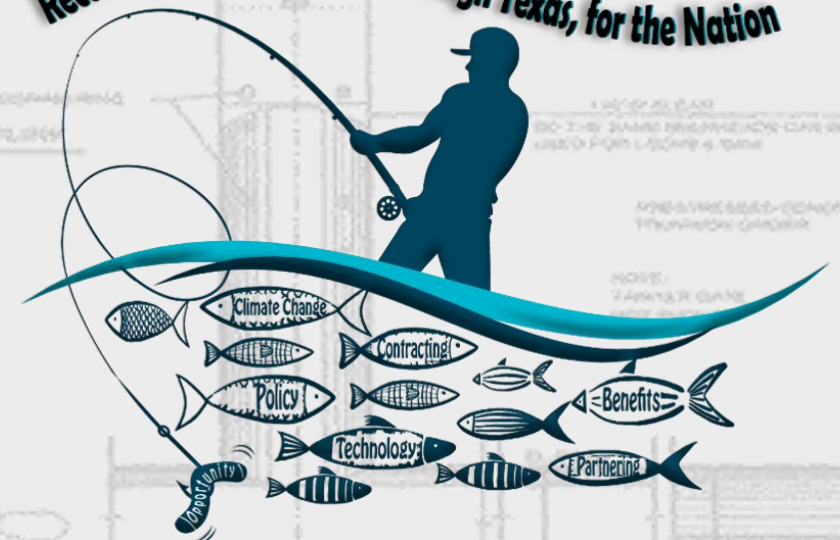


Integrating Geospatial Solutions into Program Delivery in the Galveston District



Heather Moffat
Geographer
Geospatial Branch
USACE-SWG

Recasting Project Delivery through Texas, for the Nation



US Army Corps
of Engineers®



10/6/2020

INTEGRATING GEOSPATIAL SOLUTIONS INTO PROGRAM DELIVERY IN THE GALVESTON DISTRICT

Heather Moffat
Geographer
Geospatial Branch
Date: 6 Oct 2022



US Army Corps
of Engineers®



SWG GEOSPATIAL TEAM

From Data Collections to Custom Geospatial Solutions



GIS Team

Geospatial Data
Geospatial Analysis
Maps (Digital/Hardcopy)
Map Books
Field Collection Apps
Web Surveys
Web GIS
Data Management
Training



Advanced Data Team (ADT)

Orthomosaics
Point Clouds
Digital Elevation and Surface Models
Topographic Contours
Full Motion Video and Photography
Single Beam Sonar
Infrastructure inspections
3D modeling
Multispectral imagery
Thermal imagery



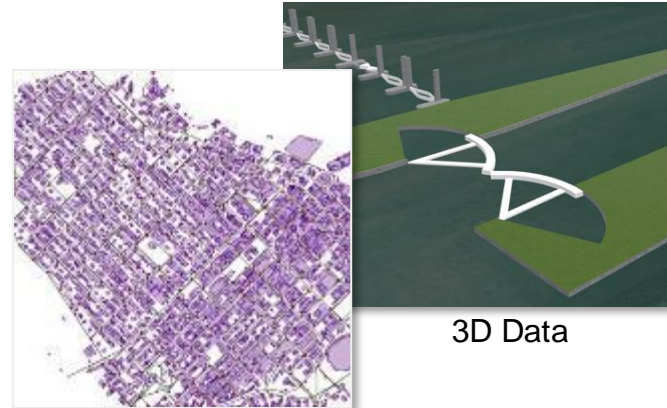
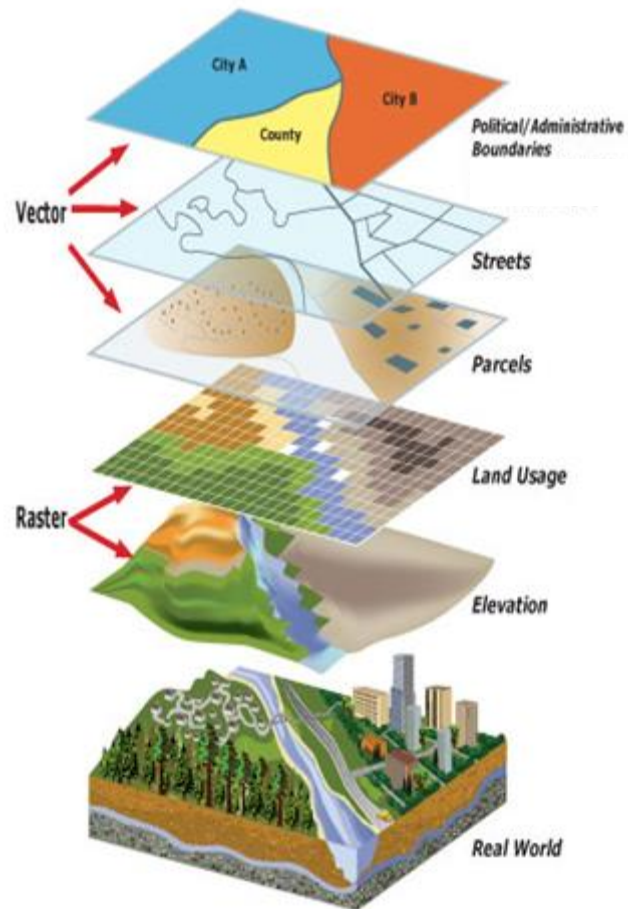
Computer Aided Design (CAD)

Full Design Modelling
QTO
CAD Reviews
Historical Documentation
Construction Documents
Training

GEOSPATIAL DATA

Working with a wide range of geospatial data

Geographic Information Systems (GIS)

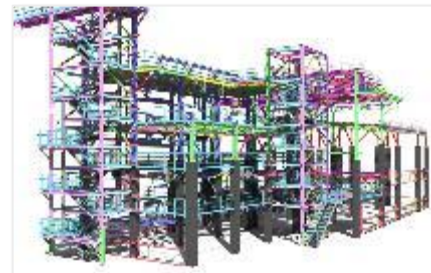


3D Data



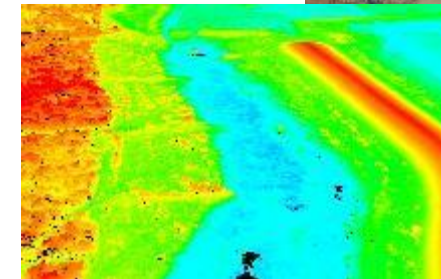
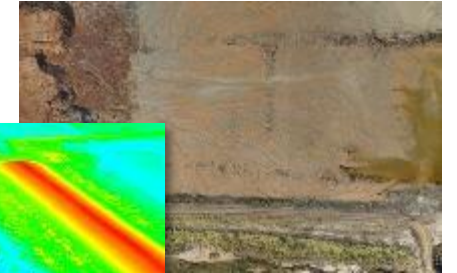
2D Data

Building Information Modelling (BIM)

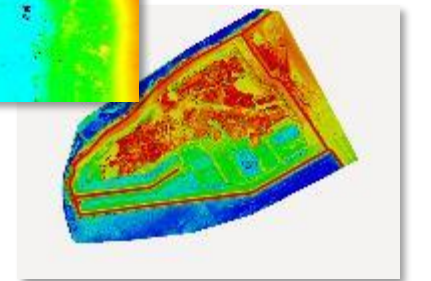


Civil Information Modelling (BIM)

Imagery



Point Clouds



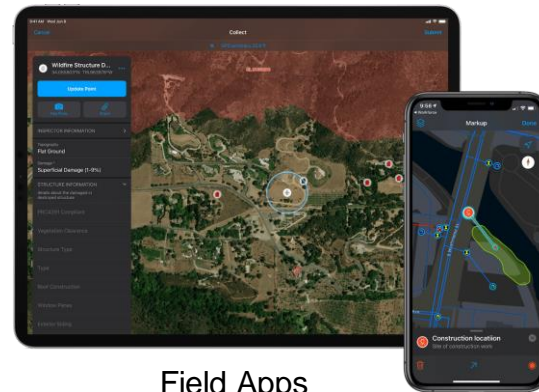
Digital Elevation Models



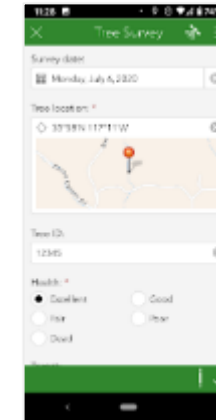
Computer-Aided Design (CAD)

COLLECTION SERVICES

Providing a wide range of geospatial data collection services



Field Apps



Web Surveys



Remote Hydrographic Survey Vessel
Z-Boat 1800 – dual channel, single beam SoNAR
Utilized for shallow water surveys up to 1ft deep



Skydio X2D – Color / Thermal
Uses: Inspections, 4k Full
Motion Video, photogrammetry



eBee TAC – S.O.D.A Camera (20MP)
Uses: Photogrammetry, Orthomosaic,
thermal, multispectral analysis, 3D Modeling

DATA MANAGEMENT

Quick-access one-stop shopping for high quality geospatial information



- Identify & Maintain Authoritative Data
- Streamline Data Updates
- Data Quality Assurance
- Compliance to Data Standards
- Web Services & Data Sharing
- Enhancing Data Discoverability
- Data Backups

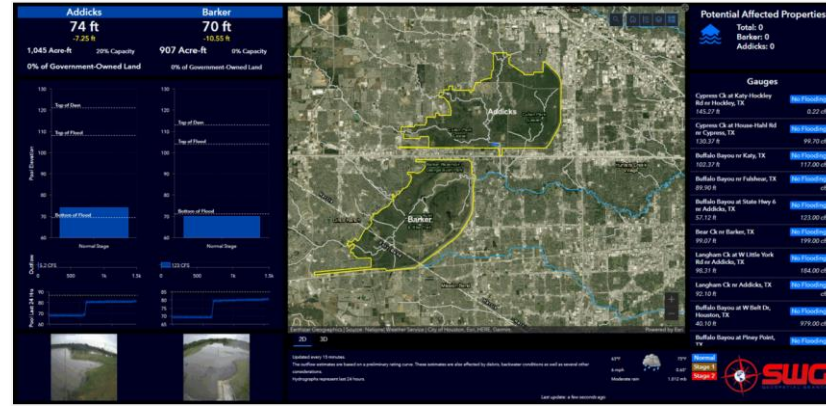


ANALYSIS & VISUALIZATION

Leveraging applications and products to communicate more effectively & enhance understanding



StoryMaps



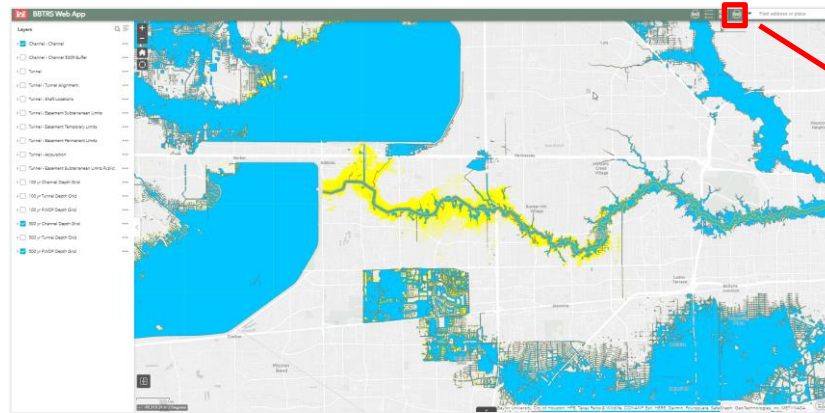
Dashboards



Map Books

Posters

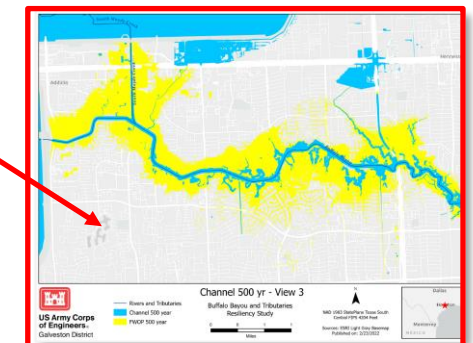
Graphics



Web Applications



Web Services



Maps

PROGRAM DELIVERY

Fulfilling geospatial needs, improving data quality, and enhancing communication & understanding

1) Data



2) Sorted



3) Arranged



4) Presented Visually



5) Explained with a Story

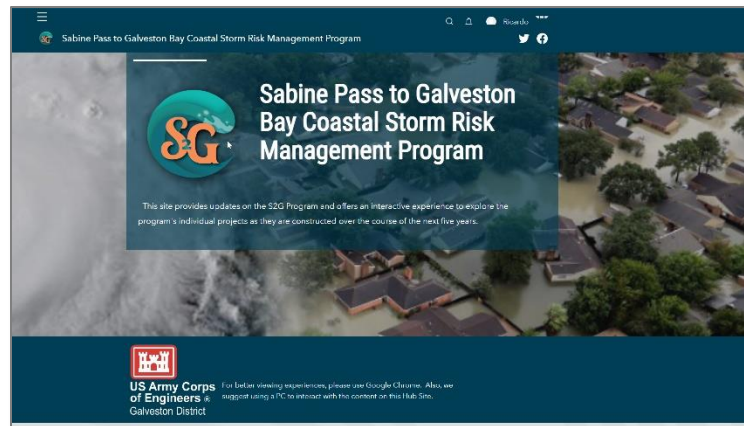




LIVE DEMO(S)

Coastal Texas - Study

- <https://coastal-texas-hub-usace-swg.hub.arcgis.com/>



Sabine Pass To Galveston Bay – Project

- <https://sabine-to-galveston-usace-swg.hub.arcgis.com/>