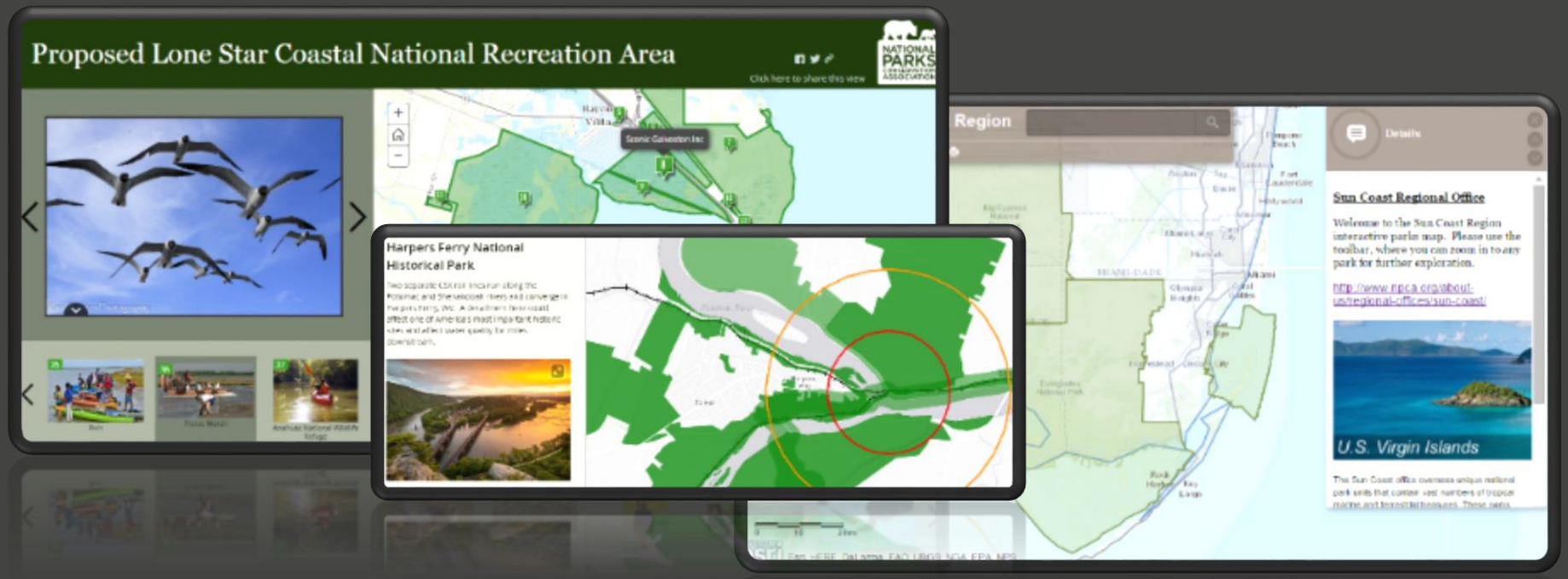
# Utilizing on-line mapping tools for partnership engagement




Ryan Valdez, Ph.D.
National Parks Conservation Association

# Story Maps

*STORY: text, images, video, maps*

esri
Nonprofit Organization Program
Giving You the Tools to Change the World

Plans
Gallery
Map
Scene
Help
Sign In
ArcGIS
esri
Esri Drought Tracker
International Airports in the U.S.
Solar System Atlas
The Uprooted

# https://storymaps.arcgis.com

Hawaiian native forest birds
By Pacific Islands Climate Change Cooperative

Conserving Georgia's Nongame Wildlife: 2015
By Georgia DNR Wildlife Resources Division

The Henry's Fork: Recreation and Conservation
By Henry's Fork Foundation, Idaho

Mapping the Impacts of Global Change
By Stanford University

The Trust for Public Land National GIS Team
By The Trust for Public Land

Tapestry of Hope
By Esri Story Maps team

The Mediterranean Basin: the spice of life
By Birdlife International

The University of Virginia Green Guide
By The Office of the Architect, UVa

Changing Face: Europe's land cover in 1900 an
By Richard Fuchs, Wageningen University

Atlas for a Changing Planet
By Esri Story Maps team

Conserving Shorebirds in the Atlantic Flyway
By US Fish and Wildlife Service

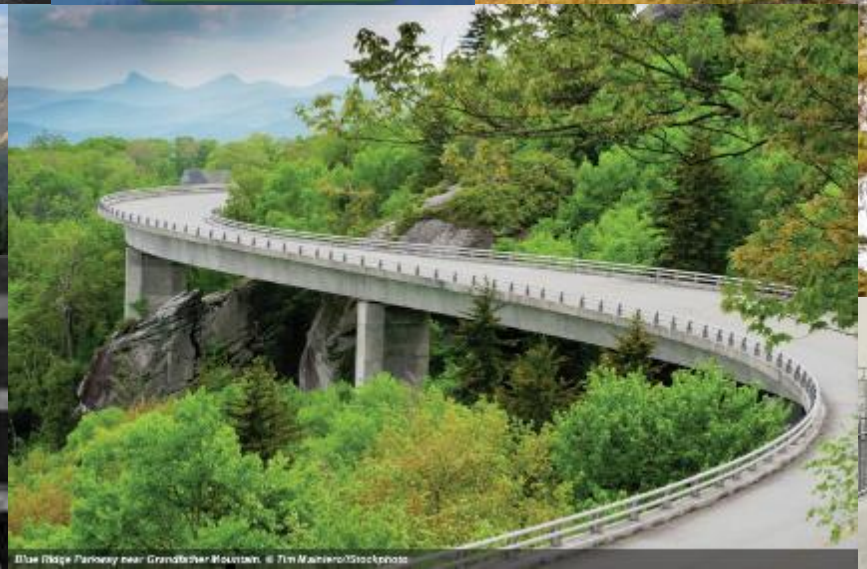
2015 Scallop Regulated Areas Story Map
By NOAA Fisheries

Largest Fishes of Chesapeake Bay: a map tour
By Chesapeake Bay Multispecies Monitoring

Meet the Yudja, Brazil's Forest Guardians
By World Resources Institute (WRI)

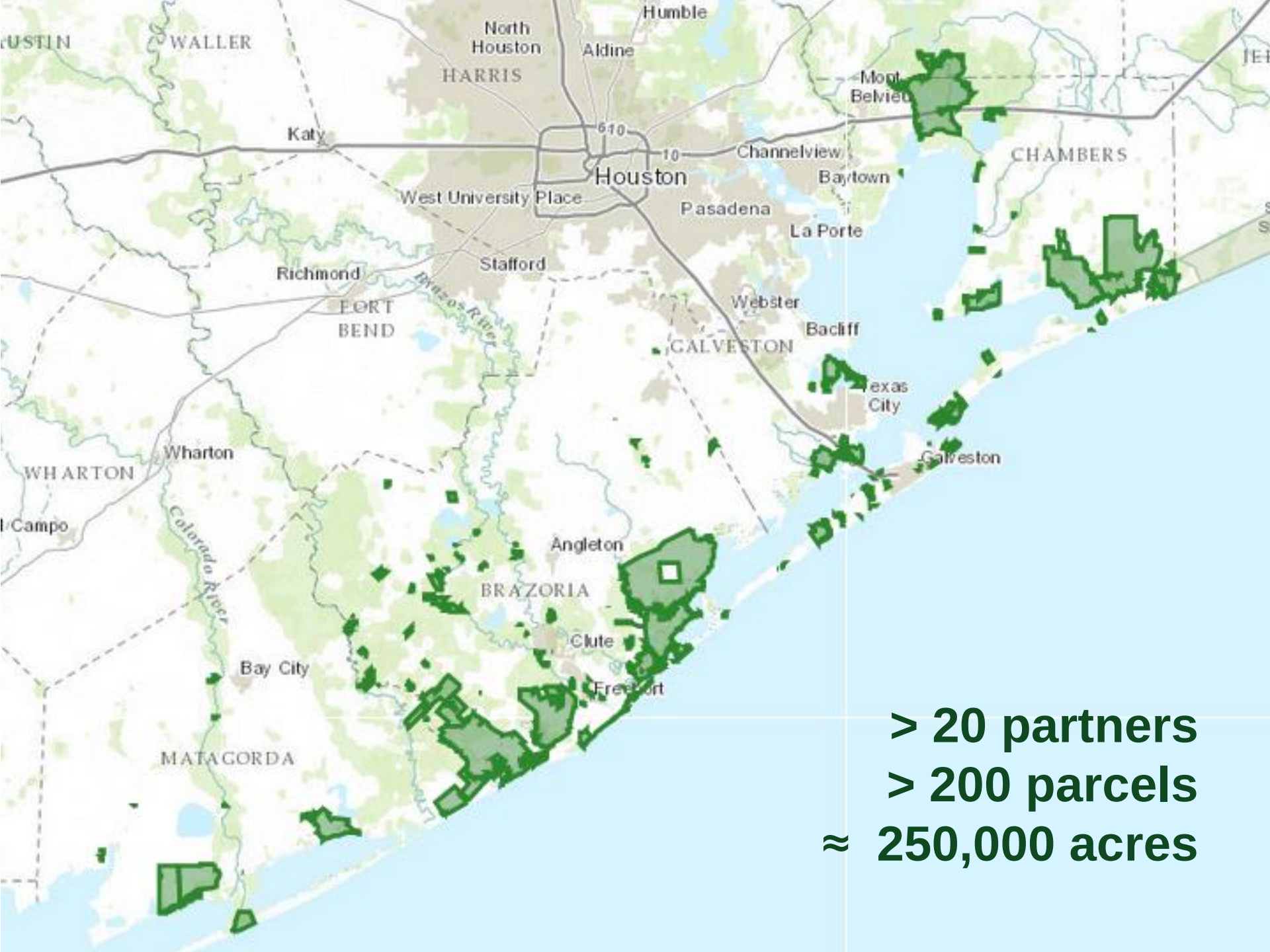
Ottawa Heritage Conservation Districts
By City of Ottawa, Ontario

# Innovative story telling



# Example:

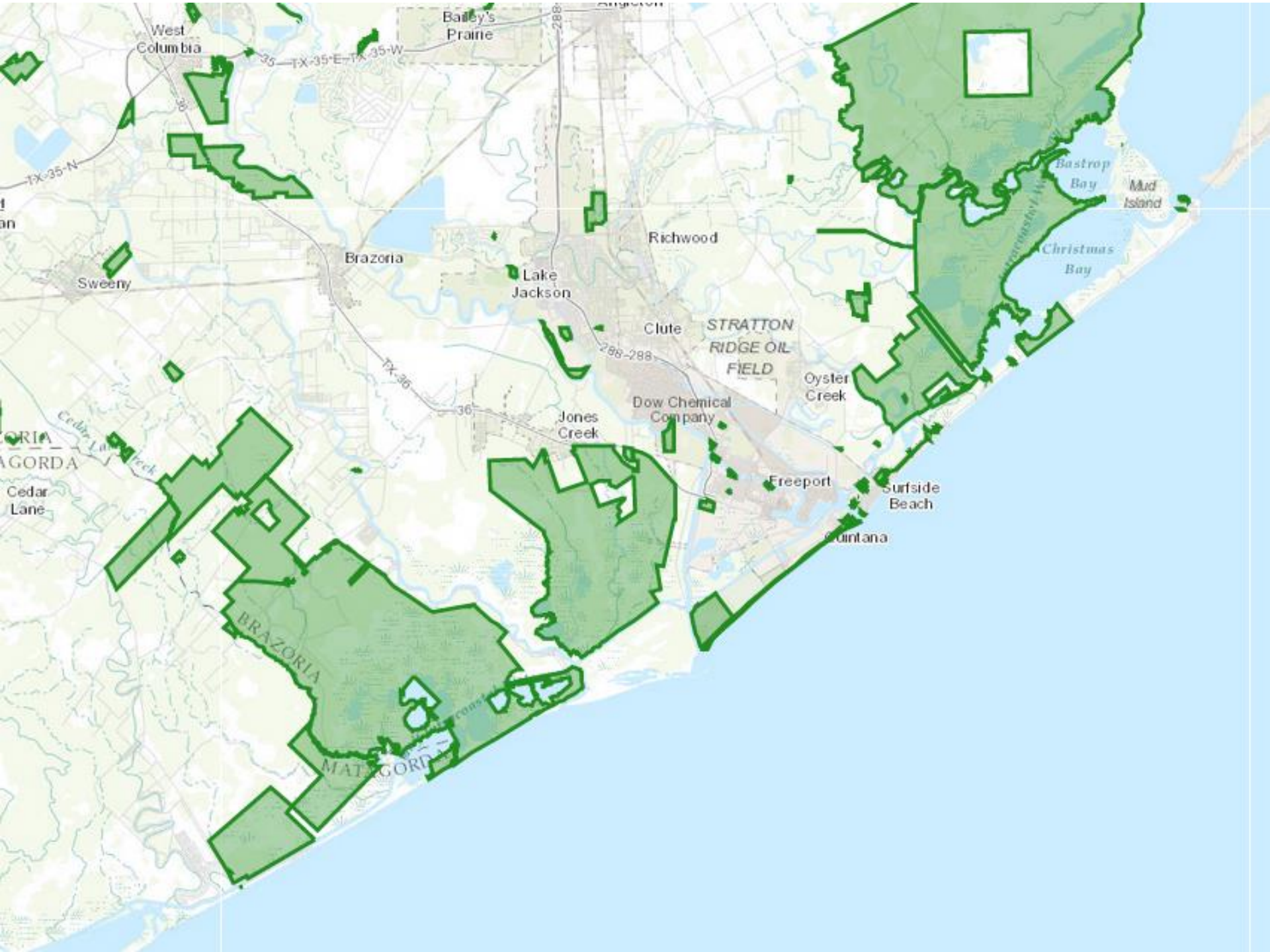
Proposed Lone Star Coastal National Recreation Area
NATIONAL PARKS CONSERVATION ASSOCIATION
About the Proposal
Partner Resources
Explore Maps
Photo by Bob Howen



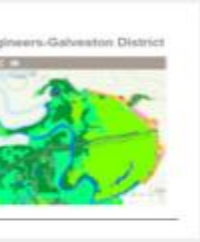

**> 20 partners**

**> 200 parcels**

**≈ 250,000 acres**


West Columbia
Bailey's Prairie
Angleton
Richwood
Brazoria
Sweeny
Lake Jackson
Clute
STRATTON RIDGE OIL FIELD
Oyster Creek
Dow Chemical Company
Jones Creek
Freeport
Surfside Beach
Quintana
Bastrop Bay
Mud Island
Christmas Bay
Cedar Lane
BRAZORIA
MATAGORDA
TX-35-N
TX-35-E
TX-35-W
TX-36
288
36
35

Andrew Hancock


gineers-Galveston District

Artist Boat

Bay Area Council, Boy Scouts of America

Bay City

Brazoria County

Cham

f Freeport

City of Galveston

Cradle of Texas Conservancy

Galveston Bay Foundation

Galveston Historical Foundation

Galveston Islan

Bird Observatory

Houston Audubon Society

Lower Colorado River Authority

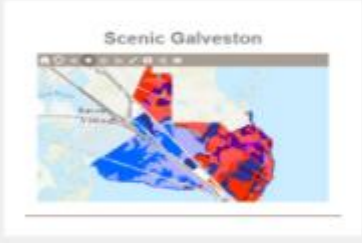
Matagorda County

Matagorda County Birding Nature Center

Moo

onservancy-Texas

Palacios Prairie Wetlands


Scenic Galveston

Sea Base-Galveston

Texas Historical Commission

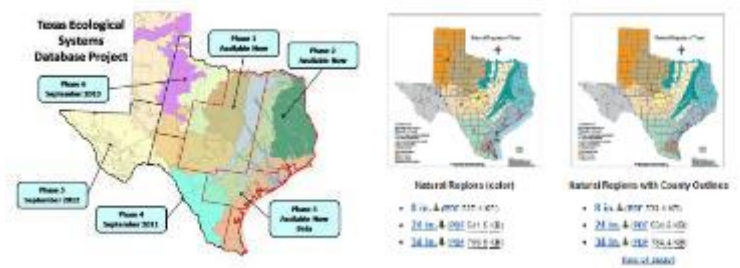
Texas Parks a

l Wildlife Service

Village of Surfside Beach

# Habitat Data

TEXAS PARKS & WILDLIFE




Ecological Mapping Systems of TX

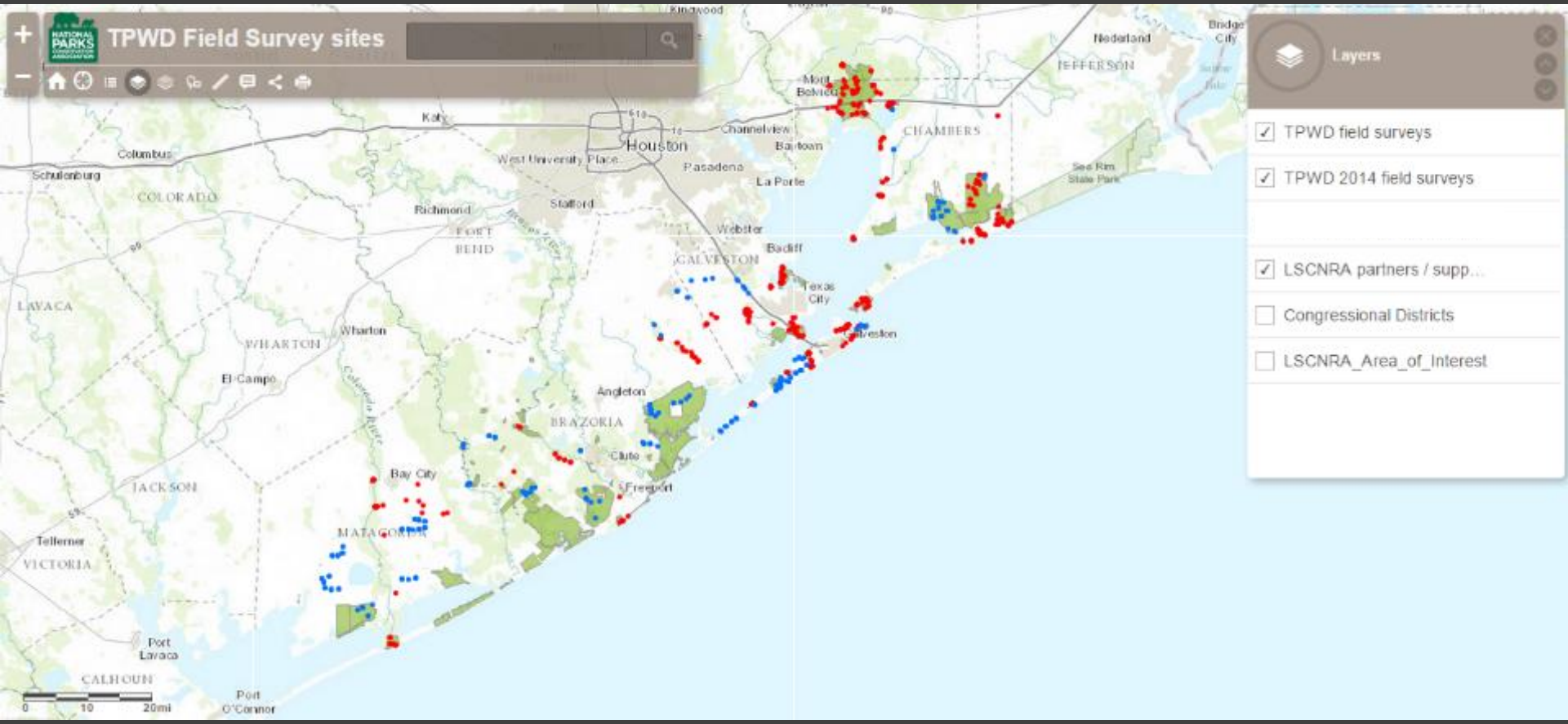
# Habitat and Species Data

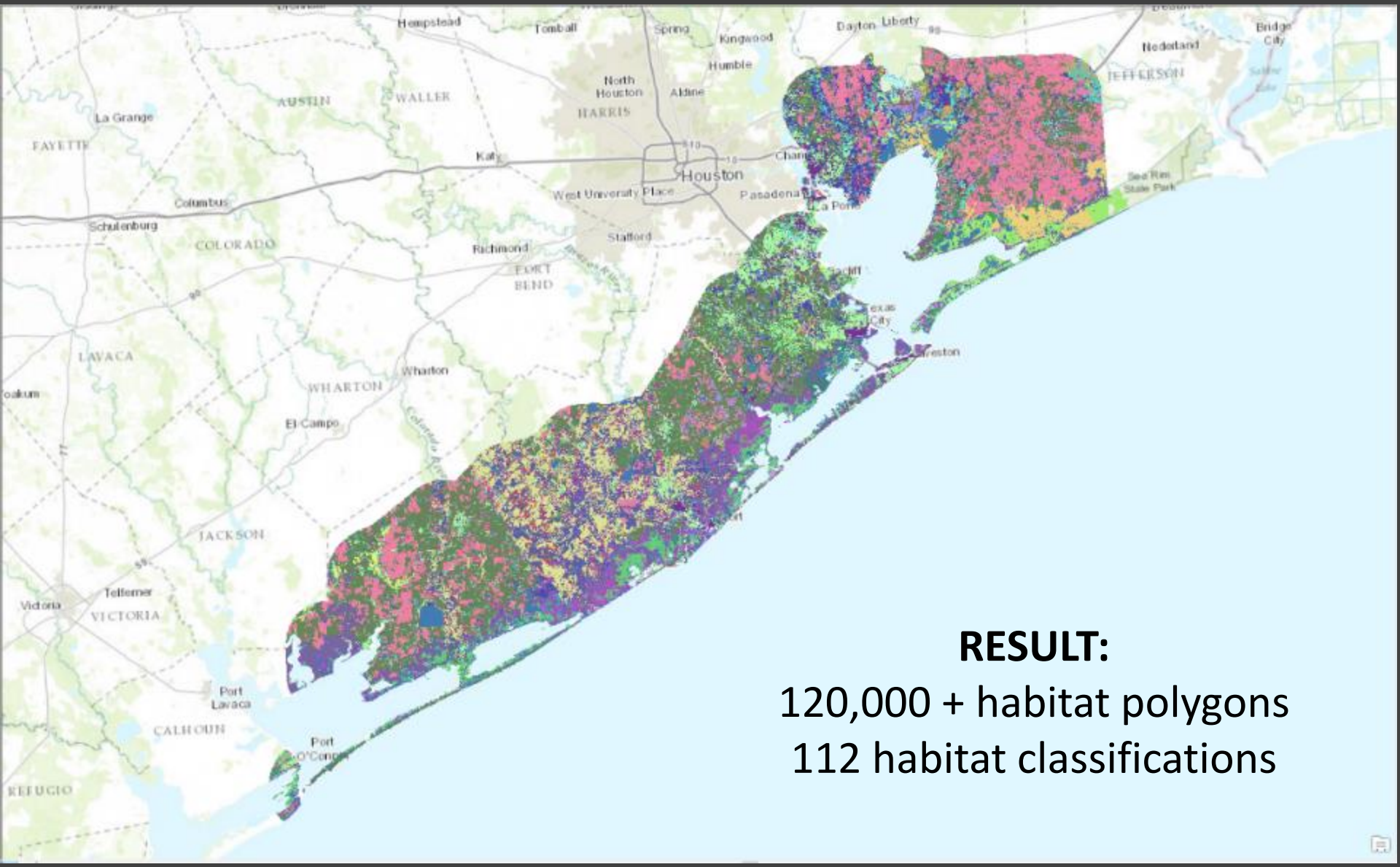
NatureServe
A Network Connecting Science With Conservation

NatureServe EXPLORER.

LandScope America

# TPWD field work





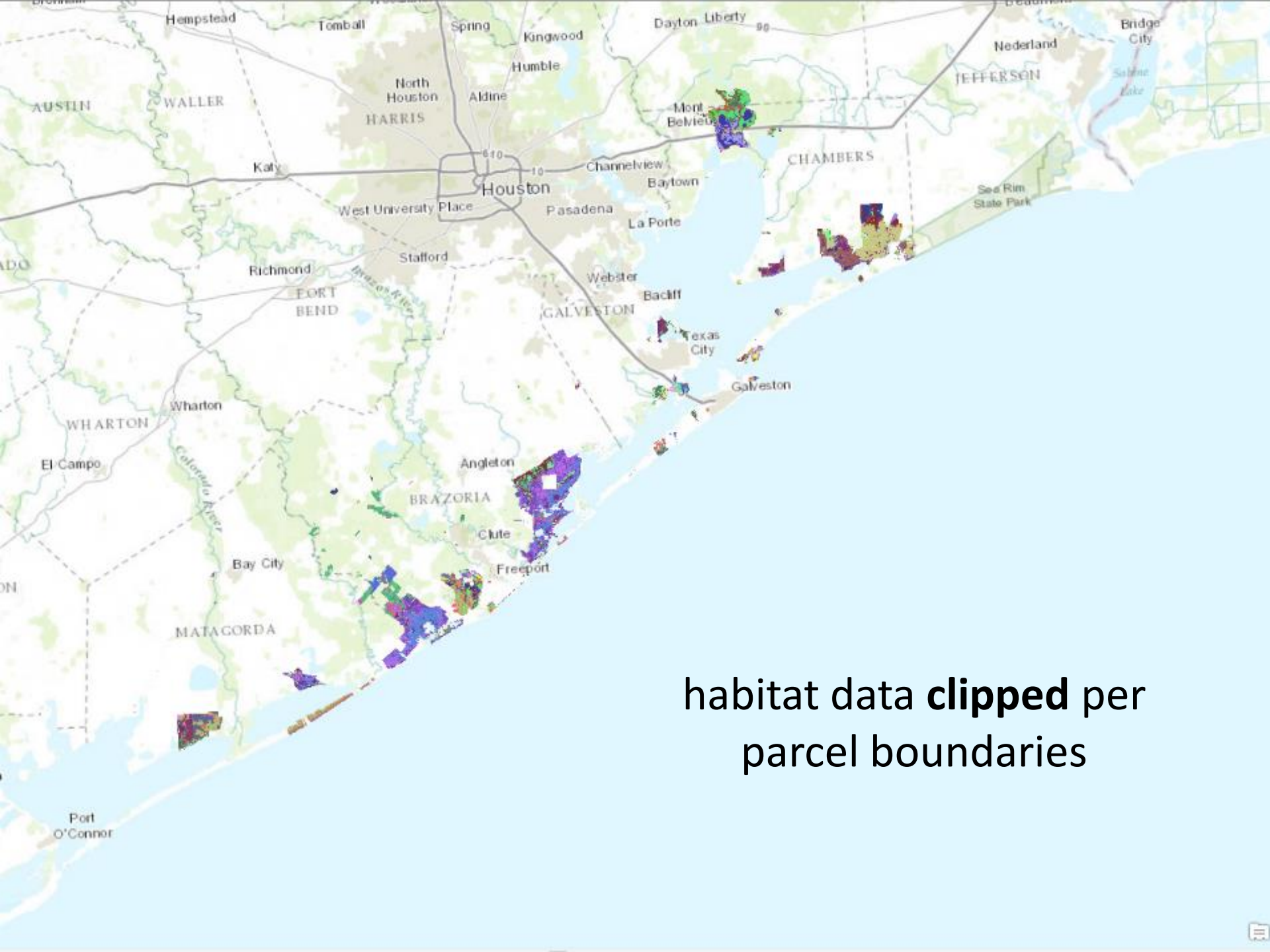

**RESULT:**

120,000 + habitat polygons

112 habitat classifications

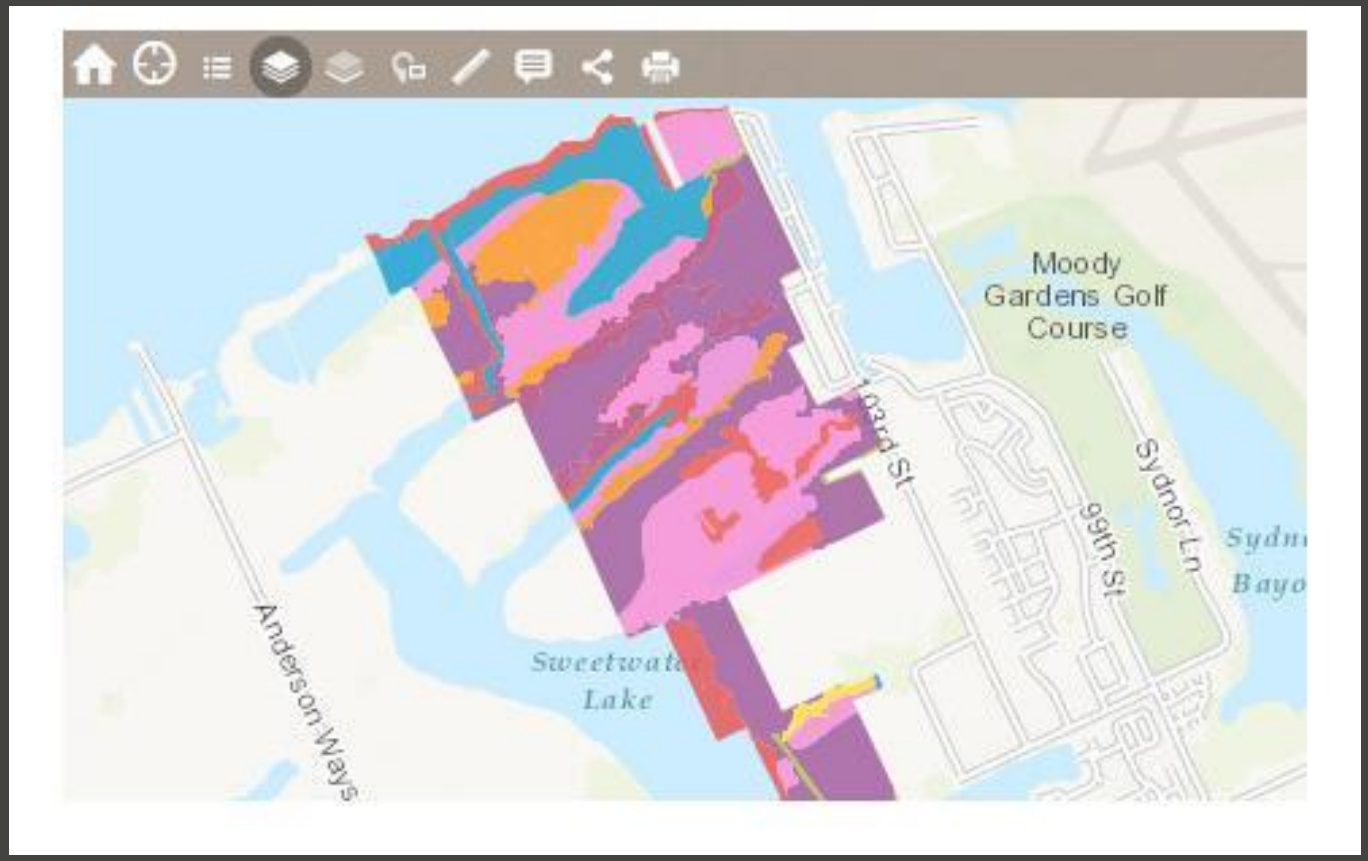
112

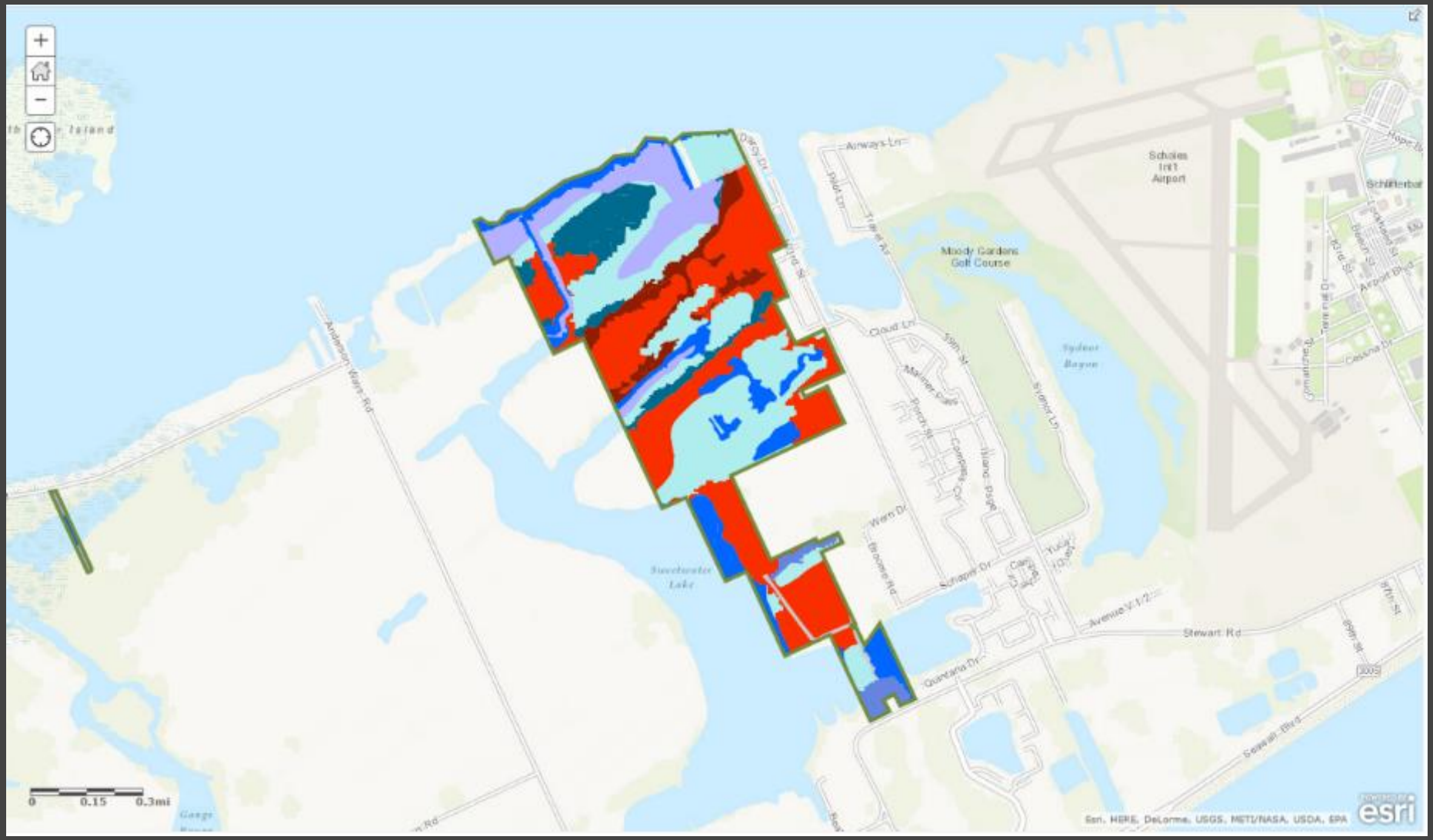
| FID | CommonName | Code in Hexadecimal Notation | Color Swatch |
|---|---|---|---|
| 0 | Active Sand Dune | #CC9900 | |
| 1 | Barren | #931D00 | |
| 2 | Central and Lower Coastal: Beach | #FDFFA7 | |
| 3 | Chenier Plain: Fresh and Intermediate Tidal Marsh | #66CDAA | |
| 4 | Chenier Plain: Fresh and Intermediate Tidal Shrub Wetland | #20B2AA | |
| 5 | Chenier Plain: Hardwood Fringe Forest | #008B8B | |
| 6 | Chenier Plain: Live Oak Fringe Forest | #00FFFF | |
| 7 | Chenier Plain: Mixed Live Oak - Deciduous Hardwood Fringe Forest | #7FFFD4 | |
| 8 | Chenier Plain: Salt and Brackish High Tidal Marsh | #AFEEEE | |
| 9 | Chenier Plain: Salt and Brackish High Tidal Shrub Wetland | #00CED1 | |
| 10 | Chenier Plain: Salt and Brackish Low Tidal Marsh | #5F9EA0 | |
| 11 | Chenier Plain: Salt and Brackish Low Tidal Shrub Wetland | #4682B4 | |
| 12 | Coastal and Sandsheet: Deep Sand Grassland | #B0C4DE | |
| 13 | Coastal and Sandsheet: Deep Sand Grassland Swale Marsh | #B0E0E6 | |
| 14 | Coastal and Sandsheet: Deep Sand Live Oak - Mesquite Woodland | #87CEEB | |
| 15 | Coastal and Sandsheet: Deep Sand Live Oak Forest and Woodland | #7171E2 | |
| 16 | Coastal and Sandsheet: Deep Sand Live Oak Shrubland | #00BFFF | |
| 17 | Coastal and Sandsheet: Deep Sand Live Oak Swale Marsh | #1E90FF | |
| 18 | Coastal and Sandsheet: Deep Sand Shrubland | #6495ED | |
| 19 | Coastal Bend: Floodplain Deciduous Shrubland | #4169E1 | |
| 20 | Coastal Bend: Floodplain Hardwood Forest | #0000FF | |
| 21 | Coastal Bend: Floodplain Herbaceous Wetland | #00008B | |
| 22 | Coastal Bend: Floodplain Live Oak - Hardwood Forest | #30305F | |
| 23 | Coastal Bend: Floodplain Live Oak Forest | #B3E0FF | |
| 24 | Coastal Bend: Riparian Deciduous Shrubland | #98E6FF | |
| 25 | Coastal Bend: Riparian Evergreen Shrubland | #85B6CE | |
| 26 | Coastal Bend: Riparian Grassland | #000053 | |
| 27 | Coastal Bend: Riparian Hardwood Forest | #1F7DFF | |
| 28 | Coastal Bend: Riparian Herbaceous Wetland | #DDEEFF | |
| 29 | Coastal Bend: Riparian Live Oak - Hardwood Forest | #4DB8DB | |
| 30 | Coastal Bend: Riparian Live Oak Forest | #85FFFF | |
| 31 | Coastal: Fresh and Intermediate Tidal Marsh | #91ACC8 | |
| 32 | Coastal: Mangrove Shrubland | #143D66 | |
| 33 | Coastal: Salt and Brackish High Tidal Marsh | #333399 | |
| 34 | Coastal: Salt and Brackish High Tidal Shrub Wetland | #8DAAE2 | |
| 35 | Coastal: Salt and Brackish Low Tidal Marsh | #B2B2FF | |
| 36 | Coastal: Sea Ox-eye Daisy Flats | #6685E0 | |
| 37 | Coastal: Tidal Flat | #006B8F | |
| 38 | Columbia Bottomlands: Deciduous Shrubland | #FECDE7 | |
| 39 | Columbia Bottomlands: Evergreen Shrubland | #FF96E8 | |
| 40 | Columbia Bottomlands: Grassland | #FF5DE9 | |
| 41 | Columbia Bottomlands: Hardwood Forest and Woodland | #FF23EA | |
| 42 | Columbia Bottomlands: Herbaceous Wetland | #E800D8 | |
| 43 | Columbia Bottomlands: Live Oak Forest and Woodland | #E595FF | |
| 44 | Columbia Bottomlands: Mixed Evergreen - Hardwood Forest and Woodland | #E45BFF | |
| 45 | Columbia Bottomlands: Riparian Deciduous Shrubland | #E321FF | |
| 46 | Columbia Bottomlands: Riparian Evergreen Shrubland | #CF00E6 | |
| 47 | Columbia Bottomlands: Riparian Grassland | #FE82B4 | |
| 48 | Columbia Bottomlands: Riparian Hardwood Forest and Woodland | #FF50B8 | |
| 49 | Columbia Bottomlands: Riparian Herbaceous Wetland | #FF1ABA | |
| 50 | Columbia Bottomlands: Riparian Live Oak Forest and Woodland | #E100AC | |
| 51 | Columbia Bottomlands: Riparian Mixed Evergreen - Hardwood Forest and W | #FFCCB3 | |
| 52 | Grass Farm | #EC8600 | |
| 53 | Gulf Coast: Coastal Prairie | #FF957C | |
| 54 | Gulf Coast: Coastal Prairie Pondshore | #FF7E4D | |
| 55 | Gulf Coast: Near-Coast Baldcypress Swamp | #FF4716 | |
| 56 | Gulf Coast: Salty Prairie | #F92F00 | |
| 57 | Gulf Coast: Salty Prairie Shrubland | #FF5555 | |
| 58 | Invasive: Evergreen Shrubland | #FFB8A6 | |
| 59 | Marsh | #FF6A06 | |
| 60 | Mud Flat | #7F2000 | |
| 61 | Native Invasive: Baccharis Shrubland | #6B0087 | |
| 62 | Native Invasive: Common Reed | #9100C0 | |
| 63 | Native Invasive: Deciduous Shrubland | #B000F8 | |
| 64 | Native Invasive: Deciduous Woodland | #B331FF | |
| 65 | Native Invasive: Huisache Woodland or Shrubland | #B265FF | |
| 66 | Native Invasive: Juniper Shrubland | #AE95FF | |
| 67 | Native Invasive: Juniper Woodland | #9563FF | |
| 68 | Native Invasive: Mesquite Shrubland | #9832FF | |
| 69 | Non-Native Invasive: Chinese Tallow Forest, Woodland, or Shrubland | #9900FD | |
| 70 | Non-native Invasive: Rose Shrubland | #7A00A3 | |
| 71 | Non-native Invasive: Saltcedar Shrubland | #330033 | |
| 72 | Open Water | #0066FF | |
| 73 | Pine Plantation > 3 meters tall | #98FB98 | |
| 74 | Pine Plantation 1 to 3 meters tall | #ADFF2F | |
| 75 | Pineywoods: Bottomland Baldcypress Swamp | #7FFF00 | |
| 76 | Pineywoods: Bottomland Deciduous Successional Shrubland | #007F5E | |
| 77 | Pineywoods: Bottomland Herbaceous Wetland | #456145 | |
| 78 | Pineywoods: Bottomland Seasonally Flooded Hardwood Forest | #00FF7F | |
| 79 | Pineywoods: Bottomland Temporarily Flooded Hardwood Forest | #009933 | |
| 80 | Pineywoods: Bottomland Temporarily Flooded Live Oak Forest | #90EE90 | |
| 81 | Pineywoods: Bottomland Temporarily Flooded Mixed Pine - Hardwood Fore | #32CD32 | |
| 82 | Pineywoods: Bottomland Wet Prairie | #3CB371 | |
| 83 | Pineywoods: Disturbance or Tame Grassland | #2E8B57 | |
| 84 | Pineywoods: Hardwood Flatwoods | #228B22 | |
| 85 | Pineywoods: Herbaceous Flatwoods Pond | #008000 | |
| 86 | Pineywoods: Longleaf or Loblolly Pine - Hardwood Flatwoods or Plantation | #006400 | |
| 87 | Pineywoods: Longleaf or Loblolly Pine Flatwoods or Plantation | #9ACD32 | |
| 88 | Pineywoods: Pine - Hardwood Forest or Plantation | #003300 | |
| 89 | Pineywoods: Pine Forest or Plantation | #859D85 | |
| 90 | Pineywoods: Small Stream and Riparian Herbaceous Wetland | #336600 | |
| 91 | Pineywoods: Small Stream and Riparian Temporarily Flooded Hardwood For | #669900 | |
| 92 | Pineywoods: Small Stream and Riparian Temporarily Flooded Mixed Forest | #99CC00 | |
| 93 | Pineywoods: Small Stream and Riparian Wet Prairie | #006600 | |
| 94 | Pineywoods: Southern Calcareous Mixedgrass Prairie | #00CC99 | |
| 95 | Pineywoods: Southern Mesic Hardwood Forest | #00FF00 | |
| 96 | Pineywoods: Upland Hardwood Forest | #304830 | |
| 97 | Pineywoods: Wet Hardwood Flatwoods | #99FF99 | |
| 98 | Post Oak Savanna: Live Oak Motte and Woodland | #E0D6CC | |
| 99 | Post Oak Savanna: Live Oak Slope Forest | #C2AD99 | |
| 100 | Post Oak Savanna: Oak - Hardwood Slope Forest | #A38566 | |
| 101 | Post Oak Savanna: Post Oak - Live Oak Motte and Woodland | #855C33 | |
| 102 | Post Oak Savanna: Post Oak - Live Oak Slope Forest | #663300 | |
| 103 | Post Oak Savanna: Post Oak - Redcedar Motte and Woodland | #522900 | |
| 104 | Post Oak Savanna: Post Oak - Yaupon Motte and Woodland | #3D1F00 | |
| 105 | Post Oak Savanna: Post Oak Motte and Woodland | #291400 | |
| 106 | Row Crops | #FBFF15 | |
| 107 | South Texas: Algal Flats | #D6DA00 | |
| 108 | Swamp | #7A5200 | |
| 109 | Upper Gulf Coast: Beach | #FFD966 | |
| 110 | Urban High Intensity | #A2A2AA | |
| 111 | Urban Low Intensity | #CACAD4 | |

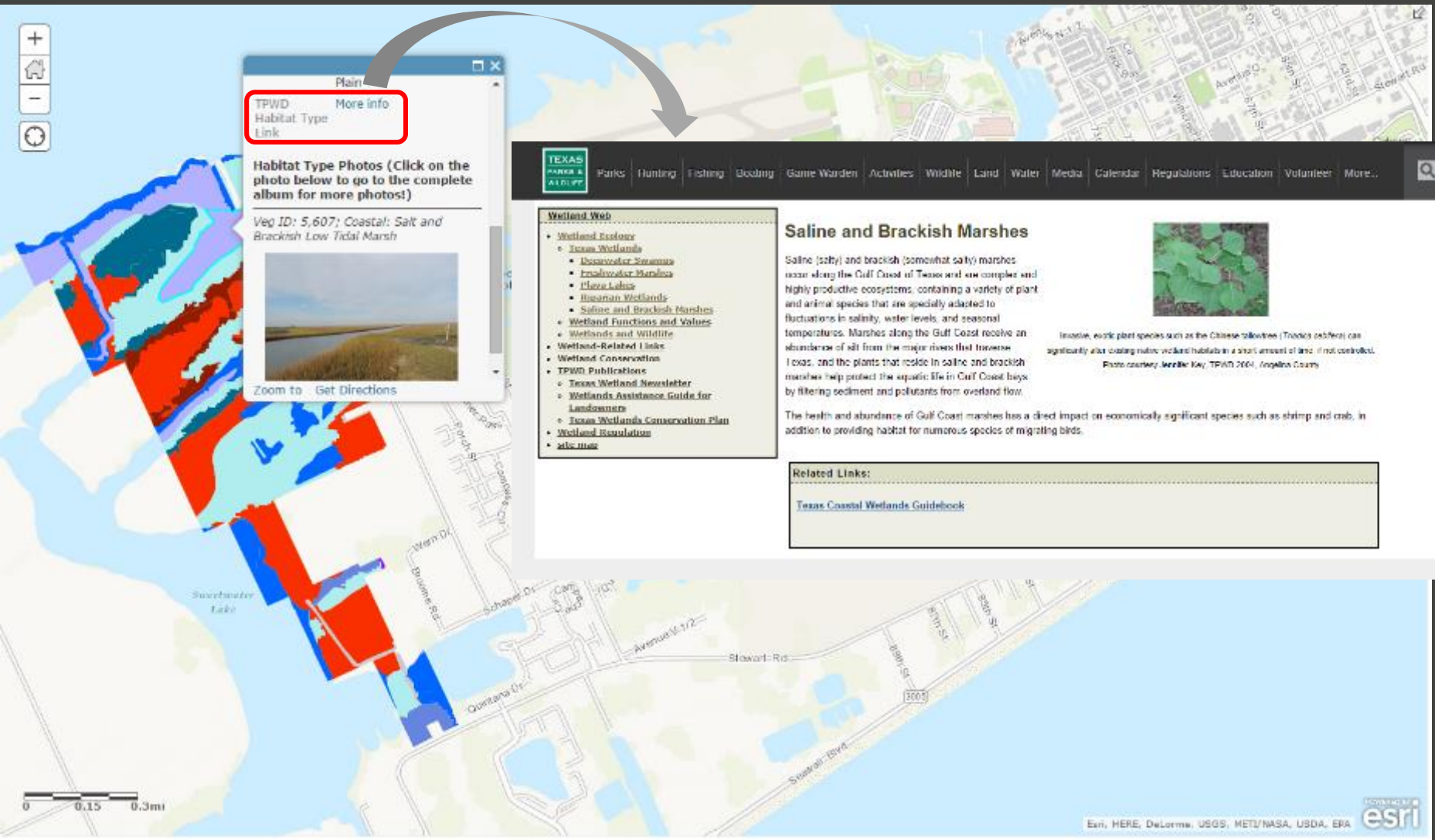

habitat data **clipped** per parcel boundaries

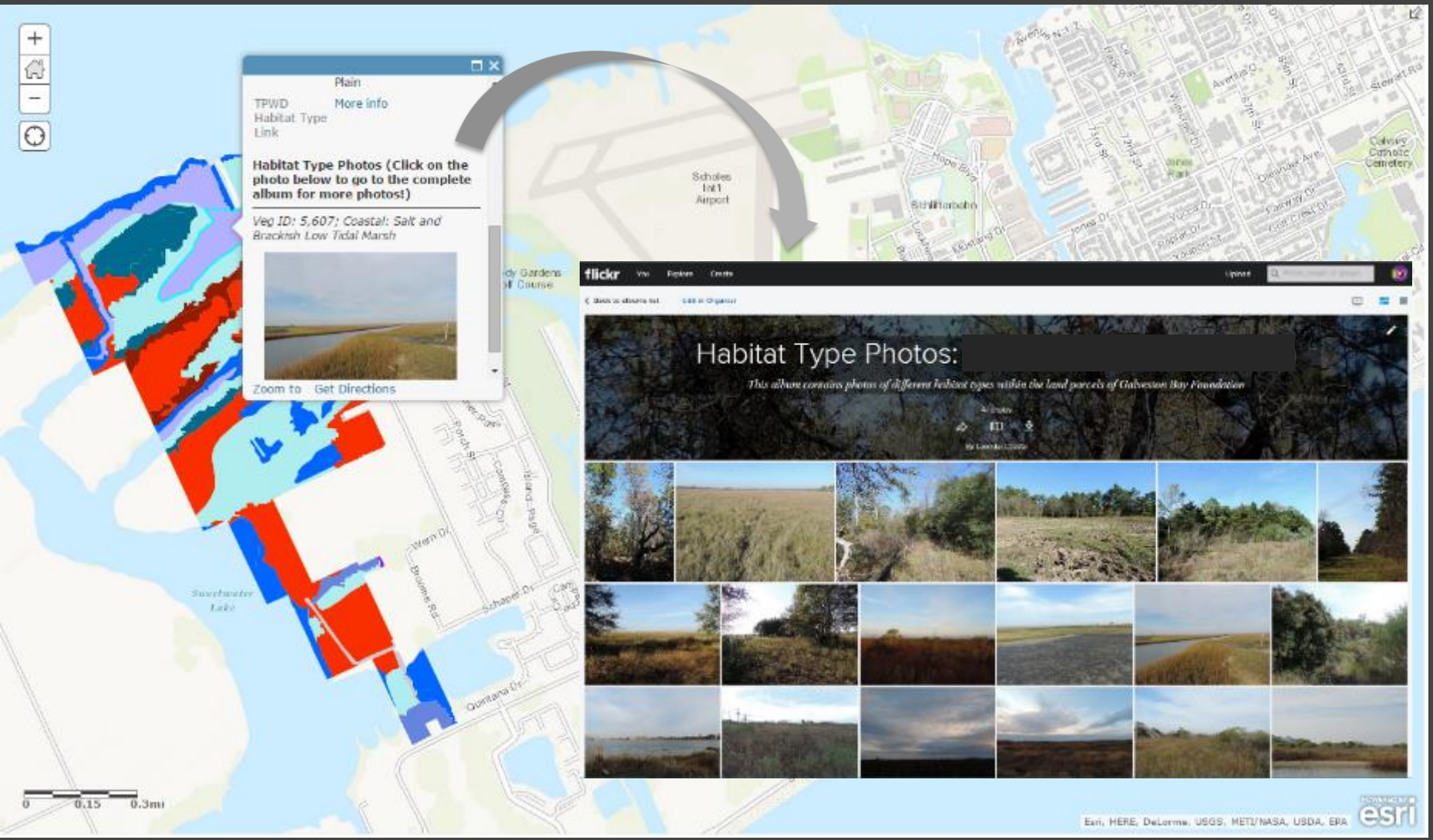
# Out of the box template

- home
- my location
- legend
- layers
- basemap
- overview
- measure
- details
- share
- print




Airways Ln
Scholes Int'l Airport
Moody Gardens Golf Course
Cloud Ln
Sydnor Bayou
Sydnor Ln
Anderson Ward Rd
Sweetwater Lake
Schaper Dr
Avenue V 1/2
Stewart Rd
Quintana Dr
Seawall Blvd
Airport Blvd
Cessna Dr
0
0.15
0.3mi
Esri, HERE, DeLorme, USGS, METI/NASA, USDA, EPA
esri

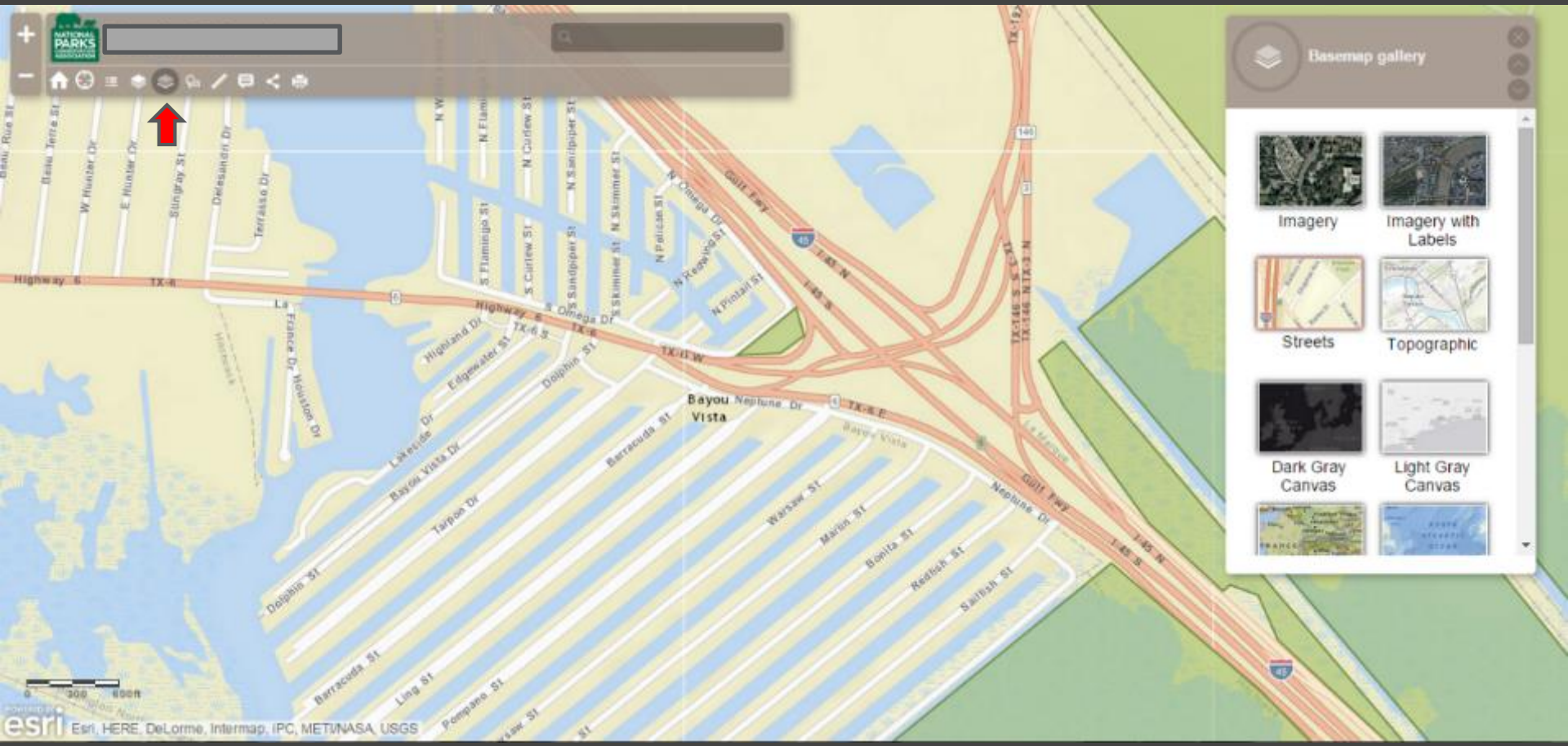

Plain
TPWD More info
Habitat Type
Link
Habitat Type Photos (Click on the photo below to go to the complete album for more photos!)
Veg ID: 5,607; Coastal: Salt and Brackish Low Tidal Marsh
Zoom to Get Directions
TEXAS PARKS & WILDLIFE
Parks Hunting Fishing Boating Game Warden Activities Wildlife Land Water Media Calendar Regulations Education Volunteer More...
Wetland Web
Wetland Ecology
Texas Wetlands
Deepwater Swamps
Freshwater Marshes
Playa Lakes
Riparian Wetlands
Saline and Brackish Marshes
Wetland Functions and Values
Wetlands and Wildlife
Wetland-Related Links
Wetland Conservation
TPWD Publications
Texas Wetland Newsletter
Wetlands Assistance Guide for Landowners
Texas Wetlands Conservation Plan
Wetland Regulation
site map
Saline and Brackish Marshes
Saline (salty) and brackish (somewhat salty) marshes occur along the Gulf Coast of Texas and are complex and highly productive ecosystems, containing a variety of plant and animal species that are specially adapted to fluctuations in salinity, water levels, and seasonal temperatures. Marshes along the Gulf Coast receive an abundance of silt from the major rivers that traverse Texas, and the plants that reside in saline and brackish marshes help protect the aquatic life in Gulf Coast bays by filtering sediment and pollutants from overland flow.
Invasive, exotic plant species such as the Chinese tallowtree (Triadica sebifera) can significantly alter existing native wetland habitats in a short amount of time, if not controlled.
Photo courtesy Jennifer Key, TPWD 2004, Angelina County
The health and abundance of Gulf Coast marshes has a direct impact on economically significant species such as shrimp and crab, in addition to providing habitat for numerous species of migrating birds.
Related Links:
Texas Coastal Wetlands Guidebook
Sweetwater Lake
Stewart Rd
Quintana Dr
Avenue V-1/2
Schaper Dr
Wern Dr
Brooms Rd
Sweetwater Blvd
0 0.15 0.3mi
Esri, HERE, DeLorme, USGS, METI/NASA, USDA, EPA
esri


Plain
TPWD Habitat Type Link
More info
Habitat Type Photos (Click on the photo below to go to the complete album for more photos!)
Veg ID: 5,607; Coastal: Salt and Brackish Low Tidal Marsh
Zoom to
Get Directions
flickr
Habitat Type Photos:
This album contains photos of different habitat types within the land parcels of Galveston Bay Foundation
Scholes Int'l Airport
Calvary Catholic Cemetery
Sweetwater Lake
0
0.15
0.3mi
Esri, HERE, DeLorme, USGS, METI/NASA, USDA, EPA
esri

**Scenic Galveston.** Private interactive map for each partner (i.e. Scenic Galveston).

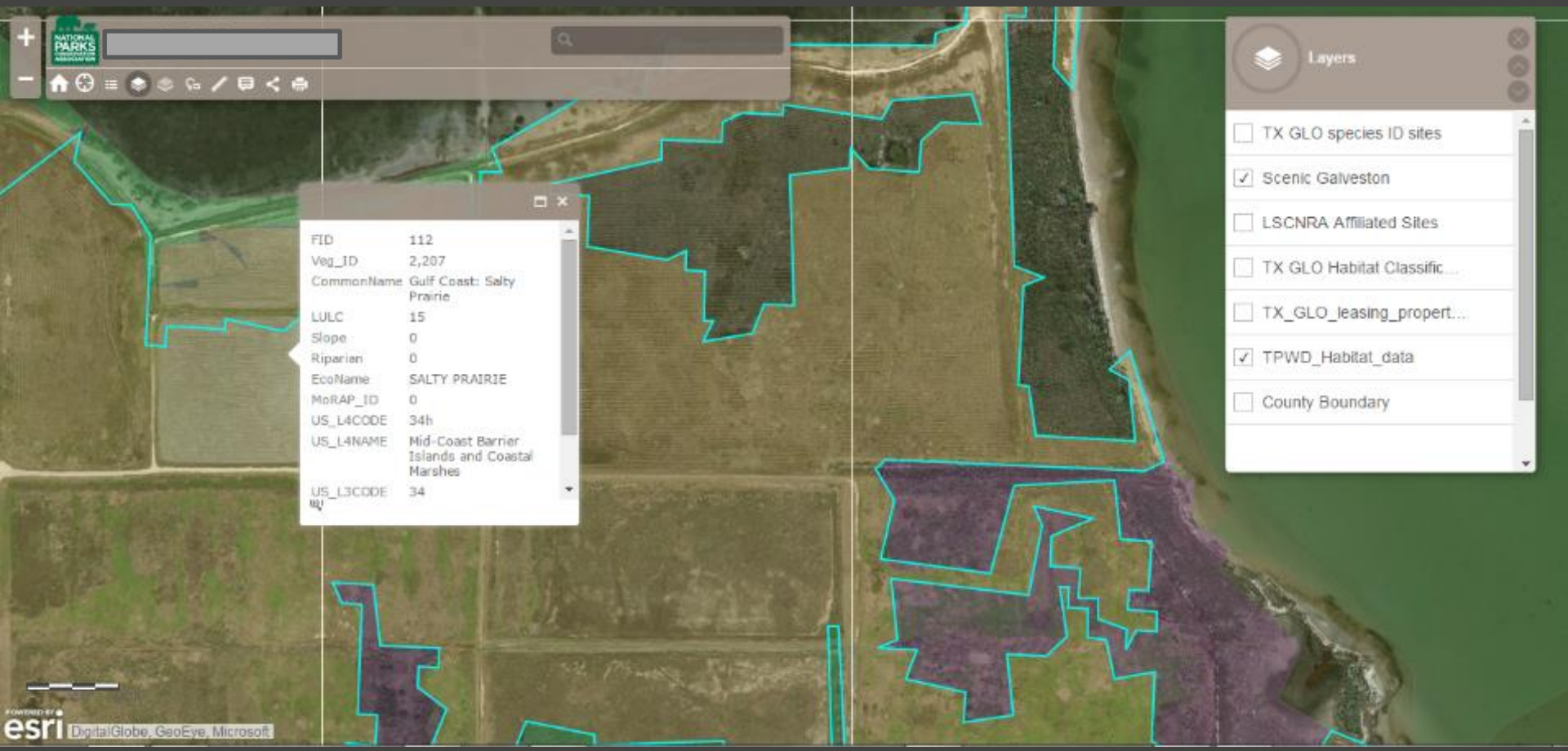
**Layers:** check the layers you want to see.

**Base maps:** change your base maps to your liking (i.e. street view)

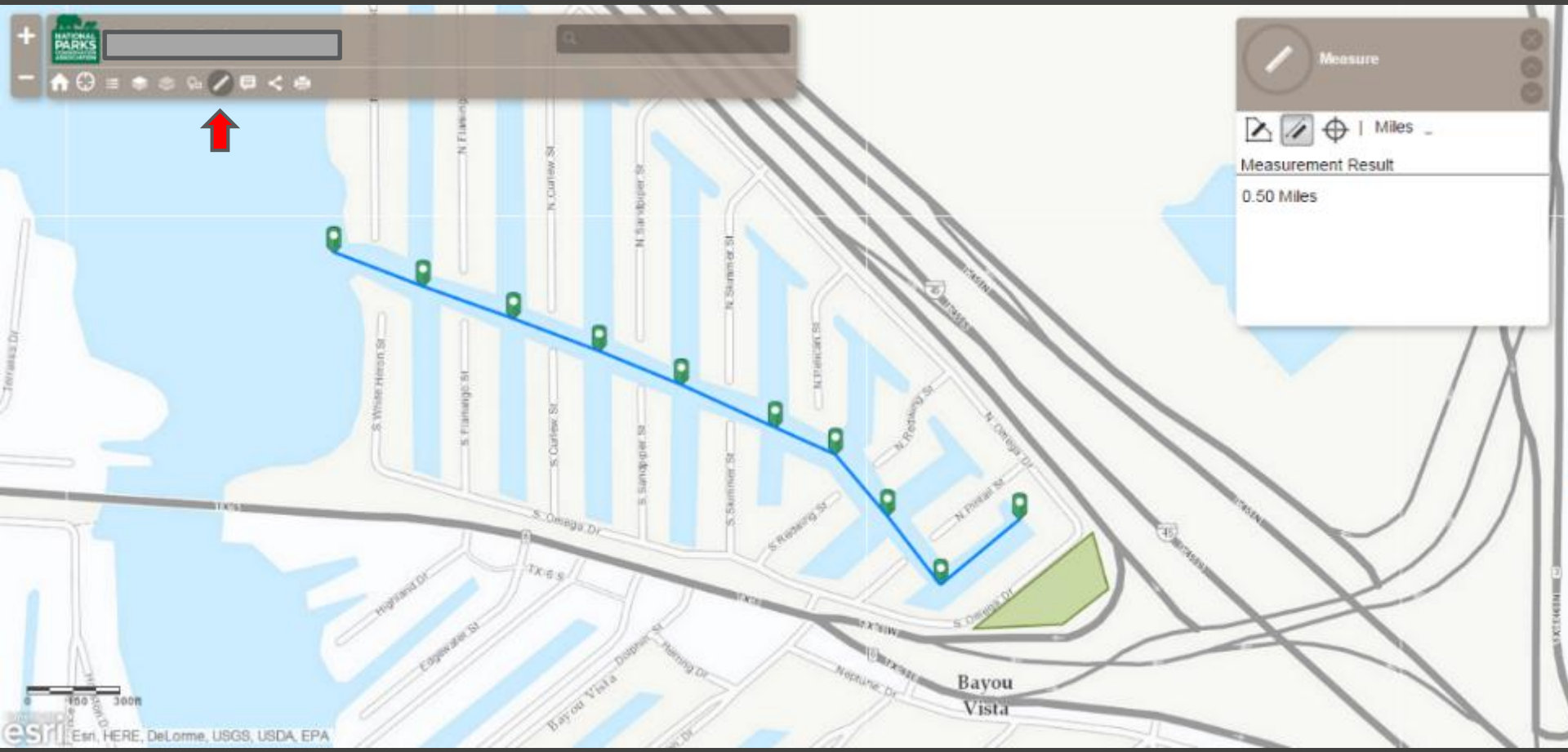


**HIGH resolution:** updated high resolution basemaps, provided by ESRI

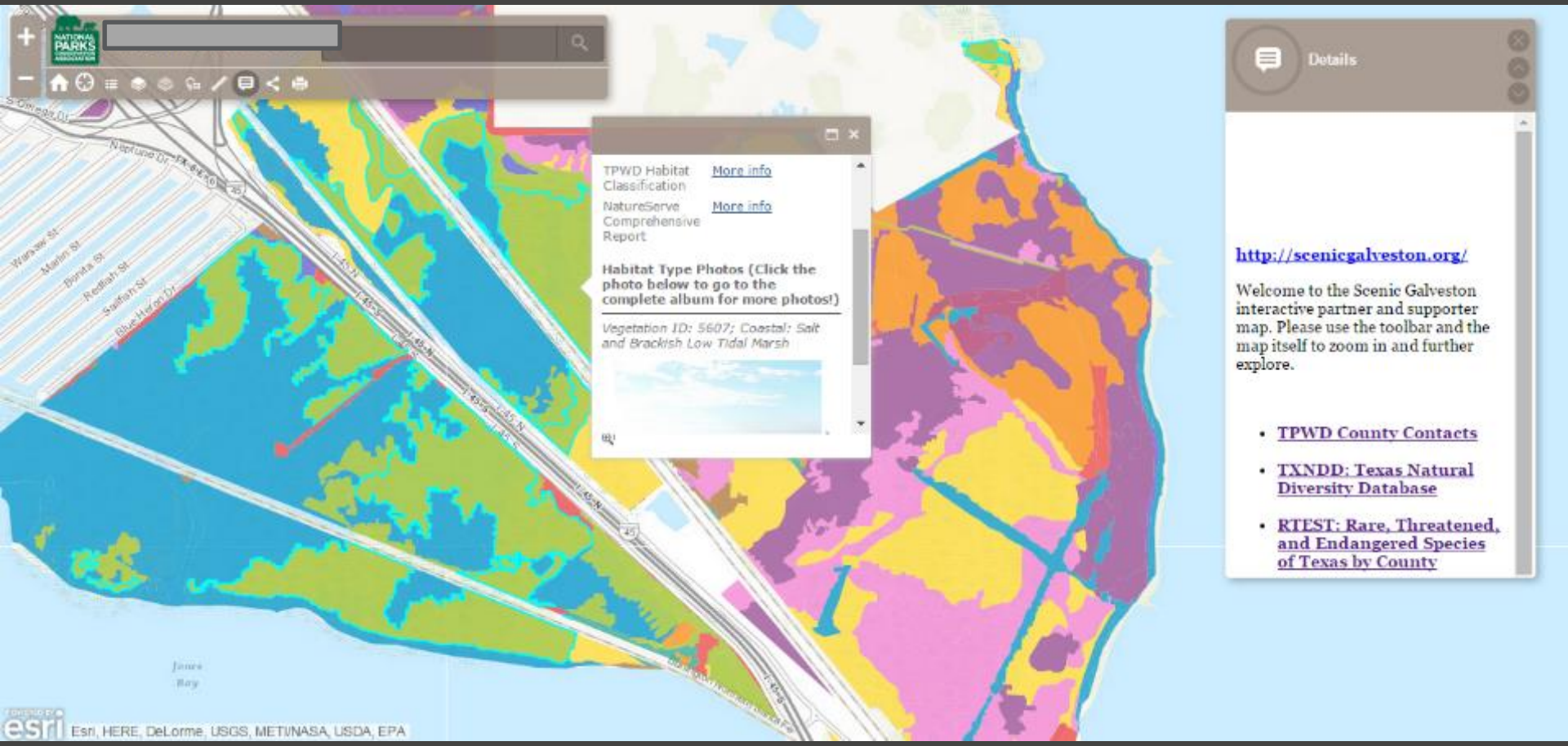
**Overlay layers:** change the base layer to see real imagery, overlay with habitat



**Measure:** measure any <u>distance</u> you want by creating a line



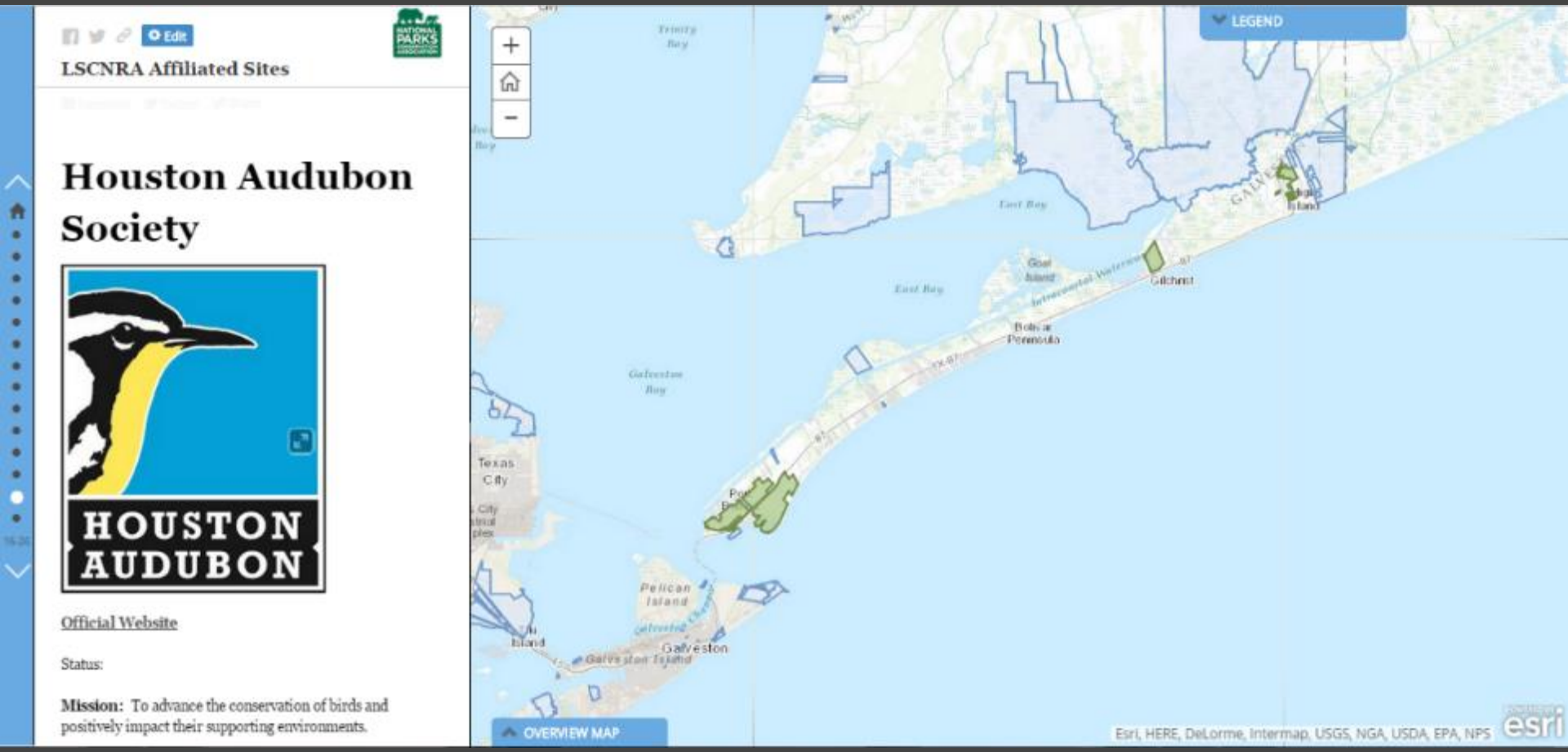
**Pop ups:** learn more by clicking on the map!

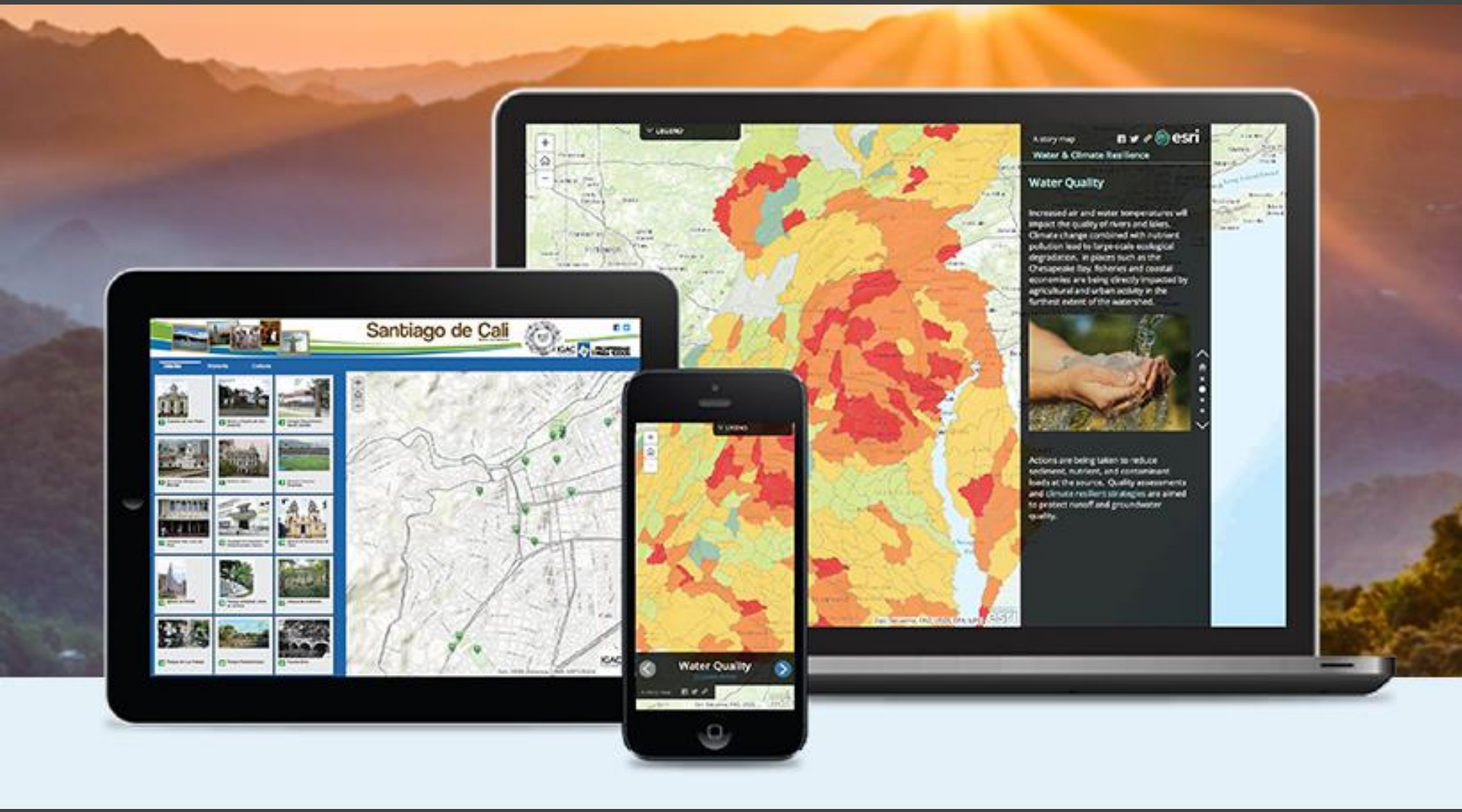


**Share:** Send the map you just made to another partner

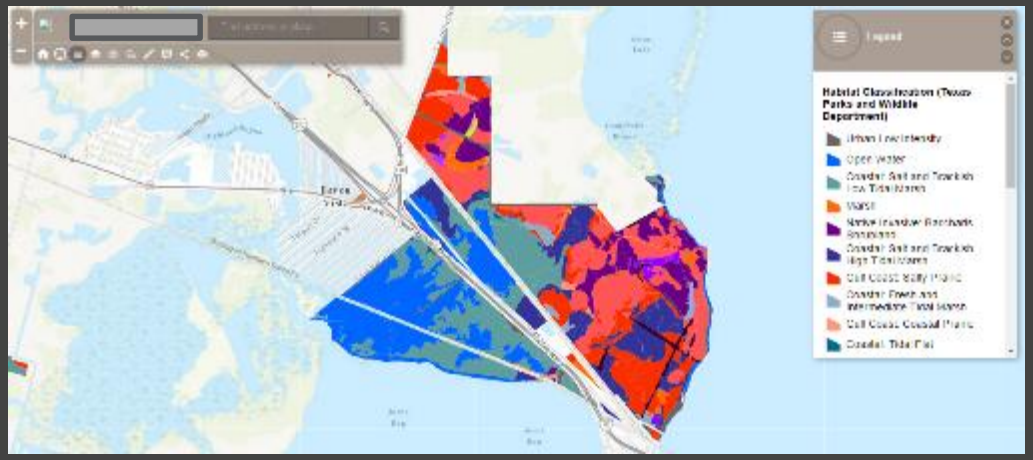
**Print:** Print the map you just made – via PDF.

## **Supportive Regional Map:** context




Santiago de Cali
Water Quality
Water & Climate Resilience
Water Quality
esri

# Partner engagement




- *Communication with partner*
- *Product deliverable – a mapping resource*
- *Personalize – future needs*
- *Private access – sharing between partners*
- *Simple, on-line, easy to use*
- *Empowering; learning from partners*

# thank you

*Ryan Valdez*
*rvaldez@npca.org*