

ALTERNATIVES ANALYSIS

The purpose of this Alternatives Analysis is to review and analyze potential project alternatives for practicability and to identify the practicable alternative that results in the Least Environmentally Damaging Practicable Alternative (LEDPA).

Purpose and Need

The Seabreeze Environmental Landfill is reaching its full capacity and expansion of the landfill is needed to accommodate the region's growing need for waste disposal. The purpose of the proposed Seabreeze Landfill Expansion is to add additional waste disposal capacity to the existing Seabreeze Environmental Landfill to create a single management unit to accommodate the regions growing need for waste disposal.

Identify Alternatives

For an alternative to be considered "practicable", it must be available and capable of being done after the consideration of cost, existing technology, and logistics for the project purpose. The applicant considered the following criteria to determine the preferred alternative:

- 1.) Use of property owned by Seabreeze Recovery, Inc. (Seabreeze) or available for purchase.
- 2.) Property must be adjacent to the existing Seabreeze Environmental Landfill, specifically adjacent to the already permitted, unconstructed 80-acre tract.
- 3.) Sufficient amount of land for waste disposal activities of at least 150 acres.
- 4.) Property must be available for landfill development according to Brazoria County Landfill Ordinance.

No-action Alternative

Alternative 1

Alternative 1 is a "No Build" alternative in which the applicant does not develop additional waste disposal areas.

Offsite Alternatives

At the time of the application, only two adjacent properties would be of sufficient size for the proposed project (**Figures 1 and 2**).

Alternative 2

Alternative 2 involves the applicant acquiring a sufficient amount of land from the Legendre Land Corporation/ JMB Land Co., LP. These parcels are located northeast of the existing landfill. The applicant would use these parcels of land for waste disposal.

Alternative 3

Alternative 3 involves the applicant acquiring the adjacent 183 acres located southwest of the existing landfill. The applicant would use these parcels of land for waste disposal.

*Alternatives Analysis***Onsite Alternatives*****Alternative 4***

Alternative 4 involves the applicant to use the already permitted, unconstructed 80-acre tract for waste disposal and to construct a road through the unpermitted 70.6-acre tract owned by Seabreeze for access to the 80-acre tract from the existing facilities.

Alternative 5 (Preferred Alternative)

Alternative 5 is the preferred alternative and involves the applicant constructing a new waste disposal area that will connect the existing Seabreeze Environmental Landfill with the permitted, but unconstructed, 80-acre tract to the north. This action would involve the development of the 70.6-acre tract between the existing facility and the undeveloped 80-acre tract giving the applicant a total of 150.6 acres to construct additional waste disposal area. Creation of the connecting waste disposal area will create a single management unit.

Practicability and LEDPA Analysis**Metric 1**

Does an alternative allow the proposed project to achieve the purpose and need of providing the region additional landfill space for waste disposal with regards to costs, existing technology, and logistics?

Alternative 1

Alternative 1 is a "No Build" alternative in which the applicant does not develop additional waste disposal areas. Once the existing Seabreeze Environmental Landfill has reached its maximum capacity, waste would have to be disposed of at other existing landfills which would cost additional money due to logistics and availability of other landfills. Eventually, these landfills would also reach their maximum capacity causing waste disposal issues in the region. The Seabreeze Environmental Landfill already has appropriate facilities and logistics in the area and is excluded in the Brazoria County Landfill Ordinance. This alternative does not achieve the purpose of providing the region with additional waste disposal areas.

For these reasons, Alternative 1 does not meet Metric 1. Therefore, Alternative 1 is determined to not be practicable and is removed from further consideration.

Alternative 2

Alternative 2 involves the applicant acquiring a sufficient amount of land from the Legendre Land Corporation/ JMB Land Co., LP. According to the Brazoria County CAD Map Search, found online at the Brazoria County Appraisal District website, the JMB Land Co., LP owns 527.82 acres northeast of the existing landfill (property identification number 169586). Upon further research, the property is a proposed wetland mitigation bank named Bastrop Bayou Mitigation Bank (BBMB). According to the United States Corps of Engineers (USACE)- Galveston District SWG-2015-00305 Public Notice, JMB Land Co., LP proposes to establish and operate a 700-acre mitigation bank to restore high quality Herbaceous Prairie Wetlands to serve as compensatory mitigation of unavoidable, permitted impacts to Waters of the United States (WOUS). A phone call on March 2, 2018 to Aaron Landry of JMB Land Co., LP was conducted to confirm that the parcels are indeed a proposed wetlands mitigation bank. The property is not available

for landfill development according to the Brazoria County Landfill Ordinance. According to the Brazoria County Landfill Ordinance, Brazoria County has banned the development of solid waste disposal for all areas, except those excluded in the ordinance. The existing Seabreeze Landfill is excluded from the ordinance but not the adjacent properties.

For these reasons, Alternative 2 does not meet Metric 1. Therefore, Alternative 2 is determined to not be practicable and is removed from further consideration.

Alternative 3

Alternative 3 involves the applicant acquiring the adjacent sixteen parcels totaling approximately 183 acres located southwest of the existing landfill. The applicant would have to purchase sixteen parcels of land with the property identification numbers of 164015, 164036, 164111, 164089, 164007, 164004, 164103, 164029, 164049, 0, 164045, 164042, 169973, 169972, 169971, and 16974 found on Brazoria County CAD Map Search. This alternative meets the criteria specified by the applicant due to the amount of land available to be developed into additional waste disposal area but not all parcels are available for purchase. The parcels also are adjacent to the existing landfill, but not adjacent to the already permitted, unconstructed 80-acre tract. These parcels are not available for landfill development according to the Brazoria County Landfill Ordinance. According to the Brazoria County Landfill Ordinance, Brazoria County has banned the development of solid waste disposal for all areas, except those excluded in the ordinance. The existing Seabreeze Landfill is excluded from the ordinance but not the adjacent properties.

For these reasons, Alternative 3 does not meet Metric 1. Therefore, Alternative 3 is determined to not be practicable and is removed from further consideration.

Alternative 4

Alternative 4 involves the applicant to use the already permitted, unconstructed 80-acre tract for waste disposal and to construct a road through the unpermitted 70.6-acre tract owned by Seabreeze for access to the 80-acre tract from the existing facilities. Due to the lack of a sufficient amount of land to create areas for waste disposal, this alternative does not meet the criteria for a sufficient amount of land for waste disposal activities. The 70.6-acre tract and 80-acre tract are excluded from the Brazoria County Landfill Ordinance and are available for solid waste disposal.

For this reason, Alternative 4 does not meet Metric 1. Therefore, Alternative 4 is determined to not be practicable and is removed from further consideration.

Alternative 5

Alternative 5 involves the applicant constructing a new waste disposal area that will connect the existing Seabreeze Environmental Landfill with the permitted, unconstructed 80-acre tract to the north. This action would involve the development of the 70.6-acre tract between the existing facility and the undeveloped 80-acre tract giving the applicant a total of 150.6 acres to construct additional waste disposal area. This alternative provides a sufficient amount of land for waste disposal activities and the 70.6-acre tract is already owned by Seabreeze, which would eliminate the option to purchase more land. This alternative would also allow the applicant to use its existing facilities at the Seabreeze Environmental Landfill. The 70.6-acre tract and 80-acre tract are excluded from the Brazoria County Landfill Ordinance and are available for solid waste disposal.

Alternative 5 meets the requirements of Metric 1, meeting the purpose of the project, and is retained for further consideration.

Metric 2

Would impacts related to the construction of additional waste disposal areas result in less damage to the environment than another parcel?

Alternative 5

Alternative 5 involves the applicant constructing a new waste disposal area that will connect the existing Seabreeze Environmental Landfill with the permitted, but unconstructed, 80-acre tract to the north. This action would involve the development of the 70.6-acre tract between the existing facility and the undeveloped 80-acre tract giving the applicant a total of 150.6 acres to construct additional waste disposal area. This alternative would require the applicant to receive a Clean Water Act Section 404 Individual Permit from the USACE for impacts to 26.63 acres of WOUS that were determined through an Approved Jurisdictional Determination (AJD). A buffer along the north and west boundaries of the 70.6-acre tract will provide separation between the proposed landfill expansion area and adjacent properties which will cause impacts to the jurisdictional WOUS. There is no other location for the landfill expansion that will allow total avoidance of jurisdictional WOUS.

For these reasons, Alternative 5 meets Metric 2 and is the only remaining Alternative.

A summary of practicality and LEDPA analysis is located in Table 1.

Table 1. Practicability and LEDPA Analysis Matrix

	Practicability	Environmental Impacts
Factor	Metric 1	Metric 2
Alternative 1	No	-
Alternative 2	No	-
Alternative 3	No	-
Alternative 4	No	-
Alternative 5 (Preferred Alternative)	Yes	26.63 acres

LEDPA Determination

Metric 1

As determined through practicability and LEDPA analysis, Alternative 1, Alternative 2, Alternative 3, and Alternative 4 would not allow the applicant to achieve the criteria stated by the applicant, and therefore, the applicant would not achieve the project's purpose and need. These four alternatives were determined to not be practicable and were removed from further consideration. Alternative 5 would allow the applicant to achieve the project's purpose and need, therefore, this alternative was retained for further consideration.

Metric 2

Alternative 5 would result in the placement of fill into 26.63 acres of jurisdictional WOUS determined by an AJD.

LEDPA

Therefore, Alternative 5, the applicant's preferred alternative, is the Least Environmentally Damaging Practicable Alternative.

Alternatives Analysis

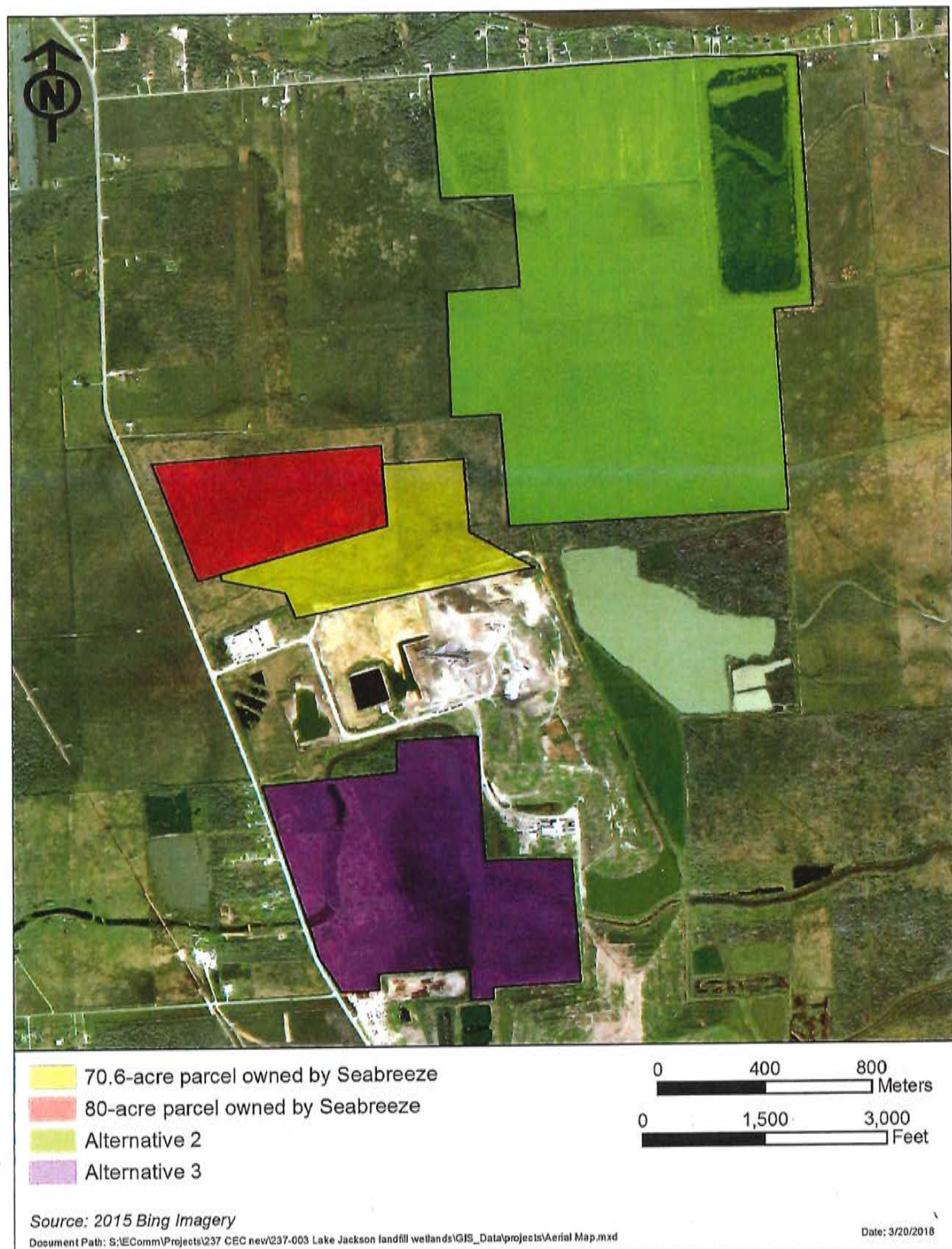


Figure 1: Aerial map of alternatives considered for the Seabreeze Landfill.

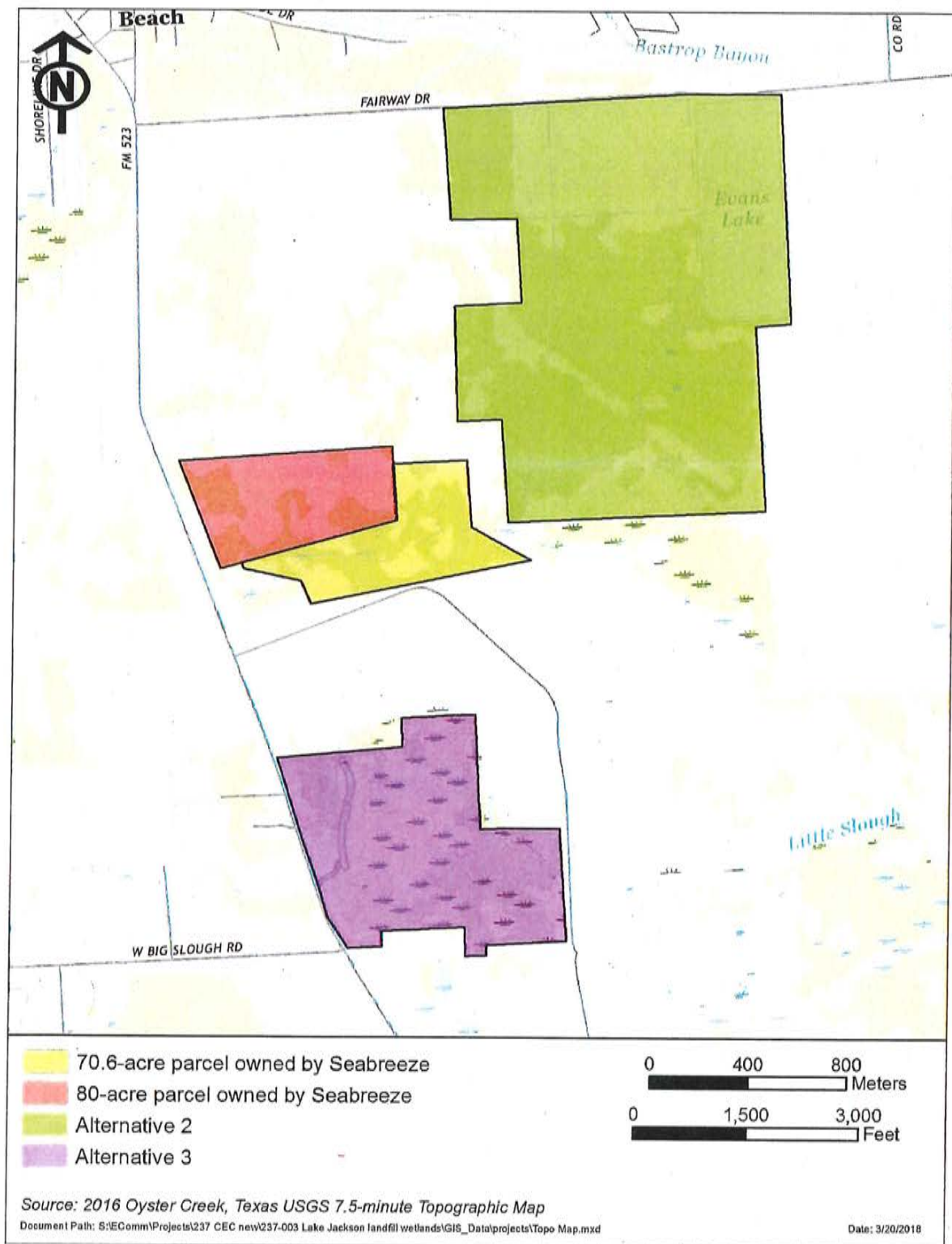


Figure 2: Topographic map of alternatives considered for the Seabreeze Landfill.