sand mining from the identified borrow sites will remove "benthic habitat along with infauna and epibiota that are incapable of avoiding the dredge, resulting in drastic reductions in number of individuals, number of species, and biomass." Removing existing habitats and biological resources may disturb how the current marine communities operate. Damaging benthic habitats by removing sand from coastal areas could have a negative cascade effect on the environment. Once this sand is removed and existing habitats are damaged, then this could further implicate food sources for commercial and recreational fishery stock. Bottom feeders' food sources could then also be destroyed. In fact, the Florida Keys Marine Sanctuary prohibited collecting "live sand" that included these crucial organisms that make up marine ecosystems because they concluded that the removal of	Environmental	Impacts -- Beach and Dune	Refer to Response to Comment #E002357-37.
			the sand would "adversely impact marine productivity, fisheries, wildlife habitat, and water quality." The effects of mining sand from these borrow sources would not only impact the immediate marine environment, but it will potentially negatively impact the greater oceanic ecosystem and the marine life in the Gulf. The DEIS acknowledges the above potential problems with sourcing sand from borrow sites, and states that "these operations have the potential to adversely affect sensitive habitats due to massive displacement of the substrate, changes in topography or bathymetry from where source material was borrowed, and destruction of benthic communities." And, as a result, the Freeport and Galveston communities are hopeful that USACE will find appropriate ways to mitigate these effects and include those in its subsequent tiered analysis—prior to moving forward with the project.			

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E002357	-82	LSLA	Commenters believe the USACE should re-evaluate its construction timeline and project priorities, so to provide quicker help directly to residents along the Gulf Coast. The USACE should identify and prioritize reasonable measures which can be initiated and completed in a relatively short timeline. Specifically, this can include “nonstructural improvements” and certain economic restoration projects. Due to the immense scope of the proposed “double dune” beach restoration projects, the USACE should also consider initiating and completing some sort of intermediate beach and dune restoration projects along the Coast which can provide significant benefits without needing to fully develop the complete double dune system. A great amount of protection from rising sea levels, climate change, and storm surge can be gained by relatively inexpensive and more reasonable nonstructural improvements	Area of Concern	Implementation Schedule	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
			and environmental restoration. By prioritizing these upfront, the USACE can provide protection more quickly. The Feasibility Study states construction could take place over a period of 12 to 20 years after Congressional authorization.290 If Congressional approval takes 2 to 5 years as suggested by the USACE on the Coastal Texas Study website291, it could thus be another 14 to 25 years before construction is completed. Those who live on the Gulf Coast need protection and relief much sooner than that. Thus, the USACE should focus immediately on obtaining funding for and completing smaller scale projects, which are included within the TSP or can be carved out of the TSP, which can be completed on a quicker timeline. The USACE should also develop these projects without tying them to the massive Bolivar Roads project which will delay their completion by decades.			
E002357	-83	LSLA	Additionally, research shows that the Earth’s continued warming makes a storm similar to Hurricane Harvey, which was an event estimated to occur once every hundred years, is now likely to occur once every 16 years.296 Major storm events are becoming more frequent and more likely due to the warming climate. As a result, it is especially important that the USACE consider the effects of tropical storms and their increasing frequency when determining which parts of the proposed project to implement. Rainfall and wind are some of the most detrimental effects that communities experience from tropical storms. Gates and pumps can only protect from some of these elements, so the cost and benefits should be carefully weighed.	Planning	Modeling /Impacts	The study addresses surge and erosion primarily, with some attention also given to precipitation. Flood impacts from rainfall are managed by pumps and drainage components of the system to ensure interior flooding will not be made worse by the project. A floodplain management plan is required to be completed during the design phase of the study. Other studies and projects are underway to address precipitation flood risk in the Houston-Galveston region, and funding for flood mitigation has been provided for mitigation projects elsewhere in the state. Also, USACE and TXGLO encourage the use of best practices in construction to ensure coastal structures are suitable for the wind effects of storms; however, those actions are beyond the authorized USACE missions and therefore outside the scope of the study.

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E002357	-84	LSLA	[Summarized] Building on the statements in the above section, commenters believe the USACE should incorporate more nonstructural improvements into the TSP, including elevating homes and businesses, flood proofing homes and businesses, proposing change to building codes, and rain and wind proofing homes and businesses. Nonstructural improvements are cheaper, can be completed quickly, and offer protection not only from storm surge and rising sea levels, but also flooding caused by rain events. While rain events are not a focus of the Coastal Texas Study, there is no reason why the USACE should not "kill two birds with one stone" and select measures which will fulfill the Coastal Texas Study's stated goals while also providing other benefits. ..Nonstructural improvements can be completed quickly...Nonstructural improvements are effective at a relatively inexpensive cost. As estimated by	General	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features. Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements.
			the USACE, nonstructural improvements can be completed across a substantial area along the west side of Galveston Bay for only $220,000,000, or less than 1% of the total cost of the TSP. Nonstructural measures also will require substantially less ongoing maintenance costs than other measures of the TSP. .Nonstructural improvements also directly help Texas residents, by providing direct assistance by elevating, flood and rain proofing, and wind proofing individuals' homes. They bring the focus clearly unto vulnerable residents along the Gulf Coast... Nonstructural improvements also have relatively little to no adverse environmental impacts...Nonstructural improvements are aesthetically more pleasing and "fit" within the existing human environment on Galveston Island, Bolivar Peninsula, and other areas around the coast.			
E002357	-85	LSLA	[Summarized] The Study also vaguely addresses the communities along the West Bay shoreline where the USACE proposes "non?structural improvements" to address wind?blown storm surge across Galveston Bay. Elevation of existing structures is the common approach, but buyouts are also mentioned. The USACE is not clear as to what structures would be elevated and what the criteria would be for elevation. In order to ensure that these lower income communities will receive fair and equitable treatment, the DEIS should indicate exactly what criteria will be used to determine who will eligible for elevation and buyouts, what safeguards will exist to ensure the equitable treatment of low?income individuals and when (as best can be reasonably anticipated) the nonstructural improvements will take place. These equity issues are further compounded when cost?benefit analysis is performed to justify	Environmental	Impacts -- EJ	Thank you for your input. Refer to the Final Real Estate Plan (Appendix F to the Final Report) which has been updated post-release of the Draft Report in October 2020 to address these issues.
			expenses. Because the cost of repeat flooding must be greater than the purchase and demolition costs associated with the property, homes and communities with low property values may not qualify. The USACE must commit to evaluat ing and publishing materials related to this as soon as possible. Future environmental documents must also include more detailed information on how the USACE will ensure equitable access to nonstructural improvements.			

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E002357	-86	LSLA	However, this does not mean Commenters believe the USACE should move forward with the Coastal Barrier, especially as currently designed. Beyond the other issues covered in these comments, the USACE should consider and recommend for funding the Galveston Bay Park Plan, as Commenters view it as a more attractive option than the Bolivar Gates Flood Barrier and Dickinson Bay and Clear Lake flood Gates. As acknowledged in the DEIS,298 Rice University's Severe Storm Prediction, Education, & Evacuation from Disasters Center—known as SSPEED—has developed a plan known as the Galveston Bay Park Project (GBPP) that provides additional protection from storm surge caused by a Hurricane. This plan has a significantly lower price tag, possibly $3-$6 billion estimated and would be part of a public-private partnership between the public and industry to ensure further projections for the	Environmental/Engineering	Alternatives	The Study Team compared the SSPEED Center's Galveston Bay Park Plan (GBPP) to the Alternatives carried forward for detailed analysis (Alternatives A and D2) in this EIS. The GBPP was screened out for several reasons: First, the resource agencies pointed out that the GBPP would have numerous environmental impacts, including direct impacts to many oyster reefs and a large area of open bay bottom habitat. In the Galveston Bay system, oyster reef is considered a highly productive habitat that supports a broad diversity of species, the permanent loss of so much reef would be considered extremely detrimental. Second, the team determined that placing a barrier structure in Galveston Bay, without a Gulf-front system in place, would induce flood risks to Galveston Island and Bolivar Peninsula. Third, the GBPP and Alternative D2 would both have a higher levels of residual risk due to the proximity of the barriers to highly developed areas. The analysis performed in this study demonstrated that the Gulf-front alignment (Alternative A) provides a first line of defense that is key to a multiple lines of defense strategy. If SSPEED is able to obtain the environmental clearances and project funding to implement as a non-Federal action, we do believe it could be complementary to the recommended plan (Alternative A). The two plans are not mutually exclusive and can be designed to be compatible and complement one another. Note that the two plans use different approaches with differing funding mechanisms to reduce flood risk. The notion that the plans are mutually exclusive is inaccurate - the designs are compatible and complementary. The Coastal Barrier takes a multiple-lines-of-defense approach. The primary intent is to stop storm surge from entering Galveston Bay, and the plan would be funded by federal and state sources. The GBPP proposes a levee along the Houston Ship Channel to protect from more extreme events, and these features would be funded by private sources and local governments. If constructed, the GBPP could replace the secondary features in the Coastal Barrier plan (i.e., gates/pumps at Clear Creek and Dickinson Bayou).
			upper areas of the Houston Ship Channel into Houston. Not only is this plan more appealing from a taxpayer perspective, as it will require industry to bear some of the cost of coastal protections that are needed to protect their economic interest in the area, but it will also generate a benefit for the public in what hopefully will become a state park and recreational facility for communities that typically do not have access to Galveston Bay. Such a park could offer a variety of water-based recreational activities including boating, kayaking, and fishing and further expand beach access for a number of coastal communities. These types of projects, which are smaller in scale, can be implemented with use of a combination of public dollars and sponsorship from industry, and have multi-benefits are in concept superior to a plan than the 14-17 foot Coastal Barrier that requires surge gates that the USACE			Two things to note: The GBPP is still a design concept - not a fully formulated plan. An environmental impact assessment will need to be undertaken to inform the designs in order to avoid, mimize and mitigate for potential environmental impacts due to the plan (whilch will likely take a mimimum of 3 years to complete). Also note that the estimated costs the SSPEED has developed for the GBPP is likely an underestimate of the final cost of the plan. A peer review of these costs (and contingencies added to the cost estimate to address potential risks and uncertainties) should be undertaken to generate a more realistic cost estimate for the plan prior to construction.
			acknowledges will impact water and sediment quality in Galveston for at least 15 years.299			
E002357	-87	LSLA	In previous comments, LSLA's clients noted that the USACE spoke of flood risk in vague generalities. The USACE, in its first DIFR-EIS, used terms and phrases such as "the risk is considered low", "the risk is considered moderate", and "flood risk will be reduced" to report on existing flood risks and what effects the TSP would have on those flood risks. These terms provided only a vague understanding which did not report the risk in quantifiable, measurable, comparable terms. Nor did the USACE discuss long-term probabilities for specific areas. In the new DEIS, the USACE's description of floodplains is similarly brief and unexacting. It provides broad statements such as "all areas in the study area, except for those behind levees, are in the 100-year coastal floodplains."301 Sweeping statements such as this, while helping to keep the DEIS succinct, have the potential to overlook the diversity of the Texas coast and	H&H / Engineering / Planning	Lack of Detail	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			the "diversity" of flood risks within the study area. By failing to analyze flood risks and effects of the TSP at both a more localized and a more exacting level, the USACE cannot possibly accurately assess the benefits and costs of the TSP.			

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E002357	-88	LSLA	Induced flooding also requires further, more exacting, localized study. For example, the USACE states the barriers and pump stations at Offatts Bayou, Dickinson Bayou, and Clear Lake "will be appropriately sized to ensure that the measures do not induce localized flooding upstream and downstream of the barriers."302 The DEIS also states "[t]he Coastal Barrier and proposed barriers at Clear Lake, Dickinson Bayou, and Offatts Bayou…may impact the following watersheds…" before listing off 5 major watersheds.303 This level of analysis is clearly insufficient for NEPA and must be corrected. The USACE must evaluate and report to the public the proposed designs, where and how much they will reduce flood risks, and where and how much they will increase flood risks. Only with this understanding can the public understand the effects of the TSP and the USACE can select which measures are appropriate for the Texas	H&H / Engineering / Planning	Lack of Detail	USACE policy mandates that the Recommended Plan cannot induce flooding without mitigation. Refer to Response to Comment #E002478-01 regarding the need for future investigations, design refinements, and supplemental NEPA documentation releases in PED.
			coast. In short, without more details regarding the design of TSP components and without more detailed study of existing flood risks and positive and negative effects of the TSP on flood risks, it is difficult to determine what the costs and benefits of the TSP will be or to understand exactly who benefits, and who does not benefit, from the USACE's plans.			
E002357	-89	LSLA	In the same vein as ensuring low-income, minority residents do not bare disproportionate negative impacts, Commenters strongly believe the USACE should take a "people-centric" approach to the Coastal Texas Study and its recommended components rather than a "industrycentric" approach. In other words, the Coastal Texas Study should not unduly focus on industry which largely has the means to invest in its own protection measures (and are themselves significant contributors to climate change). Rather, the USACE should focus its recommendations on protecting the nation's most vulnerable populations and those who do not have the means themselves to address flooding, climate change, and rising sea levels. No one disagrees that Houston Ship Channel is important and must be protected, as well as other industry along the Texas coast. However, the USACE should encourage industry— which are often large, publically traded companies or large private	Environmental	Impacts -- EJ	Refer to Response to Comment #E002357-83 and Comment #E002357-84
E002357	-90	LSLA	Many of the companies have levees to protect their facilities and they are responsible for their operation and maintenance. USACE and others charged with regulating these facilities must make sure that they remain responsible. In addition, these companies have storage tanks and units that may be at risk. But this risk can be reduced by moving tanks, tying tanks down, emptying tanks, elevating tanks, and putting different products in tanks to reduce risk when a spill occurs. The USACE and others have done nothing to require that the companies be responsible in this proposal and suggest alternatives that can be funded by industry itself to protect its property and operations rather than require the public to fund large infrastructure projects for industry's protection.	Environmental	Impacts	Refer to Response to Comment #E002357-83 and Comment #E002357-84

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E002357	-91	LSLA	In most basic terms, the Coastal Texas Study is "necessary" because development has taken place in locations which are subject to flood risks. The USACE through the TSP and through related efforts should encourage smarter, better-placed development rather than encouraging additional population, industrial, and other commercial growth in increasingly hazardous and dangerous zones. People do not have to live in storm surge or floodplain zones to work at local industry. Industry can consider better placement—and when it cannot, as noted above—should be expected to take it largely upon itself to address flood risks. Even as sea levels rise and storms become more severe, developers continue to develop properties in risky areas. They will, one day, surely learn the hard way that continuing poor practices will lead to poor outcomes. For its part, the USACE should not adopt policies or encourage new	Environmental/Engineering	Alternatives	Considerations related to "managed retreat" were formulated as part of the multiple lines of defense evaluation, however it was determined not to be a practicable and standalone solution. A standalone managed retreat scenario, whereby development retreats inland away from coastal risks, rather than addressing storm surge, inundation, and erosion through structural alternatives, is a significant challenge along the Texas coastline. For more discussion on the topic, refer to the Final Report, page 35, Panel Topic = Managed Retreat (Section 2.4, Approaches Considered).
			development in these areas that are costlier and riskier than other areas. Infrastructure development—in particular development billed as flood reduction measures—has the ability to induce development in areas which are at higher risk for flooding and inundation by sea level rise. The USACE must not take actions which will induce further development in areas at high risk of flooding. In fact the USACE should adopt as a primary goal the goal of encouraging movement away from areas at high risk of flooding. Further development in at risk areas undermines, at best, efforts to reduce overall flood and sea level rise-related damage and, at worst, will lead to more damage in the future. While these effects are indirect, it is not at all unforeseeable that development will increase along newly nourished beaches and near newly constructed infrastructure such as the flood gates at Dickinson Bayou			
			and Clear Lake. Induced growth should not be a goal of the TSP. It should be avoided. The USACE should make anyone—anyone—believe the USACE or any other measure will forever win the fight against Mother Nature. Thus, to be specific, the USACE should analyze whether TSP measures will induce development in risky areas along the Coast.			

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E002357	-92	LSLA	Meanwhile, the USACE, in public meetings and published materials had discussed soon seeking Congressional mandates and funding for constructing the proposed component parts of the TSP. This is alarming to the Commenters because it completely undermines principles of democracy and open government. If the USACE does not provide the citizens it serves with sufficient detail to understand the impacts of the TSP, then those citizens will not be able to weigh the benefits with the costs, both economic and environmentally and fully inform their government of their concerns and their opinions of the plan. That the TSP is such a huge project is no reason not to provide detailed analysis. Indeed, it is a reason to provide detailed analysis. The impacts will be on a scale never before seen in Texas from such an engineering project—or perhaps anywhere, anytime in the history of the United States.	Environmental / Engineering	Lack of Detail	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002357	-93	LSLA	Nonstructural measures, in particular, could be completed quickly, would stimulate the local economy, and would make each citizen along the Coast feel directly and individually supported by the USACE and the government it represents. Environmental restoration projects are supported, but the USACE can take on smaller projects which will help restore and sustain the beauty of Texas' coast while minimizing disruptions and providing more immediate help to coastal communities.	Environmental/Engineering	Alternatives	Refer to Section 2.1 of the Final Report, which describes the planning considerations for the study and introduces the concept of "Multiple Lines of Defense" to reduce the harm caused by storm surge, erosion, and sea level rise to communities, important petrochemical and refinery complexes, federal navigation channels, and other existing infrastructure in and around Galveston Bay while also positioning the region for rapid recovery, using robust, redundant measures to protect critical infrastructure comprehensively. The alternatives were formulated to address multiple objectives – to reduce health and safety risks to the population, damage risks to assets and infrastructure, interruption risks to business and the navigation channels, and degradation risks to the ecosystems. They were also multi-purpose, addressing the Corps' missions in coastal storm risk, navigation, and ecosystem restoration. Consideration of these losses were quantified in traditional dollar denominated NED benefits. The Recommended Plan reduces risks across the region rather than focusing on high net benefit pockets of reduced damages to structure and contents (i.e., City of Galveston), by maintaining critical components of the system (i.e., critical infrastructure such as hospitals, police stations, etc.) and supporting community-based networks (i.e., evacuation routes, supply routes, school systems, etc). The intent of the Galveston Bay system is to keep storm surge in the gulf, substantially reducing the volume of surge entering the bay. The system can be exceeded, however, so bay features are included to reduce the impacts of damaging effects from the water in the bay. Non-structural measures are included to help coastal neighborhoods withstand the effects of surge in the highest risk areas. Pump stations and interior drainage systems add another layer in this comprehensive set of redundant features.
						Critically, when considering the Galveston Ring Barrier System, it is very important to consider its function as part of a broader system of improvements. Specifically, the ring barrier is not scaled to completely address flood risk without the Bolivar Roads Gate System or the West Galveston and Bolivar Peninsula beach and dune systems in place. Delaying or not including construction of one of those components, either the beach and dune system or the gate system, would equate to significantly lower net benefits.
E002525	-05	Jordan Macha	[Summarized] Real estate acquisition costs as calculated are unfairly low to compensate residents and property owners. The entire cost should figure into the cumulative analysis of the Recommended Plan, which understates costs by almost a billion dollars.	Real Estat	Acquisitior	The Coastal Texas Protection and Restoration Feasibility study, as presented by Galveston District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. On 13 Apr 2021, the cost estimate received ATR Certification - this certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.
E002525	-06	Jordan Macha	[Summarized] Relocation and condemnation costs as presented in the Recommended Plan are unreasonably low and/or nonexistent in some cases. No money is allocated for subdivisions, in either dune system cost basis estimate, despite residential areas with numerous subdivisions that will be affected by the Recommended Plan.	Real Estat	Acquisitior	Thank you for your input. Refer to the Final Real Estate Plan (Appendix F to the Final Report) which has been updated post-release of the Draft Report in October 2020 to address these issues.

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E002525	-11	Jordan Macha	The Bolivar Roads gates design does not effectively take into account the impact of sea level rise, or the increasing frequency and intensity of unpredictable hurricanes.	Engineering	Designs	The Study Team complied with USACE policy and guidance with respect to incorporating the potential effects of Climate Change on the Recommended Plan. Refer to the Final Report, Appendix D., Section 3.4.2., Climate Hydrology which details the scenario analysis that informed design critiera for the features in the Recommended Plan, as well as Section 11.7, Future Refinement, Adaptations, and Resiliency which discusses the adaptability of the various features in the face of changing climate over the long-term (100+ years). The individual features of the Recommended plan provide a varying level of risk reduction. This was intentional - a non-traditional optimization approach was taken to ensure resiliency that considered and balanced engineering performance, construction and maintenance costs, social acceptability, and potential environmental effect (Refer to Responses to Comments #E-2020DEIS-2326-01). We are comfortable (and supported by the USACE Vertical Team) in stating that the "system" we are recommending (the Gulf and Bay defenses together) is the NED plan. Analysis determined that the performance of the Bolivar Roads Gate System (BRGS) to generate economic benefits influenced the designs of the remaining features in the system such that once the BRGS were in place, the Bayside defenses could be designed at a lower performance level at a cost savings. Adaptability then became a factor. Strategically speaking, the BRGS is considered the least adaptable component of the Recommended Plan, and as such it was intentionally designed to provide maximum performance from the onset, as retrofitting in the future was assumed to be cost prohibitive. Those features that could be more readily be adapted in the future (floodwalls and beach/dune systems) were designed at a lower level of risk reduction per policy guidance. USACE policy allows flexible design modifications of beach and dune features over time as conditions warrant. As such, we are accepting higher residual risk because of CBRA limits, environmental impacts, and impacts to the local residents' coastal lifestyle
						if a hardened structure were to be used. By sticking with a nature-based solution (sand only) we are consistent with CBRA intent, and we are keeping options open to adopt a hardened structure in the future if conditions worsen and the community and our partners are willing to accept the costs and impacts of hardened structures. The Galveston Ring Barrier System has adaption features built into the initial design. The triggers for implementing these measures are overtopping rates during a storm that increase the likelihood of exceed the pumping capacity of the interior drainage system. After construction of the GRBS the sea level rise will be monitored, and overtopping rates will be updated as part of the routine activities under the Inspection of Completed Works (ICW) program. These calculations will allow for continuous monitoring of the anticipated performance of the GRBS under updated design storm conditions and will trigger a modification study to recommend adaption measures, as needed. The adaptation measures are focused on increasing the height of the floodwalls, which can be constructed without requiring a complete rebuilding of the floodwalls, and adding additional pumping capacity to target areas of concern due to excessive overtopping along a given reach of the GRBS. The system is thus adaptable to sustain the performance level, but the timing and cost to adapt to those updated conditions are unknown at this time and will be subject to a modification study.
						Additional text has been provided to the Main Report and supporting appendices detailing the basis for the design of the individual components of the system, the level of performance for each, the level of adaptability for each, and how that informed the basis for design. Refer to the new section entitled, "Future Adaptation and Resiliency" in the documentation that details adaptation triggers, thresholds, and lead times for each of the Recommended Plans CSRM features. To conclude, it should again be noted that the CSRM features (i.e., Bolivar Roads Gate System, Beaches/Dune complexes, Galveston Ring Barrier, Seawall Improvements, Clear Lake, and Dickinson Bay features) are characterized as Tier 1 measures, and as such will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering performance and environmental analyses will be conducted.
E002525	-18	Jordan Macha	[Summarized] Fisheries impacts in Galveston Bay and coastal waters have not been adequately evaluated. The only fish included in the Appendix I ecosystem modelling is the spotted sea trout.	Environmental	Impacts	The study team conducted larval transport modeling in this phase of the study, which included numerous larval behaviors representative of multiple fish species. The results of that modeling showed very (if any) impacts. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Note that the fish model referenced was NOT used to assess the BRGS system - rather, the ecosystem modeling in Appendix I was completed specifically to assess the efficacy of the proposed ecosystem restoration measures, and the benefits were determined using standard USFWS HSI models certified by the USACE under a external peer reveiwed certification program.
E002525	-22	Jordan Macha	[Summarized] The Coastal Texas Study 2020 does not carefully evaluate beach and intertidal habitat impacts. The assumptions made about how sea turtles will be affected such as beach slope, are lacking and are skipped over. No concessions are discussed in the Recommended Plan for plovers.	Environmental	Impacts	The study team consulted with the Services to ensure avoidance and minimization measures were identified for all federally listed threatened and endangered species including the Piping plover. All the project measures included in the recommended plan that include beach nourishment are considered "Tier One" measures which will have Supplemental NEPA reviews that will include at least one additional round of public review prior to construction. Specific avoidance and minimization strategies were identified from "Volume II of the Revised Recovery Plan for the Wintering Range of the Norther Great Plains Piping plover and Comprehensive Conservation Strategy for the Piping Plover in its Coastal Migration and Wintering Range in the Continental U.S.) (USFWS 2015). Additional discussions on potential impacts to and design considerations for Piping plovers are included in Chapter 4 of the EIS. The Kemp's Ridley Turtle (nesting) model was developed to allow the study team to quantify potential habitat benefits for alternative comparisons and was not the only ecological consideration for these measures. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002525	-24	Jordan Macha	[Summarized] The USACE solutions seem to ignore sediment transport rates along the shore, and the plan completely ignores subsidence.	Engineering	Designs	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. Also note that the use of RSLR takes subsidence into account in the analyses conducted thus far (and will also be included again in investigations conducted in PED).
E002525	-25	Jordan Macha	[Summarized] The sources of required sand for the Recommended Plan are unclear. It is unlikely that enough sediment exists in the tentatively identified borrow areas to construct and maintain the project.	Engineering	Designs	The West Galveston, Bolivar, and South Padre beach and dunes are Tier 1 features (refer to Section 2.4.1 of the EIS). During PED, designs will be refined for all Tier 1 features, and the engineering team will work closely with TXGLO and BOEM to assess sources for beach renourishment. Note also that the TXGLO has initiated a longshore sediment transport study which will be completed prior to PED, and these results will be incorporated into the analyses. A a supplemental NEPA document will be produced and public input will again be sought in a formal public comment process once the designs are complete. The USACE, together with the as yet determined non-Fed cost share construction-phase sponsor, will be responsible financially for the beach nourishment program recommended in the plan. The cost-share for re-nourishment is 50:50. Refer to the Engineering Appendic's Cost Annex (page 14-15) to review estimated costs for nourishment.
E002525	-26	Jordan Macha	[Summarized] The constricting effects of the Bolivar Roads gate structures on water flow at San Luis Pass require additional analysis.	H&H		Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002525	-27	Jordan Macha	The USACE fails to state how long any restored wetland or marsh habitat will last before sea level rise and erosion from the Coastal Barrier structures overwhelms these habitats.	Environmental	Impacts	All ER features under the Recommended Plan were evaluated assuming a standard, policy-compliant 50-year project life (aka planning horizon). Based on standard USACEA policy and guidance, all mitigation activities will be maintained into perpetuity and include adaptive management measures to account for changes due to RSLR or other factors.
E002525	-37	Jordan Macha	[Summarized] We recommend consideration of an alternative consisting entirely of nature-based infrastructure and nonstructural measures. This would include wetland and oyster reef restoration, beach and dune restoration and coastal land acquisitions, along with more localized structural protections for highly vulnerable areas.	Planning	Alternatives	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

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E002526	-01	Turtle Island Restoration Network	[Summarized] Turtle Island Restoration Network (TIRN) is opposed to the current iteration of the USACE Coastal Barrier Project, as described in the October 2019 Coastal Texas Protection and Restoration Feasibility Study and DEIS. The Costal Barrier Plan, as currently iterated, will not provide immediate protection. Instead, it will ask Congress to authorize $26.2 Billion for a massive construction project including a ring barrier system around Galveston and a massive gate system at Bolivar Roads, which at the earliest would be completed 20 years from now, and is not designed to protect the coast from one of the deadliest types of storms most recently exemplified by Hurricane Harvey. The Coastal Barrier Plan prioritizes the building of massive manmade structures, leaving nonstructural improvements as an afterthought. Additionally, the Coastal Barrier Plan will result in loss of habitat for wildlife, including endangered .	General	Opposition	Your concerns have been noted, and we will take them advisement in PED - refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA. Note that the Bolivar Road Gates System (BRGS) included in the Recommended Plan would remain open until a storm threat was identified or during routine maintenance. Given this operational strategy, the Study Team has analyzed salinity, velocity, tides, and fish passage through the the BRGS in its current proposed configuration. The assessment of wetland impacts included potential indirect losses resulting from reduced tidal amplitude and the direct losses of habitat attributed to the construction of the structural features themselves. The team has characterized both the potential immediate and long-term environmental impacts on Galveston Bay, as well as the adjacent Gulf-side beaches, flats and wetlands (including Bolivar Flats). Potential impacts have been avoided and minimized where possible, and unavoidable impacts have been offset through mitigation which has been fully coordinated with state and Federal resource agencies. This initial EIS has disclosed all known potential impacts considering the available information at this time. The Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			species, a reduction in the economic value of recreation activities, and negatively impact values of homes in Galveston. It will permanently change the natural function of Galveston Bay by modifying tides and salinity			
E002526	-02	Turtle Island Restoration Network	While USACE has provided sufficient information to analyze the full extent of environmental impacts from the plan, they have chosen not to do so at this time, deferring that analysis to the Tier 2 portion of the project. This is unacceptable, and places the proverbial cart before the horse. Once Congressional authorization for the $26.2 Billion project has been approved, USACE will be pressured to complete the project as described in the Coastal Barrier Plan, with little wiggle room to modify its major aspects. USACE cannot defer environmental analysis in order to avoid Congressional scrutiny on the full effects of this project, especially when they have sufficient facts at this moment to complete such environmental review. A tiered NEPA process is not appropriate in this instance, and certainly not in the way it is being presently employed.	General	Policy	Refer to the response to Comment #E002328-01 regarding Tiered NEPA and future activities to be conducted in the PED phase in compliance with NEPA.
E002526	-03	Turtle Island Restoration Network	We strongly urge the USACE to explore other options to address sea level rises, storm surges, and hurricanes through natural defenses such as the Lone Star Recreation Area, living shorelines, and levees. Individuals who choose to live on or near the coast know that, while living along the Gulf of Mexico provides immediate access to the beauty and bounty that our coastal waters, living within floodplains, wetlands and storm surge zones pose significant challenges, making each of us vulnerable to the impacts of water and wind. Despite these challenges, there are ways to live in harmony with nature and our built environment. This balanced approach does not necessarily require an engineered solution -- but the willingness to be creative and implement multiple methods that protect our communities and the ecosystem we rely on. By working with -- rather than against -- nature, we can keep	Planning	Alternatives	Thank you for your suggestion. Congress authorized the USACE to determine the feasibility of Federal investment in a comprehensive solution that promoted a more resilient and sustainable Texas coast by reducing coastal storm risks and restoring ecosystems throughout the region. The primary goal was to produce a technically sound solution that reduced risks (not completely eliminated the risks). Risk minimization must also be balanced with environmental impacts avoidance (to the extent practicable). The solution must also be both socially acceptable and economically justified (refer to the dEIS, page ES-12). While risk reduction was a focus, tradeoffs amongst the engineering, environmental, societal and economic priorities across the system were necessary to meet the Congressional mandate and assure a comprehensive, long-term solution. Coordination with the cost-share sponsor, as well as local, state and Federal natural resource agencies was necessary to meet NEPA requirements, and gathering input from stakeholders and the public in general helped assure the comprehensive nature of the formulated plan. Therefore, evaluation of the "performance" of the Recommended Plan was thus conducted in terms of environmental, social, economic, and engineering feasibility taken as a whole. A multiple-lines-of-defense strategy was determined to offer a net positive return on the investment while taking into account the environmental and societal impacts. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			people out of harm's way and sustain our coastal communities into the future.			

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E002526	-04	Turtle Island Restoration Network	[Summarized] The plan shows nontructural improvements beginning in project year 14. Nonstructural improvements that are currently feasible and economical should receive a higher priority in the construction sequence.	Planning	Alternatives	With respect to the timeline, at the completion of the Feasibility Study, and upon approval by the Chief of Engineers of the United States Army, the Recommended Plan would be provided to Congress for authorization and funding. If authorized and funded by Congress, subsequent phases of the project would include PED, Construction, and Operations and Maintenance (See Figure 6.1 in the Final Report). Completion of PED and construction of the Recommended Plan, specifically the pace of construction, is highly dependent on Congressional approval and funding. Assuming an ample funding stream, the Recommended Plan described could be designed and then constructed over a period of 12 to 20 years. Furthermore, construction sequencing will also be dependent on completion of supplemental environmental studies, in accordance with the Tiered NEPA approach. Ultimately, implementation activities will be optimized to consider the size and frequency of funding infusions, environmental clearance of individual components, and beneficial sequencing. Project implementation decisions will require strategic considerations due to the scale and variety of the features. The Recommended Plan has been formulated to be adaptable and effective under multiple implementation scenarios, if phased implementation is required. Different strategies are possible to construct the project features, including prioritization of risk reduction performance or leveraging efficiencies by syncing action with source material generated by other projects. Section 6.3 of the Final Report walks through the five "Prioritization Strategies" to implement the project: 1) First Line of Defense, 2) Synch Action with Source Material, 3) NEPA Driven, 4) Equitable Regional Distribution, and 5) "No Regrets".
E002526	-08	Annalisa Tuel	The USACE presumes that any type of beach renourishment project is by definition ecologically beneficial, however, this presumption is derived from incomplete and flawed science. (Bishop and Peterson 2005). In reality, beach renourishment projects often have deleterious effects on the environment such as burying shallow reefs and other beach habitats, depressing nesting in sea turtles and reducing the densities of invertebrate prey for shorebirds, surf and crabs (Bishop and Peterson 2005).	Environmental	Impacts	Thank you for your concern, this will be taken under advisement in the PED phase.
E002526	-09	Turtle Island Restoration Network	Further, while the USACE describes the system as "self-mitigating," this is far from true, as the DEIS also admits that the dunes will almost immediately begin to erode and will additional sand will be required to reconstruct the system at least every 10 years.	Environmental	Impacts	Dynamic dune complexes constantly erode and acrete over time. The Beach and Dune features in the Recommended Plan are designed to emulate natural systems. They are "self-mitigating" in that they will recover ecosystem function quickly after the temporary impacts of construction.
E002526	-11	Annalisa Tuel	[Summarized] Galveston Park Board recommends against clay core in their dune maintenance manual because they do not provide ideal substrate for plant growth. Clay-core dunes increase the likelihood of an exposed hard clay interior, increasing the need for renourishment.	Engineering	Designs	Thank you for your suggestion, and note that the nature-based sand dune and beach features are proposed to maintain sediment along the barrier island and peninsula, which reduces erosion. While the "sediment-only" features does not provide risk reduction comparable to reinforced dunes, environmental considerations make hardened shorelines potentially infeasible. Since many barrier island structures are elevated, the tradeoff of performance versus environmental impacts was considered acceptable. Refer also to response to comment #E-2020DEIS-2326-23 regarding plans for fortified dune investigations in PED.
E002526	-13	Turtle Island Restoration Network	[Summarized] We strongly disagree that impacts will be temporary and will end soon after construction is over, with no long-term adverse impacts associated with the Actionable Measures. Overall, approximately 122 acres of estuarine wetlands and 128 acres of palustrine wetlands are expected to be altered or destroyed by the Coastal Barrier Plan.	Environmental	Impacts	Best management practices will be used to mitigate potential impacts to in-progress construction areas. If features (or segments of features as in the Galvest and/or Bolivar beaches & dunes specifically) are completed to the design specifications (i.e., d

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E002526	-17	Annalisa Tuel	[Summarized] The USACE method for determing the mitigation ratio for impacts to open bay bottom habitat is an outdated and oversimplified ratio averaging values across three trophic levels. USACE must determine the value of this habitat to individual species and replicate that value elsewhere.	Environmental	Impacts	Assessment of mitigation requirements was based on certified modeling procedures and index models developed by the USFWS and subject matter experts. The application of the models was peer reviewed, and the resource agencies engaged directly in assessments themselves. The Habitat Evaluation Procedures (HEP) approach assess not only the amount of habitat being restored, but the quality of that habitat. As a result, mitigation ratios will vary based on functional lift over time. It is also important to note that the assessment of impacts to date has assumed a "worse-case" scenario, and the mitigation offsets can be considered conservative (possibly in excess of what is needed to fully mitigate the losses based on current knowledge). As we move into PED, more investigations will be made, and the mitigation plan will be reassessed. Note that the assessment of impacts and the subsequent development of the study's mitigation plan have been fully coordinated with all State and Federal natural resource agencies. As we move into the next phase of the project, this coordination will continue.
E002526	-18	Turtle Island Restoration Network	[Summarized] Hydrologic and evironmental impacts from hard structures have not been adequately modelled and communicated in the draft report.	Environmental	Impacts	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002526	-19	Annalisa Tuel	[Summarized] While the DEIS analyzes cursory effects of the project on fish and shellfish larvae, the results are extremely limited and have not been adequately reviewed by fisheries biologists. Moreover, they do not seem to simulate known responses of shellfish larval transport and recruitment patterns.	Environmental	Impacts	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
E002526	-21	Turtle Island Restoration Network	[Summarized] TIRN experienced frustration with the public engagement process. Time limits on speaking and little time devoted for questions during virtual meetings created an impression of a secretive process, not an open and honest dialogue.	Project M	Stakeholder Engagement	Thank you for your input. The USACE and its cost-share sponsor(s) in PED will endeavor to improve upon the communications between ourselves and the public (including your organization). Also refer to respone to comments #E-2020DEIS-1241 and E-2020DEIS-2326 regarding NEPA guidance on public engagements and future initiatives to engage with the public respectively.
E002530	-01	USFWS	The Environmental Compliance Section on page ES-16 states that USACE is proposing to execute a Programmatic Agreement among USACE, the Texas State Historic Preservation Office, and any nonfederal sponsor to address the identification and discovery of cultural resources that may occur during the construction and maintenance of proposed or existing facilities. Because project actions are proposed on DOI lands, we request that representatives of NPS and FWS be asked to participate in the Section 106 process, including being included as signatories in a Programmatic Agreement. The project also has the potential to disturb terrestrial and underwater archaeological resources located within the boundaries of the seashore, including the Mansfield Cut Underwater Archaeological District. As a result, the NPS requests the opportunity to participate in the NHPA Section 106	Environmental	Culural	USACE has executed the Programmatic Agreement (PA) for the study. USACE will continue to coordination with the USFWS throughout the next phase (PED) of the project. USACE invites the USFWS and NPS to participate as signatories to the PA and consult with these agencies during the Section 106 process in PED. Section 6.4 of the EIS has been revised to include this recommendation.
			consultation process for all activities happening within the seashore boundary, including as a signatory to the final Programmatic Agreement.			

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E002530	-02	USFWS	[pg ES-16] states that there is a potential for new construction and improvements to existing structures to cause effects on historic properties, but that the "numbers of properties that may be affected are not extensive." Because many of these areas to be disturbed have not been surveyed or tested for the presence of historic properties, and per the following sentence, "intensive cultural resource investigations … will occur to identify and evaluate any historic properties within proposed construction areas prior to construction," it is not possible to know whether or not the numbers of properties that may be affected are extensive. We suggest either deleting the phrase referring to numbers of properties not being extensive, or revising the language in another way, which will also make it congruent with the cultural resources discussions in the remainder of the DEIS.	Environmental	Cultural	Concur, the clause "numbers of properties that may be affected are not extensive" has been removed.
E002530	-03	USFWS	The text [at section 6.4] states that "it has been determined that there is a potential for adverse effects to occur on historic properties within the project area." We suggest revisiting and rewording the statement; with all that terrestrial and marine ground and sediment disturbance over such a large geographic area, it is certain that there will be adverse effects on some historic properties.	Environmental	Cultural	Do not concur, Section 6.4 originally stated that there is a potential "to cause effects to historic properties," "adverse" was not included. There is no certainty, even though it may be likely, that there will be adverse effects to historic properties
E002530	-04	USFWS	Consistent with the provision in the DEIS that states the placement area associated with W-3 would occur with "coordination of the designated land owner to allocate the area of disturbance," NPS requests the Final EIS make clear this measure would occur on NPS land, and that PAIS be involved in any future coordination regarding efforts to study this measure further.	Environmental		The FEIS will be revised to indicate that placement of materials on the beach for ER measure W-3 would occur on NPS owned lands. The FEIS will also reiterate that during PED and construction close coordination with Padre Island National Seashore staff will continue to ensure compliance with NPS policies and regulations, and complement management objectives of the site.
E002530	-05	USFWS	[Summarized] Commentor has provided four locations in the EIS that contain incongruencies regarding NPS land ownership and have recommended corrective actions. Additionally, they request that all figures, tables, and document text be reviewed for accurate attribution of NPS land ownership in the FEIS.	Environmental	Existing Condition	Refer to response to comments #E002530 -33 through -35
E002530	-06	USFWS	The W-3 measure may require a special use permit, which is a federal action subject to NEPA and a non-impairment determination under the NPS Organic Act. With additional USACE NEPA review of W-3 as Tier One, NPS is hoping to be able to rely on USACE to have enough site-specific information regarding the dredging work or the associated impacts within the boundaries of the seashore to support authorization by USACE and NPS meet these requirements. NPS is looking forward to the opportunity to work with USACE and the State of Texas to further clarify measure W-3, review detailed engineering design documents, and ensure the Tier One NEPA documentation for W-3 includes sufficient information to support USACE and NPS decision-making, including: • Duration, locations, methods, and dimensions/quantities of all proposed dredging work,	Environmental	Policy	Refer to Response E002530-04

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			including placement of “beneficial use material” for beach and dune restoration. • Differences between “new work dredging” and “operation and maintenance dredging” proposed in the Port Mansfield Channel. • The need for frequent coordination between the USACE and the NPS immediately prior to and during project work throughout the year. • Mitigation measures and impacts analysis for NPS resources and values within the seashore boundary, which could include vegetation, visitor use and experience, wildlife, night skies, cultural resources, and natural sounds process.			
E002530	-07	USFWS	[Summarized] NPS- Heritage Partnerships Program (NPS-HPP) requests inclusion in the consultation process for any National Historic Landmarks affected as required under Section 106 and Section 110(f) of the NHPA and their implementing regulations. Per 36 CFR 800.6 and 800.10, if an undertaking may affect a NHL, the action agency is required to contact the Secretary of Interior [acting through the Director of the NPS] of any consultation involving an NHL and formally invite the Secretary to participate in teh Section 106 consultation process. Once the NPS regional director is invited to consult on potential adverse effects on NHLs, the NPS-HPP request to be involved in consultation related to any potential effects to NHLs, appropriate mitigation, and the finding of effect to be made pursuant to 36 CFR 800.5.	Environmental	Cultural	Concur, the USACE will include the Secretary of Interior and the NPS (including the NPS-HPP) in the Section 106 consultation process regarding all NHLs and NPS properties that may be affected by the proposed undertaking
E002530	-08	USFWS	[Summarized] Padre Island National Seashore has provided conservation measures in the comment and are being coordinated with FWS/NMFS to ensure inclusion in the ESA Section 7 process. [See comment for measures]	Environmental	Mitigation	USACE will coordinate closely with FWS/NMFS and Padre Island National Seashore during the Tier 2 analysis, which primarily involves completion of the environmental compliance, for W-3 and again during PED to ensure that the recommended conservation measures are incorporated into compliance documentation and contract specifications. All of the recommended measures are currently standard operating procedures when conducting work where sea turtles may be present.
E002530	-09	USFWS	[Summarized] Revise the analysis to reflect accurate sea turtle observations on the seashore: five sea turtle nests have been documented in the 0.5-mile area immediately north of the Port Mansfield Channel jetty using up-to-date and accurate information as provided by Padre Island Seashore (Shaver et al. 2016). Additionally, the NPS would appreciate the opportunity to work with USACE to ensure the Final EIS analyzes the effects of increased artificial lighting on sea turtles and the effects of anthropogenic noise on wildlife.	Environmental	Existing Conditions/Impacts	Thank you for this input. 1) The counts have been updated as requested. 2) The W3 site has been moved from the Actionable Measures category to the Tier 1 category. As such, these discussion are now captured in the EIS in Section 4.4.4 of the EIS. The USACE will coordinate closely with the FWS/NMFS throughout the PED phase as plans are refined based on additional engineering and environmental analyses.
E002530	-10	USFWS	For all ER measures, FWS recommends that the FEIS include a more comprehensive evaluation of the cumulative impacts of these measures on nest disturbance, breeding areas, and foraging areas of migratory bird species.	Environmental	Impacts	Thank you for your suggestion, we will take this under advisement and coordinate with the USFWS both in the closeout of the feasibility and continuing on into the PED phase of the project.

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E002530	-11	USFWS	It is recommended that the final EIS provide information regarding USACE's current and continuing close coordination with the National Wildlife Refuges (NWRs) on the footprint of the dune and beach enhancement projects located within the refuges, and fully evaluate the direct and indirect impacts to federally listed nesting sea turtles, migrating piping plovers (Charadrius melodus), and rufa red knots (Calidris canutus rufa).	Environmental	Coordination	Thank you for your suggestion, we will take this under advisement and coordinate with the USFWS both in the closeout of the feasibility and continuing on into the PED phase of the project.
E002530	-12	USFWS	The FWS asks that prior to finalizing a Tier Two assessment of beach and dune restoration measures, USACE coordinates with the FWS Ecological Services and NWRs regarding the actual footprint of these measures, and the direct and indirect impacts on nest disturbance, breeding areas, and foraging areas of endangered and migratory bird species.	Environmental	Coordination	Concur. The USACE will coordinate closely with the FWS/NMFS throughout the PED phase as plans are refined based on additional engineering and environmental analyses.
E002530	-13	USFWS	For a format change, we request that the FWS 2017 Planning Aid Letter (PAL), dated November 20, 2017, be moved from Appendix C-6 (which contains Essential Fish Habitat considerations) to the Fish and Wildlife Coordination Act appendix, and that the reference in Section 6.7 be revised accordingly.	Environmental	General	Concur. The 2017 PAL has been added to the 2021 CAR as an attachment and the two now make up Appendix A. Section 6.7 references to Appendix C-6 have been revised to reference Appendix A of the EIS.
E002530	-14	USFWS	[Summarized] DEIS Chapters 4.3 and 6.6 state that the overall environmental consequences of the coastal barrier system and surge gates are expected to be "temporary and limited to migratory bird species utilizing the foraging, breeding and nesting areas near the Galveston Bay Storm Surge Barrier System." The FWS believes instead that the overall effects of this coastal barrier system will be permanent, and will not be limited to regional impacts on migratory birds. The Tier Two assessment should include a more comprehensive evaluation of the cumulative long-term impacts of CSRM and ER measures to migratory bird breeding, nesting, and foraging areas including: • impacts of displacing migratory birds, or ground nesting birds such as the Eastern black rail due to retention of higher water levels in the marshes surrounding Galveston Bay	Environmental	Impacts	Thank you for your input. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted including an assessment of sediment transport. Supplemental NEPA documentation will be released at that time to encourage public review and feedback. The USACE will coordinate closely with the FWS/NMFS throughout the PED phase as plans are refined based on additional engineering and environmental analyses.
			• Changes to spatial distribution of migratory birds and the impact on long-term species survival • Cumulative long-term impacts of construction activities associated with ER measures planned on existing rookery islands, which may displace migratory birds for multiple years until habitat of equal value and greater size is established			
E002530	-15	USFWS	[Summarized] FWS has included 11 avoidance and minimization measures that should be included for construction activities to ensure the survival of migratory birds and to protect existing rookeries. [See comment for measures.]	Environmental	Mitigation	Concur. The USACE will coordinate closely with the FWS/NMFS throughout the PED phase as plans are refined based on additional engineering and environmental analyses to ensure that avoidance and minimization measures are implemented to the fullest extent possible. Responses and discussion on the proposed avoidance and minimization measures are included in Section 6.7 of the EIS.

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E002530	-16	USFWS	An additional concern with the proposed ecosystem restoration is that many of the existing rookery islands are eroding or overrun by invasive species, making them unsuitable candidates for ground-nesting birds and therefore not optimum ER measures for this project. The FWS recommends that USACE work with the Harte Research Institute for Gulf of Mexico Studies (HRI) at Texas A&M University at Corpus Christi to ensure the most up to date information for active rookery islands is evaluated prior to designing and planning restoration of rookery islands in the final EIS.	Environmental	Performance	The USACE disagrees that rookery islands that are currently eroding or overrun by invasive species makes them a poor candidate for ER measures. In fact, these types of sites are exactly why we are proposing restoration of the sites. These sites are extremely important habitats and need to be restored to increase the availablity of suitable rookery habitat along the Gulf. The proposed designs incorporate adding sediment to regain island area and breakwaters in open water areas to reduce erosion in the future and maintain the island area over the long-term, thereby revering the damage from erosion. Also, invasive species monitoring and removal is incorporated into the monitoring and adaptive management plan, which would also signficantly reduce the potential for loss of the habitat to invasive species in the future. The USACE will work with the Harte Research Institute during PED to confirm active rookery islands and coordinate design and conservation measures most suited to successful rookeries as observed by the Institute.
E002530	-17	USFWS	The FWS also recognizes that although it is not the intention of the project to promote development in wetlands or areas of the coast where there is limited ability to obtain federally backed insurance, there are numerous examples throughout the national CBRA system where those restrictions have not been a deterrent to development. Therefore, the FWS asks that additional protection or conservation easements be considered within these CBRS units to deter development in the future that may arise due to the reduced flood and storm surge measures. The FWS also included a statement that any new commitment of Federal funds associated with this action or project, or change in the project design and/or scope, is subject to the CBRA's consultation requirement.	General	Policy	The USACE acknowledges the comment and will continue to coordinate with the USFWS to ensure project measures and Federal expenditures are compliant with CBRA.
E002530	-18	USFWS	[Summarized] The FWS has concerns that the 3D Adaptive Hydraulics (AdH) modeling for the Galveston Bay Storm Surge Barrier System for identifying potential indirect impacts of constructing the gates on tidal flow, salinity, and sediment and organism movement does not extend to San Luis Pass. Although the coastal barrier system's purpose is to deter surge forces from entering Galveston Bay, the surge gates may divert storm surge forces down the coast and cause increased tidal velocity and erosion through unprotected inlets such as San Luis Pass. The build-up of storm surge along the non-structural coastal barrier (Galveston Island and Bolivar Peninsula dune and beach nourishments) may also flatten or wash away down-current landforms with greater surge height and velocity across this unprotected tidal inlet resulting in loss of critical habitat and landforms required by federally-protected	H&H/Environmental	Modeling/Impacts	The USACE acknowledges the comment and will continue to coordinate with the USFWS to ensure project measures and Federal expenditures are compliant with all environmental laws and regulations. Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate potential impacts will inform refinements of the designs in PED. Mitigation will be proposed to offset unavoidable impacts. Concur specifically with respect for additional H&H modeling. Additional Hydraulic and Hydrologic (H&H) modeling will occur in PED. USACE will reinitiate coordination with the Service and other resource agencies in PED to help inform the scope of the future H&H modeling to ensure the analysis provides necessary information and predictions. The current AdH modeling included San Luis Pass and additional modeling can be done to look at how the project will affect those areas on the western side of the system. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.
			species such as piping plover, red knot, and nesting sea turtles. FWS requests that additional AdH modeling be conducted to assess the environmental consequences of the elevated tidal amplitude from the surge gates on land forms on either side of San Luis Pass and potential loss of critical habitat for piping plover.			

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E002530	-19	USFWS	[Summarized] The proposed ring levee and dune and beach restoration may prevent sediment overwash during storms and interrupt wind transport of sediment to the bay sides of Bolivar Peninsula and Galveston Island. The sediment and nutrients exchanged during normal tidal exchanges and wind transport processes sustain estuarine wetlands on the bayside of these islands, which is crucial in prohibiting landward migration from relative sea level rise. Additionally, reflection of wave, wind, and surge forces along the elevated coastal dune and beach barriers combined with the surge gates may also cause sand to be transported away from their natural shorelines and deposited down current to San Luis Pass, which has been characterized as a sediment sink for material entering the long-shore transport system from Galveston Island shorelines. In this scenario, the nourishment of the beaches along	H&H/Environmental	Impacts	Refer to response to Comment #E002530-18
			Galveston Island would cause even greater sediment deposition in San Luis Pass resulting in tidal restrictions into West Bay and Christmas Bay and influence salinity gradients and water quality in the lower reaches of West Galveston Bay thereby limiting fish migration or larvae transport into West Bay and Christmas Bay. This inlet is important not only for providing access to migratory fish species and larvae to nearshore Gulf and bay waters during this critical stage in their life cycle, but also provides important foraging opportunities for migratory birds dependent on these fish, and future recruitment of juvenile fish in marshes adjacent to West and Christmas Bays. FWS recommends comprehensive bathymetric, hydrodynamic, and sediment transport studies to evaluates the short- and long-term impacts of potential increased sedimentation and tidal restrictions within the San Luis Pass on West Bay, Cold Pass, Moody's			
			Island, Mud Island, and Christmas Bay, as well as sediment and nutrient losses on the bay sides of Bolivar Peninsula and Galveston Island.			
E002530	-20	USFWS	The FWS is concerned that the reduced tidal exchange, reduced circulation, and increased retention time that is predicted to occur from the Bolivar Road gates will promote increased eutrophication and contaminant levels within Galveston Bay system and its tributaries, which will result in indirect impacts to trust resources such as colonial waterbirds that are dependent on the fisheries in Galveston Bay. This is particularly a concern for Dickinson Bayou and Clear Creek/Clear Lake, water bodies that have experienced repeated fish kills due to insufficient levels of dissolved oxygen. Dickinson Bayou and two of its tributaries occur on the Texas Commission on Environmental Quality 2020 Texas Integrated Report 303(d) list of impaired water bodies for depressed dissolved oxygen, while both Dickinson Bayou and Clear Creek currently are on the Clean Water Act 303(d) list for dioxin and PCBs in edible tissue (TCEQ 2020).	Environmental	Impacts	Refer to response to Comment #E002530-18

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E002530	-21	USFWS	The FWS is concerned that increased nutrient loading from stormwater runoff and wastewater treatment plants may occur in Galveston Bay due to reduced tidal exchanges through the Bolivar Roads surge gate, and the Dickinson Bayou and Clear Lake surge gates. Reduced tidal exchanges may also cause longer bay retention times of freshwater inflows or Gulf waters. These conditions combined with higher nutrient loading may promote toxic algal blooms (e.g., Karenia brevis) (Brand and Compton 2007), as well as promote the production of other pathogens which affect fish, shellfish, colonial waterbirds that forage on fish and shellfish, and the federally listed West Indian manatee, which is susceptible to toxic algae blooms. Reduced tidal exchange through the Bolivar Roads Pass and increased bay retention times may also lead to extended impacts from oil or chemical spills on colonial waterbirds, West	Environmental	Impacts	Refer to response to Comment #E002530-18
			Indian manatee, and other marine mammals, and sea turtles.			
E002530	-22	USFWS	[Summarized] FWS has concerns that the Galveston Bay Larvae Transport Model or particle transport model, by Lackey and McAlpin (2020) does not extend to San Luis Pass to determine the impacts to larvae movement transferred downstream of the surge gate. The Service recommends the model be updated to include direct and indirect impacts of the Bolivar Road surge gates on San Luis Pass.	Environmental	Modeling /Impacts	Refer to response to Comment #E002530-18
E002530	-23	USFWS	[Summarized] The FWS asks that additional particle transport modeling be conducted to assess the environmental consequences of the Upper Coast CSRM and combination of ER measures impact on tidal exchanges, fish migration, and larvae recruitment through Bolivar Roads and San Luis Pass. DUring review of the model, FWS disagrees with the USACE conclusion that the Bolivar Road gates did not appear to have a significant impact on all six biological larvae types. Of the thousands of particles released at multiple locations outside the gate, only a fraction of them reach their specific recruitment locations with very limited transport to East Bay and most transported to West Bay or the west side of Galveston Bay. Most of the returning larvae (all six types) pile up behind the Gulf side of the gate structures or are swept back into the Gulf where they are transported by currents along the shoreline.	Environmental	Modeling /Impacts	Refer to response to Comment #E002530-18
			It is also unclear if the higher velocity influences where larvae are deposited in Galveston Bay. Although tidal vertical larvae may have advantage in reaching Galveston Bay, those that make it through the gates only a few reach East Bay. Other larvae with surface moving or bottom dwelling characteristics appear to be delayed from moving through the gates or are swept back out into the Gulf.			

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002530	-24	USFWS	[Summarized] Although Chapter 4 provides an evaluation of the environmental changes that may occur to Galveston Bay directly from the Bolivar Road gates, key species such as the blue crab (Callinectes sapidus), which is in decline and is an important food source for the whooping crane, could be affected by the restricted tidal exchange or concrete sills of the shallow water gate structures than other species migrating through this pass. Restricted tidal exchanges may interrupt or deter larvae from passing over the concrete sills of the shallow water gate structures. Despite this larvae's planktonic characteristics offshore, they have a directed migration into the bays that is a combination of deliberate vertical movements between seabed and water column, and horizontal transport by currents through the pass (tidal vertical and tidal lateral characteristics). Although the results of the particle	Environmental	Modeling /Impacts	Refer to response to Comment #E002530-18
			transport model show that this species' larvae characteristics are one of the few types that might make it through the gate structures, the long term impacts of tidal restrictions on the mature gravid female blue crab that produces these larvae has not been fully evaluated in the DEIS. Additionally, the DEIS has not assessed temperature changes, which is an important variable in the life stages of blue crabs and influences mating, spawning, egg development, zoeal development, intermolt duration and growth rate, and a number of underlying metabolic functions (Ward 2012). The AdH model appears to increase bay water temperatures due to the restricted opening and tidal exchanges, the increased temperatures may prohibit female blue crab egg production, incubation, and survival. The FWS recommends additional evaluation of impacts on mature female blue crabs, eggs, and larvae			
			and a cumulative impact evaluation of how a decline in blue crab populations would indirectly affec the recovery plan for the whooping crane.			
E002530	-25	USFWS	Discrepancies in Average Annual Habitat Units (AAHUs) were found; Appendix I, Table 10 cites 161.6 AAHU for existing open bay bottom habitat impacted, while Appendix J, Table 5 cites 155.3 AAHUs.	Environmental	HEP Modeling	Concur. The HEP analysis for the study was updated and the FEIS and Environmental Appendix have been updated with the new results.
E002530	-26	USFWS	FWS believes that although actionable ER measures were designed to enhance or protect existing habitat, the DEIS has not adequately addressed minimization and avoidance of impacts to threatened and endangered species, critical habitat, migratory birds, NWRs, other trust resources or damages to existing habitats.	Environmental	Impacts/ Mitigation	Thank you for your suggestion, we will take this under advisement and coordinate with the USFWS both in the closeout of the feasibility and continuing on into the PED phase of the project.
E002530	-27	USFWS	FWS also encourages that additional proposed monitoring and adaptive management at the mitigation sites (including the preservation and rehabilitation of existing habitats) be included. Monitoring is an essential component of restoration and mitigation projects for understanding species use and composition of the newly rehabilitated sites and will provide a basis for future recommendations to ensure successful implementation and continued usage by fish and wildlife species.	Environmental	Mitigation	In accordance with the Water Resources Development Act (WRDA) of 2016, Section 1161 and subsequent implementation guidance (CECW-P Memorandum dated October 19, 2017), the USACE prepared and included monitoring and adaptive management as part of the Mitigation Plan (Appendix J of the EIS). The mitigation plan incorporates a plan to track and improve restoration success through monitoring and adaptive management. The Mitigation Plan includes a description of the monitoring activities, the criteria for success, and the estimated cost and duration of the monitoring. It also specifies that monitoring will be performed until restoration success is achieved.

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E002530	-28	USFWS	All the construction projects for ER or CSRM measures proposed to impact lands of the NWR System will be subject to a review for appropriateness and compatibility with the National Wildlife Refuge System Improvement Act (NWRSA). These reviews will assure that the proposed actions will be consistent with the purposes and intent of the establishment of the refuge and the administration of the NWR System. The NWRs appreciates the discussion and looks forward to USACE continuing to coordinate with the refuge complex managers for review of all ER and CSRM measures to obtain compatibility determinations.	General	Policy	For any ER or CSRM actions that would occur on National Wildlife Refuge lands, the USACE will coordinate closely with the affected refuge including seeking a compatability permit from the FWS during PED.
E002530	-29	USFWS	The FWS is not able to provide the financial commitment to complete the various elements of the RP on refuge lands. Although there may be statutory prohibitions for USACE's funding work on lands administered or owned by another federal agency, it is important to note that the non-federal sponsor of the plan is not prohibited from funding support for these projects on federal land and may be essential. We encourage USACE and TGLO to work with the respective refuge complex managers regarding such opportunities.	Project Management	Cost-Sharing	The USACE and the designated non-Fed Construction cost-share sponsor will continue to coordinate with FWS regarding projects adjacent to federal lands as the project proceeds into PED.
E002530	-30	USFWS	Please add the additional NWRs within the study area: Anahuac, McFaddin, Big Boggy, Aransas, and Laguna Atascosa, to Brazoria and San Bernard NWRs (Table 3-3).	Environmental	Existing Conditions	Concur. Maps provided by the USFWS post-release of the 2020 draft report/dEIS were used to update the tables that list proposed actions on other federal lands.
E002530	-31	USFWS	FWS recommends that Table 5-5 be retitled to reflect that it includes the footprint acreage for CSRM as well as ER measures within protected lands. Plrease revise the table for the final EIS to ensure accurate land ownership (PAIS is an NPS park property) and acreage reported (e.g., the table does not include the entire G-28 ER measure footprint within Anahuac NWR on the north and south sides of the GIWW, or the coastal barrier footprint within Anahuac and McFaddin NWRs on Bolivar Peninsula).	Environmental	Impacts	Thank you for your feedback. Concur, all "Other Federal" properties have been identified in the updated EIS and Main Report, and the costs for restoration on these lands have been accounted for in the revised estimates.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002530	-32	USFWS	The FWS recommends that the following statement be removed from Chapter 4.4.4 to reflect that USACE had removed a segment of the proposed coastal barrier adjacent to and north of High Island that would have impacted 300 acres of the marsh within the Anahuac NWR: "Approximately 300 acres within the Anahuac NWR are expected to be directly impacted by construction operations from the Coastal Barrier . . . The indirect impacts to the refuge are expected to result in changes to wildlife migration patterns and natural hydrography and drainage patterns of the area."	Environmental	Impacts	Concur. The section has been revised to show that no direct impacts would result to Anahuac NWR from Alternative A or the Recommended Plan.
E002530	-33	USFWS	Although Figure 2-1 shows the conceptual alignment of the coastal barrier created by beach and dune restoration on Bolivar Peninsula, there were no detailed drawings to show the actual footprint of these measures on Anahuac and McFaddin NWR lands. Since publication of the DEIS, more detailed mapping information of the footprint of beach and dune restoration on NWR lands was provided by USACE to FWS showing a 10-foot and 20-foot permanent work easement planned adjacent to the dune restoration on NWR lands. The FWS requests these two permanent work easements be removed from the plans because they are not compatible with the intended purpose of the NWRs. Any temporary work space easements needed during construction will require direct coordination with the NWR managers to obtain compatibility determinations, specific access agreements, timing for construction activities, and site-	Environmental	Designs -- Beach and Dune	Concur. Permanent work easements from the sections of beach which are located on McFaddin and Anahuac NWR have been removed and the EIS and all supporting documentation have been updated accordingly.
			specific protection requirements prior to finalizing any project plans for construction of dunes and beach nourishment activities on NWR lands.			
E002530	-34	USFWS	Although Figure 2-15 for the B-12 ER measures shows marsh creation behind multiple breakwater alignments along the GIWW adjacent to the Brazoria and San Bernard NWRs, there are no detailed figures in the DEIS to show the actual footprint of these measures on refuge lands. More detailed information (ARCGIS shape files created by the Corps in September 2020) was provided to the FWS after DEIS publication. The FWS has the following recommendations: • Breakwaters should be designed further away from the shoreline of Brazoria NWR to enhance and protect existing marsh habitat along the GIWW because the current design does not allow for natural sedimentation or beneficial use of dredge material to create additional marsh habitat behind the breakwater. • Extend the currently proposed breakwaters to include the former Big Slough opening in order to protect the	Engineering	Designs -- ER	Concur. The final alignments for the breakwaters will be optimized in PED. USACE coordinated with the resource agencies and used the best available data to forecast the future without project scenarios to create the project designs included in this feasibility report. The USACE will reinitiate coordination with the resource agencies upon project authorization to collaborate on alignment optimization. Changes in erosion patterns or protection needs will be re-evaluated in PED.
			marsh around the terminus of Big Slough on Brazoria NWR lands. • Revise the design to include erosion protection measures or breakwaters to protect both sides of the opening to Cow Trap Lake that would extend from the existing USACE Dredge Material Placement Areas along the GIWW to the interior marsh shoreline within the boundaries of the NWR.			

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
E002530	-35	USFWS	Although Figure 2-18 shows marsh and breakwater alignments along the GIWW adjacent to the Big Boggy NWR and East Matagorda Bay open waters, there are no detailed drawings in the DEIS to show the actual footprint of these measures on this refuge. Detailed mapping information provided to the FWS post-DEIS publication shows that many of the planned breakwaters along the shoreline are located within or against the eroded shoreline of the Big Boggy NWR and not in open water along the historic channel alignment of the GIWW. An additional concern is the planned breakwater and bird island planned in East Matagorda Bay across from the Big Boggy NWR does not appear in alignment with existing or remnant spoil islands along the GIWW. FWS requests that breakwater alignments with the historic GIWW channel footprint be revised so as not to encroach on NWR lands. FWS supports	Engineering	Designs -- ER	Refer to response #E002530-34
			the construction of a breakwater on the East Matagorda Bay side of the GIWW but requests that the proposed alignment also be verified.			
E002530	-36	USFWS	[Section 4.4.4.1 and Appendix H]. The coastal barrier – beach and dune restoration projects on Anahuac and McFaddin NWR have not been fully evaluated in Chapter 4 or Appendix H. In addition, Appendix H provides a list of ER measures that are identified as containing cultural resources, but Anahuac NWR is not included in cultural resources found within the G-28 measure, and the San Bernard NWR is not included the cultural resources within the B-12 measure. The FWS NWR requests to be added as a signatory to the draft and final programmatic agreement regarding compliance with Section 106 of the National Historic Preservation Act for the Coastal Texas Protection and Restoration Project in Chambers, Galveston, Harris, Brazoria, Matagorda, Calhoun, San Patricio, Nueces, Kenedy, Willacy, and Cameron Counties (Appendix H).	Environmental		Note that a full evaluation of the project area will be conducted in the PED phase of the project. USACE will continue to coordination with the USFWS throughout that process, and we invite USFWS to participate as a signatory. Section 6.4 of the EIS has been revised to include this recommendation.
E002530	-37	USFWS	It is recommended the plan be amended to include a plan for monitoring of sediment quality where applicable. At sites where proposed activities include excavation, dredging, or beneficial relocation, sediment quality should be assessed. It is well documented that sediments are a critical indicator because they can accumulate contaminates that adversely affect ecosystems and human health (US EPA 2010). At restoration sites, potential adverse biological effects caused by toxic substances in sediments could affect ecological success criteria. Numerous sediment quality studies have been done in the proposed activity areas. A USGS study showed estuarine sediments at sites in Lavaca-Matagorda Bay system exceeding sediment quality guidelines for mercury (Brown et al. 1998). A sediment quality assessment in the Corpus Christi Bay showed sediment contaminant concentrations at	Engineering	Implementation	Thank you for your suggestion, this will be taken under advisement in the PED phase. Note dredge materials used to restore the ER features will be thoroughly tested prior to their utilization.

Submission Number	Comment Number	Submitter Name	Comment	Category	Area of Concern	Response to Comment
			several outfall sites exceeding sediment quality guidelines (CCBNEP 1998). Sediment toxicity conditions in 25% of Gulf Coast waters were rated as "poor" and sediment contaminant conditions rated 3% as "fair" (US EPA, 2010). Widespread sediment sampling was done in Galveston Bay with results showing Effects Range-Low (ERL) sediment guidelines exceeded for several parameters, primarily trace elements (Harmon et al. 2003).			
E002530	-38	USFWS	There is no information describing specific water quality parameters, analytical procedures, sample types, sampling sites, or sampling frequency. The only conceptual information given (page 21) is: "anthropogenic stressors (i.e. pollution, eutrophication) should be monitored by acquiring existing data from other state and federal agencies." Regardless of agency, a conceptual sampling plan, with fundamental water quality monitoring elements and clear objectives, should be included in the DEIS project monitoring plan.	Environmental	Monitoring and Adaptive Management	Note that the Recommended Plan's Tier 1 measures (Gulf and Bay defenses), will require additional engineering design and analyses in the PED phase. As part of that effort, additional engineering investigations and environmental analyses will be conducted. Efforts to avoid, minimize and mitigate these potential impacts will be included in the design, analysis, and documentation. Supplemental NEPA documentation will be released at that time to encourage public review and feedback.

Out of Scope/Non-Substantive Comments (that are included in a submission with a susbstantive comment(s))

Submission Number	Comment Number	Submitter Name	Comment	Notes (Why out of Scope)
E-2020DEIS-0008	-02	Pamela Couch	Have you taken a look at our neighbor's (Lousiana) Barrier Island Restoration Project? It seems this has been working for some time now for them…why has it taken us so long to recognize this? [link to news article about Whisky Island Restoration]	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.
E-2020DEIS-0010	-03	Kent Hemphill	Concerns regarding the accuracy of ecosystem modeling and the subsequent impacts to people, property, and the environment.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-0010	-05	Kent Hemphill	The USACE and GLO must consider practicable non-structural solutions such as elevation of homes, preservation and enhancement of wetland prairies, riparian areas, and barrier islands, buyouts/strategic withdrawal from areas that cannot be adequately protected, and utilize appropraite land-use regulation to implement those conecepts. A multi-tiered approach that focuses on nature-based solutions can be incrementally applied in the short-term to hep provide protection for our communities now and reduce major harm to the natural resources on which our region is dependent.	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.
E-2020DEIS-0020	-01	Jean Naples	The proposed plan only addresses one symptom of hurricane disasteres: surge from the Gulf of Mexico. The proposal should include projects that address these impacts.	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.
E-2020DEIS-0020	-02	Jean Naples	Since its inception, serious concerns have been raised regarding the environmental risks to the health of Galveston Bay and the exhorbitant cost for inadequate protection to our coastal and inland communities and industries. As the second most important ecologically productive estuary in the United States, environmental harm to the Galveston Bay ecosystem will undoutedly result in economic losses for our region.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-0020	-04	Jean Naples	I have concerns regading the accuracy of ecosystem modeling and the subsequent impacts to people, property, and the environment.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-0020	-07	Jean Naples	The USACE and GLO must consider practicable non-structural solutions such as elevation of homes, preservation and enhancement of wetland prairies, riparian areas, and barrier islands, buyouts/strategic withdrawal from areas that cannot be adequately protected, and utilize appropriate land-use regulatin to implement those concepts.	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.
E-2020DEIS-0020	-02	Jean Naples	Since its inception, serious concerns have been raised regarding the environmental risks to the health of Galveston Bay and the exhorbitant cost for inadequate protection to our coastal and inland communities and industries. As the second most important ecologically productive estuary in the United States, environmental harm to the Galveston Bay ecosystem will undoutedly result in economic losses for our region.	Value-based comments that do not provide any justificatin or facts to back-up the statement.

E-2020DEIS-0031	-01	Jackie Tryggeseth	I believe in the need to simultaneously protect wildlife, natural resources, and communities from the risks associated with sea level rise, storm surges, and hurricanes. There are better and more cost-effective ways to meet these needs than those outlined in teh Coastal Texas Study 2020 Draft Feasibility Report.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-0031	-02	Jackie Tryggeseth	What will happen to our commercial and recreational fisheries with the construction of the barrier gates?	Comments take the form of vauge, open-ended questions.
E-2020DEIS-0031	-06	Jackie Tryggeseth	In addition, the proposed barrier gates do nothing to protect our communities from wind or flooding events, and will not stop the storm surge in Galveston Bay. I believe the costs of the coastal barrier plan have been grossly underestimated both in terms of construction and ongoing maintenance. The long-term burden of these costs will fall on Texans in the form of increased taxes and special fees.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-0892	-02	Deidre Moderacki	What do you gain if you destroy this eco-system?	Comments take the form of vauge, open-ended questions.
E-2020DEIS-0892	-03	Deidre Moderacki	Your goal should be to protect important and ecologically-sensitive places in and around Galveston Bay. You should want to minimize large, structural storm surge projects that have greater impacts on Galveston Bay while maximizing nature-based solutions. This alternative approach allows for more rapid response and local solutions to coastal flooding which address the unique local needs of coastal communities like Bolivar Peninsula and Galveston Island and protects our quality of life.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E-2020DEIS-1128	-03	Gabe Davis	All property values in the area will be drastically reduced, if houses is not outright eliminated. Even the discussion of this wall will effect property values immendsely.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E002200	-03	Richard White	Current plans include flood protection for the City of Galveston. What about Tiki Island, Bayou Vista, Omega Bay, etc?	Comments take the form of vauge, open-ended questions.
E002200	-04	Richard White	The flood elevation on flood maps that are now in effect makes many of the houses and businesses that are in the flood plain be too low. Will this project pay to have these houses raised or will these areas be protected like the City of Galveston is going to be protected?	Comments take the form of vauge, open-ended questions.
E002274	-03	Carol Hollaway	Alternatives to compromising the economic and environmental viability of the Galveston bay system should be more thoroughly investigated.	Comments provide support for an action without justification.
E002311	-02	Teryl Crosson	While not doubting the effectivness of the gate in the Clear Creek Channel, if a tidal surge came in during an event wouldn't the water find its way p to Bayport and flood the lake through Taylor Lake?	Comments take the form of vauge, open-ended questions.
E002339	-02	Angela Busceme	I am in favor of beach nourishment & dune restoration.	Comments provide support for an action without justification.

E002340	-09	Winifred Burkett	The Non-structural measures suggested in the study is the best way to reduce damage to structures. This will help around the bay but stronger building codes are also needed. There need to be good inspections by building inspectors and FEMA or county inspectors to make sure building codes and FEMA regulations are being adhered to.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002340	-13	Winifred Burkett	I chatted with Conner Stokes and he offered to organize a meeting for our neighborhood to answer questions about the impacts of the project. The initial meeting was canceled due to Covid 19 restrictions and eventually a virtual meeting was set up. It seemed like notices of this meeting were only sent to Port Bolivar Post Office box holders and as many neighborhood property owners don't get mail in Port Bolivar, they didn't get notification. The virtual meeting was very disappointing as the majority of the presentation given us was about Galveston and the impacts on our neighborhood weren't adequately addressed. I realize that our meeting was early in the time when you were all learning about virtual meetings but our meeting didn't answer neighborhood questions and really didn't need to include any information about the projects impact on Galveston.	
E002512	-03	Jessica Jia	I would like to see the Coastal Barrier Plan reduce the height of the levees near the opening of Galveston bay. Instead, I would like to see funding go to restoring and rebuilding the coastal marsh systems that currently stand between the coast and the inlands. Increase marshlands and historic marshes.	Comments provide support for an action without justification.
E00258	-02	Marie and Chris Robb	The second area is the absence of any gate/inflatable structure at the San Luis Pass. Again, the objective of this integrated system is to stop the surge at the coast and protect the drainage estuaries and bay from "filling up".	Comments provide support for an action without justification.
E002454	-06	Kenneth Teague	I believe your process of eliminating some alternatives, and supporting others, has been biased strongly in favor of your preferred alternative, A. I remain unconvinced that you have been objective in this process. More specifically, I believe your assessment unfairly supports Alternative A and unfairly criticizes Alternative D2. Qualitative assertions and decisions should be supported by objective, and preferably, quantitative analysis.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E002454	-16	Kenneth Teague	I recommend that [Alt D] be changed to include the same nonstructural measures that are included in Alternative A.	Comments provide support for an action without justification.
E001730	-03	Dave Swindle, Jr.	Protection/Sheltering of key assets dring storm wave conditions. During our review of the draft study's documents, we were unable to identify a strategy to address the provision of shelter to shipping traffic, the protection of inland/up-river Oil & Gas installations, or the relocation of critical infrastructure assets during storm wave conditions. It is suggested here that the study also look at establishing temporary, mobile harbors that can generate a safe haven with calmed water.	Comments provide support for an action without justification.

E001730	-04	Dave Swindle, Jr.	Storm wave protection within the Tabbs Bay Area and Water Channels adjacent to Galveston Port. Next to the Galveston Port and coastal areas close to where fixed defenses are required for storm surge mitigation, there is a noted need to establish acute storm wave protection for exposed eco-systems.	Comments provide support for an action without justification.
E001730	-05	Dave Swindle, Jr.	Environmental Protection for fixed defenses and acute estuary protection. In reviewing the study's documents, one gap identified was the need to reduce upstream flows the mouth or estuary of commercial and wider rivers.	Comments provide support for an action without justification.
E002468	-08	Environmental Defense Fund	[Summarized] Encouraging adoption of updated building codes that reflect local hazards is key to improving new construction. Allowing funding to incentivize updates to structures that were built on outdated codes will allow communities to take action on new building science and improve resiliency.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002481	-03	Gilchrist Community Association	Who should pay the costs? The GCA's previous comments noted the Trump Administration's proposal to shift the federal/state sharing ratio from 80/20 to 20/80. Such a shift could put seriously limit a state's ability to carry its burden. It is too soon to know what the position of the Biden Administration will be. The Governor of Texas needs to weigh in with a realistic assessment of the State's ability to meet its share and take a position as to what the division of costs should be.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
EE02481	-12	Gilchrist Community Association	The second general area of concern is the Corps' reliance on the GLO as a partner in the project. Simply put, the GLO has not proven itself to be a reliable managing partner, as shown by experience with the closure of Rollover Pass. More proactive guidance from the Corps is recommended.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
EE02482	-13	Gilchrist Community Association	[Summarized] Commentor lists several reasons why the GLO is unreliable and decietful as shown during the closure of Rollover Pass. Commentor acknowledges they are in litigation with GLO over the closure of Rollover Pass and explains the details of the litigation.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
EE02483	-15	Gilchrist Community Association	In the previous review by the Corps for closure of Rollover Pass, the limited consideration of environmental effects focused on species included in a government list of "endangered" list, and it did not even suggest that any protected species was harmed by the Pass. The great benefit of the Pass as wildlife habitat was wholly ignored.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
EE02484	-17	Gilchrist Community Association	[Summarized] Rollover Pass should have been replaced rather than being closed off. Commentor notes a number of issues with the original pass and potential ways to correct without closure, including the need for a gate to allow skilled management of flow.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.

E002481	-18	Gilchrist Community Association	[Summarized] The GCA advocates for the creation of a state park at Gilchrist, similar to those of the Lower Colorado River Authority at Matagorda, TX, which includes both a pass that is slightly relocated northeast and a fishing pier that would separate fishing of family outings, ideally served by a pass, from the heavy-tackle fishing for large fish often conducted from a pier. Commentor notes how the current fishing pier are defective and enangere swimmers, blights the ocean view from the beach, and provides inadequate width for safe use, especially by wheelchairs.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002486	-23	Galveston Bay Foundation/National Wildlife Federation	The Corps pays tribute to sea level rise, but does not take a cautious approach. [Re: sand dunes]	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E002487	-45	Galveston Bay Foundation/National Wildlife Federation	GBF is in strong agreement with the statement on page 52 of the Draft Report that gate structures should not be installed at San Luis Pass.	Comments provide support for an action without justification.
E002489	-01	Audubon Texas	[Summarized] Audubon Texas appreciates the emphasis on natural- and nature-based solutions and hopes that the U.S. Army Corps of Engineers (USACE) can continue to emphasize this manner of thinking.	Comments provide support for an action without justification.
E002489	-02	Audubon Texas	[Summarized] We appreciate that the document explicitly calls out current and future climate change and the urgent need to mitigate and adapt our infrastructure to respond to that reality.	Comments provide support for an action without justification.
E002489	-08	Audubon Texas	We support the elevating of existing at-risk structures	Comments provide support for an action without justification.
E002501	-27	Surfrider Foundation	Surfrider thinks the petrochemical industry should start analyzing managed retreat now because the climate crisis is predicted to get much worse. Protecting petrochemical industry infrastructure can be done in a thoughtful, proactive way instead of scrambling to protect infrastructure in a reactionary manner after natural disasters, extreme weather, and inevitable sea level rise. Perhaps in order to help facilitate relocation of petrochemical industry infrastructure, the federal government and the state of Texas could provide tax incentives for relocation.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E-2020DEIS-01565	-02	H-GAC	To the greatest degree practicable we recommend the Study incorporate natural infrastructure to supplement/complement other regional flood mitigation efforts.	Comments provide support for an action without justification.
E00235	-05	City of Nassua Bay	The proposed gate system at Clear Lake is insufficient in size and extent.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E002359	-02	City of South Padre Island Shoreline Department	With further exploration, the City would like to ensure the continued beneficial use program we currently participate in with the US Army Corps of Engineers (USACE), GLO, and Cameron County. The current partnership through the Coastal Erosion Planning and Response Act (CEPRA) provides renourishment material when the Brazos Island Santiago Pass's regular maintenance dredging occurs.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.

E-2020DEIS-01543	-02	Andrew Reiser	As the owner of a home on the western shore of Galveston Bay in Kemah, I am also completely opposed to any potential impacts along the shoreline that would affect access to or visibility of the shoreline and bay.	Value-based comments that do not provide any justificatin or facts to back-up the statement.
E002005	-46	TPWD	[2018 Comment, summarized] No levee or floodwall is proposed for this stretch of the Texas coast. However, there are some natural environmental features that should be noted in the DIFR-EIS.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002525	-01	Jordan Macha	While we recognize the need for storm protection for our coastal communities, the placement of large coastal storm risk management structures will create significant and permanent effects on the ecological health of Galveston Bay and will cost an astronomical amount of money while falling short of accomplishing their job.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-02	Jordan Macha	(We) call upon the U.S. Army Corps of Engineers to produce a comprehensive Programmatic Environmental Impact Statement ("PEIS") to adequately address our concerns.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002525	-03	Jordan Macha	[Summarized] Given that the Recommended Plan components are not rated to sustain a Category 4 or 5 hurricane, the total cost of the Coastal Texas study does not meet the basic needs of coastal communities at risk.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-04	Jordan Macha	After the initial 50 years, will the public investment be outdated and no longer viable? What happens if some of the Recommended Plan is funded and completed, but not all of it? Won't the effectiveness and benefit diminish as well?	Comments take the form of vauge, open-ended questions.
E002525	-07	Jordan Macha	We maintain that the Recommended Plan should be much farther along in its planning process in order for the public to properly understand and comment on the Recommended Plan's design, implementation, and overall impacts.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-08	Jordan Macha	[Summarized] Disruption to neighborhoods, businesses, and shipping should be accounted for and made transparent in the plan.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002525	-09	Jordan Macha	[Summarized] USACE has dismissed concerns about unscheduled gate maintenance.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002525	-10	Jordan Macha	(We) urge the USACE to consider the comprehensive impacts of the Recommended Plan, and to shift towards projects that can be implemented on a shorter timetable (e.g. 3 - 5 years), and work with the natural environment, and opposed to engineering against it.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-12	Jordan Macha	[Summarized] The sand dunes proposed in the plan will degrade quickly, will require an inconceivable amount of sand, and will deposit sand in residents' yards and streets.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-13	Jordan Macha	[Summarized] The plan does not adequately address the issue of induced development within the Galveston Ring Barrier or behind the the dune systems.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.

E002525	-14	Jordan Macha	[Summarized] We disagree with the USACE statement that the adverse impacts are temporary and would end soon after construction.	Comments indicate lack of support for an action without justification.
E002525	-15	Jordan Macha	We consider many aspects of the actionable measures, even those intended to be ecosystem restoration measures, highly concerning and warranting of further analysis.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-16	Jordan Macha	We encourage USACE to specify at what point the cost benefit ratio of impacts to the habitat, species, fisheries and tourism industry will be too great to complete the Coastal Barrier System component of the Recommended Plan.	Comments take the form of vauge, open-ended questions.
E002525	-17	Jordan Macha	[Summarized] Impacts to bottlenose dolphins, such as noise, should be formally included in all studies to mitigate impacts to the population.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-19	Jordan Macha	USACE must also account for and include effects from the temporal loss between the immediate loss of estuarine wetlands and reconstruction of new wetlands, and relative impacts to each species relying on these areas during that time. This analysis should be done now, rather than in the Tier 2 analysis.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-20	Jordan Macha	There seems to be little concern for the health of benthic habitats in Galveston Bay, surrounding waterways, or the Gulf of Mexico. This is unacceptable. Any plan that moves forward would need to preserve and protect benthic habitats, not cause lasting irreversible damage.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-21	Jordan Macha	Given the critical nature of oysters in Galveston Bay as a keystone species, the USACE must provide detailed information on the potential magnitude and duration of these high freshwater inflow and drought conditions, using data from modeled events and supplemented with data from the many historical events that have occurred in Galveston Bay.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-23	Jordan Macha	[Summarized] The Coastal Texas Study mitigation plan fails to discuss impact to food webs. We request a full review of the effects of a barrier to the entire ecosystem and ecosystem services of Galveston Bay. Mitigation needs to address full ecosystem mitigation, as well as addressing species of special concern.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002525	-28	Jordan Macha	We simply do not have the environmental impact analysis needed that would allow the public to provide informed comment. This deferral of assessing the true impacts of this alternative fails to "[r]igorously explore and objectively evaluate" the environmental and community impacts of this alignment.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-29	Jordan Macha	Review of the project description and environmental assessment reveals that the Coastal Texas Study will significantly impact the human environment and must be the subject of a comprehensive environmental impact statement prior to approval. Due to the significant environmental impacts of the Coastal Barrier project, it is imperative that this project undergo a separate and detailed PEIS under NEPA.	Value-based comments that do not provide any justification or facts to back-up the statement.

E002525	-30	Jordan Macha	[Summarized] The tiered NEPA process is being employed improperly because it results in a restriction of public input for the cumulative impacts of the Coastal Texas Study 2020 project.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-31	Jordan Macha	We strongly object to the tiered NEPA approach which requires that the public comment on a project which will likely have major and irreversible impacts to the ecology and living species of Galveston Bay - before knowing all these impacts that can be detrimental to ecology, economy, and quality of life.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-32	Jordan Macha	Due to the lack of guidance on the subject, it is unclear whether the USACE had to notify the public of its intent to undergo a tiered NEPA approach.	Comments indicate lack of support for an action without justification.
E002525	-33	Jordan Macha	The 2020 DFR-EIS Provides Insufficient Information Regarding Overall Impacts of Tier One Measures for Decision Makers to Make a Reasoned Judgment on the Merits	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-34	Jordan Macha	The 2020 DFR-EIS Must Undergo Independent External Peer Review (IEPR) Before a Record of Decision is Made	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.
E002525	-35	Jordan Macha	(The) petrochemical industry is largely responsible for the emission of the pollution that is exacerbating climate change and sea level rise. The USACE and GLO should take a hard look at the contributions these private entities have on climate change and sea level rise, and expect them to help in the restoration and protection of Galveston Bay and its surrounding areas.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002525	-36	Jordan Macha	[Summarized] The timing and structure of the public comment period limited the public's ability to fully engage with the process.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-01	Annalisa Tuel	Turtle Island Restoration Network (TIRN) is opposed to the current iteration of the United States Army Corps of Engineers (USACE) Coastal Barrier Project, as described in the October 2019 Coastal Texas Protection and Restoration Feasibility Study and Draft Environmental Impact Statement (DEIS)	
E002526	-02	Annalisa Tuel	[Summarized] USACE should alter the Coastal Barrier plan to work with rather than against nature, focus on immediate opportunities for coastal protection, prioritize corporate accountability, and minimize manmade structures such as the building of dikes and levees. A new plan should prioritize nonstructural, environmental, and immediate flood protection improvements and abandons the massive manmade structures.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-03	Annalisa Tuel	[Summarized] USACE has improperly employed the Tiered NEPA approach for the Coastal Barrier Plan. The agency seems to be attempting to rush the authorization process forward without providing adequate disclosure of environmental effects as required by NEPA.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	05	Annalisa Tuel	[Summarized] $26.2 billion does not reflect the true project cost. More analysis is needed on the full economic impacts.	Value-based comments that do not provide any justification or facts to back-up the statement.

E002526	-06	Annalisa Tuel	[Summarized] We urge USACE to quantify the homes and properties estimated to be displaced by the alignment of the barrier before proceeding with Congressional authorization. USACE has provided inadequate notice to landowners within and around the Coastal Barrier Plan area.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-07	Annalisa Tuel	[Summarized] Will the fisheries survive this structure? Will tourism be able to survive a minimum of 10-15 years of beach construction on one of the busiest navigational channels in the world? And has the health of the ocean and Bay been modeled assuming the worst-case scenario?	Comments take the form of vauge, open-ended questions.
E002526	-10	Annalisa Tuel	[Summarized] The Sabine bank should be off limits for proposed dredging because sea turtles could be caught in dredges. Dredging Sabine and Heald Banks would places the Kemp's ridley turtle and other species at risk.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-12	Annalisa Tuel	[Summarized] USACE has justified the efficacy of this project by comparing it to the Lake Borgne Barrier in Louisiana. However, the Louisiana gate system is located very far from the Bay outlet, well protected from storm surge. USACE seems to be taking examples from gate barrier systems in protected environments, when in reality there is no comparison anywhere in the world for the project they now propose.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-14	Annalisa Tuel	[Summarized] We disagree with offsite mitigation for wetlands. Mitigation and the creation of new wetlands should not be considered an environmentally sustainable option for destroying established wetlands.	Comments indicate lack of support for an action without justification.
E002526	-15	Annalisa Tuel	[Summarized] TIRN disagrees that the placement of hardened structures will reduce shoreline erosion; they are actually likely to increase erosion on the Gulf side of such structures. We cannot conclude that the effects are outweighed by the benefits, because the adverse effects have not been analyzed or disclosed.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002526	-16	Annalisa Tuel	TIRN disagrees with the approach of creating oyster reefs in order to compensate for loss open bay bottom habitat.	Comments indicate lack of support for an action without justification.
E002526	-20	Annalisa Tuel	[Summarized] Impacts of the Coastal Barrier Plan on species such as dolphins, oysters, birds, and turtles have not been adequately analyzed and disclosed.	Value-based comments that do not provide any justification or facts to back-up the statement.
E002482	-02	Gilchrist Community Association	The loss of livestock has not been adequately addressed, but one solution for that could be the creation of state-run inland stockyards where cattle and horses can be kept until danger has passed. Prevention of wildlife loss during a severe flood would be impossible, but ongoing promotion of adequate wildlife populations would help those populations bounce back after being diminished.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.

E002481	-14	Gilchrist Community Association	[Summarized] Any plan should include a functioning pass at Gilchrist (New Rollover Pass), along with a better version of a fishing pier, and other enhancements. Commentor describes how Rollover Pass when open during Harvey was the first place water could enter the sea since the Needmore Diversion Canal redirected rainfall in part of East Texas away from the lower part of Taylor Bayou, which then poured enormous amounts of water into the GIWW and then into East Bay. Without Rollover Pass, the next most direct outlet for inland storm drainage would be the Intracoastal itself, adding about twenty miles to the journey and slows drainage from East bay which can then introduce an unnecessary amount of debris-filed water. Loss of a pass at Gilchrist now has turned East Bay into a shallow tub with a twenty-mile drain. The better drain which existed until 2019 should be restored.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E002482	-16	Gilchrist Community Association	[Summarized] Reopening the pass at Gilchrist would restore the migratory pathway to habitat for many different species including fish and crustaceans. Concerns over the pass making the Bay to salty for oysters were raised, but commentor suggests that the bay also can become too "fresh" during rain runoff periods and getting heavy runoff out of the bay faster helps, not hurts, oysters.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.
E-2020DEIS-01484	-04	Brandt Mannchen	The nonstructural improvements will not occur or will be implemented ineffectively because local and state officials will not have the political will to “just say no” to more development in the wrong places and to plan ahead for strategic withdrawal. The Corps will wash its’ hand for implementation and enforcement of nonstructural improvements and say that these are out of its authority. If that is so, they should not be proposed without a mechanism that requires their use and long-term maintenance.	Value-based comments that do not provide any justificatin or facts to back-up the statement.

E002357	-80	LSLA	The severe flooding in Port Arthur and surrounding area resulting from these recent rainfall events suggests that the existing infrastructure may be insufficient to serve the community. During Harvey, there were widespread reports of pump failures in Jefferson County Drainage District 7 during Harvey that likely exacerbated the extreme rainfall the area received in addition to blocked drainage ditches and culverts.247 The USACE should engage a study to investigate the source of these failures and determine how infrastructure can be improved or maintained to prevent repeat flooding events. What became evidence after Harvey is that the current open ditch drainage systems in Port Arthur are not keeping up with demands. Although this Study focuses on storm surge, if water breaches the Port Arthur seawall as it did in Ike, the resultant flooding could create situations not unlike those seen in Harvey if there are subsequent pump failures. If the only backup plan is to remove the water using pumps (whether the water arrives by rain or storm surge over the seawall), then the pumps need to be effective and reliable. Similarly, the USACE could issue recommendations for regular maintenance of existing ditches and culverts to ensure adequate stormwater transport.	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.

Submissions with No Substantive Comments Identified

Column1	Column2	Column3	Column4	Column5
Submission Number (ES)	**Submitter Name**	**Date**	**Rational For Non-Substantive**	**Notes**
E-2020DEIS-0003	Randy Culp	11/5/2020	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.	Comment discusses concerns for impacts in Orange County; however, no project action is being taken in or that could affect Orange County. Comment is likely a duplicate of S2G
E-2020DEIS-0009	Pamela Couch	11/16/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-0012	Charles Pederson	11/17/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-0014	Amy Buehrer	11/17/2020	Comments provide support for an action without justification.	
E-2020DEIS-0935	Jimmy Dunne	11/25/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-1114	Donald Owen	12/1/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-1116	Sarah Lozano	12/2/2020	Email should not have been numbered as a submission.	
E-2020DEIS-1129	Calli Carter	12/3/2020	Comments provide support for an action without justification.	
E-2020DEIS-1132	Ken Ruby	12/3/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-1136	Verna Auge	12/3/2020	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.	
E-2020DEIS-1137	Jeff Auge	12/3/2020	Comments take the form of vauge, open-ended questions.	Comment is concerned about current dune degradation and asking if they can be repaired by adjacent property owners.
E-2020DEIS-1138	Jorge da Silva	12/3/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-1472	Barry Cohen	12/8/2020	Comments provide concern for a project/action or location that is outside the scope of the Coastal Texas Feasibility Study.	
E002343	Cheryl Johnson	1/12/2021	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E002418	Abel Ortiz II	1/13/2021	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E002498	Larry Bishop	1/13/2021	Comments provide support for an action without justification.	
E002519	Mark	1/13/2021	Suggested alternatives are already being considered and were presented to the public. No new information or additional considerations were included.	Comment recommends inclusion of a flood gate at the mouth of Dickinson Bayou with pumps to pump water into the bay.
E002523	Annette Brownfield	1/13/2021	Comments indicate lack of support for an action without justification.	
E001726	Keith Beitler	1/8/2021	Email should not have been numbered as a submission	USACE was included on a piece of "Reply to All" email correspondence that did not include an actual comment.
E001728	Brad Grace	1/8/2021	Email should not have been numbered as a submission	USACE was included on a piece of "Reply to All" email correspondence that did not include an actual comment.

E002410	Philip Kropf	1/13/2021	Value-based comments that do not provide any justification or facts to back-up the statement.	Comment submitted a long comment letter with multiple examples of projects that in his opinion have failed or has weaknesses; however, there is no concrete justification specifically stated without having to "read between the lines." The commentor closes with "But the major thrust of what I have tried to say here is that we need to be very careful of our human arrogance, and to realize that there are always consequences to what we do and build, and many times these have not been happy ones!" This statement summarizes the submission well.
E002453	David Hagy	1/13/2021	Comments provide support for an action without justification.	Trade group of affiliated engineering companies support the plan to protect the region and would be interested in assisting with the project as needed.
E002460	James Stevenson	1/13/2021	Value-based comments that do not provide any justification or facts to back-up the statement.	
E002482	Theresa Rodriguez	1/13/2021	Comments provide support for an action without justification.	
M-2020DEIS-06	Texas City-La Marque Chamber of Commerce	12/16/2020	Comments provide support for an action without justification.	
M-2020DEIS-09	James Larimore	12/18/2020	Comments indicate lack of support for an action without justification.	
E-2020DEIS-01498	Glen Adams	12/11/2020	Comments provide support for an action without justification.	
E-2020DEIS-01500	Cyre Rose	12/11/2020	Email should not have been numbered as a submission	E-mail was a sales pitch for a product to help retain sand in a dune structure.
E-2020DEIS-01517	Michael Fjetland	12/14/2020	Comments provide support for an action without justification.	
E-2020DEIS-01524	Carrie Arnold	12/16/2020	Email should not have been numbered as a submission	Request for tract register listing parcels.
E-2020DEIS-01536	Thomas Reiser	12/17/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-01547	Jack Dunn	12/18/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-01554	Elizabeth Phillips	12/19/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-01558	Shane Hoevelman	12/19/2020	Value-based comments that do not provide any justificatin or facts to back-up the statement.	
E-2020DEIS-01560	Becky Fogel	12/21/2020	Email should not have been numbered as a submission	Request for an interview about the study.
E-2020DEIS-01561	Jake Magee	12/21/2020	Email should not have been numbered as a submission	Request for images for a news article.
E-2020DEIS-01652	Phillip David	12/27/2020	Comments provide support for an action without justification.	
E-2020DEIS-01669	Letty Torri	12/29/2020	Email should not have been numbered as a submission	SPAM mail regaring a business phone service
E-2020DEIS-01679	Terry & Suzie Grover	12/30/2020	Comments provide support for an action without justification.	

Submission Record

Submission Number	Date Submitted	Submitter First Name	Submitter Last Name	Organization (Only if on Official Letterhead or submitted on behalf of Organization)	Form Letter	Form Letter Number	Submission Type	Duplicate
E-2020DEIS-0001	10/31/2020	Mike	Booher		No		E-Mail	No
E-2020DEIS-0002	11/1/2020	Jack and Jennifer	Baer		No		E-Mail	No
E-2020DEIS-0003	11/5/2020	Randy	Culp		No		E-Mail	No
E-2020DEIS-0004	11/9/2020	Walter	Wolff		No		E-Mail	No
E-2020DEIS-0005	11/9/2020	Walter	Wolff		No		E-Mail	No
E-2020DEIS-0006	11/9/2020	Rick	Suder		No		E-Mail	No
E-2020DEIS-0007		Garry	Kaufman		No		E-Mail	No
E-2020DEIS-0008	11/16/2020	Pamela	Couch		No		E-Mail	No
E-2020DEIS-0009	11/16/2020	Pamela	Couch		No		E-Mail	No
E-2020DEIS-0010	11/16/2020	Kent	Hemphill		Yes	1	E-Mail	No
E-2020DEIS-0011	11/17/2020	Matt	Pace		No		E-Mail	No
E-2020DEIS-0012	11/17/2020	Charles	Pederson		No		E-Mail	No
E-2020DEIS-0013	11/17/2020	Mary	Whaling		No		E-Mail	No
E-2020DEIS-0014	11/17/2020	Amy	Buehrer		No		E-Mail	No
E-2020DEIS-0020	11/19/2020	Jean	Naples		Yes	2	E-Mail	No
E-2020DEIS-0021	11/19/2020	Sarah	Piwetz		No		E-Mail	No
E-2020DEIS-0665	11/21/2020	Kendrick	Miller		No		E-Mail	No
E-2020DEIS-0935	11/25/2020	Jimmy	Dunne		No		E-Mail	No
E-2020DEIS-0031	11/21/2020	Jackie	Tryggeseth		Yes	3	E-Mail	No
E-2020DEIS-0892	11/23/2020	Deidre	Moderacki		No		E-Mail	No
E-2020DEIS-1110	11/30/2020	Mike	Pearson		No		E-Mail	No
E-2020DEIS-1114	12/1/2020	Donald	Owen		No		E-Mail	No
E-2020DEIS-1116	12/2/2020	Sarah	Lozano		No		E-Mail	No
E-2020DEIS-1117	12/2/2020	Michelle	Ramsey		No		E-Mail	No
E-2020DEIS-1120	12/2/2020				No		E-Mail	No
E-2020DEIS-1126	12/3/2020	Paula	Stephens		No		E-Mail	No
E-2020DEIS-1127	12/3/2020	Laurie Etta	Ortel		No		E-Mail	No
E-2020DEIS-1128	12/3/2020	Gabriel	David		No		E-Mail	No
E-2020DEIS-1129	12/3/2020	Calli	Carter		No		E-Mail	No
E-2020DEIS-1130	12/3/2020	Frank	Eichstadt		No		E-Mail	No
E-2020DEIS-1131	12/3/2020	Mike	Arden		No		E-Mail	No
E-2020DEIS-1133	12/3/2020	Kate Lange	Tom Gotthold		No		E-Mail	No
E-2020DEIS-1132	12/3/2020	Ken	Ruby		No		E-Mail	No
E-2020DEIS-1135	12/3/2020	David	Burkett		No		E-Mail	No
E-2020DEIS-1136	12/3/2020	Verna	Auge		No		E-Mail	No
E-2020DEIS-1137	12/3/2020	Jeff	Auge		No		E-Mail	No
E-2020DEIS-1138	12/3/2020	Jorge Alberta	da Silva		No		E-Mail	No

E-2020DEIS-1141	12/4/2020	Laura and Chris	Pierce		No		E-Mail	No
E-2020DEIS-1140	12/4/2020	Sue	Groff		No		E-Mail	No
E-2020DEIS-1241	12/5/2020	Tinna	McGee		No		E-Mail	No
E-2020DEIS-1242	12/5/2020	Tinna	McGee		No		E-Mail	No
E-2020DEIS-1318	12/6/2020	Nick	Singleton		No		E-Mail	No
E-2020DEIS-1472	12/8/2020	Barry	Cohen		No		E-Mail	No
E001697	1/5/2021	Jessica	Jia		No		E-Mail	No
E001698	1/5/2021	Jessica	Jia		No		E-Mail	Yes
E002023	1/8/2021	Pierre	Catala		No		E-Mail	No
E002132	1/10/2021	Larry and Marie	Wise		No		E-Mail	No
E002131	1/10/2021	Kevin	Grice		Yes	4	E-Mail	No
E002200	1/11/2021	Richard	White		No		E-Mail	No
E002140	1/11/2021	Christopher	Lish		Yes	3	E-Mail	No
E002261	1/11/2021	Susan	Fennewald		No		E-Mail	No
E002274	1/11/2021	Carol	Hollaway		No		E-Mail	No
E002311	1/12/2021	Teryl	Crosson		No		E-Mail	No
E002339	1/12/2021	Angela	Busceme		No		E-Mail	No
E002332	1/12/2021	Don	Johnson		No		E-Mail	No
E002307	1/12/2021	Paul	Cammarata		No		E-Mail	No
E002325	1/12/2021	Michael and Jodie	Lewis		No		E-Mail	No
E002320	1/12/2021	Thomas	Sharkey		No		E-Mail	No
E002327	1/12/2021	Carol	Hollaway		No		E-Mail	No
E002340	1/12/2021	Winnifred	Burkett		No		E-Mail	No
E002344	1/12/2021	Susan	Rodgers		No		E-Mail	No
E002360	1/13/2021	Azure	Bevington		No		E-Mail	No
E002343	1/13/2021	Cheryl	Johnson		No		E-Mail	No
E002351	1/12/2021	Caroline	Reichert		No		E-Mail	No
E002352	1/12/2021	Carl	Bohannon		No		E-Mail	No
E002411	1/13/2021	David	Ortega		No		E-Mail	No
E002418	1/13/2021	Able	Ortiz		No		E-Mail	No
E002429	1/13/2021	Robyn	Deveney		Yes	3	E-Mail	No
E002449	1/13/2021	John	Anderson	Rice University	No		E-Mail	No
E002454	1/13/2021	Kenneth	Teague		No		E-Mail	No
E002462	1/13/2021	De'Anne	Meeh		No		E-Mail	No
E002478	1/13/2021	John	Barnett		No		E-Mail	No
E002483	1/13/2021	Pete	Meeh		No		E-Mail	No
E002485	1/13/2021	Jerry	Mohn		No		E-Mail	No
E002487	1/13/2021	John	Barnett		No		E-Mail	No
E002490	1/13/2021	Raleigh	Jackson		No		E-Mail	No
E002491	1/13/2021	Jim	Miller		No		E-Mail	No
E002495	1/13/2021	Brian	Shmaefsky		No		E-Mail	No
E002498	1/13/2021	Larry	Bishop		No		E-Mail	No

E002499	1/13/2021	Norman	Howard		No		E-Mail	No
E002510	1/13/2021	Valerio	Campione		No		E-Mail	No
E002512	1/13/2021	Jessica	Jia		No		E-Mail	No
E002514	1/13/2021	Michael	Newton		No		E-Mail	No
E002518	1/13/2021	Sara	Rodriguez		No		E-Mail	No
E002519	1/13/2021	Mark			No		E-Mail	No
E002521	1/13/2021	Jonathon	Tromm		No		E-Mail	No
E002523	1/13/2021	Annette	Brownfield		No		E-Mail	No
E002527	1/13/2021	Richard	Dashiell		No		E-Mail	No
E002528	1/13/2021	Christopher and Marie	Robb		No		E-Mail	No
E001725	1/8/2021	Brad	Grace	Kemah Boardwalk M	No		E-Mail	No
E001726	1/8/2021	Keith	Beitler	Landry's Inc.	No		E-Mail	Yes
E001728	1/8/2021	Brad	Grace	Kemah Boardwalk M	No		E-Mail	Yes
E001730	1/8/2021	David	Swindle, Jr.		No		E-Mail	No
E002158	1/11/2021	Urs	Rathgeb	Texas Association o	No		E-Mail	No
E002219	1/11/2021	Joe	Birkofer	Seabrook Sailing Clu	No		E-Mail	No
E-2020DEIS-02312	1/12/2021	Daniela	Adjunta	Sierra Club, Housto	No		E-Mail	No
E002328	1/12/2021	Michael	Parr	American Bird Cons	No		E-Mail	No
E002330	1/12/2021	Bill	Kiene	Galveston Flood De	No		E-Mail	No
E002333	1/12/2021	Philip	Kropf		No		E-Mail	No
E002345	1/12/2021	Helen	Drummond	Houston Audubon S	No		E-Mail	No
E002357	1/13/2021	Chase	Porter	Lone Star Legal Aid	No		E-Mail	No
E002373	1/13/2021	Shane	Bonnot	Coastal Conservatic	No		E-Mail	No
E002394	1/13/2021	Cindy	DeWease	Clear Lake Area Cha	No		E-Mail	No
E002410	1/13/2021	Philip	Kropf		No		E-Mail	No
E002433	1/13/2021	Chad	Prejean	Houston Pilots	No		E-Mail	No
E002450	1/13/2021	Rob	Clay	Western Hemisphe	No		E-Mail	No
E002453	1/13/2021	David	Hagy	American Council o	No		E-Mail	No
E002460	1/13/2021	James	Stevenson	Galveston Ornithol	No		E-Mail	No
E002468	1/13/2021	Devyani	Kar	Environmental Defe	No		E-Mail	No
E002473	1/13/2021	David	Foret	Lone Star Harbor Sa	No		E-Mail	No
E002476	1/13/2021	Bob	Harvey	Greater Houston Pa	No		E-Mail	No
E002477	1/13/2021	Paul	Sanchez-Navarro	Defenders of Wildli	No		E-Mail	No
E002480	1/13/2021	Lee	Slataper	Pirates Property Ov	No		E-Mail	No
E002481	1/13/2021	Winston	Cochran, Jr.	Gilchrist Communit	No		E-Mail	No
E002482	1/13/2021	Theresa	Rodriguez	Bay Area Houston T	No		E-Mail	No
E002486	1/13/2021	Scott	Jones	Galveston Bay Four	No		E-Mail	No
E002489	1/13/2021	Scott	Moorhead	Audubon Texas	No		E-Mail	No
E002501	1/13/2021	Stefanie	Sekich-Quinn	Surfrider Foundatio	No		E-Mail	No
E002504	1/13/2021	Matthew	Bush	Galveston Texas Cit	No		E-Mail	No
E002525	1/13/2021	Jordan	Macha	Bayou City Waterke	No		E-Mail	No
E002526	1/13/2021	Annalisa	Tuel	Turtle Island Restor	No		E-Mail	No

E-2020DEIS-02326	1/12/2021	William	Merrell Jr.	Texas A&M Univers	No		E-Mail	No
E-2020DEIS-01473	12/8/2020	Megan	Mayes	City of Morgan's Po	No		E-Mail	No
E-2020DEIS-01518	12/14/2020	Mark	Mitchell	City of Houston	No		E-Mail	No
E-2020DEIS-01526	12/16/2020	Craig	Maske	Harris County Flooc	No		E-Mail	No
E-2020DEIS-01565	12/22/2020	Jeff	Taebel	Houston-Galveston	No		E-Mail	No
E001710	1/6/2020	Sally	Bakko	City of Galveston	No		E-Mail	No
E001721	1/7/2021	Rachel	Lewis	City of El Lago	No		E-Mail	No
E001722	1/7/2021	Stacey	Fields	City of Taylor Lake \	No		E-Mail	No
E001723	1/7/2021	Augusto	Sanchez Gonzalez	Cameron County Commissioners Court				
E002290	1/11/2021	Debbie	Nesbitt	City of Shoreacres	No		E-Mail	No
E002346	1/12/2021	Kristina	Boburka	City of South Padre	No		E-Mail	No
E002358	1/13/2021	Jason	Reynolds	City of Nassua Bay	No		E-Mail	No
E002359	1/13/2021	Kristina	Boburka	City of South Padre	No		E-Mail	No
E002463	1/13/2021	Robin	Lenio	City of Seabrook	No		E-Mail	No
E002493	1/13/2021	Terri	Gale	City of Kemah	No		E-Mail	No
M-2020DEIS-01	12/1/2020	David	Basco	Old Dominion Univ	No		Mail	No
M-2020DEIS-02	12/8/2020	Dave	Martin	City of Houston	No		Mail	Yes
M-2020DEIS-03	12/9/2020	Brandt	Mannchen		No		Mail	Yes
M-2020DEIS-04	12/11/2020	Diana	Stapp	City of League City	No		Mail	No
M-2020DEIS-05	12/14/2020	Walter	Wolff		No		Mail	Yes
M-2020DEIS-06	12/16/2020	Russell	Plackermeier	Texas City-La Marq	No		Mail	No
M-2020DEIS-07	12/17/2020	Rodger	Rees	Galveston Wharves	No		Mail	No
M-2020DEIS-08	12/18/2020	Rex	Bettis	Lakewood Yacht Clu	No		Mail	No
M-2020DEIS-09	12/18/2020	James	Larimore		No		Mail	No
M-2020DEIS-10	1/6/2021	Kurt	Otten	City of Clear Lake Sl	No		Mail	No
M-2020DEIS-11	1/7/2021	Brad	Grace	Kemah Boardwalk M	No		Mail	Yes
M-2020DEIS-12	1/13/2021	Thomas	Kolupski	City of Seabrook	No		Mail	Yes
M-2020DEIS-13	No Date	David	Burkett		No		Mail	No
M-2020DEIS-14	No Date	Amy	Dinn	Lone Star Legal Aid	No		Mail	Yes
M-2020DEIS-15	No Date	Daniela	Adjunta	Sierra Club, Housto	No		Mail	Yes
E-2020DEIS-01484	12/9/2020	Brandt	Mannchen		No		E-Mail	No
E-2020DEIS-01487	12/9/2020	Lee	von Gynz-Guethle		No		E-Mail	No
E-2020DEIS-01498	12/11/2020	Glen	Adams		No		E-Mail	No
E-2020DEIS-01500	12/11/2020	Rose	Cyr		No		E-Mail	No
E-2020DEIS-01506	12/12/2020	Michael	Zuteck		No		E-Mail	No
E-2020DEIS-01509	12/13/2020	Bill	Sargent		No		E-Mail	No
E-2020DEIS-01516	12/14/2020	Walter	Wolff		No		E-Mail	No
E-2020DEIS-01517	12/14/2020	Michael	Fjetland		No		E-Mail	No
E-2020DEIS-01521	12/15/2020				No		E-Mail	No
E-2020DEIS-01524	12/16/2020	Carrie	Arnold		No		E-Mail	No
E-2020DEIS-01525	12/16/2020	James	Young		No		E-Mail	No
E-2020DEIS-01528	12/17/2020	J. Bee	Bednar		No		E-Mail	No

E-2020DEIS-01533	12/17/2020	Sharron	Sims		Yes	4	E-Mail	No
E-2020DEIS-01536	12/17/2020	Thomas	Reiser		No		E-Mail	No
E-2020DEIS-01541	12/17/2020	Debra	Barringer		Yes	3	E-Mail	No
E-2020DEIS-01543	12/17/2020	Andrew	Reiser		No		E-Mail	No
E-2020DEIS-01547	12/18/2020	Jack	Dunn		No		E-Mail	No
E-2020DEIS-01554	12/19/2020	Elizabeth	Phillips		No		E-Mail	No
E-2020DEIS-01555	12/19/2020	Chris	Holley		No		E-Mail	No
E-2020DEIS-01557	12/19/2020	Mike	Johnson		No		E-Mail	No
E-2020DEIS-01558	12/19/2020	Shane	Hoevelman		No		E-Mail	No
E-2020DEIS-01560	12/21/2020	Becky	Fogel		No		E-Mail	No
E-2020DEIS-01561	12/21/2020	Jake	Magee		No		E-Mail	No
E-2020DEIS-01563	12/21/2020	David	Dillehay		No		E-Mail	No
E-2020DEIS-01652	12/27/2020	Phillip	Davis		No		E-Mail	No
E-2020DEIS-01669	12/29/2020	Letty	Tori		No		E-Mail	No
E-2020DEIS-01677	12/30/2020	Bob	Ware		No		E-Mail	No
E-2020DEIS-01679	12/30/2020	Terry & Suzie	Grover		No		E-Mail	No
E-2020DEIS-01681	12/30/2020	David	Tansey		No		E-Mail	No
E-2020DEIS-01682	12/30/2020	Mary	Duke		No		E-Mail	No
E-2020DEIS-01687	12/31/2020	Jay	Brinkmann		No		E-Mail	No
E-2020DEIS-01690	1/3/2021	Rebecca	Gribben		No		E-Mail	No
E-2020DEIS-01694	1/4/2021	Christopher	Allison					
E-2020DEIS-01469	12/8/2020	Charrish	Stevens	NOAA National Ma	No		E-Mail	No
E-2020DEIS-01483	12/9/2020	Caimee	Schoenbaechler	Texas Water Develc	No		E-Mail	No
E-2020DEIS-02005	1/8/2021	Leslie	Koza	Texas Parks and Wi	No		E-Mail	No
E002341	1/12/2021	Jessica	Mallindine	Bureau of Ocean Er	No		E-Mail	No
E-2020DEIS-0020	11/19/2020	Jean	Naples	None	Yes	2	E-Mail	No
E-2020DEIS-0024	11/19/2020	Carol	Lee	None	Yes	2	E-Mail	No
E-2020DEIS-0025	11/19/2020	Chris	Page	None	Yes	2	E-Mail	No
E-2020DEIS-0026	11/20/2020	Cecilla	Ljungberg	None	Yes	2	E-Mail	No
E-2020DEIS-0027	11/20/2020	Frank	Blake	None	Yes	2	E-Mail	No
E-2020DEIS-0488	11/21/2020	Helen	LaDeau	None	Yes	2	E-Mail	No
E-2020DEIS-0835	11/22/2020	Christine	Hinze	None	Yes	2	E-Mail	No
E-2020DEIS-0943	11/25/2020	William	Forbes	None	Yes	2	E-Mail	No
E-2020DEIS-0010	11/16/2020	Kent	Hemphill	None	Yes	1	E-Mail	No
E-2020DEIS-0015	11/17/2020	Nancy	Brown	None	Yes	1	E-Mail	No
E-2020DEIS-0016	11/17/2020	Sharron	Stewart	None	Yes	1	E-Mail	No
E-2020DEIS-0017	11/17/2020	Leticia	Gutierrez	None	Yes	1	E-Mail	No
E-2020DEIS-0018	11/18/2020	William	Macha	None	Yes	1	E-Mail	No
E-2020DEIS-0019	11/18/2020	Aubrey	Waddail	None	Yes	1	E-Mail	No
E-2020DEIS-0022	11/19/2020	Billy	Tomlinson	None	Yes	1	E-Mail	No
E-2020DEIS-0023	11/19/2020	William	Dyda	None	Yes	1	E-Mail	No
E-2020DEIS-0029	11/21/2020	William	Dyda	None	Yes	1	E-Mail	Yes

E-2020DEIS-0030	11/21/2020	Nita	Cosby	None	Yes	1	E-Mail	No
E-2020DEIS-0783	11/22/2020	Suzanne	Peloquin	None	Yes	1	E-Mail	No
E-2020DEIS-0882	11/23/2020	David	Hedgepeth	None	Yes	1	E-Mail	No
E-2020DEIS-1119	12/3/2020	Paula	Stephens	None	Yes	1	E-Mail	No
E-2020DEIS-0031	11/21/2020	Jackie	Tryggeseth	None	Yes	3	E-Mail	No
E-2020DEIS-0032	11/21/2020	Cyle	Linstrom	None	Yes	3	E-Mail	No
E-2020DEIS-0033	11/21/2020	Elsy	Shallman	None	Yes	3	E-Mail	No
E-2020DEIS-0034	11/21/2020	Melinda	Barnett	None	Yes	3	E-Mail	No
E-2020DEIS-0035	11/21/2020	Judy	Fairless	None	Yes	3	E-Mail	No
E-2020DEIS-0036	11/21/2020	Brian	Reynolds	None	Yes	3	E-Mail	No
E-2020DEIS-0037	11/21/2020	Deborah	Dahlgren	None	Yes	3	E-Mail	No
E-2020DEIS-0038	11/21/2020	Carol	Devoss	None	Yes	3	E-Mail	No
E-2020DEIS-0039	11/21/2020	Susan	Bradfield	None	Yes	3	E-Mail	No
E-2020DEIS-0040	11/21/2020	Joseph	Quirk	None	Yes	3	E-Mail	No
E-2020DEIS-0041	11/21/2020	Robert	Howard	None	Yes	3	E-Mail	No
E-2020DEIS-0042	11/21/2020	Ruth	Riordan	None	Yes	3	E-Mail	No
E-2020DEIS-0043	11/21/2020	Dominique	Jquanin	None	Yes	3	E-Mail	No
E-2020DEIS-0044	11/21/2020	Maureen	Prochaska	None	Yes	3	E-Mail	No
E-2020DEIS-0045	11/21/2020	Robert	Keiser	None	Yes	3	E-Mail	No
E-2020DEIS-0046	11/21/2020	Michele	Page	None	Yes	3	E-Mail	No
E-2020DEIS-0047	11/21/2020	Rhonda	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-0048	11/21/2020	Sandra	Lambert	None	Yes	3	E-Mail	No
E-2020DEIS-0049	11/21/2020	Stephanie	Kob	None	Yes	3	E-Mail	No
E-2020DEIS-0050	11/21/2020	Georgia	Shankel	None	Yes	3	E-Mail	No
E-2020DEIS-0051	11/21/2020	Jack	Branson	None	Yes	3	E-Mail	No
E-2020DEIS-0052	11/21/2020	Robert	Ferrara	None	Yes	3	E-Mail	No
E-2020DEIS-0053	11/21/2020	Dagmar	Leischow	None	Yes	3	E-Mail	No
E-2020DEIS-0054	11/21/2020	Courtney	Lemmon	None	Yes	3	E-Mail	No
E-2020DEIS-0055	11/21/2020	Dennis	Kreiner	None	Yes	3	E-Mail	No
E-2020DEIS-0056	11/21/2020	Joanne	Tenney	None	Yes	3	E-Mail	No
E-2020DEIS-0057	11/21/2020	Rebecca	Skalsky	None	Yes	3	E-Mail	No
E-2020DEIS-0058	11/21/2020	Kelly	Kramer	None	Yes	3	E-Mail	No
E-2020DEIS-0059	11/21/2020	George	Erceg	None	Yes	3	E-Mail	No
E-2020DEIS-0060	11/21/2020	Jennifer	Cunningham	None	Yes	3	E-Mail	No
E-2020DEIS-0061	11/21/2020	Gail	Kieler	None	Yes	3	E-Mail	No
E-2020DEIS-0062	11/21/2020	Sofia	Hellgren	None	Yes	3	E-Mail	No
E-2020DEIS-0063	11/21/2020	Eileen	Reznicek	None	Yes	3	E-Mail	No
E-2020DEIS-0064	11/21/2020	Joanne	Larsen	None	Yes	3	E-Mail	No
E-2020DEIS-0065	11/21/2020	Will	Beckman	None	Yes	3	E-Mail	No
E-2020DEIS-0066	11/21/2020	Cindy	Page	None	Yes	3	E-Mail	No
E-2020DEIS-0067	11/21/2020	Kristen	White del Rosso	None	Yes	3	E-Mail	No
E-2020DEIS-0068	11/21/2020	Hank	Ramirez	None	Yes	3	E-Mail	No

E-2020DEIS-0069	11/21/2020	Steve	Sheehy	None	Yes	3	E-Mail	No
E-2020DEIS-0070	11/21/2020	Richard	Strowd	None	Yes	3	E-Mail	No
E-2020DEIS-0071	11/21/2020	Susan	Tucker	None	Yes	3	E-Mail	No
E-2020DEIS-0072	11/21/2020	Joseph	Boone	None	Yes	3	E-Mail	No
E-2020DEIS-0073	11/21/2020	William	Crist	None	Yes	3	E-Mail	No
E-2020DEIS-0074	11/21/2020	Jay	Rice	None	Yes	3	E-Mail	No
E-2020DEIS-0075	11/21/2020	Dirk	Rogers	None	Yes	3	E-Mail	No
E-2020DEIS-0076	11/21/2020	Mariatta	Heinonen	None	Yes	3	E-Mail	No
E-2020DEIS-0077	11/21/2020	David	Swain	None	Yes	3	E-Mail	No
E-2020DEIS-0078	11/21/2020	Kerri	McGoldrick	None	Yes	3	E-Mail	No
E-2020DEIS-0079	11/21/2020	Susan	DeRammelaere	None	Yes	3	E-Mail	No
E-2020DEIS-0080	11/21/2020	Carol	Collins	None	Yes	3	E-Mail	No
E-2020DEIS-0081	11/21/2020	Perry	Gx	None	Yes	3	E-Mail	No
E-2020DEIS-0082	11/21/2020	Robin	Yates	None	Yes	3	E-Mail	No
E-2020DEIS-0083	11/21/2020	Kate	Harder	None	Yes	3	E-Mail	No
E-2020DEIS-0084	11/21/2020	Larry and Barbara	Robertson	None	Yes	3	E-Mail	No
E-2020DEIS-0085	11/21/2020	Maureen	Lynch	None	Yes	3	E-Mail	No
E-2020DEIS-0086	11/21/2020	Jenifer	Steele	None	Yes	3	E-Mail	No
E-2020DEIS-0087	11/21/2020	Ann	DeBolt	None	Yes	3	E-Mail	No
E-2020DEIS-0088	11/21/2020	Don	Bentley	None	Yes	3	E-Mail	No
E-2020DEIS-0089	11/21/2020	Ralph	Guay	None	Yes	3	E-Mail	No
E-2020DEIS-0090	11/21/2020	Giuseppe	Cortinovis	None	Yes	3	E-Mail	No
E-2020DEIS-0091	11/21/2020	Linda	Black	None	Yes	3	E-Mail	No
E-2020DEIS-0092	11/21/2020	Gregory	Esteve	None	Yes	3	E-Mail	No
E-2020DEIS-0093	11/21/2020	Martha	Burton	None	Yes	3	E-Mail	No
E-2020DEIS-0094	11/21/2020	Greg	Abernathy	None	Yes	3	E-Mail	No
E-2020DEIS-0095	11/21/2020	Wallace	Rhine	None	Yes	3	E-Mail	No
E-2020DEIS-0096	11/21/2020	Taz	Butler	None	Yes	3	E-Mail	No
E-2020DEIS-0097	11/21/2020	Richard	Riggs	None	Yes	3	E-Mail	No
E-2020DEIS-0098	11/21/2020	Silvia	Granold	None	Yes	3	E-Mail	No
E-2020DEIS-0099	11/21/2020	Marion	Ehrlich	None	Yes	3	E-Mail	No
E-2020DEIS-0100	11/21/2020	Sarah	Hamilton	None	Yes	3	E-Mail	No
E-2020DEIS-0101	11/21/2020	Lisa	Witham	None	Yes	3	E-Mail	No
E-2020DEIS-0102	11/21/2020	Heide	Catherina Coppotelli	None	Yes	3	E-Mail	No
E-2020DEIS-0103	11/21/2020	Robert	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-0104	11/21/2020	Diana	Bohn	None	Yes	3	E-Mail	No
E-2020DEIS-0105	11/21/2020	Michael	Noyes	None	Yes	3	E-Mail	No
E-2020DEIS-0106	11/21/2020	Darilynn	McCoy	None	Yes	3	E-Mail	No
E-2020DEIS-0107	11/21/2020	Diana	Leitner	None	Yes	3	E-Mail	No
E-2020DEIS-0108	11/21/2020	Fred	Coppotelli	None	Yes	3	E-Mail	No
E-2020DEIS-0109	11/21/2020	Cassandra	Treppeda	None	Yes	3	E-Mail	No
E-2020DEIS-0110	11/21/2020	Katie	Whittaker	None	Yes	3	E-Mail	No

E-2020DEIS-0111	11/21/2020	Claudia	Wornum	None	Yes	3	E-Mail	No
E-2020DEIS-0112	11/21/2020	Sally	Banner	None	Yes	3	E-Mail	No
E-2020DEIS-0113	11/21/2020	Pat	Dufau	None	Yes	3	E-Mail	No
E-2020DEIS-0114	11/21/2020	Jeanne	Friedman	None	Yes	3	E-Mail	No
E-2020DEIS-0115	11/21/2020	Gerard	Couchoud	None	Yes	3	E-Mail	No
E-2020DEIS-0116	11/21/2020	Jessica	Mitchell-Shihabi	None	Yes	3	E-Mail	No
E-2020DEIS-0117	11/21/2020	Signe	Wetteland	None	Yes	3	E-Mail	No
E-2020DEIS-0118	11/21/2020	Cathleen	Burns	None	Yes	3	E-Mail	No
E-2020DEIS-0119	11/21/2020	Su	Godwin	None	Yes	3	E-Mail	No
E-2020DEIS-0120	11/21/2020	Al	Stein	None	Yes	3	E-Mail	No
E-2020DEIS-0121	11/21/2020	Gerry	Miliken	None	Yes	3	E-Mail	No
E-2020DEIS-0122	11/21/2020	Allie	Tennant	None	Yes	3	E-Mail	No
E-2020DEIS-0123	11/21/2020	Anne	Hamre	None	Yes	3	E-Mail	No
E-2020DEIS-0124	11/21/2020	Karen	Lyons Kalmenson	None	Yes	3	E-Mail	No
E-2020DEIS-0125	11/21/2020	Caroline	Sevilla	None	Yes	3	E-Mail	No
E-2020DEIS-0126	11/21/2020	Jodi	Rodar	None	Yes	3	E-Mail	No
E-2020DEIS-0127	11/21/2020	James	Talbot	None	Yes	3	E-Mail	No
E-2020DEIS-0128	11/21/2020	Ariana	Marchena	None	Yes	3	E-Mail	No
E-2020DEIS-0129	11/21/2020	Mary	Thornton	None	Yes	3	E-Mail	No
E-2020DEIS-0130	11/21/2020	Nancy	Chismar	None	Yes	3	E-Mail	No
E-2020DEIS-0131	11/21/2020	Nina	Aronoff	None	Yes	3	E-Mail	No
E-2020DEIS-0132	11/21/2020	Pamela	Magathan	None	Yes	3	E-Mail	No
E-2020DEIS-0133	11/21/2020	Dennis	Dougherty	None	Yes	3	E-Mail	No
E-2020DEIS-0134	11/21/2020	Lisa	Cubeiro	None	Yes	3	E-Mail	No
E-2020DEIS-0135	11/21/2020	Terry	Jess	None	Yes	3	E-Mail	No
E-2020DEIS-0136	11/21/2020	Kelly	Garbato	None	Yes	3	E-Mail	No
E-2020DEIS-0137	11/21/2020	Richard	Hieber	None	Yes	3	E-Mail	No
E-2020DEIS-0138	11/21/2020	Diana	Duffy	None	Yes	3	E-Mail	No
E-2020DEIS-0139	11/21/2020	Lisa	Mazzola	None	Yes	3	E-Mail	No
E-2020DEIS-0140	11/21/2020	Karrie	Vrabel	None	Yes	3	E-Mail	No
E-2020DEIS-0141	11/21/2020	Donna	Delisi	None	Yes	3	E-Mail	No
E-2020DEIS-0142	11/21/2020	Franziska	Gerhardt	None	Yes	3	E-Mail	No
E-2020DEIS-0143	11/21/2020	Felicia	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-0144	11/21/2020	Elizabeth	Story	None	Yes	3	E-Mail	No
E-2020DEIS-0145	11/21/2020	Bev	Spector	None	Yes	3	E-Mail	No
E-2020DEIS-0146	11/21/2020	Elizabeth	Seltzer	None	Yes	3	E-Mail	No
E-2020DEIS-0147	11/21/2020	Kathleen	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-0148	11/21/2020	Ludger	Wilp	None	Yes	3	E-Mail	No
E-2020DEIS-0149	11/21/2020	Tatjana	Walker	None	Yes	3	E-Mail	No
E-2020DEIS-0150	11/21/2020	Mary	Bristow	None	Yes	3	E-Mail	No
E-2020DEIS-0151	11/21/2020	Joseph	Shulman	None	Yes	3	E-Mail	No
E-2020DEIS-0152	11/21/2020	Sue	Wood	None	Yes	3	E-Mail	No

E-2020DEIS-0153	11/21/2020	Laurent	Roatta	None	Yes	3	E-Mail	No
E-2020DEIS-0154	11/21/2020	Elaine	Kimbler	None	Yes	3	E-Mail	No
E-2020DEIS-0155	11/21/2020	Marilyn	Davis	None	Yes	3	E-Mail	No
E-2020DEIS-0156	11/21/2020	Wendy	Fears	None	Yes	3	E-Mail	No
E-2020DEIS-0157	11/21/2020	Jack	Kriendler	None	Yes	3	E-Mail	No
E-2020DEIS-0158	11/21/2020	Diego	Festa	None	Yes	3	E-Mail	No
E-2020DEIS-0159	11/21/2020	Paulina	Baran	None	Yes	3	E-Mail	No
E-2020DEIS-0160	11/21/2020	Caryn	Graves	None	Yes	3	E-Mail	No
E-2020DEIS-0161	11/21/2020	Elaine	Eudy	None	Yes	3	E-Mail	No
E-2020DEIS-0162	11/21/2020	Jessica	Cresseveur	None	Yes	3	E-Mail	No
E-2020DEIS-0163	11/21/2020	Jeanne	Stulb	None	Yes	3	E-Mail	No
E-2020DEIS-0164	11/21/2020	Amanda	Stonebank	None	Yes	3	E-Mail	No
E-2020DEIS-0165	11/21/2020	Debz	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-0166	11/21/2020	Dirk	Kortz	None	Yes	3	E-Mail	No
E-2020DEIS-0167	11/21/2020	Jeff	Gutierrez	None	Yes	3	E-Mail	No
E-2020DEIS-0168	11/21/2020	Carole	H	None	Yes	3	E-Mail	No
E-2020DEIS-0169	11/21/2020	Vic	Bostock	None	Yes	3	E-Mail	No
E-2020DEIS-0170	11/21/2020	Gary	Beckerman	None	Yes	3	E-Mail	No
E-2020DEIS-0171	11/21/2020	Susan	McNally	None	Yes	3	E-Mail	No
E-2020DEIS-0172	11/21/2020	Lisa	Krausz	None	Yes	3	E-Mail	No
E-2020DEIS-0173	11/21/2020	Linda	Townill	None	Yes	3	E-Mail	No
E-2020DEIS-0174	11/21/2020	Ellen	Ayalin	None	Yes	3	E-Mail	No
E-2020DEIS-0175	11/21/2020	Carole	Smudin	None	Yes	3	E-Mail	No
E-2020DEIS-0176	11/21/2020	Margaret	Weimer	None	Yes	3	E-Mail	No
E-2020DEIS-0177	11/21/2020	Caryn	Sappelli	None	Yes	3	E-Mail	No
E-2020DEIS-0178	11/21/2020	Lorraine	Dumas	None	Yes	3	E-Mail	No
E-2020DEIS-0179	11/21/2020	Sherry	Macias	None	Yes	3	E-Mail	No
E-2020DEIS-0180	11/21/2020	Jean	Cameron	None	Yes	3	E-Mail	No
E-2020DEIS-0181	11/21/2020	Blaise	Brockman	None	Yes	3	E-Mail	No
E-2020DEIS-0182	11/21/2020	Karrie	Vrabel	None	Yes	3	E-Mail	Yes
E-2020DEIS-0183	11/21/2020	Lily	Lau-Enright	None	Yes	3	E-Mail	No
E-2020DEIS-0184	11/21/2020	Michael	Rynes	None	Yes	3	E-Mail	No
E-2020DEIS-0185	11/21/2020	John	Howden	None	Yes	3	E-Mail	No
E-2020DEIS-0186	11/21/2020	Astrid	Slaughter	None	Yes	3	E-Mail	No
E-2020DEIS-0187	11/21/2020	Sheila	Desmond	None	Yes	3	E-Mail	No
E-2020DEIS-0188	11/21/2020	Margaret	Vernon	None	Yes	3	E-Mail	No
E-2020DEIS-0189	11/21/2020	Kirk	Francis	None	Yes	3	E-Mail	No
E-2020DEIS-0190	11/21/2020	Taffy	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-0191	11/21/2020	Marie	Mildner	None	Yes	3	E-Mail	No
E-2020DEIS-0192	11/21/2020	Brenda	Gamache	None	Yes	3	E-Mail	No
E-2020DEIS-0193	11/21/2020	Derek	Gendvil	None	Yes	3	E-Mail	No
E-2020DEIS-0194	11/21/2020	Dorinda	Kelley	None	Yes	3	E-Mail	No

E-2020DEIS-0195	11/21/2020	Elisabeth	Carroll	None	Yes	3	E-Mail	No
E-2020DEIS-0196	11/21/2020	Jane	White	None	Yes	3	E-Mail	No
E-2020DEIS-0197	11/21/2020	Shawn	Hall	None	Yes	3	E-Mail	No
E-2020DEIS-0198	11/21/2020	John	Hafkenshiel	None	Yes	3	E-Mail	No
E-2020DEIS-0199	11/21/2020	Phillip	Hope	None	Yes	3	E-Mail	No
E-2020DEIS-0200	11/21/2020	Suzanne	a'Becket	None	Yes	3	E-Mail	No
E-2020DEIS-0201	11/21/2020	DeDe	O''Donnell	None	Yes	3	E-Mail	No
E-2020DEIS-0202	11/21/2020	Judi	Weiner	None	Yes	3	E-Mail	No
E-2020DEIS-0203	11/21/2020	Mark	Vargo	None	Yes	3	E-Mail	No
E-2020DEIS-0204	11/21/2020	Stevie	Sugarman	None	Yes	3	E-Mail	No
E-2020DEIS-0205	11/21/2020	Lenora	Greenberg	None	Yes	3	E-Mail	No
E-2020DEIS-0206	11/21/2020	Jaremy	Lynch	None	Yes	3	E-Mail	No
E-2020DEIS-0207	11/21/2020	Lisa	Stimpson	None	Yes	3	E-Mail	No
E-2020DEIS-0208	11/21/2020	Marilyn	Hanson	None	Yes	3	E-Mail	No
E-2020DEIS-0209	11/21/2020	Shirley	Soldavini	None	Yes	3	E-Mail	No
E-2020DEIS-0210	11/21/2020	Deanne	O''Donnell	None	Yes	3	E-Mail	No
E-2020DEIS-0211	11/21/2020	Valerie	Hildebrand	None	Yes	3	E-Mail	No
E-2020DEIS-0212	11/21/2020	Marta	Dawes	None	Yes	3	E-Mail	No
E-2020DEIS-0213	11/21/2020	Dacia	Murphy	None	Yes	3	E-Mail	No
E-2020DEIS-0214	11/21/2020	Ann	Malyon	None	Yes	3	E-Mail	No
E-2020DEIS-0215	11/21/2020	Beth	Stanberry	None	Yes	3	E-Mail	No
E-2020DEIS-0216	11/21/2020	Cigdem	Capan	None	Yes	3	E-Mail	No
E-2020DEIS-0217	11/21/2020	Arnie	Schildhaus	None	Yes	3	E-Mail	No
E-2020DEIS-0218	11/21/2020	Michael	Zeller	None	Yes	3	E-Mail	No
E-2020DEIS-0219	11/21/2020	MarieElaina	Rago	None	Yes	3	E-Mail	No
E-2020DEIS-0220	11/21/2020	Alan	Wojtalik	None	Yes	3	E-Mail	No
E-2020DEIS-0221	11/21/2020	David	Meade	None	Yes	3	E-Mail	No
E-2020DEIS-0222	11/21/2020	Michele	Jankelow	None	Yes	3	E-Mail	No
E-2020DEIS-0223	11/21/2020	Renee	Enteen	None	Yes	3	E-Mail	No
E-2020DEIS-0224	11/21/2020	Karen	Bond	None	Yes	3	E-Mail	No
E-2020DEIS-0225	11/21/2020	Robin	Peterson	None	Yes	3	E-Mail	No
E-2020DEIS-0226	11/21/2020	Cynthia	Marks	None	Yes	3	E-Mail	No
E-2020DEIS-0227	11/21/2020	Debbie	Friesen	None	Yes	3	E-Mail	No
E-2020DEIS-0228	11/21/2020	Callie	Mack	None	Yes	3	E-Mail	No
E-2020DEIS-0229	11/21/2020	Gail	Roberts	None	Yes	3	E-Mail	No
E-2020DEIS-0230	11/21/2020	Robert Bruce	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-0231	11/21/2020	Ray	Rodney	None	Yes	3	E-Mail	No
E-2020DEIS-0232	11/21/2020	Karen	Toyohara	None	Yes	3	E-Mail	No
E-2020DEIS-0233	11/21/2020	Laurel	Treppeda	None	Yes	3	E-Mail	No
E-2020DEIS-0234	11/21/2020	Megan	Crimmins	None	Yes	3	E-Mail	No
E-2020DEIS-0235	11/21/2020	Caitlin	Herritt	None	Yes	3	E-Mail	No
E-2020DEIS-0236	11/21/2020	R.A.L	West	None	Yes	3	E-Mail	No

E-2020DEIS-0237	11/21/2020	Pavel	Tumik	None	Yes	3	E-Mail	No
E-2020DEIS-0238	11/21/2020	Michael	Kolb	None	Yes	3	E-Mail	No
E-2020DEIS-0239	11/21/2020	Jamie	Reifman	None	Yes	3	E-Mail	No
E-2020DEIS-0240	11/21/2020	Linda	Saffell	None	Yes	3	E-Mail	No
E-2020DEIS-0241	11/21/2020	Jeanine	Weber	None	Yes	3	E-Mail	No
E-2020DEIS-0242	11/21/2020	Donalyn	Gross	None	Yes	3	E-Mail	No
E-2020DEIS-0243	11/21/2020	Eleanor	Dowson	None	Yes	3	E-Mail	No
E-2020DEIS-0244	11/21/2020	April	Parkins	None	Yes	3	E-Mail	No
E-2020DEIS-0245	11/21/2020	Mireille	Dumont	None	Yes	3	E-Mail	No
E-2020DEIS-0246	11/21/2020	William	Forbes	None	Yes	3	E-Mail	No
E-2020DEIS-0247	11/21/2020	Jennifer	Scott	None	Yes	3	E-Mail	No
E-2020DEIS-0248	11/21/2020	Annabelle	Herbert	None	Yes	3	E-Mail	No
E-2020DEIS-0249	11/21/2020	Jillian	Fiedor	None	Yes	3	E-Mail	No
E-2020DEIS-0250	11/21/2020	James	Hadcroft	None	Yes	3	E-Mail	No
E-2020DEIS-0251	11/21/2020	Kajsa	Ingelsson	None	Yes	3	E-Mail	No
E-2020DEIS-0252	11/21/2020	Douglas	Thayer	None	Yes	3	E-Mail	No
E-2020DEIS-0253	11/21/2020	Jamie	Fairchild	None	Yes	3	E-Mail	No
E-2020DEIS-0254	11/21/2020	Elaine	Berg	None	Yes	3	E-Mail	No
E-2020DEIS-0255	11/21/2020	Kevin	Vaught	None	Yes	3	E-Mail	No
E-2020DEIS-0256	11/21/2020	Alan	Bedard	None	Yes	3	E-Mail	No
E-2020DEIS-0257	11/21/2020	Ron	Mittan	None	Yes	3	E-Mail	No
E-2020DEIS-0258	11/21/2020	Gail	Veiby	None	Yes	3	E-Mail	No
E-2020DEIS-0259	11/21/2020	Kathryn	Rose	None	Yes	3	E-Mail	No
E-2020DEIS-0260	11/21/2020	Christine	Goetz	None	Yes	3	E-Mail	No
E-2020DEIS-0261	11/21/2020	Jane	Simpson	None	Yes	3	E-Mail	No
E-2020DEIS-0262	11/21/2020	Louis	Gauci	None	Yes	3	E-Mail	No
E-2020DEIS-0263	11/21/2020	Angela	Brace	None	Yes	3	E-Mail	No
E-2020DEIS-0264	11/21/2020	Elizabeth	Werner	None	Yes	3	E-Mail	No
E-2020DEIS-0265	11/21/2020	Laura	Regan	None	Yes	3	E-Mail	No
E-2020DEIS-0266	11/21/2020	Lois	White	None	Yes	3	E-Mail	No
E-2020DEIS-0267	11/21/2020	K	Llewellin	None	Yes	3	E-Mail	No
E-2020DEIS-0268	11/21/2020	Denise	Edelson	None	Yes	3	E-Mail	No
E-2020DEIS-0269	11/21/2020	Mark	Wheeler	None	Yes	3	E-Mail	No
E-2020DEIS-0270	11/21/2020	Robert	Gibb	None	Yes	3	E-Mail	No
E-2020DEIS-0271	11/21/2020	Gloria	Augelli	None	Yes	3	E-Mail	No
E-2020DEIS-0272	11/21/2020	Jaszmene	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-0273	11/21/2020	Burkhard	Broecker	None	Yes	3	E-Mail	No
E-2020DEIS-0274	11/21/2020	Mercy	Sidbury	None	Yes	3	E-Mail	No
E-2020DEIS-0275	11/21/2020	Jym	Dyer	None	Yes	3	E-Mail	No
E-2020DEIS-0276	11/21/2020	Janie	Lucas	None	Yes	3	E-Mail	No
E-2020DEIS-0277	11/21/2020	Dixie	Mullineaux	None	Yes	3	E-Mail	No
E-2020DEIS-0278	11/21/2020	Liz	Field	None	Yes	3	E-Mail	No

E-2020DEIS-0279	11/21/2020	Debbie	Kearns	None	Yes	3	E-Mail	No
E-2020DEIS-0280	11/21/2020	Carolyn	Balls	None	Yes	3	E-Mail	No
E-2020DEIS-0281	11/21/2020	Lacey	Levitt	None	Yes	3	E-Mail	No
E-2020DEIS-0282	11/21/2020	Barbara	Root	None	Yes	3	E-Mail	No
E-2020DEIS-0283	11/21/2020	Sumera	Ali	None	Yes	3	E-Mail	No
E-2020DEIS-0284	11/21/2020	Annie	Carpenter	None	Yes	3	E-Mail	No
E-2020DEIS-0285	11/21/2020	Freya	Harris	None	Yes	3	E-Mail	No
E-2020DEIS-0286	11/21/2020	Tanja	Rieger	None	Yes	3	E-Mail	No
E-2020DEIS-0287	11/21/2020	Jan	Leath	None	Yes	3	E-Mail	No
E-2020DEIS-0288	11/21/2020	Timothy	Dunn	None	Yes	3	E-Mail	No
E-2020DEIS-0289	11/21/2020	Stacey	Siegel	None	Yes	3	E-Mail	No
E-2020DEIS-0290	11/21/2020	Lance	Kammerud	None	Yes	3	E-Mail	No
E-2020DEIS-0291	11/21/2020	Leann	Brewer	None	Yes	3	E-Mail	No
E-2020DEIS-0292	11/21/2020	Neli	Teofilova	None	Yes	3	E-Mail	No
E-2020DEIS-0293	11/21/2020	Patricia	Deluca	None	Yes	3	E-Mail	No
E-2020DEIS-0294	11/21/2020	Suzanne	Ross	None	Yes	3	E-Mail	No
E-2020DEIS-0295	11/21/2020	Nancy	Peterson	None	Yes	3	E-Mail	No
E-2020DEIS-0296	11/21/2020	Paula	Morgan	None	Yes	3	E-Mail	No
E-2020DEIS-0297	11/21/2020	Michael	Martin	None	Yes	3	E-Mail	No
E-2020DEIS-0298	11/21/2020	April	Rogers	None	Yes	3	E-Mail	No
E-2020DEIS-0299	11/21/2020	Sharon	Russick	None	Yes	3	E-Mail	No
E-2020DEIS-0300	11/21/2020	Liliana	Papanikolaou	None	Yes	3	E-Mail	No
E-2020DEIS-0301	11/21/2020	Victor	Maisano	None	Yes	3	E-Mail	No
E-2020DEIS-0302	11/21/2020	Sandra	Boyer	None	Yes	3	E-Mail	No
E-2020DEIS-0303	11/21/2020	Grant	Sorrell	None	Yes	3	E-Mail	No
E-2020DEIS-0304	11/21/2020	Kyra	Rice	None	Yes	3	E-Mail	No
E-2020DEIS-0305	11/21/2020	Shelly	Kearns	None	Yes	3	E-Mail	No
E-2020DEIS-0306	11/21/2020	E.	Blaine Converse	None	Yes	3	E-Mail	No
E-2020DEIS-0307	11/21/2020	Graciela	Huth	None	Yes	3	E-Mail	No
E-2020DEIS-0308	11/21/2020	Sharon	Balzano	None	Yes	3	E-Mail	No
E-2020DEIS-0309	11/21/2020	Walter	Ramsey	None	Yes	3	E-Mail	No
E-2020DEIS-0310	11/21/2020	Elena	De Fanis	None	Yes	3	E-Mail	No
E-2020DEIS-0311	11/21/2020	Lisa	Reich	None	Yes	3	E-Mail	No
E-2020DEIS-0312	11/21/2020	Samir	Bhakta	None	Yes	3	E-Mail	No
E-2020DEIS-0313	11/21/2020	Pawel	Kanafek	None	Yes	3	E-Mail	No
E-2020DEIS-0314	11/21/2020	Grant	Fujii	None	Yes	3	E-Mail	No
E-2020DEIS-0315	11/21/2020	Margaret	Hahn	None	Yes	3	E-Mail	No
E-2020DEIS-0316	11/21/2020	Marie	Claire Deluna	None	Yes	3	E-Mail	No
E-2020DEIS-0317	11/21/2020	Shelby	Davis	None	Yes	3	E-Mail	No
E-2020DEIS-0318	11/21/2020	Rachel	Wolf	None	Yes	3	E-Mail	No
E-2020DEIS-0319	11/21/2020	Elaine	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-0320	11/21/2020	David	Ross	None	Yes	3	E-Mail	No

E-2020DEIS-0321	11/21/2020	Gudrun	Dennis	None	Yes	3	E-Mail	No
E-2020DEIS-0322	11/21/2020	Silvia	De Los Santos	None	Yes	3	E-Mail	No
E-2020DEIS-0323	11/21/2020	Ardis	Karr-Robak	None	Yes	3	E-Mail	No
E-2020DEIS-0324	11/21/2020	Sharon	Lieberman	None	Yes	3	E-Mail	No
E-2020DEIS-0325	11/21/2020	Richard	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-0326	11/21/2020	Irwin	Hoenig	None	Yes	3	E-Mail	No
E-2020DEIS-0327	11/21/2020	Jerald	Vinikoff	None	Yes	3	E-Mail	No
E-2020DEIS-0328	11/21/2020	Maureen	Porcelli	None	Yes	3	E-Mail	No
E-2020DEIS-0329	11/21/2020	John	Doucette	None	Yes	3	E-Mail	No
E-2020DEIS-0330	11/21/2020	Nancy	Walter	None	Yes	3	E-Mail	No
E-2020DEIS-0331	11/21/2020	Anne	Kaufmann	None	Yes	3	E-Mail	No
E-2020DEIS-0332	11/21/2020	Jean-Michel	Leblond	None	Yes	3	E-Mail	No
E-2020DEIS-0333	11/21/2020	Mobi	Warren	None	Yes	3	E-Mail	No
E-2020DEIS-0334	11/21/2020	Carol	Hoke	None	Yes	3	E-Mail	No
E-2020DEIS-0335	11/21/2020	Sue E.	Dean	None	Yes	3	E-Mail	No
E-2020DEIS-0336	11/21/2020	Marina	Barry	None	Yes	3	E-Mail	No
E-2020DEIS-0337	11/21/2020	Joan	Wager	None	Yes	3	E-Mail	No
E-2020DEIS-0338	11/21/2020	Adam	Trauger	None	Yes	3	E-Mail	No
E-2020DEIS-0339	11/21/2020	Jill	Brett	None	Yes	3	E-Mail	No
E-2020DEIS-0340	11/21/2020	Julie	Block	None	Yes	3	E-Mail	No
E-2020DEIS-0341	11/21/2020	Carol	Thompson	None	Yes	3	E-Mail	No
E-2020DEIS-0342	11/21/2020	Jacqueline	Cutler	None	Yes	3	E-Mail	No
E-2020DEIS-0343	11/21/2020	Kathleen	Moraski	None	Yes	3	E-Mail	No
E-2020DEIS-0344	11/21/2020	Donna	Yavorky	None	Yes	3	E-Mail	No
E-2020DEIS-0345	11/21/2020	Suzanne	Hamer	None	Yes	3	E-Mail	No
E-2020DEIS-0346	11/21/2020	Karen	Wolf	None	Yes	3	E-Mail	No
E-2020DEIS-0347	11/21/2020	Joyce	Kolasa	None	Yes	3	E-Mail	No
E-2020DEIS-0348	11/21/2020	O	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-0349	11/21/2020	Anne	Streeter	None	Yes	3	E-Mail	No
E-2020DEIS-0350	11/21/2020	Christina	Viljoen	None	Yes	3	E-Mail	No
E-2020DEIS-0351	11/21/2020	Ian	Shelley	None	Yes	3	E-Mail	No
E-2020DEIS-0352	11/21/2020	Jaromir	Guzinski	None	Yes	3	E-Mail	No
E-2020DEIS-0353	11/21/2020	Kathie	Kingett	None	Yes	3	E-Mail	No
E-2020DEIS-0354	11/21/2020	Francine	Traniello	None	Yes	3	E-Mail	No
E-2020DEIS-0355	11/21/2020	Susan	Porter	None	Yes	3	E-Mail	No
E-2020DEIS-0356	11/21/2020	Sibylle	Schwarz	None	Yes	3	E-Mail	No
E-2020DEIS-0357	11/21/2020	Tammy	Fenske	None	Yes	3	E-Mail	No
E-2020DEIS-0358	11/21/2020	Vicki	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-0359	11/21/2020	Joseph	Skalecki	None	Yes	3	E-Mail	No
E-2020DEIS-0360	11/21/2020	Barbara	Sondra Levine	None	Yes	3	E-Mail	No
E-2020DEIS-0361	11/21/2020	Linda	Pemberton	None	Yes	3	E-Mail	No
E-2020DEIS-0362	11/21/2020	Marjorie	Angelo	None	Yes	3	E-Mail	No

E-2020DEIS-0363	11/21/2020	Lisa	Hammermeister	None	Yes	3	E-Mail	No
E-2020DEIS-0364	11/21/2020	Cristy	Murray	None	Yes	3	E-Mail	No
E-2020DEIS-0365	11/21/2020	Laurenda	Messer	None	Yes	3	E-Mail	No
E-2020DEIS-0366	11/21/2020	Patti	McKinley	None	Yes	3	E-Mail	No
E-2020DEIS-0367	11/21/2020	Jill	Alibrandi	None	Yes	3	E-Mail	No
E-2020DEIS-0368	11/21/2020	Ann	McFarlane	None	Yes	3	E-Mail	No
E-2020DEIS-0369	11/21/2020	Jorg	Gaiser	None	Yes	3	E-Mail	No
E-2020DEIS-0370	11/21/2020	Pam	Koller	None	Yes	3	E-Mail	No
E-2020DEIS-0371	11/21/2020	Cindy	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-0372	11/21/2020	Shirley	Harris	None	Yes	3	E-Mail	Yes
E-2020DEIS-0373	11/21/2020	Jacqueline	Tessman	None	Yes	3	E-Mail	No
E-2020DEIS-0374	11/21/2020	Matthew	Perez	None	Yes	3	E-Mail	No
E-2020DEIS-0375	11/21/2020	Phyllis	Schmidt	None	Yes	3	E-Mail	No
E-2020DEIS-0376	11/21/2020	Adina	Parsley	None	Yes	3	E-Mail	No
E-2020DEIS-0377	11/21/2020	Victora	Perizzolo	None	Yes	3	E-Mail	No
E-2020DEIS-0378	11/21/2020	Valerie	Herr	None	Yes	3	E-Mail	No
E-2020DEIS-0379	11/21/2020	Ainslie	Giligan	None	Yes	3	E-Mail	No
E-2020DEIS-0380	11/21/2020	Susan	Yarnell	None	Yes	3	E-Mail	No
E-2020DEIS-0381	11/21/2020	Craig	Todd	None	Yes	3	E-Mail	No
E-2020DEIS-0382	11/21/2020	Terry	Proeger	None	Yes	3	E-Mail	No
E-2020DEIS-0383	11/21/2020	Pamylle	Greinke	None	Yes	3	E-Mail	No
E-2020DEIS-0384	11/21/2020	Jane	Nachazel-Ruck	None	Yes	3	E-Mail	No
E-2020DEIS-0385	11/21/2020	Oliver	Clanford	None	Yes	3	E-Mail	No
E-2020DEIS-0386	11/21/2020	Rita	Lemkuil	None	Yes	3	E-Mail	No
E-2020DEIS-0387	11/21/2020	William	McMullin	None	Yes	3	E-Mail	No
E-2020DEIS-0388	11/21/2020	Mary	Walls	None	Yes	3	E-Mail	No
E-2020DEIS-0389	11/21/2020	TJ	Fox	None	Yes	3	E-Mail	No
E-2020DEIS-0390	11/21/2020	Doug & Karen	Lenier	None	Yes	3	E-Mail	No
E-2020DEIS-0391	11/21/2020	Cynthia	Fry	None	Yes	3	E-Mail	No
E-2020DEIS-0392	11/21/2020	Michelle	MacKenzie	None	Yes	3	E-Mail	No
E-2020DEIS-0393	11/21/2020	Mark S.	Weinberger	None	Yes	3	E-Mail	No
E-2020DEIS-0394	11/21/2020	Barbara	Arlen	None	Yes	3	E-Mail	No
E-2020DEIS-0395	11/21/2020	Susan	Sloan	None	Yes	3	E-Mail	No
E-2020DEIS-0396	11/21/2020	Mary	Shabbott	None	Yes	3	E-Mail	No
E-2020DEIS-0397	11/21/2020	Sandrine	Boand	None	Yes	3	E-Mail	No
E-2020DEIS-0398	11/21/2020	Anna	Rossini	None	Yes	3	E-Mail	No
E-2020DEIS-0399	11/21/2020	Tanya	Piker	None	Yes	3	E-Mail	No
E-2020DEIS-0400	11/21/2020	Elyse	Ashton	None	Yes	3	E-Mail	No
E-2020DEIS-0401	11/21/2020	Bebe	Rizo	None	Yes	3	E-Mail	No
E-2020DEIS-0402	11/21/2020	Adam	D'Onofrio	None	Yes	3	E-Mail	No
E-2020DEIS-0403	11/21/2020	Connie	Day	None	Yes	3	E-Mail	No
E-2020DEIS-0404	11/21/2020	Rayline	Dean	None	Yes	3	E-Mail	No

E-2020DEIS-0405	11/21/2020	Eva	Rossetti	None	Yes	3	E-Mail	No
E-2020DEIS-0406	11/21/2020	Judith S	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-0407	11/21/2020	John	Asprey	None	Yes	3	E-Mail	No
E-2020DEIS-0408	11/21/2020	Gwen	Hadland	None	Yes	3	E-Mail	No
E-2020DEIS-0409	11/21/2020	Jerry	Lee	None	Yes	3	E-Mail	No
E-2020DEIS-0410	11/21/2020	Joan	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-0411	11/21/2020	Karen	Fedorov	None	Yes	3	E-Mail	No
E-2020DEIS-0412	11/21/2020	Dorothea	Stephen	None	Yes	3	E-Mail	No
E-2020DEIS-0413	11/21/2020	Marylucia	Arace	None	Yes	3	E-Mail	No
E-2020DEIS-0414	11/21/2020	JoAnne	Metzler	None	Yes	3	E-Mail	No
E-2020DEIS-0415	11/21/2020	Bridgett	Heinly	None	Yes	3	E-Mail	No
E-2020DEIS-0416	11/21/2020	Eric	Edwards	None	Yes	3	E-Mail	No
E-2020DEIS-0417	11/21/2020	Susan	Berzac	None	Yes	3	E-Mail	No
E-2020DEIS-0418	11/21/2020	Susan	Gottfried	None	Yes	3	E-Mail	No
E-2020DEIS-0419	11/21/2020	Larry	Thompson	None	Yes	3	E-Mail	No
E-2020DEIS-0420	11/21/2020	Jeffery	Garcia	None	Yes	3	E-Mail	No
E-2020DEIS-0421	11/21/2020	Bradley	Budnik	None	Yes	3	E-Mail	No
E-2020DEIS-0422	11/21/2020	Tatiana	Kurakin	None	Yes	3	E-Mail	No
E-2020DEIS-0423	11/21/2020	Sue	Harrington	None	Yes	3	E-Mail	No
E-2020DEIS-0424	11/21/2020	Renee	Janton	None	Yes	3	E-Mail	No
E-2020DEIS-0425	11/21/2020	Monique	Musialowski	None	Yes	3	E-Mail	Yes
E-2020DEIS-0426	11/21/2020	Robert	Blumenthal	None	Yes	3	E-Mail	No
E-2020DEIS-0427	11/21/2020	Kim	Benston	None	Yes	3	E-Mail	No
E-2020DEIS-0428	11/21/2020	Cara	Lou Wicks	None	Yes	3	E-Mail	No
E-2020DEIS-0429	11/21/2020	Jill	Tyler	None	Yes	3	E-Mail	No
E-2020DEIS-0430	11/21/2020	Catherine	Vedder	None	Yes	3	E-Mail	No
E-2020DEIS-0431	11/21/2020	Sue	Horwood	None	Yes	3	E-Mail	No
E-2020DEIS-0432	11/21/2020	Janeene	Porcher	None	Yes	3	E-Mail	No
E-2020DEIS-0433	11/21/2020	Randi	Byron	None	Yes	3	E-Mail	No
E-2020DEIS-0434	11/21/2020	Terry	Tedesco	None	Yes	3	E-Mail	No
E-2020DEIS-0435	11/21/2020	Matthew	Franck	None	Yes	3	E-Mail	No
E-2020DEIS-0436	11/21/2020	Abigail	Gindele	None	Yes	3	E-Mail	No
E-2020DEIS-0437	11/21/2020	Marguery	Lee Zucker	None	Yes	3	E-Mail	No
E-2020DEIS-0438	11/21/2020	Kathleen	Grossman	None	Yes	3	E-Mail	No
E-2020DEIS-0439	11/21/2020	Ann	Sheffield	None	Yes	3	E-Mail	No
E-2020DEIS-0440	11/21/2020	Charles	Wirth	None	Yes	3	E-Mail	No
E-2020DEIS-0441	11/21/2020	Deborah	Santone	None	Yes	3	E-Mail	No
E-2020DEIS-0442	11/21/2020	Amber	Gill	None	Yes	3	E-Mail	No
E-2020DEIS-0443	11/21/2020	Christina	Frutiger	None	Yes	3	E-Mail	No
E-2020DEIS-0444	11/21/2020	Meryl	Pinque	None	Yes	3	E-Mail	No
E-2020DEIS-0445	11/21/2020	Tom	Maendle	None	Yes	3	E-Mail	No
E-2020DEIS-0446	11/21/2020	Becky	Monger	None	Yes	3	E-Mail	No

E-2020DEIS-0447	11/21/2020	Karin	Jeffery	None	Yes	3	E-Mail	No
E-2020DEIS-0448	11/21/2020	Karen	Slote	None	Yes	3	E-Mail	No
E-2020DEIS-0449	11/21/2020	Pamela	Miller	None	Yes	3	E-Mail	No
E-2020DEIS-0450	11/21/2020	Jarrett	Cloud	None	Yes	3	E-Mail	No
E-2020DEIS-0451	11/21/2020	Claire	Cohen	None	Yes	3	E-Mail	No
E-2020DEIS-0452	11/21/2020	Jeanine	Greene	None	Yes	3	E-Mail	No
E-2020DEIS-0453	11/21/2020	Sandra	Thompson	None	Yes	3	E-Mail	No
E-2020DEIS-0454	11/21/2020	Elizabeth	Garratt	None	Yes	3	E-Mail	No
E-2020DEIS-0455	11/21/2020	Nicolas	Duon	None	Yes	3	E-Mail	No
E-2020DEIS-0456	11/21/2020	Jaen	Lawrence	None	Yes	3	E-Mail	No
E-2020DEIS-0457	11/21/2020	Georgia	Mattingly	None	Yes	3	E-Mail	No
E-2020DEIS-0458	11/21/2020	Bonnie	MacRaith	None	Yes	3	E-Mail	No
E-2020DEIS-0459	11/21/2020	Alexia	Diaz	None	Yes	3	E-Mail	No
E-2020DEIS-0460	11/21/2020	Barry	Farley	None	Yes	3	E-Mail	No
E-2020DEIS-0461	11/21/2020	Rhys	Atkinson	None	Yes	3	E-Mail	No
E-2020DEIS-0462	11/21/2020	Nalei	Kahakalau	None	Yes	3	E-Mail	No
E-2020DEIS-0463	11/21/2020	Britta	Gehler	None	Yes	3	E-Mail	No
E-2020DEIS-0464	11/21/2020	Brian	Mitchell	None	Yes	3	E-Mail	No
E-2020DEIS-0465	11/21/2020	Rhonda	Bradley	None	Yes	3	E-Mail	No
E-2020DEIS-0466	11/21/2020	James	Chapman	None	Yes	3	E-Mail	No
E-2020DEIS-0467	11/21/2020	Urbain	Mireille	None	Yes	3	E-Mail	No
E-2020DEIS-0468	11/21/2020	Sammy	Low	None	Yes	3	E-Mail	No
E-2020DEIS-0469	11/21/2020	Denise	Giroux	None	Yes	3	E-Mail	No
E-2020DEIS-0470	11/21/2020	Marion	Berry	None	Yes	3	E-Mail	No
E-2020DEIS-0471	11/21/2020	Marianna	Riser	None	Yes	3	E-Mail	No
E-2020DEIS-0472	11/21/2020	Maryanna	Pilgrim	None	Yes	3	E-Mail	No
E-2020DEIS-0473	11/21/2020	Glen	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-0474	11/21/2020	Dusty	Dodge	None	Yes	3	E-Mail	No
E-2020DEIS-0475	11/21/2020	Sally	Madigan	None	Yes	3	E-Mail	No
E-2020DEIS-0476	11/21/2020	Karen	Jacques	None	Yes	3	E-Mail	No
E-2020DEIS-0477	11/21/2020	Alix	Keast	None	Yes	3	E-Mail	No
E-2020DEIS-0478	11/21/2020	Debra	Lancia	None	Yes	3	E-Mail	No
E-2020DEIS-0479	11/21/2020	Elaine	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-0480	11/21/2020	Harry	Knapp	None	Yes	3	E-Mail	No
E-2020DEIS-0481	11/21/2020	Federico	Bortoletto	None	Yes	3	E-Mail	No
E-2020DEIS-0482	11/21/2020	Ms	Lilith	None	Yes	3	E-Mail	No
E-2020DEIS-0483	11/21/2020	Suzanne	Marienau	None	Yes	3	E-Mail	No
E-2020DEIS-0484	11/21/2020	Katherine	Fligg	None	Yes	3	E-Mail	No
E-2020DEIS-0485	11/21/2020	Peggy	Carlisle	None	Yes	3	E-Mail	No
E-2020DEIS-0486	11/21/2020	Rob	Jursa	None	Yes	3	E-Mail	No
E-2020DEIS-0487	11/21/2020	Bob	Crone	None	Yes	3	E-Mail	No
E-2020DEIS-0489	11/21/2020	Karen	White	None	Yes	3	E-Mail	No

E-2020DEIS-0490	11/21/2020	Helen	LaDeau	None	Yes	3	E-Mail	No
E-2020DEIS-0491	11/21/2020	Chantal	Eldridge	None	Yes	3	E-Mail	No
E-2020DEIS-0492	11/21/2020	Lise	Kastigar	None	Yes	3	E-Mail	No
E-2020DEIS-0493	11/21/2020	Angela	Leventis	None	Yes	3	E-Mail	No
E-2020DEIS-0494	11/21/2020	Andarin	Arvola	None	Yes	3	E-Mail	No
E-2020DEIS-0495	11/21/2020	Ellen	Middleditch	None	Yes	3	E-Mail	No
E-2020DEIS-0496	11/21/2020	Jamie	Le	None	Yes	3	E-Mail	No
E-2020DEIS-0497	11/21/2020	Stacey	Larson	None	Yes	3	E-Mail	No
E-2020DEIS-0498	11/21/2020	Jimy	Tallal	None	Yes	3	E-Mail	No
E-2020DEIS-0499	11/21/2020	David	Walsh	None	Yes	3	E-Mail	No
E-2020DEIS-0500	11/21/2020	Rosalind	Andrews	None	Yes	3	E-Mail	No
E-2020DEIS-0501	11/21/2020	Zsanine	Alexander	None	Yes	3	E-Mail	No
E-2020DEIS-0502	11/21/2020	Kimberly	Short	None	Yes	3	E-Mail	No
E-2020DEIS-0503	11/21/2020	A	Kirk	None	Yes	3	E-Mail	No
E-2020DEIS-0504	11/21/2020	Marylen	Kincer	None	Yes	3	E-Mail	No
E-2020DEIS-0505	11/21/2020	Elaine	Benjamin	None	Yes	3	E-Mail	No
E-2020DEIS-0506	11/21/2020	Karen	DeBraal	None	Yes	3	E-Mail	No
E-2020DEIS-0507	11/21/2020	Pablo	Bobe	None	Yes	3	E-Mail	No
E-2020DEIS-0508	11/21/2020	Lynn	Costa	None	Yes	3	E-Mail	No
E-2020DEIS-0509	11/21/2020	William	Bein	None	Yes	3	E-Mail	No
E-2020DEIS-0510	11/21/2020	Ken	Gibb	None	Yes	3	E-Mail	No
E-2020DEIS-0511	11/21/2020	Shirley	Davis	None	Yes	3	E-Mail	No
E-2020DEIS-0512	11/21/2020	Barry	Medlin	None	Yes	3	E-Mail	No
E-2020DEIS-0513	11/21/2020	Karen	Ratzlaff	None	Yes	3	E-Mail	No
E-2020DEIS-0514	11/21/2020	Freddie	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-0515	11/21/2020	Melinda	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-0516	11/21/2020	Cora	Luce	None	Yes	3	E-Mail	No
E-2020DEIS-0517	11/21/2020	Cheri	Moore	None	Yes	3	E-Mail	No
E-2020DEIS-0518	11/21/2020	Andrea	Feig	None	Yes	3	E-Mail	No
E-2020DEIS-0519	11/21/2020	Taylur	Denning	None	Yes	3	E-Mail	No
E-2020DEIS-0520	11/21/2020	Claire	Prevost	None	Yes	3	E-Mail	No
E-2020DEIS-0521	11/21/2020	Janey	McMillen	None	Yes	3	E-Mail	No
E-2020DEIS-0522	11/21/2020	Lisa	Jacobson	None	Yes	3	E-Mail	No
E-2020DEIS-0523	11/21/2020	Daniel	Luna	None	Yes	3	E-Mail	No
E-2020DEIS-0524	11/21/2020	Tracey	McGrath	None	Yes	3	E-Mail	No
E-2020DEIS-0525	11/21/2020	Anne	Haflich	None	Yes	3	E-Mail	No
E-2020DEIS-0526	11/21/2020	Veronika	Egli-Steinegger	None	Yes	3	E-Mail	No
E-2020DEIS-0527	11/21/2020	Nicola	Nicolai	None	Yes	3	E-Mail	No
E-2020DEIS-0528	11/21/2020	Sue	Dougherty	None	Yes	3	E-Mail	No
E-2020DEIS-0529	11/21/2020	Lil	Bobow	None	Yes	3	E-Mail	No
E-2020DEIS-0530	11/21/2020	Dirk	Reed	None	Yes	3	E-Mail	No
E-2020DEIS-0531	11/21/2020	Probyn	Gregory	None	Yes	3	E-Mail	No

E-2020DEIS-0532	11/21/2020	Marilyn	Evenson	None	Yes	3	E-Mail	No
E-2020DEIS-0533	11/21/2020	Sabina	Pinto	None	Yes	3	E-Mail	No
E-2020DEIS-0534	11/21/2020	Connie	Dunn	None	Yes	3	E-Mail	No
E-2020DEIS-0535	11/21/2020	Donlon	McGovern	None	Yes	3	E-Mail	No
E-2020DEIS-0536	11/21/2020	Valerie	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-0537	11/21/2020	Georgina	Wright	None	Yes	3	E-Mail	No
E-2020DEIS-0538	11/21/2020	Hannah	Curzio	None	Yes	3	E-Mail	No
E-2020DEIS-0539	11/21/2020	Carrie	Swank	None	Yes	3	E-Mail	No
E-2020DEIS-0540	11/21/2020	Stephen	Donnelly	None	Yes	3	E-Mail	No
E-2020DEIS-0541	11/21/2020	Alana	Willroth	None	Yes	3	E-Mail	No
E-2020DEIS-0542	11/21/2020	Anne	Canepa	None	Yes	3	E-Mail	No
E-2020DEIS-0543	11/21/2020	Dan	Horton	None	Yes	3	E-Mail	No
E-2020DEIS-0544	11/21/2020	Erica	Munn	None	Yes	3	E-Mail	No
E-2020DEIS-0545	11/21/2020	Caterina	Sacadura	None	Yes	3	E-Mail	No
E-2020DEIS-0546	11/21/2020	Tracey	Aquino	None	Yes	3	E-Mail	No
E-2020DEIS-0547	11/21/2020	Tina	Brenza	None	Yes	3	E-Mail	No
E-2020DEIS-0548	11/21/2020	Edward	Rengers	None	Yes	3	E-Mail	No
E-2020DEIS-0549	11/21/2020	Tim	Porter	None	Yes	3	E-Mail	No
E-2020DEIS-0550	11/21/2020	Sandy	Kayoyianni	None	Yes	3	E-Mail	No
E-2020DEIS-0551	11/21/2020	Russell	Weisz	None	Yes	3	E-Mail	No
E-2020DEIS-0552	11/21/2020	Stephanie	Harti	None	Yes	3	E-Mail	No
E-2020DEIS-0553	11/21/2020	Richard	Baker	None	Yes	3	E-Mail	No
E-2020DEIS-0554	11/21/2020	Norman	Sandel	None	Yes	3	E-Mail	No
E-2020DEIS-0555	11/21/2020	Judy	Miller-Lyons	None	Yes	3	E-Mail	No
E-2020DEIS-0556	11/21/2020	Marc	Lyons	None	Yes	3	E-Mail	No
E-2020DEIS-0557	11/21/2020	Peter	Kahigian	None	Yes	3	E-Mail	No
E-2020DEIS-0558	11/21/2020	John	Varga	None	Yes	3	E-Mail	No
E-2020DEIS-0559	11/21/2020	Donna	Leavitt	None	Yes	3	E-Mail	No
E-2020DEIS-0560	11/21/2020	Michelle	Palladine	None	Yes	3	E-Mail	No
E-2020DEIS-0561	11/21/2020	Robert	Fuchs	None	Yes	3	E-Mail	No
E-2020DEIS-0562	11/21/2020	Heather	Cross	None	Yes	3	E-Mail	No
E-2020DEIS-0563	11/21/2020	Athene	Grant	None	Yes	3	E-Mail	No
E-2020DEIS-0564	11/21/2020	Elizabeth	Elder	None	Yes	3	E-Mail	No
E-2020DEIS-0565	11/21/2020	Sherrell	Cuneo	None	Yes	3	E-Mail	No
E-2020DEIS-0566	11/21/2020	Doug	Landau	None	Yes	3	E-Mail	No
E-2020DEIS-0567	11/21/2020	Lana	Schmitt	None	Yes	3	E-Mail	No
E-2020DEIS-0568	11/21/2020	Charlotte	Alexandere	None	Yes	3	E-Mail	No
E-2020DEIS-0569	11/21/2020	Walter	Schmitt	None	Yes	3	E-Mail	No
E-2020DEIS-0570	11/21/2020	Judy	Genandt	None	Yes	3	E-Mail	No
E-2020DEIS-0571	11/21/2020	Carolyn	Massey	None	Yes	3	E-Mail	No
E-2020DEIS-0572	11/21/2020	Sherrill	Futrell	None	Yes	3	E-Mail	No
E-2020DEIS-0573	11/21/2020	Lupe	Ledesma	None	Yes	3	E-Mail	No

E-2020DEIS-0574	11/21/2020	Javier	Reza	None	Yes	3	E-Mail	No
E-2020DEIS-0575	11/21/2020	I M	Lopez	None	Yes	3	E-Mail	No
E-2020DEIS-0576	11/21/2020	Vincent	Rusch	None	Yes	3	E-Mail	No
E-2020DEIS-0577	11/21/2020	Michelle	Dudeck	None	Yes	3	E-Mail	No
E-2020DEIS-0578	11/21/2020	Shirley	Harris	None	Yes	3	E-Mail	Yes
E-2020DEIS-0579	11/21/2020	Adrienne	Ross	None	Yes	3	E-Mail	No
E-2020DEIS-0580	11/21/2020	Jean	Naples	None	Yes	3	E-Mail	No
E-2020DEIS-0581	11/21/2020	Dorris	Potter	None	Yes	3	E-Mail	No
E-2020DEIS-0582	11/21/2020	Steph	Spencer	None	Yes	3	E-Mail	No
E-2020DEIS-0583	11/21/2020	Lisa	Blanck	None	Yes	3	E-Mail	No
E-2020DEIS-0584	11/21/2020	Jacobo	Santander-Monsalvo	None	Yes	3	E-Mail	No
E-2020DEIS-0585	11/21/2020	Julia	Skelton	None	Yes	3	E-Mail	No
E-2020DEIS-0586	11/21/2020	Ronald	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-0587	11/21/2020	James	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-0588	11/21/2020	Mary	Zack	None	Yes	3	E-Mail	No
E-2020DEIS-0589	11/21/2020	M.	Canter	None	Yes	3	E-Mail	No
E-2020DEIS-0590	11/21/2020	Ann	Rennacker	None	Yes	3	E-Mail	No
E-2020DEIS-0591	11/21/2020	Teresa	Hammond	None	Yes	3	E-Mail	No
E-2020DEIS-0592	11/21/2020	Marla	Bottesch	None	Yes	3	E-Mail	No
E-2020DEIS-0593	11/21/2020	Anna	Jasiukiewicz	None	Yes	3	E-Mail	No
E-2020DEIS-0594	11/21/2020	Leslie	Nieves	None	Yes	3	E-Mail	No
E-2020DEIS-0595	11/21/2020	Margaret	Chilton	None	Yes	3	E-Mail	No
E-2020DEIS-0596	11/21/2020	Tracey	Loyd	None	Yes	3	E-Mail	No
E-2020DEIS-0597	11/21/2020	Paul	Russell	None	Yes	3	E-Mail	No
E-2020DEIS-0598	11/21/2020	Shanna	Damien	None	Yes	3	E-Mail	No
E-2020DEIS-0599	11/21/2020	Sarah	Parr	None	Yes	3	E-Mail	No
E-2020DEIS-0600	11/21/2020	Leslie	Lazzo	None	Yes	3	E-Mail	No
E-2020DEIS-0601	11/21/2020	Deb	Castellana	None	Yes	3	E-Mail	No
E-2020DEIS-0602	11/21/2020	Cathy	Reynolds	None	Yes	3	E-Mail	No
E-2020DEIS-0603	11/21/2020	Julie	Ashton	None	Yes	3	E-Mail	No
E-2020DEIS-0604	11/21/2020	Linda	Cooper	None	Yes	3	E-Mail	No
E-2020DEIS-0605	11/21/2020	Kimberly	Holborn	None	Yes	3	E-Mail	No
E-2020DEIS-0606	11/21/2020	Rhonda	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-0607	11/21/2020	Ilse	Spiegel	None	Yes	3	E-Mail	No
E-2020DEIS-0608	11/21/2020	Lesley	Schultz	None	Yes	3	E-Mail	No
E-2020DEIS-0609	11/21/2020	Donna	Knipp	None	Yes	3	E-Mail	No
E-2020DEIS-0610	11/21/2020	Erica	Johanson	None	Yes	3	E-Mail	No
E-2020DEIS-0611	11/21/2020	Orva M.	Gullett	None	Yes	3	E-Mail	No
E-2020DEIS-0612	11/21/2020	Stevie B.	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-0613	11/21/2020	Renee	Vesely	None	Yes	3	E-Mail	No
E-2020DEIS-0614	11/21/2020	Don	McKelvey	None	Yes	3	E-Mail	No
E-2020DEIS-0615	11/21/2020	Kate	Kenner	None	Yes	3	E-Mail	No

E-2020DEIS-0616	11/21/2020	Anna	Lukaszewicz	None	Yes	3	E-Mail	No
E-2020DEIS-0617	11/21/2020	Dale	Anania	None	Yes	3	E-Mail	No
E-2020DEIS-0618	11/21/2020	G.	S.	None	Yes	3	E-Mail	No
E-2020DEIS-0619	11/21/2020	Leo	Kucewicz	None	Yes	3	E-Mail	No
E-2020DEIS-0620	11/21/2020	Lisa	Butterfield	None	Yes	3	E-Mail	No
E-2020DEIS-0621	11/21/2020	Stewart	Wiggers	None	Yes	3	E-Mail	No
E-2020DEIS-0622	11/21/2020	Annapoorne	Colangelo	None	Yes	3	E-Mail	No
E-2020DEIS-0623	11/21/2020	David	Boyer	None	Yes	3	E-Mail	No
E-2020DEIS-0624	11/21/2020	Tracey	Oullette	None	Yes	3	E-Mail	No
E-2020DEIS-0625	11/21/2020	Carol	Watkins	None	Yes	3	E-Mail	No
E-2020DEIS-0626	11/21/2020	Mia	Moss	None	Yes	3	E-Mail	No
E-2020DEIS-0627	11/21/2020	Ewa	Piasecka	None	Yes	3	E-Mail	No
E-2020DEIS-0628	11/21/2020	Michael	Rigoli	None	Yes	3	E-Mail	No
E-2020DEIS-0629	11/21/2020	Sherrie	Moore	None	Yes	3	E-Mail	No
E-2020DEIS-0630	11/21/2020	Nina	Monasevitch	None	Yes	3	E-Mail	No
E-2020DEIS-0631	11/21/2020	Carly	Clements Owens	None	Yes	3	E-Mail	No
E-2020DEIS-0632	11/21/2020	Stephen	Lubin	None	Yes	3	E-Mail	No
E-2020DEIS-0633	11/21/2020	A.	Todd	None	Yes	3	E-Mail	No
E-2020DEIS-0634	11/21/2020	Michelle	Hur	None	Yes	3	E-Mail	No
E-2020DEIS-0635	11/21/2020	Gay	Goden	None	Yes	3	E-Mail	No
E-2020DEIS-0636	11/21/2020	Les	Roberts	None	Yes	3	E-Mail	No
E-2020DEIS-0637	11/21/2020	Aixa	Fielder	None	Yes	3	E-Mail	No
E-2020DEIS-0638	11/21/2020	Gavin	Bornholtz	None	Yes	3	E-Mail	No
E-2020DEIS-0639	11/21/2020	Kat	Russell	None	Yes	3	E-Mail	No
E-2020DEIS-0640	11/21/2020	Mary Louise	Whitlow	None	Yes	3	E-Mail	No
E-2020DEIS-0641	11/21/2020	Pat	Blackwell-Marchant	None	Yes	3	E-Mail	No
E-2020DEIS-0642	11/21/2020	Pamela	Bond	None	Yes	3	E-Mail	No
E-2020DEIS-0643	11/21/2020	LaVonne	Gunn	None	Yes	3	E-Mail	No
E-2020DEIS-0644	11/21/2020	Barb	Powell	None	Yes	3	E-Mail	No
E-2020DEIS-0645	11/21/2020	Michal	Lynch	None	Yes	3	E-Mail	No
E-2020DEIS-0646	11/21/2020	John	Holtsclaw	None	Yes	3	E-Mail	No
E-2020DEIS-0647	11/21/2020	Judith S	Hansell	None	Yes	3	E-Mail	No
E-2020DEIS-0648	11/21/2020	Diana	Gentile	None	Yes	3	E-Mail	No
E-2020DEIS-0649	11/21/2020	Pedro	Mercado	None	Yes	3	E-Mail	No
E-2020DEIS-0650	11/21/2020	Carol	Hinkelman	None	Yes	3	E-Mail	No
E-2020DEIS-0651	11/21/2020	Cassandra	Lista	None	Yes	3	E-Mail	No
E-2020DEIS-0652	11/21/2020	Midori	Furutate	None	Yes	3	E-Mail	No
E-2020DEIS-0653	11/21/2020	Erica	Coco	None	Yes	3	E-Mail	No
E-2020DEIS-0654	11/21/2020	Teresa	Pitts	None	Yes	3	E-Mail	No
E-2020DEIS-0655	11/21/2020	Teresia	LaFleur	None	Yes	3	E-Mail	No
E-2020DEIS-0656	11/21/2020	Mary	Wylie	None	Yes	3	E-Mail	No
E-2020DEIS-0657	11/21/2020	Karen	Kindel	None	Yes	3	E-Mail	No

E-2020DEIS-0658	11/21/2020	Kenneth	Robertson	None	Yes	3	E-Mail	No
E-2020DEIS-0659	11/21/2020	Marlena	Lange	None	Yes	3	E-Mail	No
E-2020DEIS-0660	11/21/2020	Dawn	Albanese	None	Yes	3	E-Mail	No
E-2020DEIS-0661	11/21/2020	Emily	Willoughby	None	Yes	3	E-Mail	No
E-2020DEIS-0662	11/21/2020	Valerie	Hunt	None	Yes	3	E-Mail	No
E-2020DEIS-0663	11/21/2020	John	Harris	None	Yes	3	E-Mail	No
E-2020DEIS-0664	11/21/2020	Bernadette	Andaloro	None	Yes	3	E-Mail	No
E-2020DEIS-0666	11/21/2020	Antonia	Pavlovich	None	Yes	3	E-Mail	No
E-2020DEIS-0667	11/21/2020	Joe	McCullough	None	Yes	3	E-Mail	No
E-2020DEIS-0668	11/21/2020	Stephanie	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-0669	11/21/2020	Jessica	Stewart	None	Yes	3	E-Mail	No
E-2020DEIS-0670	11/21/2020	Sharon	Morris	None	Yes	3	E-Mail	No
E-2020DEIS-0671	11/21/2020	Dennis	Morley	None	Yes	3	E-Mail	No
E-2020DEIS-0672	11/21/2020	Colleen	Lobel	None	Yes	3	E-Mail	No
E-2020DEIS-0673	11/21/2020	Diana	Petrillo	None	Yes	3	E-Mail	No
E-2020DEIS-0674	11/21/2020	Sue	Velez	None	Yes	3	E-Mail	No
E-2020DEIS-0675	11/21/2020	Joy	Edwards	None	Yes	3	E-Mail	No
E-2020DEIS-0676	11/21/2020	Debra	Lane	None	Yes	3	E-Mail	No
E-2020DEIS-0677	11/21/2020	Pamela	Evans	None	Yes	3	E-Mail	No
E-2020DEIS-0678	11/21/2020	John	Barger	None	Yes	3	E-Mail	No
E-2020DEIS-0679	11/21/2020	Natalie	Bonus	None	Yes	3	E-Mail	No
E-2020DEIS-0680	11/21/2020	Katie	Clifford	None	Yes	3	E-Mail	No
E-2020DEIS-0681	11/21/2020	Brandy	Schumacher	None	Yes	3	E-Mail	No
E-2020DEIS-0682	11/21/2020	Jared	Cornelia	None	Yes	3	E-Mail	No
E-2020DEIS-0683	11/21/2020	Callie	Riley	None	Yes	3	E-Mail	No
E-2020DEIS-0684	11/21/2020	Kate	Ashley	None	Yes	3	E-Mail	No
E-2020DEIS-0685	11/21/2020	Dawna	Dorcas-Werner	None	Yes	3	E-Mail	No
E-2020DEIS-0686	11/21/2020	Emily	Dickinson-Adams	None	Yes	3	E-Mail	No
E-2020DEIS-0687	11/21/2020	Greg	Elems	None	Yes	3	E-Mail	No
E-2020DEIS-0688	11/21/2020	Anthony	Jammal	None	Yes	3	E-Mail	No
E-2020DEIS-0689	11/21/2020	Marie-Pierre	Rondia	None	Yes	3	E-Mail	No
E-2020DEIS-0690	11/21/2020	Nadine	James	None	Yes	3	E-Mail	No
E-2020DEIS-0691	11/21/2020	A	Caustaty	None	Yes	3	E-Mail	No
E-2020DEIS-0692	11/21/2020	Bryna	Pizzo	None	Yes	3	E-Mail	No
E-2020DEIS-0693	11/21/2020	Katelyn	Heflin	None	Yes	3	E-Mail	No
E-2020DEIS-0694	11/21/2020	Ellen	McCann	None	Yes	3	E-Mail	No
E-2020DEIS-0695	11/21/2020	Erin	Adams	None	Yes	3	E-Mail	No
E-2020DEIS-0696	11/21/2020	Sharon	Nicodemus	None	Yes	3	E-Mail	No
E-2020DEIS-0697	11/21/2020	Pamela	Raup-Kounovsky	None	Yes	3	E-Mail	No
E-2020DEIS-0698	11/21/2020	Steve	Wanninger	None	Yes	3	E-Mail	No
E-2020DEIS-0699	11/21/2020	Jessie	Osborne	None	Yes	3	E-Mail	No
E-2020DEIS-0700	11/21/2020	Alan	Freed	None	Yes	3	E-Mail	No

E-2020DEIS-0701	11/21/2020	Sherlene	Evans	None	Yes	3	E-Mail	No
E-2020DEIS-0702	11/21/2020	Roux	Josette	None	Yes	3	E-Mail	No
E-2020DEIS-0703	11/21/2020	Twyla	Bacon	None	Yes	3	E-Mail	No
E-2020DEIS-0704	11/21/2020	Steve	Prince	None	Yes	3	E-Mail	No
E-2020DEIS-0705	11/21/2020	Patricia	Packer	None	Yes	3	E-Mail	No
E-2020DEIS-0706	11/21/2020	Marilyn	Price	None	Yes	3	E-Mail	No
E-2020DEIS-0707	11/21/2020	William	Parr	None	Yes	3	E-Mail	No
E-2020DEIS-0708	11/21/2020	Kelley	Price	None	Yes	3	E-Mail	No
E-2020DEIS-0709	11/21/2020	Mark M.	Giese	None	Yes	3	E-Mail	No
E-2020DEIS-0710	11/21/2020	Mark M.	Giese	None	Yes	3	E-Mail	Yes
E-2020DEIS-0711	11/21/2020	Roberto	Oliveira	None	Yes	3	E-Mail	No
E-2020DEIS-0712	11/21/2020	Mariana	Oliveira	None	Yes	3	E-Mail	No
E-2020DEIS-0713	11/21/2020	Phyllis	Chavez	None	Yes	3	E-Mail	No
E-2020DEIS-0714	11/21/2020	Heidi	Erdmann	None	Yes	3	E-Mail	No
E-2020DEIS-0715	11/21/2020	Elizabeth	Mello	None	Yes	3	E-Mail	No
E-2020DEIS-0716	11/21/2020	Elizabeth	Oliveira	None	Yes	3	E-Mail	No
E-2020DEIS-0717	11/21/2020	Christina	Winter	None	Yes	3	E-Mail	No
E-2020DEIS-0718	11/21/2020	Elizabeth	B.O.	None	Yes	3	E-Mail	No
E-2020DEIS-0719	11/21/2020	Elizabeth	Leitao	None	Yes	3	E-Mail	No
E-2020DEIS-0720	11/21/2020	Karen	Berger	None	Yes	3	E-Mail	No
E-2020DEIS-0721	11/21/2020	Joyce	Grajczyk	None	Yes	3	E-Mail	No
E-2020DEIS-0722	11/21/2020	Cindy	Saxenian	None	Yes	3	E-Mail	No
E-2020DEIS-0723	11/21/2020	Maureen	O'Neal	None	Yes	3	E-Mail	No
E-2020DEIS-0724	11/21/2020	Jaremy	Lynch	None	Yes	3	E-Mail	Yes
E-2020DEIS-0725	11/21/2020	Bonnie	Faith-Smith	None	Yes	3	E-Mail	No
E-2020DEIS-0726	11/21/2020	Michael	Friedman	None	Yes	3	E-Mail	No
E-2020DEIS-0727	11/21/2020	David	Burns	None	Yes	3	E-Mail	No
E-2020DEIS-0728	11/21/2020	Barbara	McKee	None	Yes	3	E-Mail	No
E-2020DEIS-0729	11/21/2020	Stefan	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-0730	11/21/2020	Diane	Zinni	None	Yes	3	E-Mail	No
E-2020DEIS-0731	11/21/2020	Nancy	Hanson	None	Yes	3	E-Mail	No
E-2020DEIS-0732	11/21/2020	Debbie	Brush	None	Yes	3	E-Mail	No
E-2020DEIS-0733	11/21/2020	Mercedes	Lackey	None	Yes	3	E-Mail	No
E-2020DEIS-0734	11/21/2020	Michael	Olenjack	None	Yes	3	E-Mail	No
E-2020DEIS-0735	11/21/2020	Diane	Moore	None	Yes	3	E-Mail	No
E-2020DEIS-0736	11/21/2020	Carol	Jagiello	None	Yes	3	E-Mail	No
E-2020DEIS-0737	11/21/2020	Anne	Barker	None	Yes	3	E-Mail	No
E-2020DEIS-0738	11/21/2020	Sarah	Hasted	None	Yes	3	E-Mail	No
E-2020DEIS-0739	11/21/2020	Edie	Bruce	None	Yes	3	E-Mail	No
E-2020DEIS-0740	11/21/2020	Jacqueline	McKenna	None	Yes	3	E-Mail	No
E-2020DEIS-0741	11/21/2020	Amanda	Minsloff	None	Yes	3	E-Mail	No
E-2020DEIS-0742	11/21/2020	Celeste	Watt	None	Yes	3	E-Mail	No

E-2020DEIS-0743	11/22/2020	Steven	Morris	None	Yes	3	E-Mail	No
E-2020DEIS-0744	11/22/2020	Sherri	Fryer	None	Yes	3	E-Mail	No
E-2020DEIS-0745	11/22/2020	Sara	Fontani	None	Yes	3	E-Mail	No
E-2020DEIS-0746	11/22/2020	Brigitte	Silvestre	None	Yes	3	E-Mail	No
E-2020DEIS-0747	11/22/2020	Karen	Kravcov Malcolm	None	Yes	3	E-Mail	No
E-2020DEIS-0748	11/22/2020	Donna	Nelson	None	Yes	3	E-Mail	No
E-2020DEIS-0749	11/22/2020	Gayle	Janzen	None	Yes	3	E-Mail	No
E-2020DEIS-0750	11/22/2020	Dana	Palka	None	Yes	3	E-Mail	No
E-2020DEIS-0751	11/22/2020	Judith	Gottesman	None	Yes	3	E-Mail	No
E-2020DEIS-0752	11/22/2020	YeeYean	Lim	None	Yes	3	E-Mail	No
E-2020DEIS-0753	11/22/2020	Steve	Vicuna	None	Yes	3	E-Mail	No
E-2020DEIS-0754	11/22/2020	Robert	Drop	None	Yes	3	E-Mail	No
E-2020DEIS-0755	11/22/2020	Nicholas	Lenchner	None	Yes	3	E-Mail	No
E-2020DEIS-0756	11/22/2020	Catherine	Beauchamp	None	Yes	3	E-Mail	No
E-2020DEIS-0757	11/22/2020	Evelyn	Coltman	None	Yes	3	E-Mail	No
E-2020DEIS-0758	11/22/2020	Armando	Gomez	None	Yes	3	E-Mail	No
E-2020DEIS-0759	11/22/2020	Maryanna	Smale	None	Yes	3	E-Mail	No
E-2020DEIS-0760	11/22/2020	Anne	Parzick	None	Yes	3	E-Mail	No
E-2020DEIS-0761	11/22/2020	Emily	Scrivener	None	Yes	3	E-Mail	No
E-2020DEIS-0762	11/22/2020	Ira	Gerard	None	Yes	3	E-Mail	No
E-2020DEIS-0763	11/22/2020	Charity	Moschopoulos	None	Yes	3	E-Mail	No
E-2020DEIS-0764	11/22/2020	Ainga	Dobbelaere	None	Yes	3	E-Mail	No
E-2020DEIS-0765	11/22/2020	Michael	Shields	None	Yes	3	E-Mail	No
E-2020DEIS-0766	11/22/2020	Cecily	Colloby	None	Yes	3	E-Mail	No
E-2020DEIS-0767	11/22/2020	Tamara	Voyles	None	Yes	3	E-Mail	No
E-2020DEIS-0768	11/22/2020	Nancy	Beavers	None	Yes	3	E-Mail	No
E-2020DEIS-0769	11/22/2020	Joan	Ellen Mccoy	None	Yes	3	E-Mail	No
E-2020DEIS-0770	11/22/2020	Theodore	King	None	Yes	3	E-Mail	No
E-2020DEIS-0771	11/22/2020	Janet	Delaney	None	Yes	3	E-Mail	No
E-2020DEIS-0772	11/22/2020	Irene	Casey	None	Yes	3	E-Mail	No
E-2020DEIS-0773	11/22/2020	Jolayne	Justice	None	Yes	3	E-Mail	No
E-2020DEIS-0774	11/22/2020	Noel	Orr	None	Yes	3	E-Mail	No
E-2020DEIS-0775	11/22/2020	Louise	Sellon	None	Yes	3	E-Mail	No
E-2020DEIS-0776	11/22/2020	Martin	Lupowitz	None	Yes	3	E-Mail	No
E-2020DEIS-0777	11/22/2020	Gail	Johnston	None	Yes	3	E-Mail	No
E-2020DEIS-0778	11/22/2020	Debbie	Sirois	None	Yes	3	E-Mail	No
E-2020DEIS-0779	11/22/2020	Tracey	Kleber	None	Yes	3	E-Mail	No
E-2020DEIS-0780	11/22/2020	David & Patricia	Davidoson	None	Yes	3	E-Mail	No
E-2020DEIS-0781	11/22/2020	Lou	Orr	None	Yes	3	E-Mail	No
E-2020DEIS-0782	11/22/2020	Mai	Hermann	None	Yes	3	E-Mail	No
E-2020DEIS-0784	11/22/2020	Cal	Mendelsohn	None	Yes	3	E-Mail	No
E-2020DEIS-0785	11/22/2020	Eustacia	Hall	None	Yes	3	E-Mail	No

E-2020DEIS-0786	11/22/2020	David	Dewenter	None	Yes	3	E-Mail	No
E-2020DEIS-0787	11/22/2020	Carol	Chappell	None	Yes	3	E-Mail	No
E-2020DEIS-0788	11/22/2020	Ilse	Bautista	None	Yes	3	E-Mail	No
E-2020DEIS-0789	11/22/2020	Steve	Lucas	None	Yes	3	E-Mail	No
E-2020DEIS-0790	11/22/2020	Terrie	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-0791	11/22/2020	Lisa	Collon	None	Yes	3	E-Mail	No
E-2020DEIS-0792	11/22/2020	Jack	Steinberg	None	Yes	3	E-Mail	No
E-2020DEIS-0793	11/22/2020	Jay	Camp	None	Yes	3	E-Mail	No
E-2020DEIS-0794	11/22/2020	Chris	Washington	None	Yes	3	E-Mail	No
E-2020DEIS-0795	11/22/2020	Eric	Nylen	None	Yes	3	E-Mail	No
E-2020DEIS-0796	11/22/2020	Lacey	Hicks	None	Yes	3	E-Mail	No
E-2020DEIS-0797	11/22/2020	Pamela	Vouros Callahan	None	Yes	3	E-Mail	No
E-2020DEIS-0798	11/22/2020	Kathleen	Mireault	None	Yes	3	E-Mail	No
E-2020DEIS-0799	11/22/2020	Terry	Beemer	None	Yes	3	E-Mail	No
E-2020DEIS-0800	11/22/2020	Nannette	Ames	None	Yes	3	E-Mail	No
E-2020DEIS-0801	11/22/2020	Marty	Crowley	None	Yes	3	E-Mail	No
E-2020DEIS-0802	11/22/2020	Sandra	Materi	None	Yes	3	E-Mail	No
E-2020DEIS-0803	11/22/2020	Alexis	Morris	None	Yes	3	E-Mail	No
E-2020DEIS-0804	11/22/2020	Robert	Posch	None	Yes	3	E-Mail	No
E-2020DEIS-0805	11/22/2020	Yvonne	Albrecht	None	Yes	3	E-Mail	No
E-2020DEIS-0806	11/22/2020	William	Wright	None	Yes	3	E-Mail	No
E-2020DEIS-0807	11/22/2020	Mary	Dosch	None	Yes	3	E-Mail	No
E-2020DEIS-0808	11/22/2020	Spryte	Heithecker	None	Yes	3	E-Mail	No
E-2020DEIS-0809	11/22/2020	Amitav	Dash	None	Yes	3	E-Mail	No
E-2020DEIS-0810	11/22/2020	James	Cronin	None	Yes	3	E-Mail	No
E-2020DEIS-0811	11/22/2020	Ingrid	Alpha	None	Yes	3	E-Mail	No
E-2020DEIS-0812	11/22/2020	Maurice	Costa	None	Yes	3	E-Mail	No
E-2020DEIS-0813	11/22/2020	Danielle	Pirotte	None	Yes	3	E-Mail	No
E-2020DEIS-0814	11/22/2020	Carol	Hayes	None	Yes	3	E-Mail	No
E-2020DEIS-0815	11/22/2020	Samantha	Turetsky	None	Yes	3	E-Mail	No
E-2020DEIS-0816	11/22/2020	Bob	Chirpin	None	Yes	3	E-Mail	No
E-2020DEIS-0817	11/22/2020	Kathleen	Arnold	None	Yes	3	E-Mail	No
E-2020DEIS-0818	11/22/2020	Maria	Lopes	None	Yes	3	E-Mail	No
E-2020DEIS-0819	11/22/2020	Rebecca	Harper	None	Yes	3	E-Mail	No
E-2020DEIS-0820	11/22/2020	Deborah	Richards	None	Yes	3	E-Mail	No
E-2020DEIS-0821	11/22/2020	Connie	Butler	None	Yes	3	E-Mail	No
E-2020DEIS-0822	11/22/2020	Ronnie	Bolling	None	Yes	3	E-Mail	No
E-2020DEIS-0823	11/22/2020	I	Lee	None	Yes	3	E-Mail	No
E-2020DEIS-0824	11/22/2020	Renee	Woodman	None	Yes	3	E-Mail	No
E-2020DEIS-0825	11/22/2020	Michelle	Clark	None	Yes	3	E-Mail	No
E-2020DEIS-0826	11/22/2020	W.	G.	None	Yes	3	E-Mail	No
E-2020DEIS-0827	11/22/2020	Allie	Palmer	None	Yes	3	E-Mail	No

E-2020DEIS-0828	11/22/2020	Greg	Sells	None	Yes	3	E-Mail	No
E-2020DEIS-0829	11/22/2020	Pat	Bryan	None	Yes	3	E-Mail	No
E-2020DEIS-0830	11/22/2020	Roberta	Campbell	None	Yes	3	E-Mail	No
E-2020DEIS-0831	11/22/2020	Boaz	Shacham	None	Yes	3	E-Mail	No
E-2020DEIS-0832	11/22/2020	Missy	Kendrick	None	Yes	3	E-Mail	No
E-2020DEIS-0833	11/22/2020	Vicki	Hughes	None	Yes	3	E-Mail	No
E-2020DEIS-0834	11/22/2020	Carolyn	Martin	None	Yes	3	E-Mail	No
E-2020DEIS-0836	11/22/2020	Ellen	Koivisto	None	Yes	3	E-Mail	No
E-2020DEIS-0837	11/22/2020	Annette	Pirrone	None	Yes	3	E-Mail	No
E-2020DEIS-0838	11/22/2020	Kellie	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-0839	11/22/2020	Cheryl	Fergeson	None	Yes	3	E-Mail	No
E-2020DEIS-0840	11/22/2020	Henri	Jurvanen	None	Yes	3	E-Mail	No
E-2020DEIS-0841	11/22/2020	Erika	Agnew	None	Yes	3	E-Mail	No
E-2020DEIS-0842	11/22/2020	Marcey	Lachance	None	Yes	3	E-Mail	No
E-2020DEIS-0843	11/22/2020	Franca	Marchese	None	Yes	3	E-Mail	No
E-2020DEIS-0844	11/22/2020	Marilyn	Dtesser	None	Yes	3	E-Mail	No
E-2020DEIS-0845	11/22/2020	Maureen	Knutsen	None	Yes	3	E-Mail	No
E-2020DEIS-0846	11/22/2020	Ana-Paula	Martins-Fernandes	None	Yes	3	E-Mail	No
E-2020DEIS-0847	11/22/2020	Diane	Rose	None	Yes	3	E-Mail	No
E-2020DEIS-0848	11/22/2020	Maureen	Hackett	None	Yes	3	E-Mail	No
E-2020DEIS-0849	11/22/2020	Monard	Sandra	None	Yes	3	E-Mail	No
E-2020DEIS-0850	11/22/2020	Kate	Gualtieri	None	Yes	3	E-Mail	No
E-2020DEIS-0851	11/22/2020	Linda	Lemmer	None	Yes	3	E-Mail	No
E-2020DEIS-0852	11/22/2020	Joe	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-0853	11/22/2020	Deborah	Cyma	None	Yes	3	E-Mail	No
E-2020DEIS-0854	11/22/2020	Lori	Beth Kidd	None	Yes	3	E-Mail	No
E-2020DEIS-0855	11/22/2020	Jeffrey	Perrone	None	Yes	3	E-Mail	No
E-2020DEIS-0856	11/22/2020	Ben	Martin	None	Yes	3	E-Mail	No
E-2020DEIS-0857	11/22/2020	Denise	Lenardson	None	Yes	3	E-Mail	No
E-2020DEIS-0858	11/22/2020	Mari	Zatman	None	Yes	3	E-Mail	No
E-2020DEIS-0859	11/22/2020	Janine	Vinton	None	Yes	3	E-Mail	No
E-2020DEIS-0860	11/22/2020	Asano	Fertig	None	Yes	3	E-Mail	No
E-2020DEIS-0861	11/22/2020	Samantha	Solomon	None	Yes	3	E-Mail	No
E-2020DEIS-0862	11/22/2020	Cecilia	McGhee	None	Yes	3	E-Mail	No
E-2020DEIS-0863	11/22/2020	Kevin	Hughes	None	Yes	3	E-Mail	No
E-2020DEIS-0864	11/22/2020	Sylvia	Cooper	None	Yes	3	E-Mail	No
E-2020DEIS-0865	11/23/2020	Karl	Koessel	None	Yes	3	E-Mail	No
E-2020DEIS-0866	11/23/2020	Melvin D.	Cheitlin	None	Yes	3	E-Mail	No
E-2020DEIS-0867	11/23/2020	Stella	Lerma	None	Yes	3	E-Mail	No
E-2020DEIS-0868	11/23/2020	Ann	Bartell	None	Yes	3	E-Mail	No
E-2020DEIS-0869	11/23/2020	Stacie	Wooley	None	Yes	3	E-Mail	No
E-2020DEIS-0870	11/23/2020	Peter	Cox	None	Yes	3	E-Mail	No

E-2020DEIS-0871	11/23/2020	Juan	Masello	None	Yes	3	E-Mail	No
E-2020DEIS-0872	11/23/2020	Marian	Scena	None	Yes	3	E-Mail	No
E-2020DEIS-0873	11/23/2020	Kaiba	White	None	Yes	3	E-Mail	No
E-2020DEIS-0874	11/23/2020	Silvia	Bertano	None	Yes	3	E-Mail	No
E-2020DEIS-0875	11/23/2020	Roxanne	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-0876	11/23/2020	Kia	Hendrix	None	Yes	3	E-Mail	No
E-2020DEIS-0877	11/23/2020	Michael	Talbot	None	Yes	3	E-Mail	No
E-2020DEIS-0878	11/23/2020	Jackie	Byrd	None	Yes	3	E-Mail	No
E-2020DEIS-0879	11/23/2020	Jackie	Demarais	None	Yes	3	E-Mail	No
E-2020DEIS-0880	11/23/2020	Marjorie	Betz	None	Yes	3	E-Mail	No
E-2020DEIS-0881	11/23/2020	Jamie	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-0883	11/23/2020	Rob	Seltzer	None	Yes	3	E-Mail	No
E-2020DEIS-0884	11/23/2020	Nancy	Neumann	None	Yes	3	E-Mail	No
E-2020DEIS-0885	11/23/2020	Ken	Kurtz	None	Yes	3	E-Mail	No
E-2020DEIS-0886	11/23/2020	Julia	Bukatz	None	Yes	3	E-Mail	No
E-2020DEIS-0887	11/23/2020	Nickie	Lloyd	None	Yes	3	E-Mail	No
E-2020DEIS-0888	11/23/2020	Maria	Rute Correia	None	Yes	3	E-Mail	No
E-2020DEIS-0889	11/23/2020	Kenneth	Lapointe	None	Yes	3	E-Mail	No
E-2020DEIS-0890	11/23/2020	Allison	Orvin	None	Yes	3	E-Mail	No
E-2020DEIS-0891	11/23/2020	Anita	Chan	None	Yes	3	E-Mail	No
E-2020DEIS-0893	11/23/2020	Nicole	Shaffer	None	Yes	3	E-Mail	No
E-2020DEIS-0894	11/23/2020	Caephren	McKenna	None	Yes	3	E-Mail	No
E-2020DEIS-0895	11/23/2020	Laura	Herndon	None	Yes	3	E-Mail	No
E-2020DEIS-0896	11/23/2020	Hector	Garcia	None	Yes	3	E-Mail	No
E-2020DEIS-0897	11/23/2020	Sonja	Nielsen	None	Yes	3	E-Mail	No
E-2020DEIS-0898	11/23/2020	Debi	Griepsma	None	Yes	3	E-Mail	No
E-2020DEIS-0899	11/23/2020	Dr. Bob	Walling	None	Yes	3	E-Mail	No
E-2020DEIS-0900	11/23/2020	Donald	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-0901	11/23/2020	Tami	Schreurs	None	Yes	3	E-Mail	No
E-2020DEIS-0902	11/23/2020	Deborah	Lipman	None	Yes	3	E-Mail	No
E-2020DEIS-0903	11/23/2020	Monique	Musialowski	None	Yes	3	E-Mail	No
E-2020DEIS-0904	11/23/2020	Margot	Lowe	None	Yes	3	E-Mail	No
E-2020DEIS-0905	11/23/2020	Lynn	Dutton	None	Yes	3	E-Mail	No
E-2020DEIS-0906	11/23/2020	Christine	Schneebeli	None	Yes	3	E-Mail	No
E-2020DEIS-0907	11/23/2020	Jelica	Roland	None	Yes	3	E-Mail	No
E-2020DEIS-0908	11/23/2020	Polly	O'Malley	None	Yes	3	E-Mail	No
E-2020DEIS-0909	11/23/2020	Ann	Gessert	None	Yes	3	E-Mail	No
E-2020DEIS-0910	11/23/2020	Roth	Woods	None	Yes	3	E-Mail	No
E-2020DEIS-0911	11/23/2020	Anna	Melnik	None	Yes	3	E-Mail	No
E-2020DEIS-0912	11/23/2020	Blake	Wu	None	Yes	3	E-Mail	No
E-2020DEIS-0913	11/23/2020	Evelyn	Baran	None	Yes	3	E-Mail	No
E-2020DEIS-0914	11/23/2020	Marilyn	Martin	None	Yes	3	E-Mail	No

E-2020DEIS-0915	11/23/2020	Debra	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-0916	11/24/2020	Chuck	Marcovecchio	None	Yes	3	E-Mail	No
E-2020DEIS-0917	11/24/2020	Linda	Howie	None	Yes	3	E-Mail	No
E-2020DEIS-0918	11/24/2020	Debbie	Kirkpatrick	None	Yes	3	E-Mail	No
E-2020DEIS-0919	11/24/2020	Melissa	Milano	None	Yes	3	E-Mail	No
E-2020DEIS-0920	11/24/2020	Jane	Sorensen	None	Yes	3	E-Mail	No
E-2020DEIS-0921	11/24/2020	Debra	Pence	None	Yes	3	E-Mail	No
E-2020DEIS-0922	11/24/2020	Tristen	Sophia	None	Yes	3	E-Mail	No
E-2020DEIS-0923	11/24/2020	Susan	LoFurno	None	Yes	3	E-Mail	No
E-2020DEIS-0924	11/24/2020	Gary	Vencill	None	Yes	3	E-Mail	No
E-2020DEIS-0925	11/24/2020	Judith	Greenleaf	None	Yes	3	E-Mail	No
E-2020DEIS-0926	11/24/2020	Cora	Luce	None	Yes	3	E-Mail	Yes
E-2020DEIS-0927	11/24/2020	Nicole	Waldron	None	Yes	3	E-Mail	No
E-2020DEIS-0928	11/24/2020	Mary	Kahle	None	Yes	3	E-Mail	No
E-2020DEIS-0929	11/24/2020	Wendy	Lukowitz	None	Yes	3	E-Mail	No
E-2020DEIS-0930	11/24/2020	Josephine	Cristobal	None	Yes	3	E-Mail	No
E-2020DEIS-0931	11/24/2020	Lynne	Wiley	None	Yes	3	E-Mail	No
E-2020DEIS-0932	11/24/2020	Debbie	Sherman	None	Yes	3	E-Mail	No
E-2020DEIS-0933	11/24/2020	Natalie	Sligar	None	Yes	3	E-Mail	No
E-2020DEIS-0934	11/25/2020	Nancy	Chismar	None	Yes	3	E-Mail	Yes
E-2020DEIS-0936	11/25/2020	Meghan	Frost	None	Yes	3	E-Mail	No
E-2020DEIS-0937	11/25/2020	Stanley	Almoney	None	Yes	3	E-Mail	No
E-2020DEIS-0938	11/25/2020	Stanley	Almoney	None	Yes	3	E-Mail	Yes
E-2020DEIS-0939	11/25/2020	Joan	Connolly	None	Yes	3	E-Mail	No
E-2020DEIS-0940	11/25/2020	Mark	Mansfield	None	Yes	3	E-Mail	No
E-2020DEIS-0941	11/25/2020	June	Elliott-Cattell	None	Yes	3	E-Mail	No
E-2020DEIS-0942	11/25/2020	Michael	Hynes	None	Yes	3	E-Mail	No
E-2020DEIS-0944	11/25/2020	Dawn	Albanese	None	Yes	3	E-Mail	Yes
E-2020DEIS-0945	11/25/2020	Matthew	Carlstroem	None	Yes	3	E-Mail	No
E-2020DEIS-0946	11/25/2020	Eric	Edwards	None	Yes	3	E-Mail	Yes
E-2020DEIS-0947	11/25/2020	Elisabeth	Carroll	None	Yes	3	E-Mail	Yes
E-2020DEIS-0948	11/25/2020	David	Boyer	None	Yes	3	E-Mail	Yes
E-2020DEIS-0949	11/25/2020	Marion	Barry	None	Yes	3	E-Mail	Yes
E-2020DEIS-0950	11/25/2020	Ann	DeBolt	None	Yes	3	E-Mail	No
E-2020DEIS-0951	11/25/2020	Carol	Collins	None	Yes	3	E-Mail	Yes
E-2020DEIS-0952	11/25/2020	JoAnne	Larsen	None	Yes	3	E-Mail	No
E-2020DEIS-0953	11/25/2020	Pilar	Quintana	None	Yes	3	E-Mail	No
E-2020DEIS-0954	11/25/2020	Allen	Sanders	None	Yes	3	E-Mail	No
E-2020DEIS-0955	11/25/2020	Hilary	Clark	None	Yes	3	E-Mail	No
E-2020DEIS-0956	11/25/2020	Jane	Nachazel-Ruck	None	Yes	3	E-Mail	Yes
E-2020DEIS-0957	11/25/2020	Vic	Bostock	None	Yes	3	E-Mail	Yes
E-2020DEIS-0958	11/25/2020	Ellen	Halbert	None	Yes	3	E-Mail	No

E-2020DEIS-0959	11/25/2020	Caroline	Sevilla	None	Yes	3	E-Mail	Yes
E-2020DEIS-0960	11/25/2020	Mary	Shabbott	None	Yes	3	E-Mail	Yes
E-2020DEIS-0961	11/25/2020	Nicola	Nicolai	None	Yes	3	E-Mail	Yes
E-2020DEIS-0962	11/25/2020	Rosamund	Downing	None	Yes	3	E-Mail	No
E-2020DEIS-0963	11/25/2020	Barry	Farley	None	Yes	3	E-Mail	Yes
E-2020DEIS-0964	11/25/2020	Gail	Kieler	None	Yes	3	E-Mail	Yes
E-2020DEIS-0965	11/25/2020	Aixa	Fielder	None	Yes	3	E-Mail	No
E-2020DEIS-0966	11/25/2020	Shirley	Harris	None	Yes	3	E-Mail	Yes
E-2020DEIS-0967	11/25/2020	James	Halbert	None	Yes	3	E-Mail	No
E-2020DEIS-0968	11/25/2020	Martha	Burton	None	Yes	3	E-Mail	Yes
E-2020DEIS-0969	11/25/2020	James	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-0970	11/25/2020	Larry	Thompson	None	Yes	3	E-Mail	Yes
E-2020DEIS-0971	11/25/2020	Angela	Black	None	Yes	3	E-Mail	No
E-2020DEIS-0972	11/25/2020	Nick	Grantz	None	Yes	3	E-Mail	No
E-2020DEIS-0973	11/25/2020	Grant	Fujii	None	Yes	3	E-Mail	No
E-2020DEIS-0974	11/25/2020	Marina	Sagardua	None	Yes	3	E-Mail	No
E-2020DEIS-0975	11/25/2020	Laura	Herndon	None	Yes	3	E-Mail	Yes
E-2020DEIS-0976	11/25/2020	Rita	Lemkuil	None	Yes	3	E-Mail	Yes
E-2020DEIS-0977	11/25/2020	Kathryn	Spence	None	Yes	3	E-Mail	No
E-2020DEIS-0978	11/25/2020	Kate	Harder	None	Yes	3	E-Mail	Yes
E-2020DEIS-0979	11/25/2020	Debbie	Friesen	None	Yes	3	E-Mail	Yes
E-2020DEIS-0980	11/25/2020	Marilyn	Evenson	None	Yes	3	E-Mail	Yes
E-2020DEIS-0981	11/25/2020	Liz	Field	None	Yes	3	E-Mail	Yes
E-2020DEIS-0982	11/25/2020	Bronwen	Evans	None	Yes	3	E-Mail	No
E-2020DEIS-0983	11/25/2020	Elaine	Eudy	None	Yes	3	E-Mail	Yes
E-2020DEIS-0984	11/25/2020	Diane	Cote	None	Yes	3	E-Mail	No
E-2020DEIS-0985	11/25/2020	Jerald	Vinikoff	None	Yes	3	E-Mail	Yes
E-2020DEIS-0986	11/25/2020	Rob	Jursa	None	Yes	3	E-Mail	Yes
E-2020DEIS-0987	11/25/2020	Laraine	Lebron	None	Yes	3	E-Mail	No
E-2020DEIS-0988	11/25/2020	Julia	Skelton	None	Yes	3	E-Mail	Yes
E-2020DEIS-0989	11/25/2020	Mark	Feldman	None	Yes	3	E-Mail	No
E-2020DEIS-0990	11/25/2020	Linda	Pemberton	None	Yes	3	E-Mail	Yes
E-2020DEIS-0991	11/25/2020	Jaromir	Guzinski	None	Yes	3	E-Mail	Yes
E-2020DEIS-0992	11/25/2020	Perry	Gx	None	Yes	3	E-Mail	Yes
E-2020DEIS-0993	11/25/2020	Janet	Robinson	None	Yes	3	E-Mail	No
E-2020DEIS-0994	11/25/2020	Diane	Moore	None	Yes	3	E-Mail	Yes
E-2020DEIS-0995	11/25/2020	Elizabeth	Reid	None	Yes	3	E-Mail	No
E-2020DEIS-0996	11/25/2020	Kathi	Ridgway	None	Yes	3	E-Mail	No
E-2020DEIS-0997	11/25/2020	Emily	Dickinson-Adams	None	Yes	3	E-Mail	Yes
E-2020DEIS-0998	11/25/2020	Judith S	Anderson	None	Yes	3	E-Mail	Yes
E-2020DEIS-0999	11/25/2020	P	Perron	None	Yes	3	E-Mail	No
E-2020DEIS-1000	11/25/2020	Anna	Lukaszewicz	None	Yes	3	E-Mail	No

E-2020DEIS-1001	11/25/2020	Maggie	Topalian	None	Yes	3	E-Mail	No
E-2020DEIS-1002	11/25/2020	Leslie	Nieves	None	Yes	3	E-Mail	Yes
E-2020DEIS-1003	11/25/2020	Ms.	Lilith	None	Yes	3	E-Mail	Yes
E-2020DEIS-1004	11/25/2020	Rob	Roberto	None	Yes	3	E-Mail	No
E-2020DEIS-1005	11/25/2020	Lisa	Mazzola	None	Yes	3	E-Mail	Yes
E-2020DEIS-1006	11/25/2020	James	Cronin	None	Yes	3	E-Mail	No
E-2020DEIS-1007	11/25/2020	Dan	Faucher	None	Yes	3	E-Mail	No
E-2020DEIS-1008	11/25/2020	Sophia	Vassilakidis	None	Yes	3	E-Mail	No
E-2020DEIS-1009	11/25/2020	Cora	Luce	None	Yes	3	E-Mail	Yes
E-2020DEIS-1010	11/25/2020	Elaine	Johnson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1011	11/25/2020	Jane	Edsall	None	Yes	3	E-Mail	No
E-2020DEIS-1012	11/25/2020	Kyra	Rice	None	Yes	3	E-Mail	Yes
E-2020DEIS-1013	11/25/2020	Kathy	Rusch	None	Yes	3	E-Mail	No
E-2020DEIS-1014	11/25/2020	Dominick	Falzone	None	Yes	3	E-Mail	No
E-2020DEIS-1015	11/25/2020	Mary Ann	Leitch	None	Yes	3	E-Mail	No
E-2020DEIS-1016	11/25/2020	Vesna	Glavina	None	Yes	3	E-Mail	No
E-2020DEIS-1017	11/25/2020	Steve	Aydelott	None	Yes	3	E-Mail	No
E-2020DEIS-1018	11/25/2020	Sandy	Kayoyianni	None	Yes	3	E-Mail	Yes
E-2020DEIS-1019	11/25/2020	John	Varga	None	Yes	3	E-Mail	Yes
E-2020DEIS-1020	11/25/2020	Jaremy	Lynch	None	Yes	3	E-Mail	Yes
E-2020DEIS-1021	11/25/2020	Lacey	Levitt	None	Yes	3	E-Mail	Yes
E-2020DEIS-1022	11/25/2020	Lisa	Annecone	None	Yes	3	E-Mail	No
E-2020DEIS-1023	11/25/2020	Karen	Jacques	None	Yes	3	E-Mail	Yes
E-2020DEIS-1024	11/25/2020	Anthony	Montapert	None	Yes	3	E-Mail	No
E-2020DEIS-1025	11/25/2020	Stephanie	Seavers	None	Yes	3	E-Mail	No
E-2020DEIS-1026	11/25/2020	Ann	Tagawa	None	Yes	3	E-Mail	No
E-2020DEIS-1027	11/25/2020	Kathy	Walker	None	Yes	3	E-Mail	No
E-2020DEIS-1028	11/25/2020	Julie	Block	None	Yes	3	E-Mail	Yes
E-2020DEIS-1029	11/25/2020	Gary	Goetz	None	Yes	3	E-Mail	No
E-2020DEIS-1030	11/25/2020	Hollie	Hollon	None	Yes	3	E-Mail	No
E-2020DEIS-1031	11/25/2020	Karen	Kindel	None	Yes	3	E-Mail	Yes
E-2020DEIS-1032	11/25/2020	Derek	Gendvil	None	Yes	3	E-Mail	Yes
E-2020DEIS-1033	11/25/2020	Karen	Toyohara	None	Yes	3	E-Mail	Yes
E-2020DEIS-1034	11/25/2020	Stephanie	Trasoff	None	Yes	3	E-Mail	No
E-2020DEIS-1035	11/25/2020	William	Forbes	None	Yes	3	E-Mail	Yes
E-2020DEIS-1036	11/25/2020	Asano	Fertig	None	Yes	3	E-Mail	No
E-2020DEIS-1037	11/25/2020	Ann	Bailleul	None	Yes	3	E-Mail	No
E-2020DEIS-1038	11/25/2020	Joyce	Grajczyk	None	Yes	3	E-Mail	Yes
E-2020DEIS-1039	11/25/2020	Nancy	Hanson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1040	11/25/2020	Kathryn	Rose	None	Yes	3	E-Mail	Yes
E-2020DEIS-1041	11/25/2020	Lisa	Jacobson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1042	11/25/2020	Jon	Povill	None	Yes	3	E-Mail	No

E-2020DEIS-1043	11/25/2020	Danielle	Jesensky	None	Yes	3	E-Mail	No
E-2020DEIS-1044	11/25/2020	Mark	Giese	None	Yes	3	E-Mail	No
E-2020DEIS-1045	11/25/2020	Russell	Weisz	None	Yes	3	E-Mail	Yes
E-2020DEIS-1046	11/25/2020	Cheryl	Pressgrove	None	Yes	3	E-Mail	No
E-2020DEIS-1047	11/25/2020	Diane	Petrillo	None	Yes	3	E-Mail	Yes
E-2020DEIS-1048	11/25/2020	Tracey	Oullette	None	Yes	3	E-Mail	Yes
E-2020DEIS-1049	11/25/2020	Pamela	Vouros Callahan	None	Yes	3	E-Mail	Yes
E-2020DEIS-1050	11/25/2020	Steve	Tyler	None	Yes	3	E-Mail	No
E-2020DEIS-1051	11/25/2020	Patricia	Blevins	None	Yes	3	E-Mail	No
E-2020DEIS-1052	11/25/2020	Phillip	Hope	None	Yes	3	E-Mail	Yes
E-2020DEIS-1053	11/26/2020	Jean	Naples	None	Yes	3	E-Mail	Yes
E-2020DEIS-1054	11/26/2020	Elsy	Shallman	None	Yes	3	E-Mail	Yes
E-2020DEIS-1055	11/26/2020	Samuel	Sautaux	None	Yes	3	E-Mail	No
E-2020DEIS-1056	11/26/2020	Marilyn	Price	None	Yes	3	E-Mail	Yes
E-2020DEIS-1057	11/26/2020	Amitav	Dash	None	Yes	3	E-Mail	No
E-2020DEIS-1058	11/26/2020	Susan	Campbell	None	Yes	3	E-Mail	No
E-2020DEIS-1059	11/26/2020	Anne	Canepa	None	Yes	3	E-Mail	No
E-2020DEIS-1060	11/26/2020	Claudia	Correia	None	Yes	3	E-Mail	No
E-2020DEIS-1061	11/26/2020	Jorg	Gaiser	None	Yes	3	E-Mail	Yes
E-2020DEIS-1062	11/26/2020	Probyn	Gregory	None	Yes	3	E-Mail	Yes
E-2020DEIS-1063	11/26/2020	Nancy	Beavers	None	Yes	3	E-Mail	Yes
E-2020DEIS-1064	11/26/2020	Janet	Delaney	None	Yes	3	E-Mail	Yes
E-2020DEIS-1065	11/26/2020	Bradley	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-1066	11/26/2020	Debra	Corbett	None	Yes	3	E-Mail	No
E-2020DEIS-1067	11/26/2020	Noel	Orr	None	Yes	3	E-Mail	Yes
E-2020DEIS-1068	11/26/2020	Marie Louise	Morandi Long Zwicker	None	Yes	3	E-Mail	No
E-2020DEIS-1069	11/26/2020	Ellen	McCann	None	Yes	3	E-Mail	Yes
E-2020DEIS-1070	11/26/2020	Janey	McMillen	None	Yes	3	E-Mail	Yes
E-2020DEIS-1071	11/26/2020	Terrie	Williams	None	Yes	3	E-Mail	Yes
E-2020DEIS-1072	11/26/2020	Margaret	Sharp	None	Yes	3	E-Mail	No
E-2020DEIS-1073	11/26/2020	Katie	Franklin	None	Yes	3	E-Mail	No
E-2020DEIS-1074	11/26/2020	Jeffrey	Garcia	None	Yes	3	E-Mail	Yes
E-2020DEIS-1075	11/26/2020	Rob	Seltzer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1076	11/26/2020	Antonella	Nielsen	None	Yes	3	E-Mail	No
E-2020DEIS-1077	11/26/2020	Marian	Scena	None	Yes	3	E-Mail	Yes
E-2020DEIS-1078	11/26/2020	Michelle	Mehlhorn	None	Yes	3	E-Mail	No
E-2020DEIS-1079	11/26/2020	Ken	Gibb	None	Yes	3	E-Mail	Yes
E-2020DEIS-1080	11/26/2020	Abigail	Gindele	None	Yes	3	E-Mail	No
E-2020DEIS-1081	11/26/2020	Alison	Merkel	None	Yes	3	E-Mail	No
E-2020DEIS-1082	11/26/2020	Janet	Forman	None	Yes	3	E-Mail	No
E-2020DEIS-1083	11/26/2020	Michelle	Ramauro	None	Yes	3	E-Mail	No
E-2020DEIS-1084	11/26/2020	E	L	None	Yes	3	E-Mail	No

E-2020DEIS-1085	11/26/2020	Steven	Collins	None	Yes	3	E-Mail	No
E-2020DEIS-1086	11/26/2020	Jennifer	Scott	None	Yes	3	E-Mail	Yes
E-2020DEIS-1087	11/27/2020	Jana	Perinchief	None	Yes	3	E-Mail	No
E-2020DEIS-1088	11/27/2020	Nikki	Wojtalik	None	Yes	3	E-Mail	No
E-2020DEIS-1089	11/27/2020	Mary	Dosch	None	Yes	3	E-Mail	Yes
E-2020DEIS-1090	11/27/2020	Litsa	Katsarou	None	Yes	3	E-Mail	No
E-2020DEIS-1091	11/27/2020	Kristen	Reed	None	Yes	3	E-Mail	No
E-2020DEIS-1092	11/27/2020	Karin	Jeffery	None	Yes	3	E-Mail	Yes
E-2020DEIS-1093	11/27/2020	Jan	Slechten	None	Yes	3	E-Mail	No
E-2020DEIS-1094	11/27/2020	Mary	Walls	None	Yes	3	E-Mail	Yes
E-2020DEIS-1095	11/28/2020	Deborah	Sorrell	None	Yes	3	E-Mail	No
E-2020DEIS-1096	11/28/2020	Sarah	Hasted	None	Yes	3	E-Mail	Yes
E-2020DEIS-1097	11/28/2020	Jane	Broendel	None	Yes	3	E-Mail	No
E-2020DEIS-1098	11/28/2020	Michael	Cassidy	None	Yes	3	E-Mail	No
E-2020DEIS-1099	11/28/2020	Roberta	Campbell	None	Yes	3	E-Mail	Yes
E-2020DEIS-1100	11/28/2020	Charleen	Strelke	None	Yes	3	E-Mail	No
E-2020DEIS-1101	11/29/2020	Natalie	Parra	None	Yes	3	E-Mail	No
E-2020DEIS-1102	11/29/2020	Sharon	Fisher	None	Yes	3	E-Mail	No
E-2020DEIS-1103	11/29/2020	Nicola	Shaffer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1104	11/30/2020	Sigrid	Ramos	None	Yes	3	E-Mail	No
E-2020DEIS-1105	11/30/2020	Shana	Van Meter	None	Yes	3	E-Mail	No
E-2020DEIS-1106	11/30/2020	Chris	Hazynski	None	Yes	3	E-Mail	No
E-2020DEIS-1107	11/30/2020	Laura	Chariton	None	Yes	3	E-Mail	No
E-2020DEIS-1108	11/30/2020	Paul	Hohman	None	Yes	3	E-Mail	No
E-2020DEIS-1109	11/30/2020	Denise	Lytle	None	Yes	3	E-Mail	No
E-2020DEIS-1111	12/1/2020	Jim	Head	None	Yes	3	E-Mail	No
E-2020DEIS-1112	12/1/2020	Monica	Maes	None	Yes	3	E-Mail	No
E-2020DEIS-1113	12/1/2020	W.	G.	None	Yes	3	E-Mail	Yes
E-2020DEIS-1115	12/2/2020	J	Lasahn	None	Yes	3	E-Mail	No
E-2020DEIS-1118	12/2/2020	Miguel	Jaume Llop I Navas	None	Yes	3	E-Mail	No
E-2020DEIS-1121	12/2/2020	Kevin	Hughes	None	Yes	3	E-Mail	Yes
E-2020DEIS-1122	12/2/2020	Dennis	Fritzinger	None	Yes	3	E-Mail	No
E-2020DEIS-1123	12/3/2020	Petra	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-1124	12/3/2020	Esther	Blau	None	Yes	3	E-Mail	No
E-2020DEIS-1125	12/3/2020	Xenia	Lussich	None	Yes	3	E-Mail	No
E-2020DEIS-1134	12/3/2020	Carol	Leuenberger	None	Yes	3	E-Mail	No
E-2020DEIS-1139	12/4/2020	Jamie	Shultz	None	Yes	3	E-Mail	No
E-2020DEIS-1142	12/5/2020	Lisa	Simms	None	Yes	3	E-Mail	No
E-2020DEIS-1143	12/5/2020	Katie	Levine	None	Yes	3	E-Mail	No
E-2020DEIS-1144	12/5/2020	Georgia	Brewer	None	Yes	3	E-Mail	No
E-2020DEIS-1145	12/5/2020	Devon	Kendall	None	Yes	3	E-Mail	No
E-2020DEIS-1146	12/5/2020	Betsy	Wolf	None	Yes	3	E-Mail	No

E-2020DEIS-1147	12/5/2020	Dalton	Rego	None	Yes	3	E-Mail	No
E-2020DEIS-1148	12/5/2020	Rebecca	McDonough	None	Yes	3	E-Mail	No
E-2020DEIS-1149	12/5/2020	Robin	Mater	None	Yes	3	E-Mail	No
E-2020DEIS-1150	12/5/2020	Christen	King	None	Yes	3	E-Mail	No
E-2020DEIS-1151	12/5/2020	Dorothy	Blake	None	Yes	3	E-Mail	No
E-2020DEIS-1152	12/5/2020	Cheryl	Trosper	None	Yes	3	E-Mail	No
E-2020DEIS-1153	12/5/2020	Sylvie	Auger	None	Yes	3	E-Mail	No
E-2020DEIS-1154	12/5/2020	Leo	Lantz	None	Yes	3	E-Mail	No
E-2020DEIS-1155	12/5/2020	Doug	Landau	None	Yes	3	E-Mail	No
E-2020DEIS-1156	12/5/2020	Cheri	Langlois	None	Yes	3	E-Mail	No
E-2020DEIS-1157	12/5/2020	Vincent	Rusch	None	Yes	3	E-Mail	Yes
E-2020DEIS-1158	12/5/2020	Dawn	Wooten	None	Yes	3	E-Mail	No
E-2020DEIS-1159	12/5/2020	Michael	Kunkel	None	Yes	3	E-Mail	No
E-2020DEIS-1160	12/5/2020	Kristene	Soly	None	Yes	3	E-Mail	No
E-2020DEIS-1161	12/5/2020	John	Breiby	None	Yes	3	E-Mail	No
E-2020DEIS-1162	12/5/2020	Melissa	Gaskins	None	Yes	3	E-Mail	No
E-2020DEIS-1163	12/5/2020	Hannah	English	None	Yes	3	E-Mail	No
E-2020DEIS-1164	12/5/2020	Bob	Gunn	None	Yes	3	E-Mail	No
E-2020DEIS-1165	12/5/2020	Phillip	Peabody	None	Yes	3	E-Mail	No
E-2020DEIS-1166	12/5/2020	Nishanga	Bliss	None	Yes	3	E-Mail	No
E-2020DEIS-1167	12/5/2020	D	Schoech	None	Yes	3	E-Mail	No
E-2020DEIS-1168	12/5/2020	Patricia	Cachopo	None	Yes	3	E-Mail	No
E-2020DEIS-1169	12/5/2020	Ruth	Darden	None	Yes	3	E-Mail	No
E-2020DEIS-1170	12/5/2020	Roxanne	Christie	None	Yes	3	E-Mail	No
E-2020DEIS-1171	12/5/2020	Anita	Scheunemann	None	Yes	3	E-Mail	No
E-2020DEIS-1172	12/5/2020	M S	Dillon III	None	Yes	3	E-Mail	No
E-2020DEIS-1173	12/5/2020	Elke	Hochmair	None	Yes	3	E-Mail	No
E-2020DEIS-1174	12/5/2020	Kellie	Petersen	None	Yes	3	E-Mail	No
E-2020DEIS-1175	12/5/2020	Sue	Christie	None	Yes	3	E-Mail	No
E-2020DEIS-1176	12/5/2020	Lisa	Hughes	None	Yes	3	E-Mail	No
E-2020DEIS-1177	12/5/2020	Joanne	Domingoes	None	Yes	3	E-Mail	No
E-2020DEIS-1178	12/5/2020	Sabine	Sturm	None	Yes	3	E-Mail	No
E-2020DEIS-1179	12/5/2020	Mal	Gaff	None	Yes	3	E-Mail	No
E-2020DEIS-1180	12/5/2020	Robert	Veltkamp	None	Yes	3	E-Mail	No
E-2020DEIS-1181	12/5/2020	Michael	Halloran	None	Yes	3	E-Mail	No
E-2020DEIS-1182	12/5/2020	G	M	None	Yes	3	E-Mail	No
E-2020DEIS-1183	12/5/2020	Marie Claire	G	None	Yes	3	E-Mail	No
E-2020DEIS-1184	12/5/2020	Hilary	Lorrraine	None	Yes	3	E-Mail	No
E-2020DEIS-1185	12/5/2020	Florence	Lange	None	Yes	3	E-Mail	No
E-2020DEIS-1186	12/5/2020	Antonio	Dias	None	Yes	3	E-Mail	No
E-2020DEIS-1187	12/5/2020	Antonio	Garcia-Palao	None	Yes	3	E-Mail	No
E-2020DEIS-1188	12/5/2020	Derrell	Chambers	None	Yes	3	E-Mail	No

E-2020DEIS-1189	12/5/2020	Martha	Bagni Shulman	None	Yes	3	E-Mail	No
E-2020DEIS-1190	12/5/2020	Edeltraut	Renk	None	Yes	3	E-Mail	No
E-2020DEIS-1191	12/5/2020	Laura	Hix	None	Yes	3	E-Mail	No
E-2020DEIS-1192	12/5/2020	Anne	Atkinson	None	Yes	3	E-Mail	No
E-2020DEIS-1193	12/5/2020	Sandra	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-1194	12/5/2020	Ted	Cheeseman	None	Yes	3	E-Mail	No
E-2020DEIS-1195	12/5/2020	Mark	Stewart	None	Yes	3	E-Mail	No
E-2020DEIS-1196	12/5/2020	Erma	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-1197	12/5/2020	Robert	Reed	None	Yes	3	E-Mail	No
E-2020DEIS-1198	12/5/2020	Brian	Baltin	None	Yes	3	E-Mail	No
E-2020DEIS-1199	12/5/2020	Lidwina	Van Kooten	None	Yes	3	E-Mail	No
E-2020DEIS-1200	12/5/2020	Suzanne	Selby	None	Yes	3	E-Mail	No
E-2020DEIS-1201	12/5/2020	Ina	Mitchell	None	Yes	3	E-Mail	No
E-2020DEIS-1202	12/5/2020	Nancy	Bereznay	None	Yes	3	E-Mail	No
E-2020DEIS-1203	12/5/2020	Anna	Rossini	None	Yes	3	E-Mail	No
E-2020DEIS-1204	12/5/2020	Glenn	Hufnagel	None	Yes	3	E-Mail	No
E-2020DEIS-1205	12/5/2020	Automn	Gonzalez	None	Yes	3	E-Mail	No
E-2020DEIS-1206	12/5/2020	Claire	T Lawrence	None	Yes	3	E-Mail	No
E-2020DEIS-1207	12/5/2020	Mr. Shelley PhD	Dahlgren	None	Yes	3	E-Mail	No
E-2020DEIS-1208	12/5/2020	Fred	Coppotelli	None	Yes	3	E-Mail	Yes
E-2020DEIS-1209	12/5/2020	Heide	Coppotelli	None	Yes	3	E-Mail	No
E-2020DEIS-1210	12/5/2020	Michael	Essex	None	Yes	3	E-Mail	No
E-2020DEIS-1211	12/5/2020	Holly	Crawford	None	Yes	3	E-Mail	No
E-2020DEIS-1212	12/5/2020	Andrea	Difore	None	Yes	3	E-Mail	No
E-2020DEIS-1213	12/5/2020	Sherry	Harry	None	Yes	3	E-Mail	No
E-2020DEIS-1214	12/5/2020	Martha	Lyons	None	Yes	3	E-Mail	No
E-2020DEIS-1215	12/5/2020	Elliott	Sernel	None	Yes	3	E-Mail	No
E-2020DEIS-1216	12/5/2020	Patricia	Gregory	None	Yes	3	E-Mail	No
E-2020DEIS-1217	12/5/2020	Karen	Warren	None	Yes	3	E-Mail	No
E-2020DEIS-1218	12/5/2020	Laura	Ricci	None	Yes	3	E-Mail	No
E-2020DEIS-1219	12/5/2020	Margaret	Silver	None	Yes	3	E-Mail	No
E-2020DEIS-1220	12/5/2020	Gina	Sanfilippo	None	Yes	3	E-Mail	No
E-2020DEIS-1221	12/5/2020	Laurie	Zuckerman	None	Yes	3	E-Mail	No
E-2020DEIS-1222	12/5/2020	Daniel	O'Brien	None	Yes	3	E-Mail	No
E-2020DEIS-1223	12/5/2020	Monique	Tonet	None	Yes	3	E-Mail	No
E-2020DEIS-1224	12/5/2020	Amber	Coverdale Sumrall	None	Yes	3	E-Mail	No
E-2020DEIS-1225	12/5/2020	Lorraine	Manon	None	Yes	3	E-Mail	No
E-2020DEIS-1226	12/5/2020	Paul	Greenfield	None	Yes	3	E-Mail	No
E-2020DEIS-1227	12/5/2020	James	Pentelow	None	Yes	3	E-Mail	No
E-2020DEIS-1228	12/5/2020	Charles	Paxton	None	Yes	3	E-Mail	No
E-2020DEIS-1229	12/5/2020	Caroline	Sevilla	None	Yes	3	E-Mail	Yes
E-2020DEIS-1230	12/5/2020	Gerald	Bowman	None	Yes	3	E-Mail	No

E-2020DEIS-1231	12/5/2020	Martha	Waltman	None	Yes	3	E-Mail	No
E-2020DEIS-1232	12/5/2020	Giovanni	Andreotti	None	Yes	3	E-Mail	No
E-2020DEIS-1233	12/5/2020	John	Squire	None	Yes	3	E-Mail	No
E-2020DEIS-1234	12/5/2020	Leonard	Jacobs	None	Yes	3	E-Mail	No
E-2020DEIS-1235	12/5/2020	R.	Zierikzee	None	Yes	3	E-Mail	No
E-2020DEIS-1236	12/5/2020	Susan	Hunter	None	Yes	3	E-Mail	No
E-2020DEIS-1237	12/5/2020	James	Gifford	None	Yes	3	E-Mail	No
E-2020DEIS-1238	12/5/2020	Sylvia	Lewis Gunning	None	Yes	3	E-Mail	No
E-2020DEIS-1239	12/5/2020	Rosalind	Deitcher	None	Yes	3	E-Mail	No
E-2020DEIS-1240	12/5/2020	Lindi	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-1243	12/5/2020	Dona	LaSchiava	None	Yes	3	E-Mail	No
E-2020DEIS-1244	12/5/2020	Sarah	Hogan	None	Yes	3	E-Mail	No
E-2020DEIS-1245	12/5/2020	Cara	Schmidt	None	Yes	3	E-Mail	No
E-2020DEIS-1246	12/5/2020	Lenora	Charles	None	Yes	3	E-Mail	No
E-2020DEIS-1247	12/5/2020	Pamela	Miller	None	Yes	3	E-Mail	Yes
E-2020DEIS-1248	12/5/2020	Thomas	Spero	None	Yes	3	E-Mail	No
E-2020DEIS-1249	12/5/2020	Dorothy	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-1250	12/5/2020	Kelley	Lamke	None	Yes	3	E-Mail	No
E-2020DEIS-1251	12/5/2020	Monica	Riedler	None	Yes	3	E-Mail	No
E-2020DEIS-1252	12/5/2020	Francisca	James Hernandez	None	Yes	3	E-Mail	No
E-2020DEIS-1253	12/5/2020	Allison	Kermode	None	Yes	3	E-Mail	No
E-2020DEIS-1254	12/5/2020	Kelly	Connolly	None	Yes	3	E-Mail	No
E-2020DEIS-1255	12/5/2020	Caroline	Hair	None	Yes	3	E-Mail	No
E-2020DEIS-1256	12/5/2020	Marie	Young	None	Yes	3	E-Mail	No
E-2020DEIS-1257	12/5/2020	James & Patricia	Moran	None	Yes	3	E-Mail	No
E-2020DEIS-1258	12/5/2020	Lakota	Crowchild	None	Yes	3	E-Mail	No
E-2020DEIS-1259	12/5/2020	Deborah	Burckhardt	None	Yes	3	E-Mail	No
E-2020DEIS-1260	12/5/2020	Timothy	Castine	None	Yes	3	E-Mail	No
E-2020DEIS-1261	12/5/2020	Jack	Bedford	None	Yes	3	E-Mail	No
E-2020DEIS-1262	12/5/2020	Sandy	Tabin	None	Yes	3	E-Mail	No
E-2020DEIS-1263	12/5/2020	Ellen	McConnell	None	Yes	3	E-Mail	No
E-2020DEIS-1264	12/5/2020	Dennis	Schvejda	None	Yes	3	E-Mail	No
E-2020DEIS-1265	12/5/2020	Lori	Vadnais	None	Yes	3	E-Mail	No
E-2020DEIS-1266	12/5/2020	Diana D	Somps	None	Yes	3	E-Mail	No
E-2020DEIS-1267	12/5/2020	Reetta	Raag	None	Yes	3	E-Mail	No
E-2020DEIS-1268	12/5/2020	Elizabeth	Pacanovsky	None	Yes	3	E-Mail	No
E-2020DEIS-1269	12/5/2020	Tiffany	Ashley Snider	None	Yes	3	E-Mail	No
E-2020DEIS-1270	12/5/2020	Jody	Gibson	None	Yes	3	E-Mail	No
E-2020DEIS-1271	12/5/2020	Honey	Friedman	None	Yes	3	E-Mail	No
E-2020DEIS-1272	12/5/2020	Nadav	Shalev	None	Yes	3	E-Mail	No
E-2020DEIS-1273	12/5/2020	Laurel	Brewer	None	Yes	3	E-Mail	No
E-2020DEIS-1274	12/5/2020	Leslie	Burpo	None	Yes	3	E-Mail	No

E-2020DEIS-1275	12/5/2020	Sherrill	Futrell	None	Yes	3	E-Mail	Yes
E-2020DEIS-1276	12/5/2020	Deb	Castellana	None	Yes	3	E-Mail	Yes
E-2020DEIS-1277	12/5/2020	Charles	Oliveri	None	Yes	3	E-Mail	No
E-2020DEIS-1278	12/5/2020	Lori	Beraha	None	Yes	3	E-Mail	No
E-2020DEIS-1279	12/5/2020	Gail	Walter	None	Yes	3	E-Mail	No
E-2020DEIS-1280	12/5/2020	Michelle	Mitchell	None	Yes	3	E-Mail	No
E-2020DEIS-1281	12/5/2020	Gregory A	Clewell	None	Yes	3	E-Mail	No
E-2020DEIS-1282	12/5/2020	Lisa N.	Ferguson	None	Yes	3	E-Mail	No
E-2020DEIS-1283	12/5/2020	Therese	DeBing	None	Yes	3	E-Mail	No
E-2020DEIS-1284	12/5/2020	Sandra	Sullivan	None	Yes	3	E-Mail	No
E-2020DEIS-1285	12/5/2020	Joan	Glasser	None	Yes	3	E-Mail	No
E-2020DEIS-1286	12/5/2020	Jen	Plishka	None	Yes	3	E-Mail	No
E-2020DEIS-1287	12/5/2020	James	Lansing	None	Yes	3	E-Mail	No
E-2020DEIS-1288	12/5/2020	Erik	Peterson	None	Yes	3	E-Mail	No
E-2020DEIS-1289	12/5/2020	Cynthia	Morris	None	Yes	3	E-Mail	No
E-2020DEIS-1290	12/5/2020	Beti	Webb Trauth	None	Yes	3	E-Mail	No
E-2020DEIS-1291	12/5/2020	Bob	Steininger	None	Yes	3	E-Mail	Yes
E-2020DEIS-1292	12/5/2020	Cheryl	Dzubak	None	Yes	3	E-Mail	No
E-2020DEIS-1293	12/5/2020	Leslie	Lund	None	Yes	3	E-Mail	No
E-2020DEIS-1294	12/5/2020	Olive	Stamm	None	Yes	3	E-Mail	No
E-2020DEIS-1295	12/5/2020	Chantele	Singleton	None	Yes	3	E-Mail	No
E-2020DEIS-1296	12/5/2020	Marsha	Adams	None	Yes	3	E-Mail	No
E-2020DEIS-1297	12/6/2020	Deborah	Grossberg	None	Yes	3	E-Mail	No
E-2020DEIS-1298	12/6/2020	Nina	Wouk	None	Yes	3	E-Mail	No
E-2020DEIS-1299	12/6/2020	Catherine	Loudis	None	Yes	3	E-Mail	No
E-2020DEIS-1300	12/6/2020	Coleman	Bynes	None	Yes	3	E-Mail	No
E-2020DEIS-1301	12/6/2020	Francisca	Brechbuhler	None	Yes	3	E-Mail	No
E-2020DEIS-1302	12/6/2020	Paula	Zerzan	None	Yes	3	E-Mail	No
E-2020DEIS-1303	12/6/2020	Doris	Rodriguez	None	Yes	3	E-Mail	No
E-2020DEIS-1304	12/6/2020	Miram L	Iosupovici	None	Yes	3	E-Mail	No
E-2020DEIS-1305	12/6/2020	Cathy	Sikes	None	Yes	3	E-Mail	No
E-2020DEIS-1306	12/6/2020	Carol	Sears	None	Yes	3	E-Mail	No
E-2020DEIS-1307	12/6/2020	Deborah	Sorrell	None	Yes	3	E-Mail	Yes
E-2020DEIS-1308	12/6/2020	Maja	L	None	Yes	3	E-Mail	No
E-2020DEIS-1309	12/6/2020	Bruce	Cratty	None	Yes	3	E-Mail	No
E-2020DEIS-1310	12/6/2020	Cindy	Bassman	None	Yes	3	E-Mail	No
E-2020DEIS-1311	12/6/2020	Kate	Mullan	None	Yes	3	E-Mail	No
E-2020DEIS-1312	12/6/2020	Gina	Estrada	None	Yes	3	E-Mail	No
E-2020DEIS-1313	12/6/2020	Mary	Bangs	None	Yes	3	E-Mail	No
E-2020DEIS-1314	12/6/2020	Walter	Schultz	None	Yes	3	E-Mail	No
E-2020DEIS-1315	12/6/2020	William	Hayes	None	Yes	3	E-Mail	No
E-2020DEIS-1316	12/6/2020	Mary	Chong	None	Yes	3	E-Mail	No

E-2020DEIS-1317	12/6/2020	Tove	Reece	None	Yes	3	E-Mail	No
E-2020DEIS-1319	12/6/2020	Kathy	Tobey	None	Yes	3	E-Mail	No
E-2020DEIS-1320	12/6/2020	Michael	Benton	None	Yes	3	E-Mail	No
E-2020DEIS-1321	12/6/2020	Karen	Slote	None	Yes	3	E-Mail	Yes
E-2020DEIS-1322	12/6/2020	Michelle	McKenney	None	Yes	3	E-Mail	No
E-2020DEIS-1323	12/6/2020	Randall	Hartman	None	Yes	3	E-Mail	No
E-2020DEIS-1324	12/6/2020	Lindsay	Kowis	None	Yes	3	E-Mail	No
E-2020DEIS-1325	12/6/2020	Carolyn	Dennison	None	Yes	3	E-Mail	No
E-2020DEIS-1326	12/6/2020	Blake	Wu	None	Yes	3	E-Mail	Yes
E-2020DEIS-1327	12/6/2020	JoEllen	Rudolph	None	Yes	3	E-Mail	No
E-2020DEIS-1328	12/6/2020	Martina	Gubler	None	Yes	3	E-Mail	No
E-2020DEIS-1329	12/7/2020	Skot	McDaniel	None	Yes	3	E-Mail	No
E-2020DEIS-1330	12/7/2020	Elizabeth	Byrne	None	Yes	3	E-Mail	No
E-2020DEIS-1331	12/7/2020	Zachary	Butler	None	Yes	3	E-Mail	No
E-2020DEIS-1332	12/7/2020	Judith	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-1333	12/7/2020	Vincent	Rusch	None	Yes	3	E-Mail	Yes
E-2020DEIS-1334	12/7/2020	Dusty	Dodge	None	Yes	3	E-Mail	Yes
E-2020DEIS-1335	12/7/2020	Robert	Fuchs	None	Yes	3	E-Mail	Yes
E-2020DEIS-1336	12/7/2020	Jane	Nachazel-Ruck	None	Yes	3	E-Mail	Yes
E-2020DEIS-1337	12/7/2020	Kevin	Vaught	None	Yes	3	E-Mail	Yes
E-2020DEIS-1338	12/7/2020	Lorenz	Steininger	None	Yes	3	E-Mail	No
E-2020DEIS-1339	12/7/2020	Kerri	McGoldrick	None	Yes	3	E-Mail	Yes
E-2020DEIS-1340	12/7/2020	Mary	Shabbott	None	Yes	3	E-Mail	Yes
E-2020DEIS-1341	12/7/2020	Sarah	Hamilton	None	Yes	3	E-Mail	Yes
E-2020DEIS-1342	12/7/2020	Lisa	Mazzola	None	Yes	3	E-Mail	Yes
E-2020DEIS-1343	12/7/2020	Marylen	Kincer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1344	12/7/2020	Dawn	Albanese	None	Yes	3	E-Mail	Yes
E-2020DEIS-1345	12/7/2020	Jodi	Rodar	None	Yes	3	E-Mail	Yes
E-2020DEIS-1346	12/7/2020	Allen	Sanders	None	Yes	3	E-Mail	No
E-2020DEIS-1347	12/7/2020	Becky	Monger	None	Yes	3	E-Mail	Yes
E-2020DEIS-1348	12/7/2020	Carol	Hoke	None	Yes	3	E-Mail	Yes
E-2020DEIS-1349	12/7/2020	Linda	Bescript	None	Yes	3	E-Mail	No
E-2020DEIS-1350	12/7/2020	Michael	Essex	None	Yes	3	E-Mail	Yes
E-2020DEIS-1351	12/7/2020	Brian	Field	None	Yes	3	E-Mail	No
E-2020DEIS-1352	12/7/2020	Rhonda	Johnson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1353	12/7/2020	Les	Roberts	None	Yes	3	E-Mail	Yes
E-2020DEIS-1354	12/7/2020	Mary	Thorpe	None	Yes	3	E-Mail	No
E-2020DEIS-1355	12/7/2020	Diane	Kraft	None	Yes	3	E-Mail	No
E-2020DEIS-1356	12/7/2020	Michael	Zeller	None	Yes	3	E-Mail	Yes
E-2020DEIS-1357	12/7/2020	Fred	Coppotelli	None	Yes	3	E-Mail	Yes
E-2020DEIS-1358	12/7/2020	Heide	Catherina Coppotelli	None	Yes	3	E-Mail	Yes
E-2020DEIS-1359	12/7/2020	Ann	DeBolt	None	Yes	3	E-Mail	No

E-2020DEIS-1360	12/7/2020	Beth	Stanberry	None	Yes	3	E-Mail	Yes
E-2020DEIS-1361	12/7/2020	Stephen	Cutler	None	Yes	3	E-Mail	No
E-2020DEIS-1362	12/7/2020	Michelle	Mitchell	None	Yes	3	E-Mail	Yes
E-2020DEIS-1363	12/7/2020	Roy	Fuller	None	Yes	3	E-Mail	No
E-2020DEIS-1364	12/7/2020	Jessica	Cresseveur	None	Yes	3	E-Mail	Yes
E-2020DEIS-1365	12/7/2020	Kimberly	Short	None	Yes	3	E-Mail	No
E-2020DEIS-1366	12/7/2020	Cindy	Bassman	None	Yes	3	E-Mail	Yes
E-2020DEIS-1367	12/7/2020	Caryn	Graves	None	Yes	3	E-Mail	Yes
E-2020DEIS-1368	12/7/2020	Caroline	Sevilla	None	Yes	3	E-Mail	Yes
E-2020DEIS-1369	12/7/2020	Margaret	Goodale	None	Yes	3	E-Mail	No
E-2020DEIS-1370	12/7/2020	Sarah	Hasted	None	Yes	3	E-Mail	Yes
E-2020DEIS-1371	12/7/2020	Laura	Herndon	None	Yes	3	E-Mail	Yes
E-2020DEIS-1372	12/7/2020	Judith S	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-1373	12/7/2020	Terrie	Williams	None	Yes	3	E-Mail	Yes
E-2020DEIS-1374	12/7/2020	Bob	Steininger	None	Yes	3	E-Mail	No
E-2020DEIS-1375	12/7/2020	Tracy	Oullette	None	Yes	3	E-Mail	No
E-2020DEIS-1376	12/7/2020	Gerry	Miliken	None	Yes	3	E-Mail	Yes
E-2020DEIS-1377	12/7/2020	Chris	Hazynski	None	Yes	3	E-Mail	Yes
E-2020DEIS-1378	12/7/2020	Veronika	Meyer-Zietz	None	Yes	3	E-Mail	No
E-2020DEIS-1379	12/7/2020	Tina	Brenza	None	Yes	3	E-Mail	Yes
E-2020DEIS-1380	12/7/2020	Gerard	Couchoud	None	Yes	3	E-Mail	Yes
E-2020DEIS-1381	12/7/2020	Laura	Regan	None	Yes	3	E-Mail	Yes
E-2020DEIS-1382	12/7/2020	Zee	Fisher	None	Yes	3	E-Mail	No
E-2020DEIS-1383	12/7/2020	Liz	Dyer	None	Yes	3	E-Mail	No
E-2020DEIS-1384	12/7/2020	Sue	Horwood	None	Yes	3	E-Mail	Yes
E-2020DEIS-1385	12/7/2020	Carol	Thompson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1386	12/7/2020	Richard	Spotts	None	Yes	3	E-Mail	No
E-2020DEIS-1387	12/7/2020	Antonia	Pavlovich	None	Yes	3	E-Mail	No
E-2020DEIS-1388	12/7/2020	Ann	Haflich	None	Yes	3	E-Mail	No
E-2020DEIS-1389	12/7/2020	Linda	Takemori	None	Yes	3	E-Mail	No
E-2020DEIS-1390	12/7/2020	Nico	Duon	None	Yes	3	E-Mail	No
E-2020DEIS-1391	12/7/2020	Phillip	Hope	None	Yes	3	E-Mail	Yes
E-2020DEIS-1392	12/7/2020	Jaszmene	Smith	None	Yes	3	E-Mail	Yes
E-2020DEIS-1393	12/7/2020	Tracey	Katseoros	None	Yes	3	E-Mail	No
E-2020DEIS-1394	12/7/2020	Marilyn	Evenson	None	Yes	3	E-Mail	No
E-2020DEIS-1395	12/7/2020	Francine	Traniello	None	Yes	3	E-Mail	Yes
E-2020DEIS-1396	12/7/2020	Matthew	Franck	None	Yes	3	E-Mail	Yes
E-2020DEIS-1397	12/7/2020	Adam	D''Onofrio	None	Yes	3	E-Mail	No
E-2020DEIS-1398	12/7/2020	Elaine	Benjamin	None	Yes	3	E-Mail	Yes
E-2020DEIS-1399	12/7/2020	Rhonda	Bradley	None	Yes	3	E-Mail	Yes
E-2020DEIS-1400	12/7/2020	Natalie	Parra	None	Yes	3	E-Mail	Yes
E-2020DEIS-1401	12/7/2020	Christina	Viljoen	None	Yes	3	E-Mail	Yes

E-2020DEIS-1402	12/7/2020	Marjorie	Angelo	None	Yes	3	E-Mail	Yes
E-2020DEIS-1403	12/7/2020	Nancy	Jacobs	None	Yes	3	E-Mail	No
E-2020DEIS-1404	12/7/2020	Stephen	Donnelly	None	Yes	3	E-Mail	Yes
E-2020DEIS-1405	12/7/2020	I M	Lopez	None	Yes	3	E-Mail	Yes
E-2020DEIS-1406	12/7/2020	Dennis	Kreiner	None	Yes	3	E-Mail	Yes
E-2020DEIS-1407	12/7/2020	Probyn	Gregory	None	Yes	3	E-Mail	Yes
E-2020DEIS-1408	12/7/2020	Carol	Book	None	Yes	3	E-Mail	No
E-2020DEIS-1409	12/7/2020	Freddie	Williams	None	Yes	3	E-Mail	Yes
E-2020DEIS-1410	12/7/2020	Amber	Coverdale Sumrall	None	Yes	3	E-Mail	No
E-2020DEIS-1411	12/7/2020	Emily	Dickinson-Adams	None	Yes	3	E-Mail	Yes
E-2020DEIS-1412	12/7/2020	Sharon	Lieberman	None	Yes	3	E-Mail	Yes
E-2020DEIS-1413	12/7/2020	Lise	Kastigar	None	Yes	3	E-Mail	Yes
E-2020DEIS-1414	12/7/2020	Rhonda	Anderson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1415	12/7/2020	Pamela	Vouros Callahan	None	Yes	3	E-Mail	Yes
E-2020DEIS-1416	12/7/2020	Nicole	Shaffer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1417	12/7/2020	Rob	Seltzer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1418	12/7/2020	Elaine	Taylor	None	Yes	3	E-Mail	Yes
E-2020DEIS-1419	12/7/2020	Adrienne	Ross	None	Yes	3	E-Mail	No
E-2020DEIS-1420	12/7/2020	Lucero	Sanchez	None	Yes	3	E-Mail	No
E-2020DEIS-1421	12/7/2020	Martha	Burton	None	Yes	3	E-Mail	Yes
E-2020DEIS-1422	12/7/2020	Jennifer	Cunningham	None	Yes	3	E-Mail	No
E-2020DEIS-1423	12/7/2020	Donna	Leavitt	None	Yes	3	E-Mail	No
E-2020DEIS-1424	12/7/2020	David	Boyer	None	Yes	3	E-Mail	Yes
E-2020DEIS-1425	12/7/2020	Jillian	Fiedor	None	Yes	3	E-Mail	Yes
E-2020DEIS-1426	12/7/2020	Julia	Skelton	None	Yes	3	E-Mail	Yes
E-2020DEIS-1427	12/7/2020	Judy	Miller-Lyons	None	Yes	3	E-Mail	Yes
E-2020DEIS-1428	12/7/2020	John	Miller	None	Yes	3	E-Mail	No
E-2020DEIS-1429	12/7/2020	Anne	Veraldi	None	Yes	3	E-Mail	No
E-2020DEIS-1430	12/7/2020	Derek	Gendvil	None	Yes	3	E-Mail	No
E-2020DEIS-1431	12/7/2020	Ms.	Lilith	None	Yes	3	E-Mail	Yes
E-2020DEIS-1432	12/7/2020	Rayline	Dean	None	Yes	3	E-Mail	Yes
E-2020DEIS-1433	12/7/2020	Annette	Hummell	None	Yes	3	E-Mail	No
E-2020DEIS-1434	12/7/2020	Maggie	Topalian	None	Yes	3	E-Mail	Yes
E-2020DEIS-1435	12/7/2020	Erica	Johanson	None	Yes	3	E-Mail	Yes
E-2020DEIS-1436	12/7/2020	Carole	Stepp	None	Yes	3	E-Mail	No
E-2020DEIS-1437	12/7/2020	Jean	Naples	None	Yes	3	E-Mail	Yes
E-2020DEIS-1438	12/7/2020	Mary	Wylie	None	Yes	3	E-Mail	Yes
E-2020DEIS-1439	12/7/2020	Tiffany	Ashley Snider	None	Yes	3	E-Mail	Yes
E-2020DEIS-1440	12/7/2020	Maureen	Knutsen	None	Yes	3	E-Mail	Yes
E-2020DEIS-1441	12/7/2020	Garry	Taroli	None	Yes	3	E-Mail	No
E-2020DEIS-1442	12/7/2020	Alan	Wojtalik	None	Yes	3	E-Mail	No
E-2020DEIS-1443	12/7/2020	Julie	Block	None	Yes	3	E-Mail	Yes

E-2020DEIS-1444	12/7/2020	Gay	Goden	None	Yes	3	E-Mail	Yes
E-2020DEIS-1445	12/7/2020	Dominick	Falzone	None	Yes	3	E-Mail	Yes
E-2020DEIS-1446	12/7/2020	Evelyn	Coltman	None	Yes	3	E-Mail	Yes
E-2020DEIS-1447	12/7/2020	Gail	Wiemann	None	Yes	3	E-Mail	No
E-2020DEIS-1448	12/7/2020	Therese	Debing	None	Yes	3	E-Mail	Yes
E-2020DEIS-1449	12/7/2020	Cheryl	Dzubak	None	Yes	3	E-Mail	Yes
E-2020DEIS-1450	12/7/2020	Todd	Walker	None	Yes	3	E-Mail	No
E-2020DEIS-1451	12/7/2020	John	Harris	None	Yes	3	E-Mail	Yes
E-2020DEIS-1452	12/7/2020	Michelle	MacKenzie	None	Yes	3	E-Mail	Yes
E-2020DEIS-1453	12/7/2020	Christina	Novelo	None	Yes	3	E-Mail	No
E-2020DEIS-1454	12/7/2020	Kathryn	Ross	None	Yes	3	E-Mail	No
E-2020DEIS-1455	12/7/2020	Greg	Sells	None	Yes	3	E-Mail	Yes
E-2020DEIS-1456	12/7/2020	Karen	Berger	None	Yes	3	E-Mail	Yes
E-2020DEIS-1457	12/7/2020	Maureen	Porcelli	None	Yes	3	E-Mail	Yes
E-2020DEIS-1458	12/7/2020	Melissa	Gaskins	None	Yes	3	E-Mail	Yes
E-2020DEIS-1459	12/7/2020	Teo	Teo	None	Yes	3	E-Mail	No
E-2020DEIS-1460	12/7/2020	Diane	Petrillo	None	Yes	3	E-Mail	Yes
E-2020DEIS-1461	12/8/2020	Don	McKelvey	None	Yes	3	E-Mail	Yes
E-2020DEIS-1462	12/8/2020	Dr. Robert and Ginny L	Bonometti	None	Yes	3	E-Mail	No
E-2020DEIS-1463	12/8/2020	Nancy	Beavers	None	Yes	3	E-Mail	Yes
E-2020DEIS-1464	12/8/2020	Bruce	Cratty	None	Yes	3	E-Mail	Yes
E-2020DEIS-1465	12/8/2020	Judith	Hansell	None	Yes	3	E-Mail	Yes
E-2020DEIS-1466	12/8/2020	Pedro	Mercado	None	Yes	3	E-Mail	Yes
E-2020DEIS-1467	12/8/2020	Alan	Bedard	None	Yes	3	E-Mail	No
E-2020DEIS-1468	12/8/2020	Ellen	Koivisto	None	Yes	3	E-Mail	Yes
E-2020DEIS-1470	12/8/2020	Patricia	Packer	None	Yes	3	E-Mail	No
E-2020DEIS-1471	12/8/2020	Brenda	Michaels	None	Yes	3	E-Mail	No
E-2020DEIS-1529	12/17/2020	Darin	Keever	None	Yes	4	E-Mail	No
E-2020DEIS-1530	12/17/2020	Richard	Fisher	None	Yes	4	E-Mail	No
E-2020DEIS-1531	12/17/2020	Steve	Willits	None	Yes	4	E-Mail	No
E-2020DEIS-01534	12/17/2020	Greg	Casamayor	None	Yes	4	E-Mail	No
E-2020DEIS-01535	12/17/2020	Gerald T.	Greak	None	Yes	4	E-Mail	No
E-2020DEIS-01537	12/17/2020	Michael	Meinersmann	None	Yes	4	E-Mail	No
E-2020DEIS-01538	12/17/2020	Andrea	Hanson	None	Yes	4	E-Mail	No
E-2020DEIS-01539	12/17/2020	Ray	Bentele	None	Yes	4	E-Mail	No
E-2020DEIS-01540	12/17/2020	Bob	Hunkins	None	Yes	4	E-Mail	No
E-2020DEIS-01542	12/17/2020	Francis Ed	Kangas	None	Yes	4	E-Mail	No
E-2020DEIS-01544	12/17/2020	Jack	Sharp	None	Yes	4	E-Mail	No
E-2020DEIS-01546	12/18/2020	Andrew	Kramer	None	Yes	4	E-Mail	No
E-2020DEIS-01548	12/18/2020	Peter van	Oosten	None	Yes	4	E-Mail	No
E-2020DEIS-01550	12/18/2020	Chuck	Wielchowsky	None	Yes	4	E-Mail	No
E-2020DEIS-01551	12/18/2020	Jay	Leggett	None	Yes	4	E-Mail	No

E-2020DEIS-01552	12/19/2020	Don	Mitchell	None	Yes	4	E-Mail	No
E-2020DEIS-01553	12/19/2020	Dave	Christensen	None	Yes	4	E-Mail	No
E-2020DEIS-01562	12/21/2020	Steven	Press	None	Yes	4	E-Mail	No
E-2020DEIS-01564	12/22/2020	Ben	Dotson	None	Yes	4	E-Mail	No
E-2020DEIS-01566	12/23/2020	Graham	Marshall	None	Yes	4	E-Mail	No
E-2020DEIS-01647	12/26/2020	David J.	Boldra	None	Yes	4	E-Mail	No
E-2020DEIS-01648	12/26/2020	Denise	Parsons	None	Yes	4	E-Mail	No
E-2020DEIS-01659	12/27/2020	Cheryl	Morvillo	None	Yes	4	E-Mail	No
E-2020DEIS-01660	12/27/2020	Thann	Dauterive	None	Yes	4	E-Mail	No
E-2020DEIS-01661	12/27/2020	Mary	Morgan	None	Yes	4	E-Mail	No
E-2020DEIS-01663	12/28/2020	Sherry	Marshall	None	Yes	4	E-Mail	No
E-2020DEIS-01670	12/29/2020	Aaron	Brittain	None	Yes	4	E-Mail	No
E-2020DEIS-01673	12/29/2020	Kelly	Soich	None	Yes	4	E-Mail	No
E-2020DEIS-01678	12/30/2020	Jim	Eisele	None	Yes	4	E-Mail	No
E-2020DEIS-01680	12/30/2020	Frank	Peacock	None	Yes	4	E-Mail	No
E-2020DEIS-01683	12/30/2020	Mark	Pearson	None	Yes	4	E-Mail	No
E-2020DEIS-01684	12/30/2020	Robert	Buddingh	None	Yes	4	E-Mail	No
E-2020DEIS-01685	12/30/2020	Nishant	Krishnan	None	Yes	4	E-Mail	No
E-2020DEIS-01689	1/3/2021	Denise	Kay-Hanrahan	None	Yes	4	E-Mail	No
E-2020DEIS-01692	1/4/2021	John	Plunkett	None	Yes	4	E-Mail	No
E-2020DEIS-01693	1/4/2021	David	Grissom	None	Yes	4	E-Mail	No
E-2020DEIS-01477	12/9/2020	Kathy	Bankston	None	Yes	1	E-Mail	No
E-2020DEIS-01478	12/9/2020	Corinne	Maddox	None	Yes	1	E-Mail	No
E-2020DEIS-01515	12/14/2020	Alfredo	Vazquez	None	Yes	1	E-Mail	No
E-2020DEIS-01675	12/29/2020	William	Forbes	None	Yes	1	E-Mail	No
E-2020DEIS-01490	12/9/2020	Frank	Blake	None	Yes	2	E-Mail	No
E-2020DEIS-01523	12/15/2020	Fletcher	Rose	None	Yes	2	E-Mail	No
E-2020DEIS-01527	12/17/2020	Sharron	Stewart	None	Yes	2	E-Mail	No
E-2020DEIS-01474	12/8/2020	Janet	Forman	None	Yes	3	E-Mail	No
E-2020DEIS-01475	12/9/2020	Janet	Delaney	None	Yes	3	E-Mail	No
E-2020DEIS-01476	12/9/2020	Holly	Crawford	None	Yes	3	E-Mail	No
E-2020DEIS-01479	12/9/2020	Margaret	Halbeisen	None	Yes	3	E-Mail	No
E-2020DEIS-01480	12/9/2020	Karen	Slote	None	Yes	3	E-Mail	No
E-2020DEIS-01481	12/9/2020	Haydee	Pisa	None	Yes	3	E-Mail	No
E-2020DEIS-01482	12/9/2020	Tami	Shreurs	None	Yes	3	E-Mail	No
E-2020DEIS-01485	12/9/2020	Kathy	Aub	None	Yes	3	E-Mail	No
E-2020DEIS-01486	12/9/2020	Amitav	Dash	None	Yes	3	E-Mail	No
E-2020DEIS-01488	12/9/2020	Christine	Miller	None	Yes	3	E-Mail	No
E-2020DEIS-01489	12/9/2020	Kelly	Drinnen	None	Yes	3	E-Mail	No
E-2020DEIS-01491	12/10/2020	Susan	Lewis	None	Yes	3	E-Mail	No
E-2020DEIS-01492	12/10/2020	Margarite	Salone	None	Yes	3	E-Mail	No
E-2020DEIS-01493	12/10/2020	Douglas	Powless	None	Yes	3	E-Mail	No

E-2020DEIS-01494	12/10/2020	Nicole	McKenzie	None	Yes	3	E-Mail	No
E-2020DEIS-01495	12/10/2020	Heather	Ruckman	None	Yes	3	E-Mail	No
E-2020DEIS-01496	12/10/2020	Samantha	Lee	None	Yes	3	E-Mail	No
E-2020DEIS-01497	12/11/2020	Sylvia	Cooper	None	Yes	3	E-Mail	No
E-2020DEIS-01499	12/11/2020	Denise	Lytle	None	Yes	3	E-Mail	No
E-2020DEIS-01501	12/11/2020	Nikki	Wojtalik	None	Yes	3	E-Mail	No
E-2020DEIS-01502	12/11/2020	Judy	Smario-Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-01503	12/12/2020	Vicki	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-01504	12/12/2020	Ken	Goldsmith	None	Yes	3	E-Mail	No
E-2020DEIS-01505	12/13/2020	Paulo	Catapano	None	Yes	3	E-Mail	No
E-2020DEIS-01507	12/13/2020	Sarah	Sowambur	None	Yes	3	E-Mail	No
E-2020DEIS-01508	12/13/2020	Bruce	Cratty	None	Yes	3	E-Mail	No
E-2020DEIS-01510	12/13/2020	Ellen	Gutfleisch	None	Yes	3	E-Mail	No
E-2020DEIS-01511	12/13/2020	Linda	Petrulias	None	Yes	3	E-Mail	No
E-2020DEIS-01512	12/13/2020	Monique	Musialowski	None	Yes	3	E-Mail	No
E-2020DEIS-01513	12/14/2020	Angie	Rhinier	None	Yes	3	E-Mail	No
E-2020DEIS-01514	12/14/2020	Richard	Clark	None	Yes	3	E-Mail	No
E-2020DEIS-01519	12/14/2020	Julianna	Golding	None	Yes	3	E-Mail	No
E-2020DEIS-01520	12/15/2020	Audrey	Tillinghast	None	Yes	3	E-Mail	No
E-2020DEIS-01522	12/15/2020	Janet	Rauscher	None	Yes	3	E-Mail	No
E-2020DEIS-01532	12/17/2020	Catherine	Cameron	None	Yes	3	E-Mail	No
E-2020DEIS-01545	12/17/2020	Madeleine	Graham	None	Yes	3	E-Mail	No
E-2020DEIS-01549	12/18/2020	Michael	Garitty	None	Yes	3	E-Mail	No
E-2020DEIS-01556	12/19/2020	Donald	Shaw	None	Yes	3	E-Mail	No
E-2020DEIS-01559	12/20/2020	Kat	Russell	None	Yes	3	E-Mail	No
E-2020DEIS-01567	12/24/2020	Kathie	Kingett	None	Yes	3	E-Mail	No
E-2020DEIS-01568	12/24/2020	Carol	Collins	None	Yes	3	E-Mail	No
E-2020DEIS-01569	12/24/2020	Perry	Gx	None	Yes	3	E-Mail	No
E-2020DEIS-01570	12/24/2020	Ann	Neef	None	Yes	3	E-Mail	No
E-2020DEIS-01571	12/24/2020	Steve	Schueth	None	Yes	3	E-Mail	No
E-2020DEIS-01572	12/24/2020	Sue	Horwood	None	Yes	3	E-Mail	No
E-2020DEIS-01573	12/24/2020	Pamela	Miller	None	Yes	3	E-Mail	No
E-2020DEIS-01574	12/24/2020	Daniel	Obrien	None	Yes	3	E-Mail	No
E-2020DEIS-01575	12/24/2020	Mary	Walls	None	Yes	3	E-Mail	No
E-2020DEIS-01576	12/24/2020	Susan	Sloan	None	Yes	3	E-Mail	No
E-2020DEIS-01577	12/24/2020	Mark	Feldman	None	Yes	3	E-Mail	No
E-2020DEIS-01578	12/24/2020	Laura	Herndon	None	Yes	3	E-Mail	No
E-2020DEIS-01579	12/24/2020	Dorothea	Stephan	None	Yes	3	E-Mail	No
E-2020DEIS-01580	12/24/2020	Mary Ann	Leitch	None	Yes	3	E-Mail	No
E-2020DEIS-01581	12/24/2020	Nancy	Thelot	None	Yes	3	E-Mail	No
E-2020DEIS-01582	12/24/2020	Caroline	Sevilla	None	Yes	3	E-Mail	No
E-2020DEIS-01583	12/24/2020	Georgia	Mattingly	None	Yes	3	E-Mail	No

E-2020DEIS-01584	12/24/2020	Kimberly	Dunbar	None	Yes	3	E-Mail	No
E-2020DEIS-01585	12/24/2020	Judy	Whitehouse	None	Yes	3	E-Mail	No
E-2020DEIS-01586	12/24/2020	Susan	Campbell	None	Yes	3	E-Mail	No
E-2020DEIS-01587	12/24/2020	Caryn	Graves	None	Yes	3	E-Mail	No
E-2020DEIS-01588	12/24/2020	Garry	Taroli	None	Yes	3	E-Mail	No
E-2020DEIS-01589	12/24/2020	Phillip	Hope	None	Yes	3	E-Mail	No
E-2020DEIS-01590	12/24/2020	Debra	Pence	None	Yes	3	E-Mail	No
E-2020DEIS-01591	12/24/2020	Stefan	Taylor	None	Yes	3	E-Mail	No
E-2020DEIS-01592	12/24/2020	Lisa	Mazzola	None	Yes	3	E-Mail	No
E-2020DEIS-01593	12/24/2020	Joe	McCullough	None	Yes	3	E-Mail	No
E-2020DEIS-01594	12/24/2020	Bronwen	Evans	None	Yes	3	E-Mail	No
E-2020DEIS-01595	12/24/2020	Kyra	Rice	None	Yes	3	E-Mail	No
E-2020DEIS-01596	12/24/2020	Claudia	Wornum	None	Yes	3	E-Mail	No
E-2020DEIS-01597	12/24/2020	Dominick	Falzone	None	Yes	3	E-Mail	No
E-2020DEIS-01598	12/24/2020	Rob	Seltzer	None	Yes	3	E-Mail	No
E-2020DEIS-01599	12/24/2020	Steve	Lucas	None	Yes	3	E-Mail	No
E-2020DEIS-01600	12/24/2020	Lorenz	Steininger	None	Yes	3	E-Mail	No
E-2020DEIS-01601	12/24/2020	Julie	Block	None	Yes	3	E-Mail	No
E-2020DEIS-01602	12/24/2020	Rita	Lemkuil	None	Yes	3	E-Mail	No
E-2020DEIS-01603	12/24/2020	David	Boyer	None	Yes	3	E-Mail	No
E-2020DEIS-01604	12/24/2020	Rhonda	Johnson	None	Yes	3	E-Mail	No
E-2020DEIS-01605	12/24/2020	Lora	Hamrock	None	Yes	3	E-Mail	No
E-2020DEIS-01606	12/24/2020	Joel	Gruwell	None	Yes	3	E-Mail	No
E-2020DEIS-01607	12/24/2020	Freddie	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-01608	12/24/2020	Jillian	Fieldor	None	Yes	3	E-Mail	No
E-2020DEIS-01609	12/24/2020	Dennis	Kreiner	None	Yes	3	E-Mail	No
E-2020DEIS-01610	12/24/2020	Jennifer	Cunningham	None	Yes	3	E-Mail	No
E-2020DEIS-01611	12/24/2020	Dorothy	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-01612	12/24/2020	Dan	Horton	None	Yes	3	E-Mail	No
E-2020DEIS-01613	12/24/2020	Grant	Fujii	None	Yes	3	E-Mail	No
E-2020DEIS-01614	12/24/2020	Stevie	Sugarman	None	Yes	3	E-Mail	No
E-2020DEIS-01615	12/24/2020	Diana	Bohn	None	Yes	3	E-Mail	No
E-2020DEIS-01616	12/24/2020	Mary	Shabbott	None	Yes	3	E-Mail	No
E-2020DEIS-01617	12/24/2020	Alana	Willroth	None	Yes	3	E-Mail	No
E-2020DEIS-01618	12/24/2020	Christine	Hinze	None	Yes	3	E-Mail	No
E-2020DEIS-01619	12/24/2020	Dianne	Douglas	None	Yes	3	E-Mail	No
E-2020DEIS-01620	12/24/2020	Lacey	Levitt	None	Yes	3	E-Mail	No
E-2020DEIS-01621	12/24/2020	Becky	Monger	None	Yes	3	E-Mail	No
E-2020DEIS-01622	12/24/2020	Judith S.	Anderson	None	Yes	3	E-Mail	No
E-2020DEIS-01623	12/24/2020	Laraine	Bowen	None	Yes	3	E-Mail	No
E-2020DEIS-01624	12/24/2020	Anthony	Montapert	None	Yes	3	E-Mail	No
E-2020DEIS-01625	12/24/2020	Ellen	Gutfleisch	None	Yes	3	E-Mail	No

E-2020DEIS-01626	12/24/2020	Russell	Weisz	None	Yes	3	E-Mail	No
E-2020DEIS-01627	12/24/2020	Dawn	Albanese	None	Yes	3	E-Mail	No
E-2020DEIS-01628	12/24/2020	Kathryn	Rose	None	Yes	3	E-Mail	No
E-2020DEIS-01629	12/24/2020	Sharon	Lieberman	None	Yes	3	E-Mail	No
E-2020DEIS-01630	12/24/2020	Barry	Gurdin	None	Yes	3	E-Mail	No
E-2020DEIS-01631	12/24/2020	Thomas	Talbot	None	Yes	3	E-Mail	No
E-2020DEIS-01632	12/24/2020	Marilyn	Price	None	Yes	3	E-Mail	No
E-2020DEIS-01633	12/24/2020	Tracy	Oullette	None	Yes	3	E-Mail	No
E-2020DEIS-01634	12/25/2020	Elaine	Fischer	None	Yes	3	E-Mail	No
E-2020DEIS-01635	12/25/2020	Jorg	Gaiser	None	Yes	3	E-Mail	No
E-2020DEIS-01636	12/25/2020	Shana	Van Meter	None	Yes	3	E-Mail	No
E-2020DEIS-01637	12/25/2020	Alan	Bedard	None	Yes	3	E-Mail	No
E-2020DEIS-01638	12/25/2020	Kevin	Hughes	None	Yes	3	E-Mail	No
E-2020DEIS-01639	12/25/2020	Janet	Forman	None	Yes	3	E-Mail	No
E-2020DEIS-01640	12/25/2020	Orva M.	Gullett	None	Yes	3	E-Mail	No
E-2020DEIS-01641	12/25/2020	Sabina	Pinto	None	Yes	3	E-Mail	No
E-2020DEIS-01642	12/25/2020	Lil	Bobow	None	Yes	3	E-Mail	No
E-2020DEIS-01643	12/25/2020	Sue	Dougherty	None	Yes	3	E-Mail	No
E-2020DEIS-01644	12/25/2020	Richard	Wightman	None	Yes	3	E-Mail	No
E-2020DEIS-01645	12/25/2020	Stephanie	Jones	None	Yes	3	E-Mail	No
E-2020DEIS-01646	12/25/2020	John	Varga	None	Yes	3	E-Mail	No
E-2020DEIS-01649	12/26/2020	Lupe	Ledesma	None	Yes	3	E-Mail	No
E-2020DEIS-01650	12/26/2020	Jennifer	Sellers	None	Yes	3	E-Mail	No
E-2020DEIS-01651	12/27/2020	Michael	Garitty	None	Yes	3	E-Mail	No
E-2020DEIS-01653	12/27/2020	Esme	Prjanikov	None	Yes	3	E-Mail	No
E-2020DEIS-01654	12/27/2020	Elizabeth	Story	None	Yes	3	E-Mail	No
E-2020DEIS-01655	12/27/2020	Carole	Allen	None	Yes	3	E-Mail	No
E-2020DEIS-01656	12/27/2020	Sue	Harrington	None	Yes	3	E-Mail	No
E-2020DEIS-01657	12/27/2020	Colleen	Lobel	None	Yes	3	E-Mail	No
E-2020DEIS-01658	12/27/2020	Freya	Harris	None	Yes	3	E-Mail	No
E-2020DEIS-01662	12/28/2020	Sara	Graziosa	None	Yes	3	E-Mail	No
E-2020DEIS-01664	12/28/2020	Pablo	Bobe	None	Yes	3	E-Mail	No
E-2020DEIS-01665	12/28/2020	Terrie	Williams	None	Yes	3	E-Mail	No
E-2020DEIS-01667	12/28/2020	Terrie	Phenicie	None	Yes	3	E-Mail	No
E-2020DEIS-01668	12/28/2020	Jelica	Roland	None	Yes	3	E-Mail	No
E-2020DEIS-01671	12/28/2020	Maggie	Topalian	None	Yes	3	E-Mail	No
E-2020DEIS-01672	12/29/2020	Mary	Zack	None	Yes	3	E-Mail	No
E-2020DEIS-01674	12/29/2020	Ellen	McCann	None	Yes	3	E-Mail	No
E-2020DEIS-01676	12/30/2020	Vic	Bostock	None	Yes	3	E-Mail	No
E-2020DEIS-01686	12/31/2020	Harina	Dias	None	Yes	3	E-Mail	No
E-2020DEIS-01688	1/1/2020	Janine	Vinton	None	Yes	3	E-Mail	No
E-2020DEIS-01691	1/4/2021	Michael	Garitty	None	Yes	3	E-Mail	No

E-2020DEIS-01696	1/5/2021	Melissa	Althouse	None	Yes	1	E-Mail	No
E-2020DEIS-01699	1/5/2021	Zachary	Tiemann	None	Yes	1	E-Mail	No
E-2020DEIS-01701	1/5/2021	Hawken	Carlton	None	Yes	1	E-Mail	No
E-2020DEIS-01702	1/5/2021	Susan	Lacy	None	Yes	1	E-Mail	No
E-2020DEIS-01704	1/6/2021	Jasmine	Erazmus	None	Yes	1	E-Mail	No
E-2020DEIS-01705	1/6/2021	Deborah	Baumgarten	None	Yes	1	E-Mail	No
E-2020DEIS-01708	1/6/2021	Allison	Snodgrass	None	Yes	1	E-Mail	No
E-2020DEIS-01709	1/6/2021	Meriel	Brooks	None	Yes	1	E-Mail	No
E-2020DEIS-01711	1/6/2021	Peter	Sundt	None	Yes	1	E-Mail	No
E-2020DEIS-01715	1/6/2021	Jo	Mann	None	Yes	1	E-Mail	No
E-2020DEIS-01717	1/6/2021	Edward	Cook	None	Yes	1	E-Mail	No
E-2020DEIS-01718	1/6/2021	Jared	Jannise	None	Yes	1	E-Mail	No
E-2020DEIS-01720	1/7/2021	Dana	Bennewitz	None	Yes	1	E-Mail	No
E-2020DEIS-02094	1/9/2021	Michelle	Dennis	None	Yes	1	E-Mail	No
E-2020DEIS-01712	1/6/2021	Bill	Burge	None	Yes	4	E-Mail	No
E-2020DEIS-01716	1/6/2021	Jorge	Viamontes	None	Yes	4	E-Mail	No
E-2020DEIS-01729	1/8/2021	Jeff	Aufill	None	Yes	4	E-Mail	No
E-2020DEIS-02135	1/10/2021	Stacy	Jones	None	Yes	4	E-Mail	No
E-2020DEIS-02136	1/10/2021	Sherry	Jones	None	Yes	4	E-Mail	No
E-2020DEIS-02141	1/11/2021	Karen	Tisdel	None	Yes	4	E-Mail	No
E-2020DEIS-02184	1/11/2021	Stephen W.	Schueler	None	Yes	4	E-Mail	No
E-2020DEIS-02268	1/11/2021	Billy	McMillin	None	Yes	4	E-Mail	No
E-2020DEIS-02349	1/12/2021	Polly	Grissom	None	Yes	4	E-Mail	No
E-2020DEIS-01700	1/5/2021	Shelli	Ellerbe	None	Yes	2	E-Mail	No
E-2020DEIS-01703	1/6/2021	Callie	Alden	None	Yes	2	E-Mail	No
E-2020DEIS-01706	1/6/2021	Karen	Morris	None	Yes	2	E-Mail	No
E-2020DEIS-01707	1/6/2021	Phil	Tapply	None	Yes	2	E-Mail	No
E-2020DEIS-01714	1/6/2021	Brian	Watanabe	None	Yes	2	E-Mail	No
E-2020DEIS-01731	1/8/2021	Mrs. Christine	Schneebeli	None	Yes	2	E-Mail	No
E-2020DEIS-01732	1/8/2021	Ms. Shirlene	Harris	None	Yes	2	E-Mail	No
E-2020DEIS-01733	1/8/2021	Richard	Barker	None	Yes	2	E-Mail	No
E-2020DEIS-01734	1/8/2021	Ms. Marie	Wakefield	None	Yes	2	E-Mail	No
E-2020DEIS-01735	1/8/2021	Richard	Wilkins	None	Yes	2	E-Mail	No
E-2020DEIS-01737	1/8/2021	Sharon	Rich	None	Yes	2	E-Mail	No
E-2020DEIS-01738	1/8/2021	Cynthia	Curtis	None	Yes	2	E-Mail	No
E-2020DEIS-01739	1/8/2021	Mark	Bailey	None	Yes	2	E-Mail	No
E-2020DEIS-01740	1/8/2021	Ms. Chris	Washington	None	Yes	2	E-Mail	No
E-2020DEIS-01741	1/8/2021	Susan	Pelakh	None	Yes	2	E-Mail	No
E-2020DEIS-01742	1/8/2021	Valerie	DeCastris	None	Yes	2	E-Mail	No
E-2020DEIS-01743	1/8/2021	Mr. Ken	Martin	None	Yes	2	E-Mail	No
E-2020DEIS-01744	1/8/2021	Ryan	Dodson	None	Yes	2	E-Mail	No
E-2020DEIS-01745	1/8/2021	Kevin	Bickers	None	Yes	2	E-Mail	No

E-2020DEIS-01746	1/8/2021	Lauri	desMarais	None	Yes	2	E-Mail	No
E-2020DEIS-01747	1/8/2021	Kevin	Silvey	None	Yes	2	E-Mail	No
E-2020DEIS-01748	1/8/2021	Christina	Morse	None	Yes	2	E-Mail	No
E-2020DEIS-01749	1/8/2021	Ms. Antoinette	Gonzalez	None	Yes	2	E-Mail	No
E-2020DEIS-01750	1/8/2021	Mr. Steve	Mattan	None	Yes	2	E-Mail	No
E-2020DEIS-01751	1/8/2021	Edward	Butler	None	Yes	2	E-Mail	No
E-2020DEIS-01752	1/8/2021	Dr. Thomas	Lemberg	None	Yes	2	E-Mail	No
E-2020DEIS-01753	1/8/2021	Donna	Parente	None	Yes	2	E-Mail	No
E-2020DEIS-01754	1/8/2021	Mr. Zach	Stanley	None	Yes	2	E-Mail	No
E-2020DEIS-01756	1/8/2021	Ms. T	C	None	Yes	2	E-Mail	No
E-2020DEIS-01757	1/8/2021	Lodiza	Lepore	None	Yes	2	E-Mail	No
E-2020DEIS-01758	1/8/2021	Dominick	Libby	None	Yes	2	E-Mail	No
E-2020DEIS-01759	1/8/2021	Ms. Lynn C.	Lang	None	Yes	2	E-Mail	No
E-2020DEIS-01760	1/8/2021	Amanda	Gordon	None	Yes	2	E-Mail	No
E-2020DEIS-01761	1/8/2021	Laura	Chinofsky	None	Yes	2	E-Mail	No
E-2020DEIS-01762	1/8/2021	Jeanne	Stulb	None	Yes	2	E-Mail	No
E-2020DEIS-01763	1/8/2021	Dallas	Windham	None	Yes	2	E-Mail	No
E-2020DEIS-01764	1/8/2021	Ms. Stephanie	Trudeau	None	Yes	2	E-Mail	No
E-2020DEIS-01765	1/8/2021	Tony	Delia	None	Yes	2	E-Mail	No
E-2020DEIS-01766	1/8/2021	Ms. Teresa	Iovino	None	Yes	2	E-Mail	No
E-2020DEIS-01767	1/8/2021	Linda	Headley	None	Yes	2	E-Mail	No
E-2020DEIS-01768	1/8/2021	Jon	Pitt	None	Yes	2	E-Mail	No
E-2020DEIS-01769	1/8/2021	Ewa	Stein	None	Yes	2	E-Mail	No
E-2020DEIS-01770	1/8/2021	James	Vanderweele	None	Yes	2	E-Mail	No
E-2020DEIS-01771	1/8/2021	Ms. Mary	Dinino	None	Yes	2	E-Mail	No
E-2020DEIS-01772	1/8/2021	Ms. J	Beverly	None	Yes	2	E-Mail	No
E-2020DEIS-01773	1/8/2021	Ms. Pam	Kirkpatrick	None	Yes	2	E-Mail	No
E-2020DEIS-01774	1/8/2021	Melissa	Beaur	None	Yes	2	E-Mail	No
E-2020DEIS-01775	1/8/2021	Bob	Shippee	None	Yes	2	E-Mail	No
E-2020DEIS-01776	1/8/2021	Maryanna	Foskett	None	Yes	2	E-Mail	No
E-2020DEIS-01777	1/8/2021	Thomas A.	Guaraldi	None	Yes	2	E-Mail	No
E-2020DEIS-01778	1/8/2021	Ms. Deborah	Voves	None	Yes	2	E-Mail	No
E-2020DEIS-01779	1/8/2021	Angela	Plagge	None	Yes	2	E-Mail	No
E-2020DEIS-01780	1/8/2021	Dr. Tina	Brenza	None	Yes	2	E-Mail	No
E-2020DEIS-01781	1/8/2021	Ms. Francis	Goff	None	Yes	2	E-Mail	No
E-2020DEIS-01782	1/8/2021	Janet	Robinson	None	Yes	2	E-Mail	No
E-2020DEIS-01783	1/8/2021	Joyce	Niksic	None	Yes	2	E-Mail	No
E-2020DEIS-01784	1/8/2021	Mrs. Joyce	Schwartz	None	Yes	2	E-Mail	No
E-2020DEIS-01785	1/8/2021	John	Dervin	None	Yes	2	E-Mail	No
E-2020DEIS-01786	1/8/2021	Dawn	Reed	None	Yes	2	E-Mail	No
E-2020DEIS-01787	1/8/2021	Susie	Cassens	None	Yes	2	E-Mail	No
E-2020DEIS-01788	1/8/2021	Susannah	Biggs	None	Yes	2	E-Mail	No

E-2020DEIS-01789	1/8/2021	Matt	Rota	None	Yes	2	E-Mail	No
E-2020DEIS-01790	1/8/2021	Stephan	Donovan	None	Yes	2	E-Mail	No
E-2020DEIS-01791	1/8/2021	Ms. S	R	None	Yes	2	E-Mail	No
E-2020DEIS-01792	1/8/2021	Bonnie	Burke	None	Yes	2	E-Mail	No
E-2020DEIS-01793	1/8/2021	Donald	Shaw	None	Yes	2	E-Mail	No
E-2020DEIS-01794	1/8/2021	Ms. Jack	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01795	1/8/2021	Scott	Kenneddy	None	Yes	2	E-Mail	No
E-2020DEIS-01796	1/8/2021	Jay	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01797	1/8/2021	Demiann	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01798	1/8/2021	Todd	Cisna	None	Yes	2	E-Mail	No
E-2020DEIS-01799	1/8/2021	John	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01800	1/8/2021	Ms. B	Tippens	None	Yes	2	E-Mail	No
E-2020DEIS-01801	1/8/2021	Ms. Janet	Neihart	None	Yes	2	E-Mail	No
E-2020DEIS-01802	1/8/2021	Ms. Nadine	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01803	1/8/2021	Ms. Jade	Gregg	None	Yes	2	E-Mail	No
E-2020DEIS-01804	1/8/2021	Ms. Susan	Thompson	None	Yes	2	E-Mail	No
E-2020DEIS-01805	1/8/2021	Mr. Richard	Sprotts	None	Yes	2	E-Mail	No
E-2020DEIS-01806	1/8/2021	Ms. Nancy	Heck	None	Yes	2	E-Mail	No
E-2020DEIS-01807	1/8/2021	Charlotte	Fremaux	None	Yes	2	E-Mail	No
E-2020DEIS-01808	1/8/2021	Ms. Joann	Koch	None	Yes	2	E-Mail	No
E-2020DEIS-01809	1/8/2021	Mr. Gregory	Barton	None	Yes	2	E-Mail	No
E-2020DEIS-01810	1/8/2021	Ms. W	Lynch	None	Yes	2	E-Mail	No
E-2020DEIS-01811	1/8/2021	Ms. Virginia	Richard	None	Yes	2	E-Mail	No
E-2020DEIS-01812	1/8/2021	Mr. Chris	Lima	None	Yes	2	E-Mail	No
E-2020DEIS-01813	1/8/2021	Mr. Lou	Furmann	None	Yes	2	E-Mail	No
E-2020DEIS-01814	1/8/2021	Dr. Jan	Modjeski	None	Yes	2	E-Mail	No
E-2020DEIS-01815	1/8/2021	Dr. Lorna	Wood	None	Yes	2	E-Mail	No
E-2020DEIS-01816	1/8/2021	Ms. Christian	King	None	Yes	2	E-Mail	No
E-2020DEIS-01817	1/8/2021	Mr. Alexander	Grant	None	Yes	2	E-Mail	No
E-2020DEIS-01818	1/8/2021	Ms. Kathleen	Mireault	None	Yes	2	E-Mail	No
E-2020DEIS-01819	1/8/2021	Mr. Vincent	Bowers	None	Yes	2	E-Mail	No
E-2020DEIS-01820	1/8/2021	Kathleen	Grossman	None	Yes	2	E-Mail	No
E-2020DEIS-01821	1/8/2021	Ms. Mattie	Goodwin	None	Yes	2	E-Mail	No
E-2020DEIS-01822	1/8/2021	Ms. Maria	Asteinza	None	Yes	2	E-Mail	No
E-2020DEIS-01823	1/8/2021	Dr. Jeanne	Stangle	None	Yes	2	E-Mail	No
E-2020DEIS-01824	1/8/2021	Dr. Virgene	Link-New	None	Yes	2	E-Mail	No
E-2020DEIS-01825	1/8/2021	Mrs. Barbara	Giorgio	None	Yes	2	E-Mail	No
E-2020DEIS-01826	1/8/2021	Mrs. Judith	Peter	None	Yes	2	E-Mail	No
E-2020DEIS-01827	1/8/2021	Mr. Gary	Rejsek	None	Yes	2	E-Mail	No
E-2020DEIS-01828	1/8/2021	Ms. Shelley	Wehberg	None	Yes	2	E-Mail	No
E-2020DEIS-01829	1/8/2021	Ms. Eugenia	Economos	None	Yes	2	E-Mail	No
E-2020DEIS-01830	1/8/2021	Ms. Sara	White	None	Yes	2	E-Mail	No

E-2020DEIS-01831	1/8/2021	Ms. Michelle	Macy	None	Yes	2	E-Mail	No
E-2020DEIS-01832	1/8/2021	Mr. Richard	Bourne	None	Yes	2	E-Mail	No
E-2020DEIS-01833	1/8/2021	Mr. Jared	Cornelia	None	Yes	2	E-Mail	No
E-2020DEIS-01834	1/8/2021	Ms. Pauline	Burak	None	Yes	2	E-Mail	No
E-2020DEIS-01835	1/8/2021	Mr. Dana	Bleckinger	None	Yes	2	E-Mail	No
E-2020DEIS-01836	1/8/2021	Ms Penelope	Speier	None	Yes	2	E-Mail	No
E-2020DEIS-01837	1/8/2021	Mr. Brian	Wilson	None	Yes	2	E-Mail	No
E-2020DEIS-01838	1/8/2021	Ms. Theresa	Dendinger	None	Yes	2	E-Mail	No
E-2020DEIS-01839	1/8/2021	Ms. Gail	Whitten	None	Yes	2	E-Mail	No
E-2020DEIS-01840	1/8/2021	Andy	Lynn	None	Yes	2	E-Mail	No
E-2020DEIS-01841	1/8/2021	Ms. Sharon	Garlena	None	Yes	2	E-Mail	No
E-2020DEIS-01842	1/8/2021	Mx Rebecca	Brooks	None	Yes	2	E-Mail	No
E-2020DEIS-01843	1/8/2021	Mr. Bernardo alayza	Mujica	None	Yes	2	E-Mail	No
E-2020DEIS-01844	1/8/2021	Ms. Maureen	O'Neal	None	Yes	2	E-Mail	No
E-2020DEIS-01845	1/8/2021	Ms Deni	Davis	None	Yes	2	E-Mail	No
E-2020DEIS-01846	1/8/2021	Ms. Ivonne	Carlson	None	Yes	2	E-Mail	No
E-2020DEIS-01847	1/8/2021	Ms. Linda	Bescript	None	Yes	2	E-Mail	No
E-2020DEIS-01848	1/8/2021	Ms. Nancy	Hartman	None	Yes	2	E-Mail	No
E-2020DEIS-01849	1/8/2021	Ms. Julie	Brickell	None	Yes	2	E-Mail	No
E-2020DEIS-01850	1/8/2021	Ms. Carol	Taggart	None	Yes	2	E-Mail	No
E-2020DEIS-01851	1/8/2021	Ms. Madison	Hoover	None	Yes	2	E-Mail	No
E-2020DEIS-01852	1/8/2021	Mr. Ken	Goldsmith	None	Yes	2	E-Mail	No
E-2020DEIS-01853	1/8/2021	Ms. Linda	Shirey	None	Yes	2	E-Mail	No
E-2020DEIS-01854	1/8/2021	Mr. James	Mulcare	None	Yes	2	E-Mail	No
E-2020DEIS-01855	1/8/2021	Dr. James	Klein	None	Yes	2	E-Mail	No
E-2020DEIS-01856	1/8/2021	Ms. M	S	None	Yes	2	E-Mail	No
E-2020DEIS-01857	1/8/2021	Ms. Nina	Council	None	Yes	2	E-Mail	No
E-2020DEIS-01858	1/8/2021	Mr. Steve	Green	None	Yes	2	E-Mail	No
E-2020DEIS-01859	1/8/2021	Ms. Marcia	Reiter	None	Yes	2	E-Mail	No
E-2020DEIS-01860	1/8/2021	Mr. Michael J	Guma	None	Yes	2	E-Mail	No
E-2020DEIS-01861	1/8/2021	Ms. Gail	Roberts	None	Yes	2	E-Mail	No
E-2020DEIS-01862	1/8/2021	Ms. Jackie	Tryggeseth	None	Yes	2	E-Mail	No
E-2020DEIS-01863	1/8/2021	Mr. Marty	Hertz	None	Yes	2	E-Mail	No
E-2020DEIS-01864	1/8/2021	Mr. Robert T	Gordon Jr.	None	Yes	2	E-Mail	No
E-2020DEIS-01865	1/8/2021	Mrs. Sharen	Oxman	None	Yes	2	E-Mail	No
E-2020DEIS-01866	1/8/2021	Mr. Tones	Jones	None	Yes	2	E-Mail	No
E-2020DEIS-01867	1/8/2021	Mr. Doug	Young	None	Yes	2	E-Mail	No
E-2020DEIS-01868	1/8/2021	Ms Maryann	Barulich	None	Yes	2	E-Mail	No
E-2020DEIS-01869	1/8/2021	Mr. McCormick	Douglas	None	Yes	2	E-Mail	No
E-2020DEIS-01870	1/8/2021	Ms. Sarah	Apfel	None	Yes	2	E-Mail	No
E-2020DEIS-01871	1/8/2021	Dr. Andrea	Chisari	None	Yes	2	E-Mail	No
E-2020DEIS-01872	1/8/2021	Mr. Michael	Ott	None	Yes	2	E-Mail	No

E-2020DEIS-01873	1/8/2021	Ms. Alea	Chevalier	None	Yes	2	E-Mail	No
E-2020DEIS-01874	1/8/2021	Ms. Lisa	Koehl	None	Yes	2	E-Mail	No
E-2020DEIS-01875	1/8/2021	Mr. Marco	Aguilera	None	Yes	2	E-Mail	No
E-2020DEIS-01876	1/8/2021	Mx. Melissa	Fleming	None	Yes	2	E-Mail	No
E-2020DEIS-01877	1/8/2021	Mrs. Laura	Vera	None	Yes	2	E-Mail	No
E-2020DEIS-01878	1/8/2021	Ms. Kathy	Okulewicz	None	Yes	2	E-Mail	No
E-2020DEIS-01879	1/8/2021	Ms. Kellie	Smith	None	Yes	2	E-Mail	No
E-2020DEIS-01880	1/8/2021	Mrs. Mary	Shabbott	None	Yes	2	E-Mail	No
E-2020DEIS-01881	1/8/2021	Mrs. Kathryn	Lemoine	None	Yes	2	E-Mail	No
E-2020DEIS-01882	1/8/2021	Mrs. Janet	McCalister	None	Yes	2	E-Mail	No
E-2020DEIS-01883	1/8/2021	Dr. Felcia	Lewis	None	Yes	2	E-Mail	No
E-2020DEIS-01884	1/8/2021	Eric	West	None	Yes	2	E-Mail	No
E-2020DEIS-01885	1/8/2021	Kathleen	Bryson	None	Yes	2	E-Mail	No
E-2020DEIS-01886	1/8/2021	Ms. Leah	Stables	None	Yes	2	E-Mail	No
E-2020DEIS-01887	1/8/2021	Mr. George	Craciun	None	Yes	2	E-Mail	No
E-2020DEIS-01888	1/8/2021	Ms. Alison	Zyla	None	Yes	2	E-Mail	No
E-2020DEIS-01889	1/8/2021	Ms. Inge	Ness	None	Yes	2	E-Mail	No
E-2020DEIS-01890	1/8/2021	Ms. Carol	Wiley	None	Yes	2	E-Mail	No
E-2020DEIS-01891	1/8/2021	Ms. Julie	Ford	None	Yes	2	E-Mail	No
E-2020DEIS-01892	1/8/2021	Ms. Elaine	Becker	None	Yes	2	E-Mail	No
E-2020DEIS-01893	1/8/2021	Mr. Les	Roberts	None	Yes	2	E-Mail	No
E-2020DEIS-01894	1/8/2021	Ms. Carol	Wiley	None	Yes	2	E-Mail	No
E-2020DEIS-01895	1/8/2021	Ms. Christine	Norman	None	Yes	2	E-Mail	No
E-2020DEIS-01896	1/8/2021	Ms. Kris	Strate	None	Yes	2	E-Mail	No
E-2020DEIS-01897	1/8/2021	Dr. Howard	Cohen	None	Yes	2	E-Mail	No
E-2020DEIS-01898	1/8/2021	Mr. Bill	Vom Weg	None	Yes	2	E-Mail	No
E-2020DEIS-01899	1/8/2021	Ms. Toni	Logan	None	Yes	2	E-Mail	No
E-2020DEIS-01900	1/8/2021	Ms. Patricia	Blackwell-Marchant	None	Yes	2	E-Mail	No
E-2020DEIS-01901	1/8/2021	Mr. Darryl	Malek-Wiley	None	Yes	2	E-Mail	No
E-2020DEIS-01902	1/8/2021	Mrs. Diane	Kent	None	Yes	2	E-Mail	No
E-2020DEIS-01903	1/8/2021	Mrs. Linda	Baker	None	Yes	2	E-Mail	No
E-2020DEIS-01904	1/8/2021	Miss. Mel	Green	None	Yes	2	E-Mail	No
E-2020DEIS-01905	1/8/2021	Dr. Kenneth	Gibb	None	Yes	2	E-Mail	No
E-2020DEIS-01906	1/8/2021	Ms. Laurine	Cook	None	Yes	2	E-Mail	No
E-2020DEIS-01907	1/8/2021	Ms. DeAnna	Baier-Barnes	None	Yes	2	E-Mail	No
E-2020DEIS-01908	1/8/2021	Ms. Jean	Farris	None	Yes	2	E-Mail	No
E-2020DEIS-01909	1/8/2021	Mr. Jeffrey	Wilson	None	Yes	2	E-Mail	No
E-2020DEIS-01910	1/8/2021	Mrs. Suzanne	Marienau	None	Yes	2	E-Mail	No
E-2020DEIS-01911	1/8/2021	Ms. Barb	Morrison	None	Yes	2	E-Mail	No
E-2020DEIS-01912	1/8/2021	Mr. Barney	Fortier	None	Yes	2	E-Mail	No
E-2020DEIS-01913	1/8/2021	Mrs. Fay	Forman	None	Yes	2	E-Mail	No
E-2020DEIS-01914	1/8/2021	Dr. Alice	Naegele	None	Yes	2	E-Mail	No

E-2020DEIS-01915	1/8/2021	Ms. Donna	Pemberton	None	Yes	2	E-Mail	No
E-2020DEIS-01916	1/8/2021	Mr. Terrance	Ward	None	Yes	2	E-Mail	No
E-2020DEIS-01917	1/8/2021	Mrs. Patrice	Waguespack	None	Yes	2	E-Mail	No
E-2020DEIS-01918	1/8/2021	Ms. Kathy	Turner	None	Yes	2	E-Mail	No
E-2020DEIS-01919	1/8/2021	Ms. Shawn	Hall	None	Yes	2	E-Mail	No
E-2020DEIS-01920	1/8/2021	Ms. Heidi M.	Hess	None	Yes	2	E-Mail	No
E-2020DEIS-01921	1/8/2021	Ms. L	Zeveloff	None	Yes	2	E-Mail	No
E-2020DEIS-01922	1/8/2021	Mr. Gregg	Strauss	None	Yes	2	E-Mail	No
E-2020DEIS-01923	1/8/2021	Mr. Brian	Levy	None	Yes	2	E-Mail	No
E-2020DEIS-01924	1/8/2021	Mr. John	Benschoter	None	Yes	2	E-Mail	No
E-2020DEIS-01925	1/8/2021	Edith	Mirante	None	Yes	2	E-Mail	No
E-2020DEIS-01926	1/8/2021	Ms. Rita	Warner	None	Yes	2	E-Mail	No
E-2020DEIS-01927	1/8/2021	Ms. Beverly	Barry	None	Yes	2	E-Mail	No
E-2020DEIS-01928	1/8/2021	Ms. Tamara	Matz	None	Yes	2	E-Mail	No
E-2020DEIS-01929	1/8/2021	Ms. Tina	Freeman	None	Yes	2	E-Mail	No
E-2020DEIS-01930	1/8/2021	Dr. Dara	Nix-Stevenson	None	Yes	2	E-Mail	No
E-2020DEIS-01931	1/8/2021	Ms. Pamylle	Greinke	None	Yes	2	E-Mail	No
E-2020DEIS-01932	1/8/2021	Ms. Linda	Smyth	None	Yes	2	E-Mail	No
E-2020DEIS-01933	1/8/2021	Ms. Christine	Hightower	None	Yes	2	E-Mail	No
E-2020DEIS-01934	1/8/2021	Ms. Ruby	Wood	None	Yes	2	E-Mail	No
E-2020DEIS-01935	1/8/2021	Ms. Kate	Skolnick	None	Yes	2	E-Mail	No
E-2020DEIS-01936	1/8/2021	Dr. Donlon	McGovern	None	Yes	2	E-Mail	No
E-2020DEIS-01937	1/8/2021	Mr. John	Templin	None	Yes	2	E-Mail	No
E-2020DEIS-01938	1/8/2021	Mr Javier	Rivera-Diaz	None	Yes	2	E-Mail	No
E-2020DEIS-01939	1/8/2021	Ms. Kathy	Barton	None	Yes	2	E-Mail	No
E-2020DEIS-01940	1/8/2021	Mrs. Fran	Teders	None	Yes	2	E-Mail	No
E-2020DEIS-01941	1/8/2021	Mrs. Carol	Fletcher	None	Yes	2	E-Mail	No
E-2020DEIS-01942	1/8/2021	Ms. Martha	Gorak	None	Yes	2	E-Mail	No
E-2020DEIS-01943	1/8/2021	Ms. Tamara	Matz	None	Yes	2	E-Mail	No
E-2020DEIS-01944	1/8/2021	Mrs. Dori	Cole	None	Yes	2	E-Mail	No
E-2020DEIS-01945	1/8/2021	Ms. Shiela	Cockshott	None	Yes	2	E-Mail	No
E-2020DEIS-01946	1/8/2021	Mrs. Linda	Allen	None	Yes	2	E-Mail	No
E-2020DEIS-01947	1/8/2021	Mr. Joe	Salazar	None	Yes	2	E-Mail	No
E-2020DEIS-01948	1/8/2021	Ms. Amy	Schumacher	None	Yes	2	E-Mail	No
E-2020DEIS-01949	1/8/2021	Mr. Dennis	Schaef	None	Yes	2	E-Mail	No
E-2020DEIS-01950	1/8/2021	Mrs. Romi	Elnagar	None	Yes	2	E-Mail	No
E-2020DEIS-01951	1/8/2021	Mr. Rick	Geyer	None	Yes	2	E-Mail	No
E-2020DEIS-01952	1/8/2021	Mrs. Jennifer	Koval	None	Yes	2	E-Mail	No
E-2020DEIS-01953	1/8/2021	Mrs. Lydia	Peters	None	Yes	2	E-Mail	No
E-2020DEIS-01954	1/8/2021	Ms. Lisa	Salazar	None	Yes	2	E-Mail	No
E-2020DEIS-01955	1/8/2021	Mrs. Marie	Weis	None	Yes	2	E-Mail	No
E-2020DEIS-01956	1/8/2021	Mr. Chris	Drumright	None	Yes	2	E-Mail	No

E-2020DEIS-01957	1/8/2021	Mr. Joel	Maguire	None	Yes	2	E-Mail	No
E-2020DEIS-01958	1/8/2021	Mrs. Janine	Vinton	None	Yes	2	E-Mail	No
E-2020DEIS-01959	1/8/2021	Mr. Joel	Malkerson	None	Yes	2	E-Mail	No
E-2020DEIS-01960	1/8/2021	Mrs. Nancy	O	None	Yes	2	E-Mail	No
E-2020DEIS-01961	1/8/2021	Mr. Jeffrey	Baines	None	Yes	2	E-Mail	No
E-2020DEIS-01962	1/8/2021	Ms. Joann	Ramos	None	Yes	2	E-Mail	No
E-2020DEIS-01963	1/8/2021	Ms. Margo	Salone	None	Yes	2	E-Mail	No
E-2020DEIS-01964	1/8/2021	Ms. Susan	Christiansen	None	Yes	2	E-Mail	No
E-2020DEIS-01965	1/8/2021	Mr. Kevin	Rolfes	None	Yes	2	E-Mail	No
E-2020DEIS-01966	1/8/2021	Ms. Allison	Anderson	None	Yes	2	E-Mail	No
E-2020DEIS-01967	1/8/2021	Mrs. Jody	Gibson	None	Yes	2	E-Mail	No
E-2020DEIS-01968	1/8/2021	Ms. Anne	Veraldi	None	Yes	2	E-Mail	No
E-2020DEIS-01969	1/8/2021	Mr. John	Kirchner	None	Yes	2	E-Mail	No
E-2020DEIS-01970	1/8/2021	Ms. Linda	Luke	None	Yes	2	E-Mail	No
E-2020DEIS-01971	1/8/2021	Mr. Derek	Gendvil	None	Yes	2	E-Mail	No
E-2020DEIS-01972	1/8/2021	Dr. Rosalind	Bresnahan	None	Yes	2	E-Mail	No
E-2020DEIS-01973	1/8/2021	Dr. Harriet	McCleary	None	Yes	2	E-Mail	No
E-2020DEIS-01974	1/8/2021	Mr. Carlos	Nunez	None	Yes	2	E-Mail	No
E-2020DEIS-01975	1/8/2021	Mrs. Frances	Machiewicz	None	Yes	2	E-Mail	No
E-2020DEIS-01976	1/8/2021	Ms. Susaan	Aram	None	Yes	2	E-Mail	No
E-2020DEIS-01977	1/8/2021	Mr. Steve	Donoso	None	Yes	2	E-Mail	No
E-2020DEIS-01978	1/8/2021	Dr. J. Barry	Gurdin	None	Yes	2	E-Mail	No
E-2020DEIS-01979	1/8/2021	Ms. Mary	Gutierrez	None	Yes	2	E-Mail	No
E-2020DEIS-01980	1/8/2021	Ms. Tatyana	Stevens	None	Yes	2	E-Mail	No
E-2020DEIS-01981	1/8/2021	Ms. Lorraine	Manon	None	Yes	2	E-Mail	No
E-2020DEIS-01982	1/8/2021	Mrs. Chey	Richmond	None	Yes	2	E-Mail	No
E-2020DEIS-01983	1/8/2021	Ms. Sally	McDonald	None	Yes	2	E-Mail	No
E-2020DEIS-01984	1/8/2021	Miss. Keiko	Barrett	None	Yes	2	E-Mail	No
E-2020DEIS-01985	1/8/2021	Mr. David	Snope	None	Yes	2	E-Mail	No
E-2020DEIS-01986	1/8/2021	Mrs. Janine	Vinton	None	Yes	2	E-Mail	No
E-2020DEIS-01987	1/8/2021	Ms. Debbie	McCarthy	None	Yes	2	E-Mail	No
E-2020DEIS-01988	1/8/2021	Ms. Jane	Leatherman	None	Yes	2	E-Mail	No
E-2020DEIS-01989	1/8/2021	Ms. Penelope	Prochazka	None	Yes	2	E-Mail	No
E-2020DEIS-01990	1/8/2021	Ms. Vicki	Johnson	None	Yes	2	E-Mail	No
E-2020DEIS-01991	1/8/2021	Ms. Julie	Sanford	None	Yes	2	E-Mail	No
E-2020DEIS-01992	1/8/2021	Miss Sandra	Couch	None	Yes	2	E-Mail	No
E-2020DEIS-01993	1/8/2021	Mrs. Kathy	Britt	None	Yes	2	E-Mail	No
E-2020DEIS-01994	1/8/2021	Ms. Rhodie	Jorgenson	None	Yes	2	E-Mail	No
E-2020DEIS-01995	1/8/2021	Mrs. Elizabeth	Watts	None	Yes	2	E-Mail	No
E-2020DEIS-01996	1/8/2021	Mr. William	Klock	None	Yes	2	E-Mail	No
E-2020DEIS-01997	1/8/2021	Miss. Lisa	Scharin	None	Yes	2	E-Mail	No
E-2020DEIS-01998	1/8/2021	Mr. Timothy	Lippert	None	Yes	2	E-Mail	No

E-2020DEIS-01999	1/8/2021	Mr. Paul	Kalka	None	Yes	2	E-Mail	No
E-2020DEIS-02000	1/8/2021	Mr. Timothy	Duda	None	Yes	2	E-Mail	No
E-2020DEIS-02001	1/8/2021	Mr. Rick	Willing	None	Yes	2	E-Mail	No
E-2020DEIS-02002	1/8/2021	Mr. Michael Jr.	Miller Jr.	None	Yes	2	E-Mail	No
E-2020DEIS-02004	1/8/2021	Ms. Camille	Gilbert	None	Yes	2	E-Mail	No
E-2020DEIS-02006	1/8/2021	Ms. Deborah	Reiter	None	Yes	2	E-Mail	No
E-2020DEIS-02007	1/8/2021	Ms. S	Jordan	None	Yes	2	E-Mail	No
E-2020DEIS-02008	1/8/2021	Ms. Alice	Polesky	None	Yes	2	E-Mail	No
E-2020DEIS-02009	1/8/2021	Dr. Linda	Carroll	None	Yes	2	E-Mail	No
E-2020DEIS-02010	1/8/2021	Mr. Russell	Weisz	None	Yes	2	E-Mail	No
E-2020DEIS-02011	1/8/2021	Ms. Wendi	Myers	None	Yes	2	E-Mail	No
E-2020DEIS-02012	1/8/2021	Ms. Judi	Travis	None	Yes	2	E-Mail	No
E-2020DEIS-02013	1/8/2021	Ms. Rosemary	Ward	None	Yes	2	E-Mail	No
E-2020DEIS-02014	1/8/2021	Ms. Geri	Collecchia	None	Yes	2	E-Mail	No
E-2020DEIS-02015	1/8/2021	Ms. Twyla	Meyer	None	Yes	2	E-Mail	No
E-2020DEIS-02016	1/8/2021	Mr. David G.	Laramie	None	Yes	2	E-Mail	No
E-2020DEIS-02017	1/8/2021	Mr. Brian	Reynolds	None	Yes	2	E-Mail	No
E-2020DEIS-02018	1/8/2021	Mr. Gabriel	Sheets	None	Yes	2	E-Mail	No
E-2020DEIS-02019	1/8/2021	Mrs. Sarah	Sheets	None	Yes	2	E-Mail	No
E-2020DEIS-02020	1/8/2021	Mr. Ari	Meyer	None	Yes	2	E-Mail	No
E-2020DEIS-02021	1/8/2021	Ms. Karla	Devine	None	Yes	2	E-Mail	No
E-2020DEIS-02022	1/8/2021	Mr. Ralph	Bocchetti	None	Yes	2	E-Mail	No
E-2020DEIS-02025	1/8/2021	Mr. Ken	Gunther	None	Yes	2	E-Mail	No
E-2020DEIS-02026	1/8/2021	Ms. Wendy	Pabian	None	Yes	2	E-Mail	No
E-2020DEIS-02027	1/9/2021	Mr. Thane	Harpole	None	Yes	2	E-Mail	No
E-2020DEIS-02028	1/9/2021	Ms. Edith	Ogella	None	Yes	2	E-Mail	No
E-2020DEIS-02030	1/9/2021	Ms. Ramona	Krause	None	Yes	2	E-Mail	No
E-2020DEIS-02031	1/9/2021	Mrs. Elsy	Shallman	None	Yes	2	E-Mail	No
E-2020DEIS-02032	1/9/2021	Prof. Mara	Sabinson	None	Yes	2	E-Mail	No
E-2020DEIS-02033	1/9/2021	Ms. Tracy	Cole	None	Yes	2	E-Mail	No
E-2020DEIS-02034	1/9/2021	Mrs. Dorothea	Stephan	None	Yes	2	E-Mail	No
E-2020DEIS-02035	1/9/2021	Mrs. Amy	Harlib	None	Yes	2	E-Mail	No
E-2020DEIS-02036	1/9/2021	Mr. Jason	Fish	None	Yes	2	E-Mail	No
E-2020DEIS-02037	1/9/2021	Ms. Judy	Daniels	None	Yes	2	E-Mail	No
E-2020DEIS-02038	1/9/2021	Mr. Joesph	Reel	None	Yes	2	E-Mail	No
E-2020DEIS-02039	1/9/2021	Mr. Colonel	Meyer	None	Yes	2	E-Mail	No
E-2020DEIS-02040	1/9/2021	Mr. Scott	Jennings	None	Yes	2	E-Mail	No
E-2020DEIS-02041	1/9/2021	Ms. Deanne	O'Donnell	None	Yes	2	E-Mail	No
E-2020DEIS-02042	1/9/2021	Mrs. Elaine	Fischer	None	Yes	2	E-Mail	No
E-2020DEIS-02043	1/9/2021	Mrs. Elisabeth	Richter	None	Yes	2	E-Mail	No
E-2020DEIS-02044	1/9/2021	Ms. Meryl	Pinque	None	Yes	2	E-Mail	No
E-2020DEIS-02045	1/9/2021	Ms. Lauren	Murdoch	None	Yes	2	E-Mail	No

E-2020DEIS-02046	1/9/2021	Ms. Jean	Saja	None	Yes	2	E-Mail	No
E-2020DEIS-02047	1/9/2021	Mr. Charles	Rota	None	Yes	2	E-Mail	No
E-2020DEIS-02048	1/9/2021	Ms. Marcy	Gordon	None	Yes	2	E-Mail	No
E-2020DEIS-02049	1/9/2021	Ms. Brenda	Smith	None	Yes	2	E-Mail	No
E-2020DEIS-02050	1/9/2021	Ms. Elizabeth	Wheat	None	Yes	2	E-Mail	No
E-2020DEIS-02051	1/9/2021	Ms Rachael	Pappano	None	Yes	2	E-Mail	No
E-2020DEIS-02052	1/9/2021	Mr. Steve	Lucas	None	Yes	2	E-Mail	No
E-2020DEIS-02053	1/9/2021	Ms. Jennifer	Scott	None	Yes	2	E-Mail	No
E-2020DEIS-02054	1/9/2021	Mr. Guy	Denney	None	Yes	2	E-Mail	No
E-2020DEIS-02055	1/9/2021	Mr. Michael	Olenjack	None	Yes	2	E-Mail	No
E-2020DEIS-02056	1/9/2021	Mr. D.	Randall	None	Yes	2	E-Mail	No
E-2020DEIS-02057	1/9/2021	Mr. D.	Randall	None	Yes	2	E-Mail	yes
E-2020DEIS-02058	1/9/2021	Mr. Albert	Marra	None	Yes	2	E-Mail	No
E-2020DEIS-02059	1/9/2021	Ms. Sheila	Ward	None	Yes	2	E-Mail	No
E-2020DEIS-02060	1/9/2021	Ms. Judith	Hazelton	None	Yes	2	E-Mail	No
E-2020DEIS-02061	1/9/2021	Mr. Annie	Winstead	None	Yes	2	E-Mail	No
E-2020DEIS-02062	1/9/2021	Mrs. Terrie	Wiliams	None	Yes	2	E-Mail	No
E-2020DEIS-02063	1/9/2021	Mrs. Vic	Bostock	None	Yes	2	E-Mail	No
E-2020DEIS-02064	1/9/2021	Ms. Krista	Garcia	None	Yes	2	E-Mail	No
E-2020DEIS-02065	1/9/2021	Ms. Susan	Rybski	None	Yes	2	E-Mail	No
E-2020DEIS-02066	1/9/2021	Ms. Jackie	Demarais	None	Yes	2	E-Mail	No
E-2020DEIS-02067	1/9/2021	Ms. Shannon	Milhaupt	None	Yes	2	E-Mail	No
E-2020DEIS-02068	1/9/2021	Mrs. Sandra	Boylston	None	Yes	2	E-Mail	No
E-2020DEIS-02069	1/9/2021	Ms. Terry	Tedesco	None	Yes	2	E-Mail	No
E-2020DEIS-02071	1/9/2021	Ms. Shirlene	Harris	None	Yes	2	E-Mail	No
E-2020DEIS-02072	1/9/2021	Ms. Tammy	McDonald	None	Yes	2	E-Mail	No
E-2020DEIS-02073	1/9/2021	Mr. Peter	Schumacher	None	Yes	2	E-Mail	No
E-2020DEIS-02074	1/9/2021	Mrs. Silvia	Bertano	None	Yes	2	E-Mail	No
E-2020DEIS-02075	1/9/2021	Ms. Gina	Obrien	None	Yes	2	E-Mail	No
E-2020DEIS-02076	1/9/2021	Mr. Lawrence	Dillard	None	Yes	2	E-Mail	No
E-2020DEIS-02077	1/9/2021	Ms. Marjorie	Rathbone	None	Yes	2	E-Mail	No
E-2020DEIS-02078	1/9/2021	Ms. Cheryl	Henley	None	Yes	2	E-Mail	No
E-2020DEIS-02079	1/9/2021	Mr. Dennis	Schwarzauer	None	Yes	2	E-Mail	No
E-2020DEIS-02080	1/9/2021	Ms. Audette	Siem	None	Yes	2	E-Mail	No
E-2020DEIS-02081	1/9/2021	Mr. Lynn	Miller	None	Yes	2	E-Mail	No
E-2020DEIS-02082	1/9/2021	Mrs. Sheila	Larkin	None	Yes	2	E-Mail	No
E-2020DEIS-02083	1/9/2021	Kari	Tamblyn	None	Yes	2	E-Mail	No
E-2020DEIS-02084	1/9/2021	Mrs. Sandra	Breakfield	None	Yes	2	E-Mail	No
E-2020DEIS-02085	1/9/2021	Ms. Ingrid	Alpha	None	Yes	2	E-Mail	No
E-2020DEIS-02086	1/9/2021	Mrs. Jenifer	Johnson	None	Yes	2	E-Mail	No
E-2020DEIS-02087	1/9/2021	Ms. Kelley	Scanlon	None	Yes	2	E-Mail	No
E-2020DEIS-02088	1/9/2021	Mr. James	Manchester	None	Yes	2	E-Mail	No

E-2020DEIS-02089	1/9/2021	Mr. Donald	Garlit	None	Yes	2	E-Mail	No
E-2020DEIS-02090	1/9/2021	Ms. Valerie	Hildebrand	None	Yes	2	E-Mail	No
E-2020DEIS-02091	1/9/2021	Ms. Paige	Harrison	None	Yes	2	E-Mail	No
E-2020DEIS-02092	1/9/2021	Ms. Catherine	McNamara	None	Yes	2	E-Mail	No
E-2020DEIS-02093	1/9/2021	Mrs. Donna	Yavorsky	None	Yes	2	E-Mail	No
E-2020DEIS-02095	1/9/2021	Ms. Jamie	Harris	None	Yes	2	E-Mail	No
E-2020DEIS-02096	1/9/2021	Ms. Rachele	Huennekens	None	Yes	2	E-Mail	No
E-2020DEIS-02097	1/9/2021	Dr. Leslie	Snider	None	Yes	2	E-Mail	No
E-2020DEIS-02098	1/9/2021	Ms. Janie	Martinez	None	Yes	2	E-Mail	No
E-2020DEIS-02099	1/9/2021	Mr. Rick	Pearson	None	Yes	2	E-Mail	No
E-2020DEIS-02101	1/9/2021	Mrs. Mary	Foley Foley	None	Yes	2	E-Mail	No
E-2020DEIS-02102	1/9/2021	Ms. Jean	Mack	None	Yes	2	E-Mail	No
E-2020DEIS-02103	1/9/2021	Ms. Pamela	Dugan	None	Yes	2	E-Mail	No
E-2020DEIS-02104	1/9/2021	Dr. Barbara	Scwartz	None	Yes	2	E-Mail	No
E-2020DEIS-02105	1/9/2021	Mrs. Lynn	Garavaglia	None	Yes	2	E-Mail	No
E-2020DEIS-02106	1/9/2021	Mrs. Nancy	McDonald	None	Yes	2	E-Mail	No
E-2020DEIS-02107	1/9/2021	Ms. Nancy	Roberts-Moneir	None	Yes	2	E-Mail	No
E-2020DEIS-02108	1/9/2021	Mr. Gary	Pontelandolfo	None	Yes	2	E-Mail	No
E-2020DEIS-02109	1/9/2021	Mrs. Mary	Helen Venos	None	Yes	2	E-Mail	No
E-2020DEIS-02110	1/9/2021	Mrs. Rita	Racioppo	None	Yes	2	E-Mail	No
E-2020DEIS-02111	1/9/2021	Mrs. Krystal	Fletcher-Burroughs	None	Yes	2	E-Mail	No
E-2020DEIS-02112	1/9/2021	Ms. Dobi	Dobroslawa	None	Yes	2	E-Mail	No
E-2020DEIS-02113	1/9/2021	Miss Natalie	Van Leekwijck	None	Yes	2	E-Mail	No
E-2020DEIS-02114	1/9/2021	Miss. Maryn	Jones	None	Yes	2	E-Mail	No
E-2020DEIS-02115	1/9/2021	Mr. Rob	Nash	None	Yes	2	E-Mail	No
E-2020DEIS-02116	1/9/2021	Ms. Marita	Mayer	None	Yes	2	E-Mail	No
E-2020DEIS-02117	1/9/2021	Ms. Janet	Forman	None	Yes	2	E-Mail	No
E-2020DEIS-02118	1/9/2021	Mr. Mark	Giese	None	Yes	2	E-Mail	No
E-2020DEIS-02119	1/9/2021	Mrs. Corine	de Zeeuw	None	Yes	2	E-Mail	No
E-2020DEIS-02120	1/9/2021	Ms. Madeline	Amalphy	None	Yes	2	E-Mail	No
E-2020DEIS-02121	1/10/2021	Ms. Sirena	LaBurn	None	Yes	2	E-Mail	No
E-2020DEIS-02122	1/10/2021	Mrs. Rosemary	Tann	None	Yes	2	E-Mail	No
E-2020DEIS-02123	1/10/2021	Mrs. Evelyn	Fraser	None	Yes	2	E-Mail	No
E-2020DEIS-02124	1/10/2021	Mr. Michael	Shoule	None	Yes	2	E-Mail	No
E-2020DEIS-02125	1/10/2021	Dr. Tony	Delia	None	Yes	2	E-Mail	No
E-2020DEIS-02126	1/10/2021	Ms. Joan	Breiding	None	Yes	2	E-Mail	No
E-2020DEIS-02127	1/10/2021	Mr. Pat	Bryan	None	Yes	2	E-Mail	No
E-2020DEIS-02128	1/10/2021	Mr. Art	Hanson	None	Yes	2	E-Mail	No
E-2020DEIS-02129	1/10/2021	Mrs. Karen	Leavitt	None	Yes	2	E-Mail	No
E-2020DEIS-02130	1/10/2021	Ms. Rita	Franco	None	Yes	2	E-Mail	No
E-2020DEIS-02134	1/10/2021	Ms. Kelley	Riley	None	Yes	2	E-Mail	No
E-2020DEIS-02137	1/10/2021	Ms. Denise	Fry	None	Yes	2	E-Mail	No

E-2020DEIS-02138	1/11/2021	Mrs. Randy	Sailer	None	Yes	2	E-Mail	No
E-2020DEIS-02139	1/11/2021	Ms. Mary Sue	Baker	None	Yes	2	E-Mail	No
E-2020DEIS-02142	1/11/2021	Ms. Melissa	Milano	None	Yes	2	E-Mail	No
E-2020DEIS-02143	1/11/2021	Ms. Rachel	Guillory	None	Yes	2	E-Mail	No
E-2020DEIS-02152	1/11/2021	Ms. Rachel	Watts	None	Yes	2	E-Mail	No
E-2020DEIS-02192	1/11/2021	Mr. Michael	Shapiro	None	Yes	2	E-Mail	No
E-2020DEIS-02209	1/11/2021	Ms. Karen	Matulina	None	Yes	2	E-Mail	No
E-2020DEIS-02263	1/11/2021	Mrs. Carrie	West	None	Yes	2	E-Mail	No
E-2020DEIS-02278	1/11/2021	Ms. Valeriya	Efimova	None	Yes	2	E-Mail	No
E-2020DEIS-02279	1/11/2021	Mr. Victor	Escobar	None	Yes	2	E-Mail	No
E-2020DEIS-02285	1/11/2021	Ms. Alexandra	Mummery	None	Yes	2	E-Mail	No
E-2020DEIS-02289	1/11/2021	Dr. Sharon	Sprouse	None	Yes	2	E-Mail	No
E-2020DEIS-02297	1/11/2021	Mr. Bernardo alayza	Mujica	None	Yes	2	E-Mail	No
E-2020DEIS-02315	1/12/2021	Mrs. Terese P.	Collins	None	Yes	2	E-Mail	No
E-2020DEIS-02319	1/12/2021	Mrs. Ronda	Reynolds	None	Yes	2	E-Mail	No
E-2020DEIS-02347	1/12/2021	Mr. Bernardo alayza	Mujica	None	Yes	2	E-Mail	No
E-2020DEIS-02355	1/13/2021	Mrs. Claudia	Correia	None	Yes	2	E-Mail	No
E-2020DEIS-02356	1/13/2021	Mr. Joseph	O'Sullivan	None	Yes	2	E-Mail	No
E-2020DEIS-02446	1/13/2021	Mr. Hudson	Coccoluto	None	Yes	2	E-Mail	No
E-2020DEIS-02451	1/13/2021	Ms. Maria	Asteinza	None	Yes	2	E-Mail	No
E-2020DEIS-02455	1/13/2021	Mrs. Claudia	Correia	None	Yes	2	E-Mail	No
E-2020DEIS-02459	1/13/2021	Mr. Brenda	Michaels	None	Yes	2	E-Mail	No
E-2020DEIS-02471	1/13/2021	Esteban	Barboza	None	Yes	2	E-Mail	No
E-2020DEIS-01695	1/5/2021	Leslie	Lazzo	None	Yes	3	E-Mail	No
E-2020DEIS-01713	1/5/2021	June	M	None	Yes	3	E-Mail	No
E-2020DEIS-01719	1/7/2021	Wendy	Forester	None	Yes	3	E-Mail	No
E-2020DEIS-01724	1/7/2021	Lisa	Haut	None	Yes	3	E-Mail	No
E-2020DEIS-02144	1/11/2021	Mark	Reback	None	Yes	3	E-Mail	No
E-2020DEIS-02145	1/11/2021	Arianna	Van Meurs	None	Yes	3	E-Mail	No
E-2020DEIS-02146	1/11/2021	Jill	Alibrandi	None	Yes	3	E-Mail	No
E-2020DEIS-02147	1/11/2021	Massimiliano	Urso	None	Yes	3	E-Mail	No
E-2020DEIS-02148	1/11/2021	Amy	Bursky	None	Yes	3	E-Mail	No
E-2020DEIS-02149	1/11/2021	Dr. Scott	Whitener	None	Yes	3	E-Mail	No
E-2020DEIS-02150	1/11/2021	Lana	May	None	Yes	3	E-Mail	No
E-2020DEIS-02151	1/11/2021	Jerry	Banks	None	Yes	3	E-Mail	No
E-2020DEIS-02153	1/11/2021	Meredith	Needham	None	Yes	3	E-Mail	No
E-2020DEIS-02154	1/11/2021	Kallie	Barnes	None	Yes	3	E-Mail	No
E-2020DEIS-02155	1/11/2021	Darian	Mark	None	Yes	3	E-Mail	No
E-2020DEIS-02156	1/11/2021	Felicia	Kautz	None	Yes	3	E-Mail	No
E-2020DEIS-02157	1/11/2021	Malcome	Groome	None	Yes	3	E-Mail	No
E-2020DEIS-02159	1/11/2021	Steve	Graff	None	Yes	3	E-Mail	No
E-2020DEIS-02160	1/11/2021	Gabrielle	Gaffney	None	Yes	3	E-Mail	No

E-2020DEIS-02161	1/11/2021	Macaire	Grambauer	None	Yes	3	E-Mail	No
E-2020DEIS-02162	1/11/2021	Josephine	Kowalski	None	Yes	3	E-Mail	No
E-2020DEIS-02163	1/11/2021	Tracy	Marotta	None	Yes	3	E-Mail	No
E-2020DEIS-02164	1/11/2021	Leonard	Neering	None	Yes	3	E-Mail	No
E-2020DEIS-02165	1/11/2021	Ann	Wright	None	Yes	3	E-Mail	No
E-2020DEIS-02166	1/11/2021	Carol	Becker	None	Yes	3	E-Mail	No
E-2020DEIS-02167	1/11/2021	Sarah	Werner	None	Yes	3	E-Mail	No
E-2020DEIS-02168	1/11/2021	Paul	Capaldo	None	Yes	3	E-Mail	No
E-2020DEIS-02169	1/11/2021	David	Ross	None	Yes	3	E-Mail	No
E-2020DEIS-02170	1/11/2021	Johanna	van de Woestijne	None	Yes	3	E-Mail	No
E-2020DEIS-02171	1/11/2021	Terri	Faircloth	None	Yes	3	E-Mail	No
E-2020DEIS-02172	1/11/2021	Jeanne	Sumner	None	Yes	3	E-Mail	No
E-2020DEIS-02173	1/11/2021	Jenna	Contuchio	None	Yes	3	E-Mail	No
E-2020DEIS-02174	1/11/2021	Lurrie	Amos	None	Yes	3	E-Mail	No
E-2020DEIS-02175	1/11/2021	Jodi	Lasseter	None	Yes	3	E-Mail	No
E-2020DEIS-02176	1/11/2021	Ann	Bicking	None	Yes	3	E-Mail	No
E-2020DEIS-02177	1/11/2021	Lorraine	Lowry	None	Yes	3	E-Mail	No
E-2020DEIS-02178	1/11/2021	Robert	Lerner	None	Yes	3	E-Mail	No
E-2020DEIS-02180	1/11/2021	Rick	Sparks	None	Yes	3	E-Mail	No
E-2020DEIS-02181	1/11/2021	Daniel	Van Geel	None	Yes	3	E-Mail	No
E-2020DEIS-02182	1/11/2021	Fern	Wachtel	None	Yes	3	E-Mail	No
E-2020DEIS-02183	1/11/2021	Brenda	Michaels	None	Yes	3	E-Mail	No
E-2020DEIS-02186	1/11/2021	Robert	Nowak	None	Yes	3	E-Mail	No
E-2020DEIS-02187	1/11/2021	Anna	Brewer	None	Yes	3	E-Mail	No
E-2020DEIS-02188	1/11/2021	Kaayla	Roth	None	Yes	3	E-Mail	No
E-2020DEIS-02189	1/11/2021	Melissa	L'Homme	None	Yes	3	E-Mail	No
E-2020DEIS-02190	1/11/2021	Maria	Studer	None	Yes	3	E-Mail	No
E-2020DEIS-02191	1/11/2021	Barbara	Masters	None	Yes	3	E-Mail	No
E-2020DEIS-02193	1/11/2021	Alan	Bartl	None	Yes	3	E-Mail	No
E-2020DEIS-02194	1/11/2021	Guy	Zahller	None	Yes	3	E-Mail	No
E-2020DEIS-02195	1/11/2021	Ross	Allen	None	Yes	3	E-Mail	No
E-2020DEIS-02196	1/11/2021	Esther	Mooncrest	None	Yes	3	E-Mail	No
E-2020DEIS-02197	1/11/2021	Andrew	Witthaus	None	Yes	3	E-Mail	No
E-2020DEIS-02198	1/11/2021	Marcia	Ostrowski	None	Yes	3	E-Mail	No
E-2020DEIS-02199	1/11/2021	Don	Lockard	None	Yes	3	E-Mail	No
E-2020DEIS-02201	1/11/2021	Karen	Weigand	None	Yes	3	E-Mail	No
E-2020DEIS-02202	1/11/2021	David	Roehm	None	Yes	3	E-Mail	No
E-2020DEIS-02203	1/11/2021	Catherine	Martin	None	Yes	3	E-Mail	No
E-2020DEIS-02204	1/11/2021	Deborah	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-02205	1/11/2021	Lynn	R	None	Yes	3	E-Mail	No
E-2020DEIS-02206	1/11/2021	Edward	Laurson	None	Yes	3	E-Mail	No
E-2020DEIS-02207	1/11/2021	Joan	Clark	None	Yes	3	E-Mail	No

E-2020DEIS-02208	1/11/2021	Elke	Romer	None	Yes	3	E-Mail	No
E-2020DEIS-02210	1/11/2021	Andrew	Arneson	None	Yes	3	E-Mail	No
E-2020DEIS-02211	1/11/2021	Dawne	Santopietro	None	Yes	3	E-Mail	No
E-2020DEIS-02212	1/11/2021	Janine	Vinton	None	Yes	3	E-Mail	No
E-2020DEIS-02213	1/11/2021	Harry	R. Sharpless jr.	None	Yes	3	E-Mail	No
E-2020DEIS-02215	1/11/2021	Michael	Hamm	None	Yes	3	E-Mail	No
E-2020DEIS-02216	1/11/2021	Marcia	Flannery	None	Yes	3	E-Mail	No
E-2020DEIS-02217	1/11/2021	Amy	Schuchman	None	Yes	3	E-Mail	No
E-2020DEIS-02218	1/11/2021	William	Ritter	None	Yes	3	E-Mail	No
E-2020DEIS-02220	1/11/2021	Ray	Plotkin	None	Yes	3	E-Mail	No
E-2020DEIS-02221	1/11/2021	Brenda	Robinson	None	Yes	3	E-Mail	No
E-2020DEIS-02222	1/11/2021	Chad	Fuqua	None	Yes	3	E-Mail	No
E-2020DEIS-02223	1/11/2021	Charlene	Kerchevall	None	Yes	3	E-Mail	No
E-2020DEIS-02224	1/11/2021	Silvia	Rocha	None	Yes	3	E-Mail	No
E-2020DEIS-02225	1/11/2021	Laura	Chariton	None	Yes	3	E-Mail	No
E-2020DEIS-02226	1/11/2021	Jean-claude	Guigot	None	Yes	3	E-Mail	No
E-2020DEIS-02227	1/11/2021	Victor	Carmichael	None	Yes	3	E-Mail	No
E-2020DEIS-02228	1/11/2021	Bhuvanesh	Bhatt	None	Yes	3	E-Mail	No
E-2020DEIS-02229	1/11/2021	W.	Clark	None	Yes	3	E-Mail	No
E-2020DEIS-02230	1/11/2021	Harry	Davis	None	Yes	3	E-Mail	No
E-2020DEIS-02231	1/11/2021	Sean	Blankenship	None	Yes	3	E-Mail	No
E-2020DEIS-02232	1/11/2021	Shiela	Cockshott	None	Yes	3	E-Mail	No
E-2020DEIS-02233	1/11/2021	Katha	Kerr	None	Yes	3	E-Mail	No
E-2020DEIS-02234	1/11/2021	Chris	Dufour	None	Yes	3	E-Mail	No
E-2020DEIS-02235	1/11/2021	Kay	Quackenbush	None	Yes	3	E-Mail	No
E-2020DEIS-02236	1/11/2021	Joanna	Molina	None	Yes	3	E-Mail	No
E-2020DEIS-02237	1/11/2021	Rachel	Lehmberg	None	Yes	3	E-Mail	No
E-2020DEIS-02238	1/11/2021	Christina	Nillo	None	Yes	3	E-Mail	No
E-2020DEIS-02239	1/11/2021	Janet and Mark	Thew	None	Yes	3	E-Mail	No
E-2020DEIS-02240	1/11/2021	Loraine	Fusco	None	Yes	3	E-Mail	No
E-2020DEIS-02241	1/11/2021	Brian	Kirven	None	Yes	3	E-Mail	No
E-2020DEIS-02242	1/11/2021	Linda	Pydeski	None	Yes	3	E-Mail	No
E-2020DEIS-02243	1/11/2021	Ericka	Ceballos	None	Yes	3	E-Mail	No
E-2020DEIS-02244	1/11/2021	John	Lango	None	Yes	3	E-Mail	No
E-2020DEIS-02245	1/11/2021	Antonio	Scognamiglio	None	Yes	3	E-Mail	No
E-2020DEIS-02246	1/11/2021	Erika	Ferrara	None	Yes	3	E-Mail	No
E-2020DEIS-02247	1/11/2021	Dolores	Graham	None	Yes	3	E-Mail	No
E-2020DEIS-02248	1/11/2021	Clive	Farndon	None	Yes	3	E-Mail	No
E-2020DEIS-02249	1/11/2021	Margaret	Lindler	None	Yes	3	E-Mail	No
E-2020DEIS-02250	1/11/2021	Michael	Vensky	None	Yes	3	E-Mail	No
E-2020DEIS-02251	1/11/2021	Barbara	Ginsberg	None	Yes	3	E-Mail	No
E-2020DEIS-02252	1/11/2021	Karen and Will	Lozow Cleary	None	Yes	3	E-Mail	No

E-2020DEIS-02253	1/11/2021	Karen	Stickney	None	Yes	3	E-Mail	No
E-2020DEIS-02254	1/11/2021	Christiane	Verhaegen	None	Yes	3	E-Mail	No
E-2020DEIS-02255	1/11/2021	Shari	Iacone	None	Yes	3	E-Mail	No
E-2020DEIS-02256	1/11/2021	Charles	Fox	None	Yes	3	E-Mail	No
E-2020DEIS-02257	1/11/2021	Jennie	Gosche	None	Yes	3	E-Mail	No
E-2020DEIS-02258	1/11/2021	Crystal	Marshall	None	Yes	3	E-Mail	No
E-2020DEIS-02259	1/11/2021	Suzanne	Gooch	None	Yes	3	E-Mail	No
E-2020DEIS-02260	1/11/2021	Maxwell	Fogleman	None	Yes	3	E-Mail	No
E-2020DEIS-02262	1/11/2021	Cathy	Sulinski	None	Yes	3	E-Mail	No
E-2020DEIS-02264	1/11/2021	Cathy	Sulinski	None	Yes	3	E-Mail	No
E-2020DEIS-02265	1/11/2021	Ann	Summy	None	Yes	3	E-Mail	No
E-2020DEIS-02266	1/11/2021	Phil	Broncucia	None	Yes	3	E-Mail	No
E-2020DEIS-02267	1/11/2021	Stacy	Baar	None	Yes	3	E-Mail	No
E-2020DEIS-02269	1/11/2021	Bruce	Rasmussen	None	Yes	3	E-Mail	No
E-2020DEIS-02270	1/11/2021	Kelly	Travers	None	Yes	3	E-Mail	No
E-2020DEIS-02271	1/11/2021	Linda	Peterson	None	Yes	3	E-Mail	No
E-2020DEIS-02272	1/11/2021	Nancy	Gowani	None	Yes	3	E-Mail	No
E-2020DEIS-02273	1/11/2021	L	Kifer	None	Yes	3	E-Mail	No
E-2020DEIS-02275	1/11/2021	Kay	Labo	None	Yes	3	E-Mail	No
E-2020DEIS-02276	1/11/2021	Duncan	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-02277	1/11/2021	Tim	Rhodes	None	Yes	3	E-Mail	No
E-2020DEIS-02280	1/11/2021	Fred	Fall	None	Yes	3	E-Mail	No
E-2020DEIS-02282	1/11/2021	R. Miles	Mendenhall	None	Yes	3	E-Mail	No
E-2020DEIS-02283	1/11/2021	Joe	Buhowsky	None	Yes	3	E-Mail	No
E-2020DEIS-02284	1/11/2021	Regine	Ruelle	None	Yes	3	E-Mail	No
E-2020DEIS-02286	1/11/2021	Dan	O''Keefe	None	Yes	3	E-Mail	No
E-2020DEIS-02287	1/11/2021	Joan	Milford	None	Yes	3	E-Mail	No
E-2020DEIS-02288	1/11/2021	K.	Krupinski	None	Yes	3	E-Mail	No
E-2020DEIS-02291	1/11/2021	Nageen	Zarinehbaf	None	Yes	3	E-Mail	No
E-2020DEIS-02292	1/11/2021	Blain	Martino	None	Yes	3	E-Mail	No
E-2020DEIS-02293	1/11/2021	Steven	Dawes	None	Yes	3	E-Mail	No
E-2020DEIS-02294	1/11/2021	Catherine	Gibbons	None	Yes	3	E-Mail	No
E-2020DEIS-02295	1/11/2021	Nia	Cherrett	None	Yes	3	E-Mail	No
E-2020DEIS-02296	1/11/2021	Robert	Umbreit	None	Yes	3	E-Mail	No
E-2020DEIS-02298	1/11/2021	Kathy	Shimata	None	Yes	3	E-Mail	No
E-2020DEIS-02299	1/11/2021	None	Grabowski	None	Yes	3	E-Mail	No
E-2020DEIS-02300	1/11/2021	Emma	Schultz	None	Yes	3	E-Mail	No
E-2020DEIS-02301	1/11/2021	Madeleine	Grenu	None	Yes	3	E-Mail	No
E-2020DEIS-02302	1/12/2021	Laurel	Nakanishi	None	Yes	3	E-Mail	No
E-2020DEIS-02303	1/12/2021	Danielle	L''Ecuyer	None	Yes	3	E-Mail	No
E-2020DEIS-02304	1/12/2021	Deborah	Wilson	None	Yes	3	E-Mail	No
E-2020DEIS-02305	1/12/2021	Laura	Hassin	None	Yes	3	E-Mail	No

E-2020DEIS-02306	1/12/2021	Caroline	Sevilla	None	Yes	3	E-Mail	No
E-2020DEIS-02308	1/12/2021	Bellinda	Rolf-Jansen	None	Yes	3	E-Mail	No
E-2020DEIS-02309	1/12/2021	Patricia	Stock	None	Yes	3	E-Mail	No
E-2020DEIS-02310	1/12/2021	Wendy	Forster	None	Yes	3	E-Mail	No
E-2020DEIS-02313	1/12/2021	Amy	Cyr	None	Yes	3	E-Mail	No
E-2020DEIS-02314	1/12/2021	Lee	Leines	None	Yes	3	E-Mail	No
E-2020DEIS-02316	1/12/2021	Vern	Cruise	None	Yes	3	E-Mail	No
E-2020DEIS-02317	1/12/2021	Louise	Kistler	None	Yes	3	E-Mail	No
E-2020DEIS-02318	1/12/2021	Kate	Kenner	None	Yes	3	E-Mail	No
E-2020DEIS-02321	1/12/2021	Kezzy	Metivier	None	Yes	3	E-Mail	No
E-2020DEIS-02322	1/12/2021	Tara	Combs	None	Yes	3	E-Mail	No
E-2020DEIS-02323	1/12/2021	Jon	Berges	None	Yes	3	E-Mail	No
E-2020DEIS-02324	1/12/2021	David	Wint	None	Yes	3	E-Mail	No
E-2020DEIS-02329	1/12/2021	David	Wint	None	Yes	3	E-Mail	No
E-2020DEIS-02331	1/12/2021	Kirsten	Kristensen	None	Yes	3	E-Mail	No
E-2020DEIS-02335	1/12/2021	Eryn	Cook	None	Yes	3	E-Mail	No
E-2020DEIS-02336	1/12/2021	Nina	Brunetti	None	Yes	3	E-Mail	No
E-2020DEIS-02337	1/12/2021	Elisabeth	Bechmann	None	Yes	3	E-Mail	No
E-2020DEIS-02338	1/12/2021	Sau	Tsang	None	Yes	3	E-Mail	No
E-2020DEIS-02342	1/12/2021	Ethel	Tankenson	None	Yes	3	E-Mail	No
E-2020DEIS-02348	1/12/2021	Philip	Kritzman	None	Yes	3	E-Mail	No
E-2020DEIS-02350	1/12/2021	Rebecca	Lamoreaux	None	Yes	3	E-Mail	No
E-2020DEIS-02353	1/12/2021	Krista	Reynolds	None	Yes	3	E-Mail	No
E-2020DEIS-02354	1/12/2021	Bernadette	Webster	None	Yes	3	E-Mail	No
E-2020DEIS-02361	1/13/2021	Deborah	Brown	None	Yes	3	E-Mail	No
E-2020DEIS-02362	1/13/2021	Alexander	Vollmer	None	Yes	3	E-Mail	No
E-2020DEIS-02363	1/13/2021	Pietro	Poggi	None	Yes	3	E-Mail	No
E-2020DEIS-02364	1/13/2021	Alan	Bosch	None	Yes	3	E-Mail	No
E-2020DEIS-02365	1/13/2021	Richard	Santivong	None	Yes	3	E-Mail	No
E-2020DEIS-02366	1/13/2021	Kenn	Hopkins	None	Yes	3	E-Mail	No
E-2020DEIS-02367	1/13/2021	Susannah	Cummings	None	Yes	3	E-Mail	No
E-2020DEIS-02368	1/13/2021	Laura	West	None	Yes	3	E-Mail	No
E-2020DEIS-02369	1/13/2021	Jill	Mulato	None	Yes	3	E-Mail	No
E-2020DEIS-02370	1/13/2021	Danny	Franke	None	Yes	3	E-Mail	No
E-2020DEIS-02371	1/13/2021	Dominique	Landis	None	Yes	3	E-Mail	No
E-2020DEIS-02372	1/13/2021	Jeannine	Lish	None	Yes	3	E-Mail	No
E-2020DEIS-02374	1/13/2021	Susan	Weems	None	Yes	3	E-Mail	No
E-2020DEIS-02375	1/13/2021	Gudrun	Dennis	None	Yes	3	E-Mail	No
E-2020DEIS-02376	1/13/2021	Alicia	Walker	None	Yes	3	E-Mail	No
E-2020DEIS-02377	1/13/2021	Kathleen	Donnafield	None	Yes	3	E-Mail	No
E-2020DEIS-02378	1/13/2021	Saundra	Holloway	None	Yes	3	E-Mail	No
E-2020DEIS-02379	1/13/2021	Deann	Piehl	None	Yes	3	E-Mail	No

E-2020DEIS-02380	1/13/2021	Tom	Boughan	None	Yes	3	E-Mail	No
E-2020DEIS-02381	1/13/2021	Michel	Collin	None	Yes	3	E-Mail	No
E-2020DEIS-02382	1/13/2021	Julie	Sonam	None	Yes	3	E-Mail	No
E-2020DEIS-02383	1/13/2021	Joyce	Hughes	None	Yes	3	E-Mail	No
E-2020DEIS-02384	1/13/2021	Eugene	Gorrin	None	Yes	3	E-Mail	No
E-2020DEIS-02385	1/13/2021	Julie	Rose	None	Yes	3	E-Mail	No
E-2020DEIS-02386	1/13/2021	Trina	Cooper	None	Yes	3	E-Mail	No
E-2020DEIS-02387	1/13/2021	Diana E	Smith	None	Yes	3	E-Mail	No
E-2020DEIS-02388	1/13/2021	Norty	Kalishman	None	Yes	3	E-Mail	No
E-2020DEIS-02389	1/13/2021	Leonard	Piersialla	None	Yes	3	E-Mail	No
E-2020DEIS-02390	1/13/2021	Patricia	Rahikainen	None	Yes	3	E-Mail	No
E-2020DEIS-02391	1/13/2021	Jill	McAnally	None	Yes	3	E-Mail	No
E-2020DEIS-02392	1/13/2021	T	Sherrill	None	Yes	3	E-Mail	No
E-2020DEIS-02393	1/13/2021	Yvonne	Zepeda	None	Yes	3	E-Mail	No
E-2020DEIS-02395	1/13/2021	Michele	Peterson	None	Yes	3	E-Mail	No
E-2020DEIS-02396	1/13/2021	Keli	Steinhoff	None	Yes	3	E-Mail	No
E-2020DEIS-02397	1/13/2021	Gregory	Esteve	None	Yes	3	E-Mail	No
E-2020DEIS-02398	1/13/2021	Valerie	Clark	None	Yes	3	E-Mail	No
E-2020DEIS-02399	1/13/2021	Theresa	Blackwell	None	Yes	3	E-Mail	No
E-2020DEIS-02400	1/13/2021	Teresa	Zollars	None	Yes	3	E-Mail	No
E-2020DEIS-02401	1/13/2021	Deborah	Mulligan	None	Yes	3	E-Mail	No
E-2020DEIS-02402	1/13/2021	Kirsten	Brueggerhoff	None	Yes	3	E-Mail	No
E-2020DEIS-02403	1/13/2021	Cononel	Freitas	None	Yes	3	E-Mail	No
E-2020DEIS-02404	1/13/2021	Peggy	Merz	None	Yes	3	E-Mail	No
E-2020DEIS-02405	1/13/2021	Anna	Rossini	None	Yes	3	E-Mail	No
E-2020DEIS-02406	1/13/2021	Cathleen	Hothersall	None	Yes	3	E-Mail	No
E-2020DEIS-02407	1/13/2021	Jennie	Richards	None	Yes	3	E-Mail	No
E-2020DEIS-02408	1/13/2021	Len	Neering	None	Yes	3	E-Mail	No
E-2020DEIS-02409	1/13/2021	Sue	Binder	None	Yes	3	E-Mail	No
E-2020DEIS-02412	1/13/2021	Brad	Nahill	None	Yes	3	E-Mail	No
E-2020DEIS-02413	1/13/2021	Michael	Archer	None	Yes	3	E-Mail	No
E-2020DEIS-02414	1/13/2021	Don	Madden	None	Yes	3	E-Mail	No
E-2020DEIS-02415	1/13/2021	Marcia	Flannery	None	Yes	3	E-Mail	No
E-2020DEIS-02416	1/13/2021	Mary	Finelli	None	Yes	3	E-Mail	No
E-2020DEIS-02417	1/13/2021	Bryn	Robertson	None	Yes	3	E-Mail	No
E-2020DEIS-02419	1/13/2021	Kiah	Semion	None	Yes	3	E-Mail	No
E-2020DEIS-02420	1/13/2021	Ella	Craig	None	Yes	3	E-Mail	No
E-2020DEIS-02421	1/13/2021	Bruce	Rodgers	None	Yes	3	E-Mail	No
E-2020DEIS-02422	1/13/2021	Julie	Stevenson	None	Yes	3	E-Mail	No
E-2020DEIS-02423	1/13/2021	Nancy	Schultz	None	Yes	3	E-Mail	No
E-2020DEIS-02424	1/13/2021	Donna	Howe	None	Yes	3	E-Mail	No
E-2020DEIS-02425	1/13/2021	Jonathan	Roberts	None	Yes	3	E-Mail	No

E-2020DEIS-02426	1/13/2021	Adriann	Ivey	None	Yes	3	E-Mail	No
E-2020DEIS-02427	1/13/2021	Pamela	Yates	None	Yes	3	E-Mail	No
E-2020DEIS-02428	1/13/2021	Erica	Sohl	None	Yes	3	E-Mail	No
E-2020DEIS-02430	1/13/2021	Matthew	Tarpley	None	Yes	3	E-Mail	No
E-2020DEIS-02431	1/13/2021	James	Burnette	None	Yes	3	E-Mail	No
E-2020DEIS-02432	1/13/2021	Diwanna	Zapalac	None	Yes	3	E-Mail	No
E-2020DEIS-02434	1/13/2021	Diwanna	Zapalac	None	Yes	3	E-Mail	Yes
E-2020DEIS-02435	1/13/2021	Michelle	Wallhagen	None	Yes	3	E-Mail	No
E-2020DEIS-02436	1/13/2021	Mary	Rezner	None	Yes	3	E-Mail	No
E-2020DEIS-02437	1/13/2021	Tim	B	None	Yes	3	E-Mail	No
E-2020DEIS-02438	1/13/2021	Vito	Antonio Filho	None	Yes	3	E-Mail	No
E-2020DEIS-02439	1/13/2021	Josh	Pelleg	None	Yes	3	E-Mail	No
E-2020DEIS-02440	1/13/2021	Terri	Garrison	None	Yes	3	E-Mail	No
E-2020DEIS-02441	1/13/2021	Jes	Ro	None	Yes	3	E-Mail	No
E-2020DEIS-02442	1/13/2021	Nancy	Sharak	None	Yes	3	E-Mail	No
E-2020DEIS-02443	1/13/2021	Edith	Livesay	None	Yes	3	E-Mail	No
E-2020DEIS-02444	1/13/2021	Laura	Livesay	None	Yes	3	E-Mail	No
E-2020DEIS-02445	1/13/2021	Jo-Dee	Burbach	None	Yes	3	E-Mail	No
E-2020DEIS-02447	1/13/2021	AD	Godley	None	Yes	3	E-Mail	No
E-2020DEIS-02448	1/13/2021	Nancy	Lowell	None	Yes	3	E-Mail	No
E-2020DEIS-02452	1/13/2021	Barbara	DuBois	None	Yes	3	E-Mail	No
E-2020DEIS-02455	1/13/2021	Janet	Gipson	None	Yes	3	E-Mail	No
E-2020DEIS-02456	1/13/2021	Marilyn	Mangione	None	Yes	3	E-Mail	No
E-2020DEIS-02457	1/13/2021	Asterid	Geest	None	Yes	3	E-Mail	No
E-2020DEIS-02458	1/13/2021	Kathy	Haverkamp	None	Yes	3	E-Mail	No
E-2020DEIS-02461	1/13/2021	William	Welkowitz	None	Yes	3	E-Mail	No
E-2020DEIS-02464	1/13/2021	William	Welkowitz	None	Yes	3	E-Mail	No
E-2020DEIS-02465	1/13/2021	Deana	Piedra	None	Yes	3	E-Mail	No
E-2020DEIS-02466	1/13/2021	Terrie	Tannehill	None	Yes	3	E-Mail	No
E-2020DEIS-02467	1/13/2021	James	Wee	None	Yes	3	E-Mail	No
E-2020DEIS-02469	1/13/2021	Julie	Sanford	None	Yes	3	E-Mail	No
E-2020DEIS-02470	1/13/2021	Jeff	Fromberg	None	Yes	3	E-Mail	No
E-2020DEIS-02472	1/13/2021	Morgan	Walhagen	None	Yes	3	E-Mail	No
E-2020DEIS-02474	1/13/2021	Dianne	Ensign	None	Yes	3	E-Mail	No
E-2020DEIS-02475	1/13/2021	Olivia	Casino	None	Yes	3	E-Mail	No
E-2020DEIS-02479	1/13/2021	Brent	Rusert	None	Yes	3	E-Mail	No
E-2020DEIS-02484	1/13/2021	Brent	Rusert	None	Yes	3	E-Mail	No
E-2020DEIS-02488	1/13/2021	Carrie	West	None	Yes	3	E-Mail	No
E-2020DEIS-02492	1/13/2021	Lorraine	Foster	None	Yes	3	E-Mail	No
E-2020DEIS-02494	1/13/2021	Susan	Allen	None	Yes	3	E-Mail	No
E-2020DEIS-02496	1/13/2021	Jennifer	Lutje	None	Yes	3	E-Mail	No
E-2020DEIS-02497	1/13/2021	Jackie	Cole	None	Yes	3	E-Mail	No

E-2020DEIS-02500	1/13/2021	Glenda	Corning	None	Yes	3	E-Mail	No
E-2020DEIS-02502	1/13/2021	Janine	Vinton	None	Yes	3	E-Mail	No
E-2020DEIS-02503	1/13/2021	Joe	Le Gris	None	Yes	3	E-Mail	No
E-2020DEIS-02505	1/13/2021	Freya	Harris	None	Yes	3	E-Mail	No
E-2020DEIS-02506	1/13/2021	Pablo	Bobe	None	Yes	3	E-Mail	No
E-2020DEIS-02507	1/13/2021	Lodiza	Lepore	None	Yes	3	E-Mail	No
E-2020DEIS-02508	1/13/2021	Sharon	Lacy	None	Yes	3	E-Mail	No
E-2020DEIS-02509	1/13/2021	Don	Faia	None	Yes	3	E-Mail	No
E-2020DEIS-02511	1/13/2021	Patricia	Kusmierski	None	Yes	3	E-Mail	No
E-2020DEIS-02513	1/13/2021	MaryLynn	Michaelis	None	Yes	3	E-Mail	No
E-2020DEIS-02515	1/13/2021	Richard	Meyer	None	Yes	3	E-Mail	No
E-2020DEIS-02516	1/13/2021	Judy	Tobey	None	Yes	3	E-Mail	No
E-2020DEIS-02517	1/13/2021	Holly	Nelson	None	Yes	3	E-Mail	No
E-2020DEIS-02520	1/13/2021	Steve	Rusk	None	Yes	3	E-Mail	No
E-2020DEIS-02522	1/13/2021	Danelle	lawson	None	Yes	3	E-Mail	No
E-2020DEIS-02524	1/13/2021	Arlene	Brunn	None	Yes	3	E-Mail	No
E-2020DEIS-02529	1/13/2021	Jim	Curland	None	Yes	3	E-Mail	No

Cooperating Agency Letters

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Peter Schaefer
Texas Commission on Environmental Quality
Water Quality Division
P.O. Box 13087, MC-150
Austin, TX 78711-3087

Dear Mr. Schaefer:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

We are inviting the participation of your agency as a Cooperating Agency pursuant to Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (40 CFR §1501.6 and §1508.5). The purpose of this request is to formalize, via designation as a Cooperating Agency, the continuing coordination and active participation by resource agencies in the Coastal Texas Protection and Restoration Feasibility Study. Furthermore, we would like to coordinate our review schedule for study completion so that all reviews and approvals will, to the maximum extent practicable, be conducted concurrently. This concurrent coordination is required by Section 2045 of the Water Resources Development Act of 2007 and Section 1001 of the Water Resources Reform Development Act of 2014. The following review periods for the IFR-EIS have been established in accordance with the current project schedule:

Review of Draft IFR-EIS – 45-day review period begins July 2018
State & Agency Review of Final IFR-EIS – 30-day review begins February 2021

We are also inviting you to participate in an Interagency Meeting of Federal, tribal, and State agencies that may be interested or required by law to review the Federal

proposal to be developed by this study. The Interagency Meeting is scheduled to be held at the following date, time and location:

May 3, 2016 – 8:30 to 11:30 am
Galveston District Headquarters
2000 Fort Point Road
Galveston, Texas 77550
Conference Room 120

We appreciate this opportunity to invite your participation as a Cooperating Agency and request that you advise us as to whether the report review periods shown above are acceptable. In addition, please let us know if you plan to attend the Interagency Meeting, either remotely or in person. The meeting will be available by teleconference and web meeting (webinar address http://www.webmeeting.att.com, call-in and web meeting number 866-434-5269, access code 8362189, security code 1234). If you plan to attend in person, please advise my staff so we can facilitate your entry into the Galveston District facility. Please contact Janelle Stokes of my staff at (409) 766-3039 or at janelle.s.stokes@usace.army.mil.

Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 11 2016

Ms. Karla Guthrie, Ph.D.
Team Lead, Bays and Estuaries Program
Texas Water Development Board
P.O. Box 13231
Austin, TX 78711-3231

Dear Dr. Guthrie:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Kevin Cauble
Manager, Emissions Assessment Section
Texas Commission on Environmental Quality
P.O. Box 13087, MC-164
Austin, TX 78711-3087

Dear Mr. Cauble:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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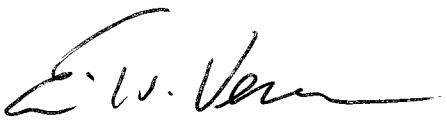
Sincerely,



Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Matthew Mahoney
Waterways Program Coordinator
Texas Department of Transportation, Maritime Division
118 E. Riverside Drive
Austin, Texas 78704

Dear Mr. Mahoney:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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Sincerely,

Eric W. Verwers
Director, Regional Planning and
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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 11 2016

Ms. Rebecca Hensley
Regional Director, Ecosystem Resources Program
Texas Parks and Wildlife Department
1502 FM 517 East
Dickinson, TX 77539

Dear Ms. Hensley:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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State & Agency Review of Final IFR-EIS – 30-day review begins February 2021

We are also inviting you to participate in an Interagency Meeting of Federal, tribal, and State agencies that may be interested or required by law to review the Federal

proposal to be developed by this study. The Interagency Meeting is scheduled to be held at the following date, time and location:

May 3, 2016 – 8:30 to 11:30 am
Galveston District Headquarters
2000 Fort Point Road
Galveston, Texas 77550
Conference Room 120

We appreciate this opportunity to invite your participation as a Cooperating Agency and request that you advise us as to whether the report review periods shown above are acceptable. In addition, please let us know if you plan to attend the Interagency Meeting, either remotely or in person. The meeting will be available by teleconference and web meeting (webinar address http://www.webmeeting.att.com, call-in and web meeting number 866-434-5269, access code 8362189, security code 1234). If you plan to attend in person, please advise my staff so we can facilitate your entry into the Galveston District facility. Please contact Janelle Stokes of my staff at (409) 766-3039 or at janelle.s.stokes@usace.army.mil.

Sincerely,

Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Scott Alford
District Conservationist
US Department of Agriculture
National Resources Conservation Service
7705 West Bay Road 77523
Baytown, TX

Dear Mr. Alford:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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DEPARTMENT OF THE ARMY
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P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Rusty Swafford
Branch Supervisor
National Marine Fisheries Service
Habitat Conservation Division
4700 Avenue U
Galveston, TX 77551

Dear Mr. Swafford:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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GALVESTON DISTRICT, CORPS OF ENGINEERS
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GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Chuck Ardizzone
Project Leader
US Fish and Wildlife Service
Texas Coastal Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, Texas 77058

Dear Mr. Ardizzone:

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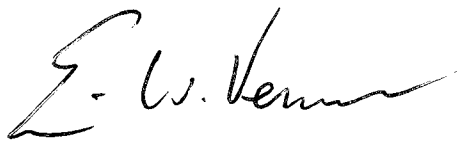

Eric W. Verwers
Director, Regional Planning and
Environmental Center

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Ms. Maria Martinez
Section Chief, Wetland Section
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Ms. Martinez:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 11 2016

Mr. Russell Martin
President
Tonkawa Tribe of Oklahoma
1 Rush Buffalo Road
Tonkawa, Oklahoma 74654

Dear President Martin:

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Danny Breuninger, Jr.
President
Mescalero Apache Tribe
P.O. Box 227
Mescalero, New Mexico 88340

Dear President Breuninger:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. William Owens
Tribal Administrator
The Comanche Nation
584 NW Bingo Road
Lawton, Oklahoma 73507

Dear Administrator Owens:

The U.S. Army Corps of Engineers, Galveston District (Corps) intends to prepare an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. The Corps and the non-federal sponsor, the Texas General Land Office, would like to invite your agency to participate as a Cooperating Agency in the development of the IFR-EIS. The IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage risk management, hurricane and storm damage risk management, and ecosystem restoration for the coastal areas of the State of Texas. The study will focus on providing for the protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands and features that protect critical resources, habitat, and infrastructure from the impacts of coastal storms, hurricanes, erosion, and subsidence.

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Ms. Amber Toppah
Chairperson
Kiowa Indian Tribe of Oklahoma
P.O. Box 370
Carnegie, Oklahoma 73016

Dear Chairperson Toppah:

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 11 2016

Ms. Nina Battise
Chairperson
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, Texas 77351

Dear Chairperson Battise:

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GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

APR 1 1 2016

Mr. Kevin Stickney
Chairman
Coushatta Tribe of Louisiana
1940 C.C. Bel Road
Elton, Louisiana 70532

Dear Chairman Stickney:

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UNITED STATES DEPARTMENT OF COMMERCE
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NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
http://sero.nmfs.noaa.gov

F/SER:NS

APR 26 2016

Eric W. Verwers
Director, Regional Planning and Environmental Center
Galveston District, U.S. Army Corps of Engineers
Post Office Box 1229
Galveston, Texas 77553-1229

Attention: Janelle Stokes

Dear Mr. Verwers:

NOAA's National Marine Fisheries Service (NMFS) has received your letter dated April 11, 2016, requesting our participation as a cooperating agency in the preparation of the Integrated Feasibility Report and Environmental Impact statement (IFR-EIS) for the Coastal Texas Protection and Restoration Feasibility Study. Given the scale and scope of the U.S. Army Corps of Engineers' IFR-EIS, there is the potential for impacts and benefits to NOAA-trust resources resulting from projects associated with the IFR-EIS. Therefore, NMFS agrees to serve as a cooperating agency in the preparation of the IFR-EIS. Due to staffing and travel constraints, our participation in the preparation of the IFR-EIS may be limited to our review and comment on draft National Environmental Policy Act documents, teleconferences, and occasional travel to meetings.

We appreciate your invitation to participate in an Interagency Meeting scheduled on May 3, 2016, from 8:30 to 11:30 AM at the Galveston District Headquarters. Mr. Rusty Swafford of our Habitat Conservation Division plans on attending this meeting. Rusty Swafford is the point of contact for any Essential Fish Habitat related issues/questions and can be reached at (409) 766-3699 or rusty.swafford@noaa.gov. Mr. Dennis Klemm of our Protected Resources Division plans to participate remotely via teleconference/webinar. Dennis Klemm is the point of contact for any Endangered Species Act related issues/questions and can be reached at (727) 824-5312, or at dennis.klemm@noaa.gov. Dr. Jim Nance of the Southeast Fisheries Science Center's Galveston Laboratory has also indicated he may attend the Interagency Meeting. Dr. Nance can be reached at (409) 766-3500, or at james.m.nance@noaa.gov.

Sincerely,

Roy E. Crabtree, Ph.D.
for Regional Administrator

cc: GC2: Dillen
F: Leathery, Reid
F/SER: Strelcheck, Silverman, Blough, Giordano
F/SER3: Bernhart, Klemm
F/SER4: Fay, Dale
F/SER46: Swafford
SEFSC: Nance, Hargrove
Files

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

4 MAY 2016

Eric W. Verwers
Director, Regional Planning and
Environmental Center
Galveston District
Corps of Engineers
P.O. Box 1229
Galveston, TX 77553-1229

Dear Mr. Verwers:

This letter is in response to the U.S. Army Corps of Engineers' (COE) request (dated April 11, 2016), for the Environmental Protection Agency (EPA) to become a cooperating agency in the development of a National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) for the Coastal Texas Protection and Restoration Study. The EIS will analyze the impacts of the proposed project to the human and natural environment.

The EPA agrees to participate in this proposed project as a cooperating agency. As a cooperating agency, the EPA will

- provide expertise on NEPA compliance and other subject matter such as wetlands, water quality, air quality, and environmental justice, during EIS planning and development;
- provide timely technical reviews and comments on preliminary documents, reports, analyses, and sections of the Draft EIS;
- participate in meetings and provide information as requested by COE, as resources allow;
- provide sources for information or support in the analysis of such information, when known, during preparation of the Draft EIS in areas in which EPA has expertise;
- review and comment on the Draft EIS pursuant to our regulatory responsibilities under Section 309 of the Clean Air Act.

The EPA anticipates that a cooperative team approach will streamline the environmental process and result in a high quality EIS. We look forward to continued involvement and cooperation in the environmental assessment phase of the project. If you have any further questions, please contact Mike Jansky at 214-665-7451 or jansky.michael@epa.gov.

Sincerely,

John Blevins
Director
Compliance Assurance and
Enforcement Division

United States Department of the Interior
BUREAU OF OCEAN ENERGY MANAGEMENT
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

In Reply Refer To: GM 633D

FEB 1 6 2017

Dr. Kelly A. Burks-Copes
Chief, Coastal Section
U.S. Army Corps of Engineers
Galveston District
Post Office Box 1229
Galveston, Texas 77553-1229

Dear Dr. Burks-Copes:

Thank you for your letter requesting that the Bureau of Ocean Energy Management (BOEM) become a Cooperating Agency during the National Environmental Policy Act (NEPA) process for the preparation of an Integrated Feasibility Report and Environmental Impact Statement (IFR-EIS) for the Coastal Texas Ecosystem Protection and Restoration Study. It is our understanding that the IFR-EIS will identify and evaluate the feasibility of developing a comprehensive plan for flood damage reduction, hurricane and storm damage risk reduction, and ecosystem restoration for the coastal areas of the State of Texas. As a result, projects may develop requesting the use of sand on the Outer Continental Shelf (OCS), by the U.S. Army Corps of Engineers (USACE), Galveston District, to provide protection, conservation, and restoration of wetlands, barrier islands, shorelines, and related lands. Since BOEM has jurisdiction over mineral leasing on the OCS, BOEM agrees to serve as a Cooperating Agency in the preparation of the IFR-EIS. In the event that minerals are needed from the OCS, pending completion of environmental review, BOEM will enter into a Memorandum of Agreement with the USACE under the authority of Section 8(k)(2) of the Outer Continental Shelf Lands Act (43 U.S.C. § 1337(k)(2)), which will serve as a noncompetitive negotiated agreement for the use of OCS minerals from designated borrow areas and define each agency's role in the program or project(s).

As a Cooperating Agency, BOEM expects to provide Bureau-appropriate assistance with the preparation of the IFR-EIS. Michael Miner and Bridgette Duplantis will represent BOEM on the IFR-EIS Project Delivery Team and will ensure that the scope accurately reflects BOEM's NEPA and leasing requirements. BOEM also recognizes the importance of participating in the required Endangered Species Act Section 7 consultation, the Magnuson-Stevens Fishery and Conservation Management Act Section 305 essential fish habitat consultation, the National Historic Preservation Act Section 106 process, and the Coastal Zone Management Act Section 307 consistency process.

Beyond the NEPA and interagency consultation coordination discussed above, BOEM also offers the USACE information and expertise related to offshore sediment resources for consideration in the feasibility study. Since the 1980s, BOEM (and its predecessor, the Minerals Management Service) has funded cooperative agreements with various entities in Texas and Louisiana to identify and delineate sediment resources offshore Texas. We have recently entered into a cooperative agreement with the University of Texas titled "Texas Offshore Sediment Resources Inventory: Development and Application of Geophysical Processing Workflows for Sand Resource Evaluation," which will build upon previous investments to characterize offshore sand resources as part of BOEM's larger initiative to develop a Gulfwide Offshore Sand Resources Inventory. BOEM welcomes and encourages input from the USACE on these resource evaluation efforts so that BOEM can better meet the needs of our stakeholders and specifically so that we can direct resources to best support the Coastal Texas Ecosystem Protection and Restoration Study.

BOEM looks forward to working with the USACE during this process. If you would like to discuss any of these items further, please contact Dr. Michael Miner with our Marine Minerals Program at 504-736-2700 or by email at michael.miner@boem.gov.

Sincerely,

Michael A. Celata
Regional Director