



*Florida Department of
Environmental Protection*

Detailed Allocation Procedure

IRL North BMAP Meeting
February 12, 2010



IRL North BMAP





North IRL Existing Loading (2000)

- WBID 2963F
 - TN: 144,968 lbs/yr
 - TP: 13,901 lbs/yr
- WBID 2963E
 - TN: 146,598 lbs/yr
 - TP: 24,812 lbs/yr
- WBIDs 2963D
 - TN: 122,049 lbs/yr
 - TP: 19,205 lbs/yr
- WBIDs 2963B & 2963C
 - TN: 185,503 lbs/yr
 - TP: 36,272 lbs/yr



Values are Without Atmospheric Deposition



North TN & TP Target Loads

- WBID 2963F
 - TN: 88,322 lbs/yr
 - TP: 7,307 lbs/yr
- WBID 2963E
 - TN: 95,932 lbs/yr
 - TP: 13,042 lbs/yr
- WBIDs 2963D
 - TN: 73,882 lbs/yr
 - TP: 8,752 lbs/yr
- WBIDs 2963B & 2963C
 - TN: 114,458 lbs/yr
 - TP: 18,886 lbs/yr



Values Without Atmospheric Deposition



Stakeholders in the North IRL

WWTFs

- Cape Canaveral Power Plant
- Cocoa – J. Sellers
- Melbourne Reverse Osmosis (RO)
- Reliant Energy – Indian River
- Rockledge

Non-MS4s

- Town of Palm Shores
- Agriculture

MS4s

- Brevard County
- Volusia County
- City of Edgewater
- City of Oakhill
- City of Titusville
- City of Cocoa
- City of Indian Harbor Beach
- City of Melbourne
- City of Rockledge
- City of Titusville
- Town of Indialantic
- FDOT District 5





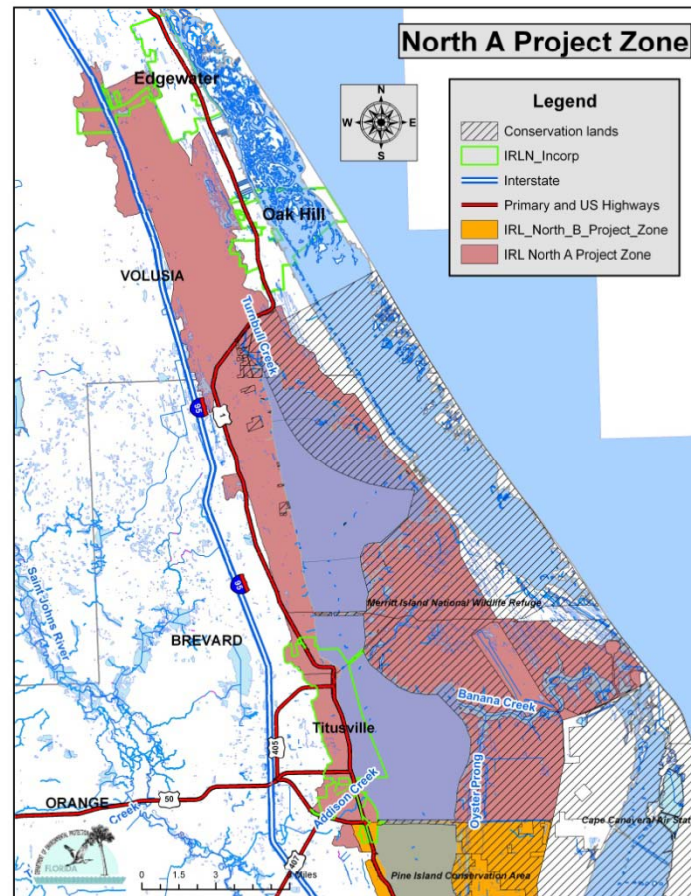
Project Zones

- Project zones represent the differing residence times within segments of the IRL
- Helps to introduce flexibility to stakeholders by allowing project credit outside of their respective jurisdictions
- The North BMAP has two project zones:
 - North A: Residence Time 2.3 Years
 - North B: Residence Time 1.5 Years





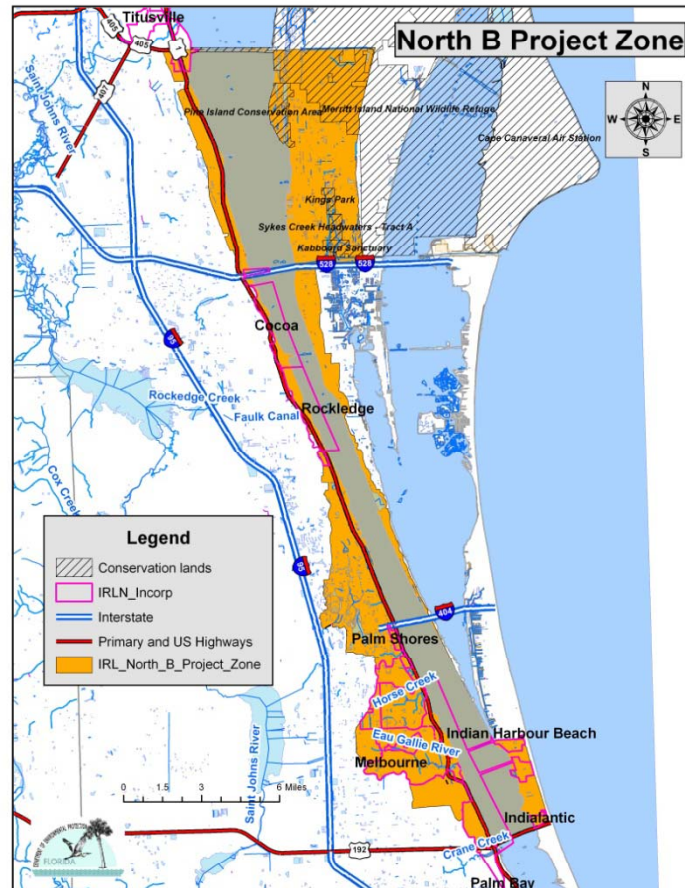
North A Project Zone



Turnbull Creek to NASA Causeway (SR405) & Includes Titusville



North B Project Zone



NASA Causeway to Melbourne Causeway (US. 192)



Methodology for Calculations

- Geographic Information System (GIS) based
- Uses Pollutant Load Screening Model (PLSM) shapefile for the North IRL as the base map.
- The PLSM shapefile contains the LULC associated with the 2000 land use, runoff coefficients (ROs), event mean concentration (EMCs), and the 30-year average rainfall for each identified area.



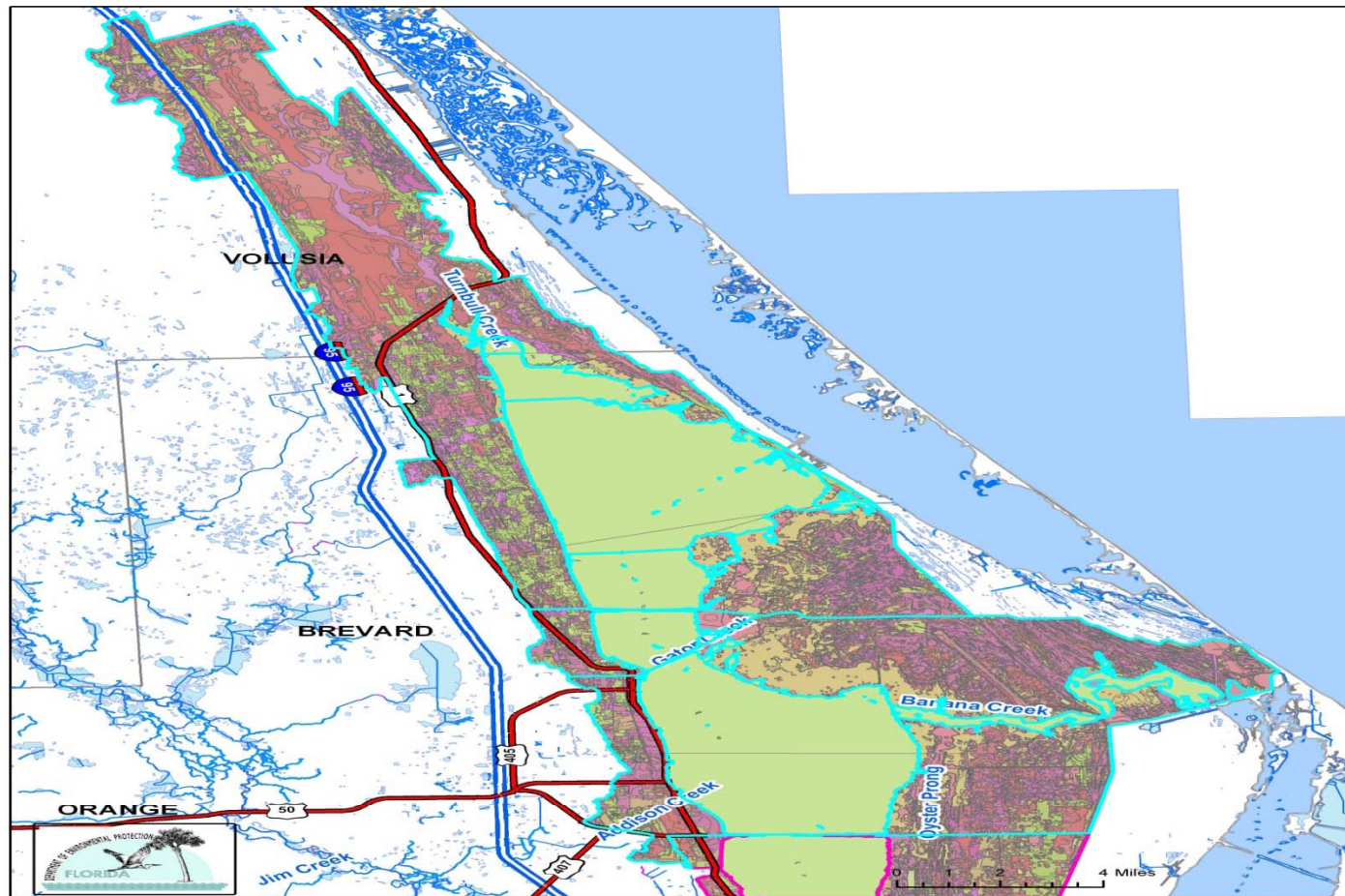


GIS PROCESSING STEPS



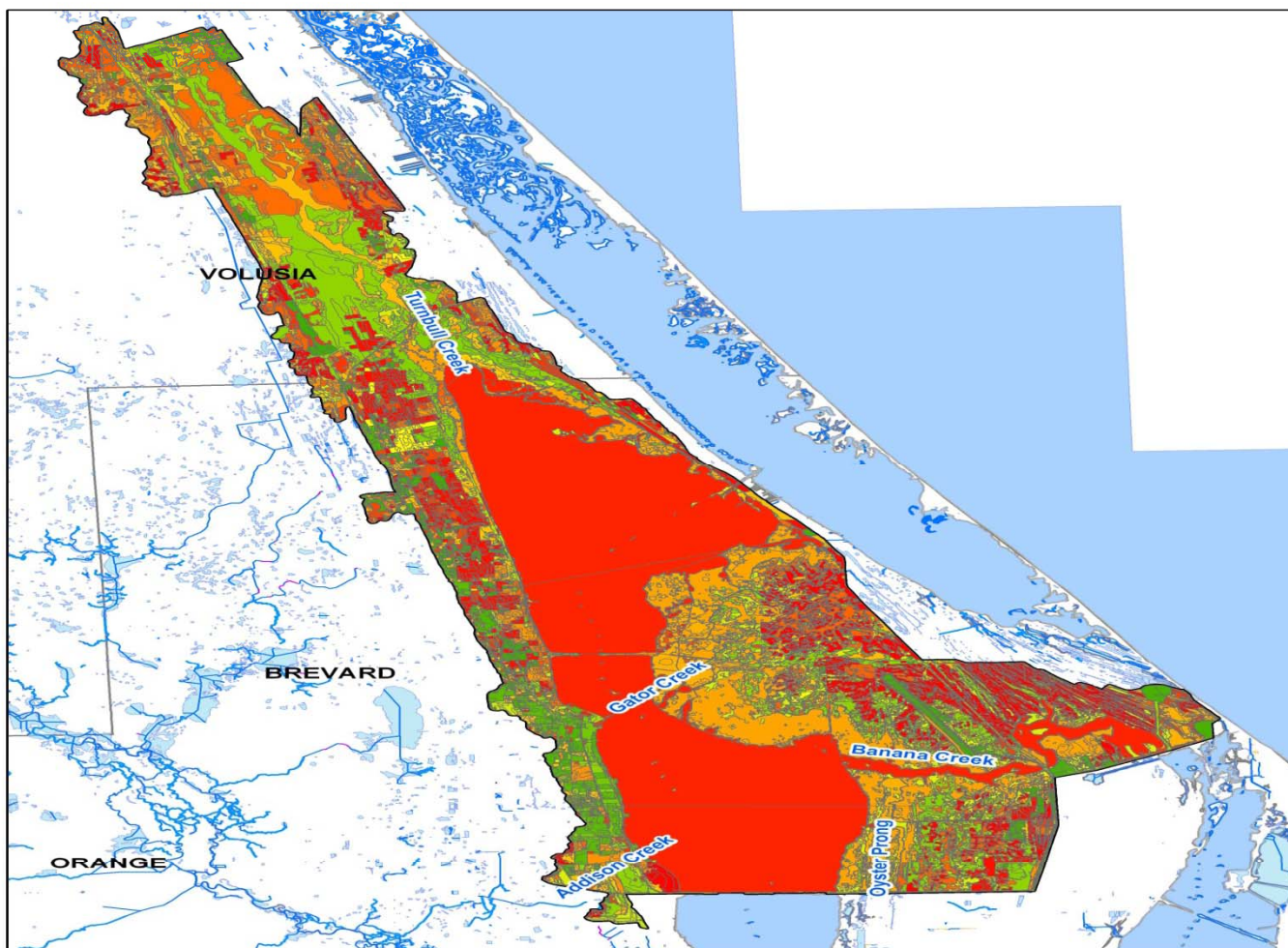


Clip Project Zone from PLSM Output



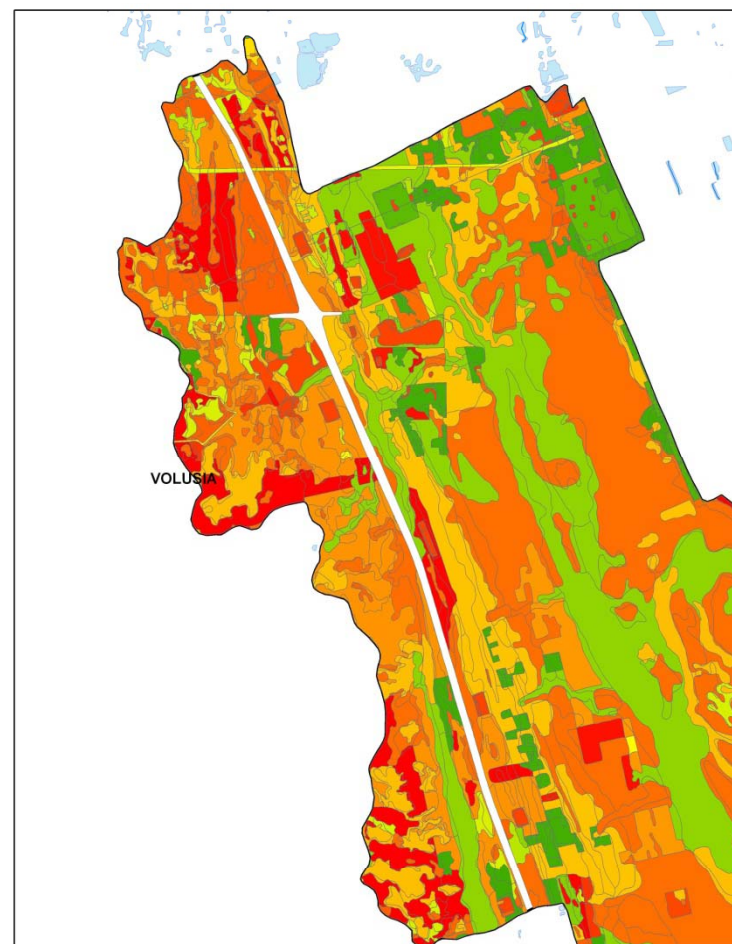
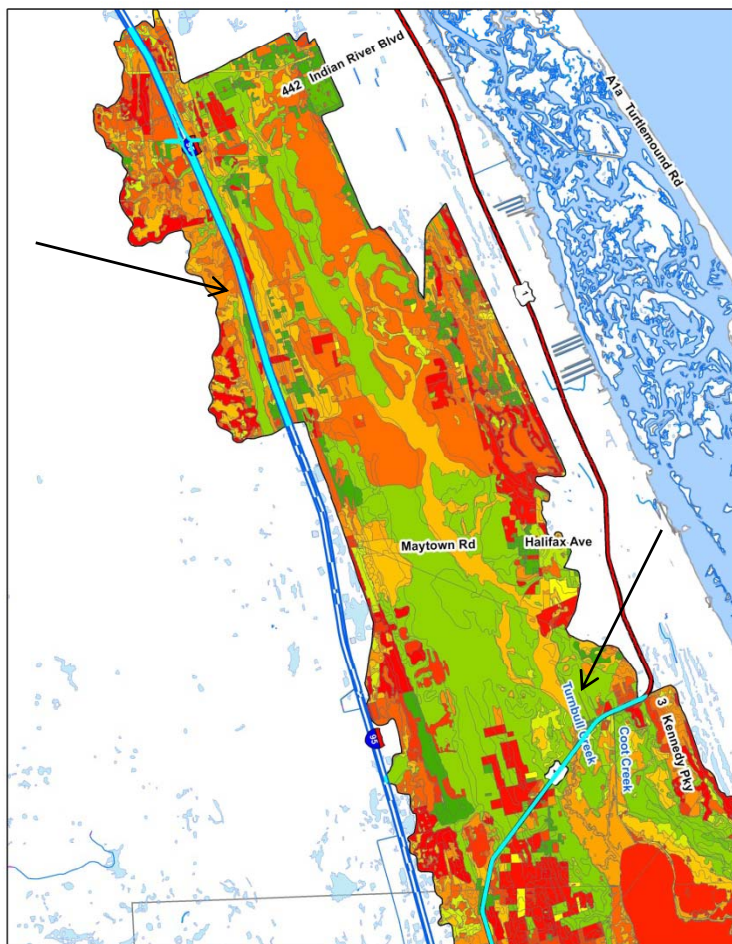


IRL North Project Zone Base Map





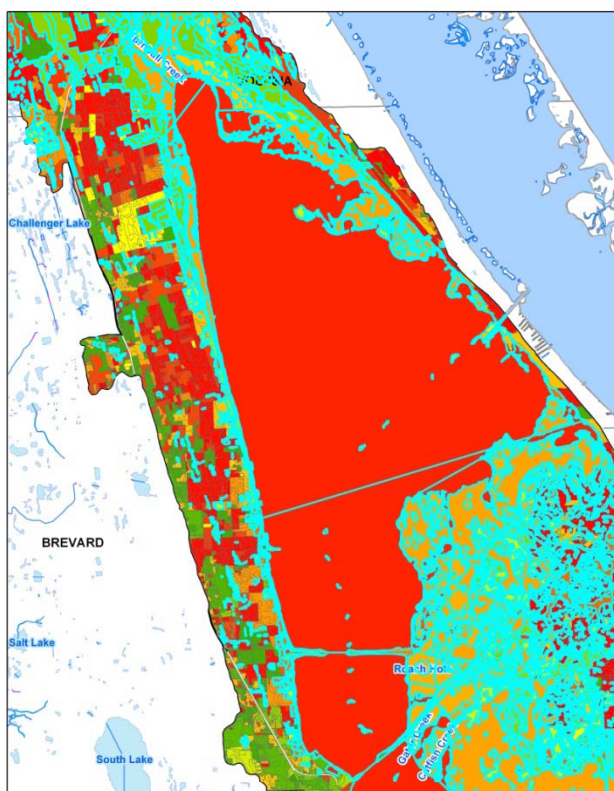
Base Map Minus FDOT Roads



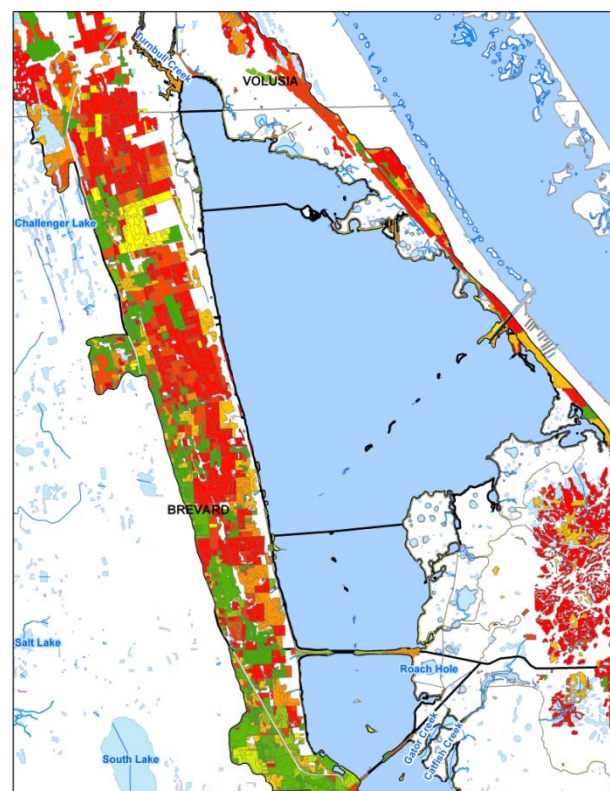


Base Map Minus Zero EMC Values

EMCs with Zero Value



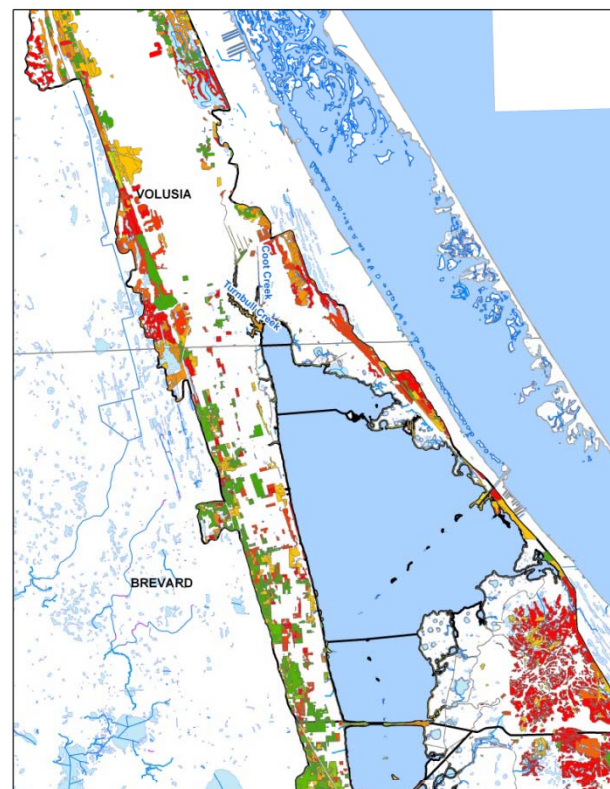
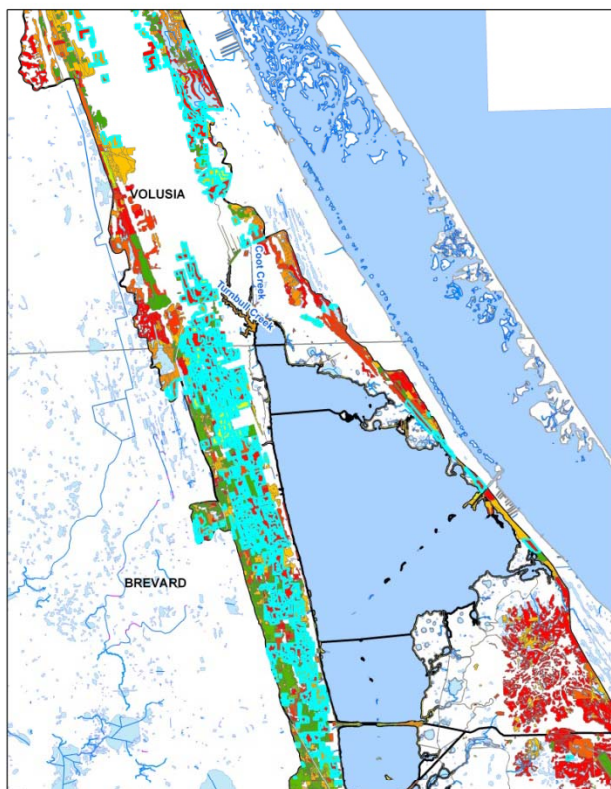
New Base Map





Base Map Minus Agriculture

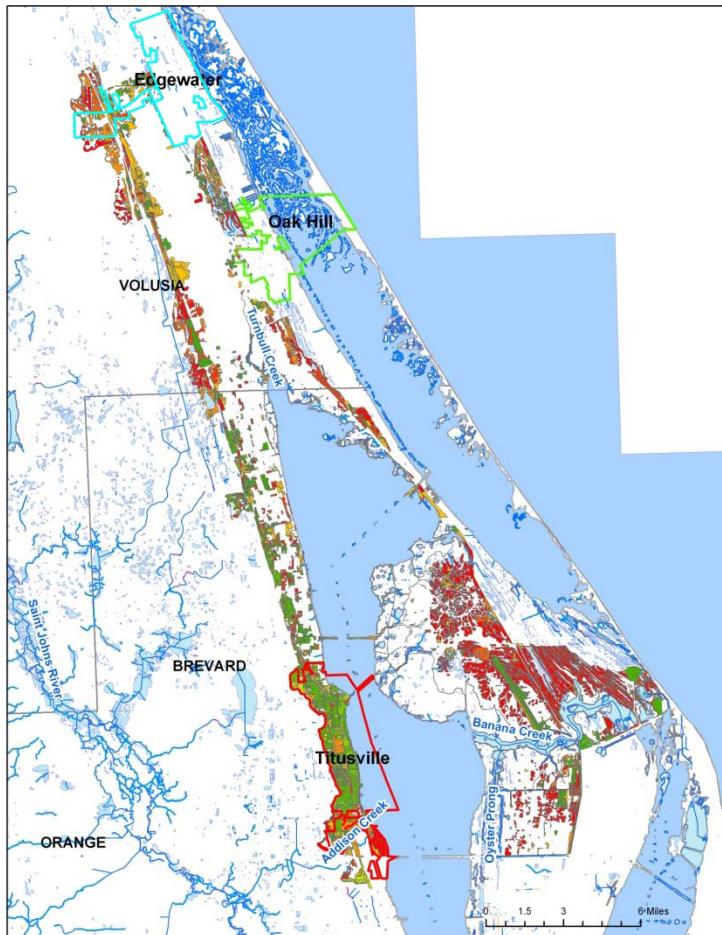
Agriculture outlined in Teal Base Minus Agriculture



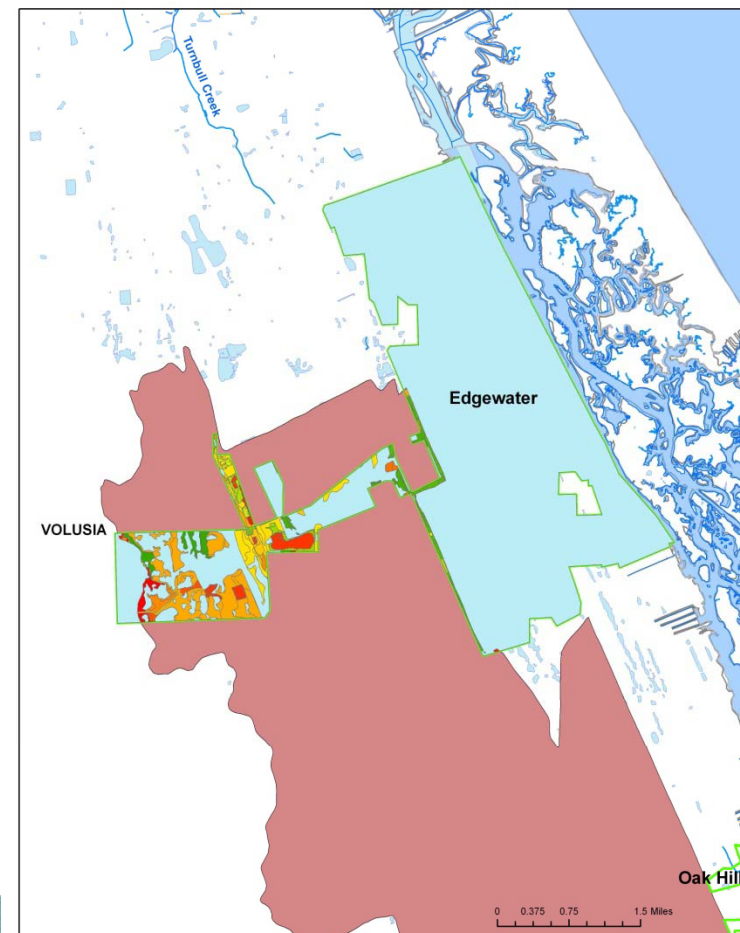


Base Map Minus Cities, Towns

Cities on Base Map

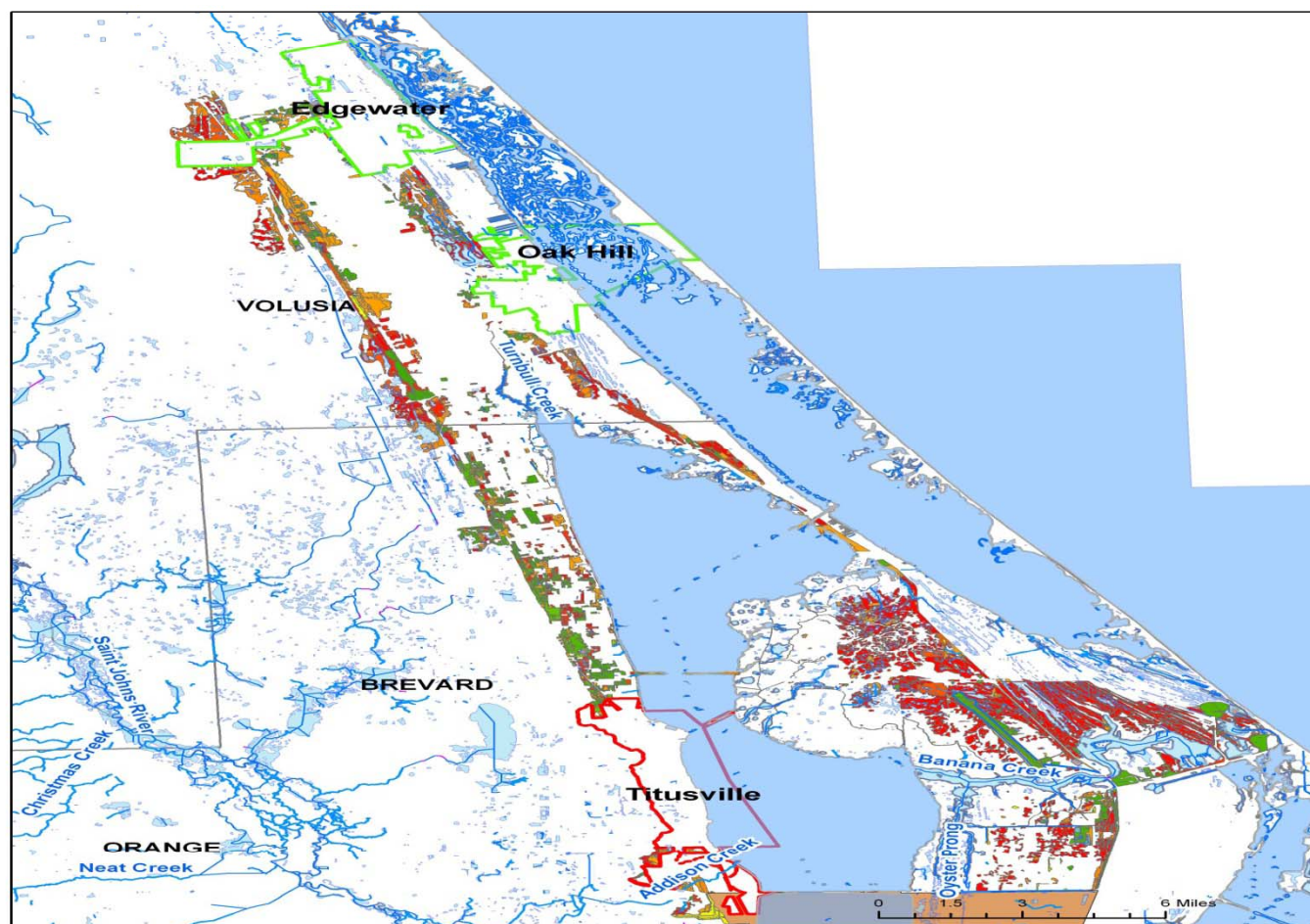


Edgewater's Land Use Clipped from Base Map





Base Map - Remaining County





Calculation of 2000 Base Loadings

- Example:
 - City of Utopia:
 - 1,520 acres after roads, zero EMCs, and agriculture removed from PLSM output.
 - Then the land use codes and their associated loadings are summed from the PLSM.
 - 5,000 lbs/year of TN is their 2000 base load.





Calculation of Allowable Load

- Using the project zone's calculated allowable TN per acre (Example: 1.2 lbs)
- Multiply 1.2 lbs by Utopia's 1,520 Acres
 - Allowable load of 1,824 pounds/yr of TN.
 - Subtract allowable load from Utopia's 2000 base load of 5,000 pounds of TN.
 - The required reduction for Utopia is 3,176 pounds/yr TN.





Next Steps

- Collect GIS Boundaries
 - Jurisdictional Boundaries
 - MS4 Boundaries
- Determine *De Minimus*
 - Entities must meet both TN and TP *de minimus* levels to qualify
 - FDEP will contact entities who qualify
- FDEP will calculate base loads and reductions





QUESTIONS?

