



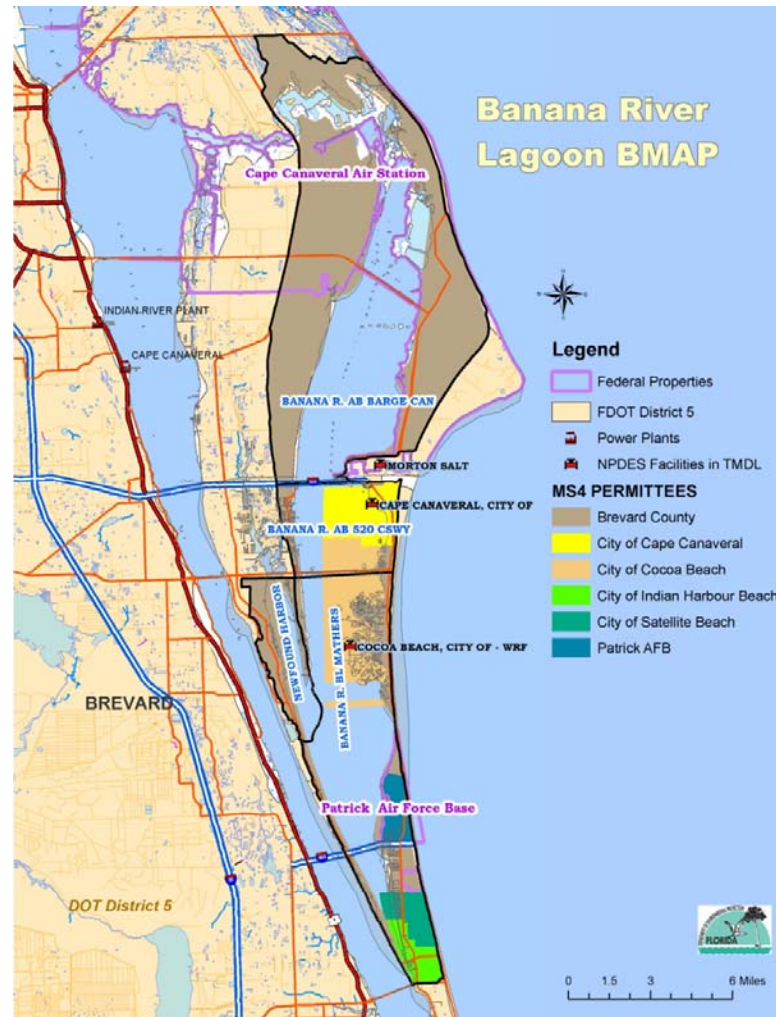
*Florida Department of
Environmental Protection*

Detailed Allocation Procedure

Banana River Lagoon BMAP Meeting
March 12, 2010



Banana River Lagoon BMAP





Banana River Existing Loading (2000)

- WBID 3057C
 - TN: 128,274 lbs/yr
 - TP: 20,763 lbs/yr
- WBID 3044A
 - TN: 46,213 lbs/yr
 - TP: 9,724 lbs/yr
- WBIDs 3057A & 3057B
 - TN: 130,248 lbs/yr
 - TP: 27,380 lbs/yr



Values are Without Atmospheric Deposition Loads



Banana River Lagoon Target Loads

- WBID 3057C
 - TN: 42,828 lbs/yr
 - TP: 6,176 lbs/yr
- WBID 3044A
 - TN: 15,489 lbs/yr
 - TP: 2,907 lbs/yr
- WBIDs 3057A & 3057B
 - TN: 53,711 lbs/yr
 - TP: 10,137 lbs/yr



Values are Without Atmospheric Deposition Loads



Stakeholders in the Banana River Lagoon

WWTFs

- Cape Canaveral
- Cocoa Beach
- Morton Salt

Non-MS4s

- NASA- Kennedy Space Center
- Cape Canaveral Air Station
- Agriculture

MS4s

- Brevard County
- City of Cape Canaveral
- City of Cocoa Beach
- City of Indian Harbor Beach
- City of Melbourne
- City of Satellite Beach
- Patrick Air Force Base
- FDOT District 5





Methodology for Allocation Calculations

- Geographic Information System (GIS) based process
- Uses Pollutant Load Screening Model (PLSM) shapefile output for the Banana 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.





Methodology for Allocation Calculations Cont.

- Each GIS processing step will create a separate GIS shapefile that will contain the land use land cover acres within each stakeholders jurisdiction OR, it will remove acres for which an entity is not responsible.
- MS4 permit jurisdictions allocated load reductions will be further subdivided into two categories:
 - A Waste Load Allocation (WLA) is for those acres within their MS4 system boundary and
 - A Load Allocation (LA) is for those acres outside of the MS4 boundary but within the entities jurisdiction .





Wasteload and Load Allocations

- The wasteload allocation (WLA) is for point sources permitted under the National Pollutant Discharge Elimination System (NPDES) Program including:
 - Domestic and industrial wastewater treatment facilities (WWTFs); and
 - Municipal separate storm sewer systems (MS4s).
- The load allocation (LA) is for nonpoint sources, including agricultural runoff and stormwater from areas that are not covered by an MS4 (non-MS4).





Permitted versus Non-Point Areas

- The loads associated with the MS4 acres will be linked to the MS4 permit through the self-implementation language in the permit.
 - Enforcement for BMAP project implementation will also occur through the permit.
- The non-MS4 or non-point required reductions and associated projects will be enforced through the Secretarial adopted BMAP.
- Stakeholders in other basins have requested this split to limit their permit responsibility within the MS4 area to only those acres.
- Projects to achieve these reductions can occur any where within the BRL basin (i.e., MS4 reductions do not have to occur in the MS4 area).



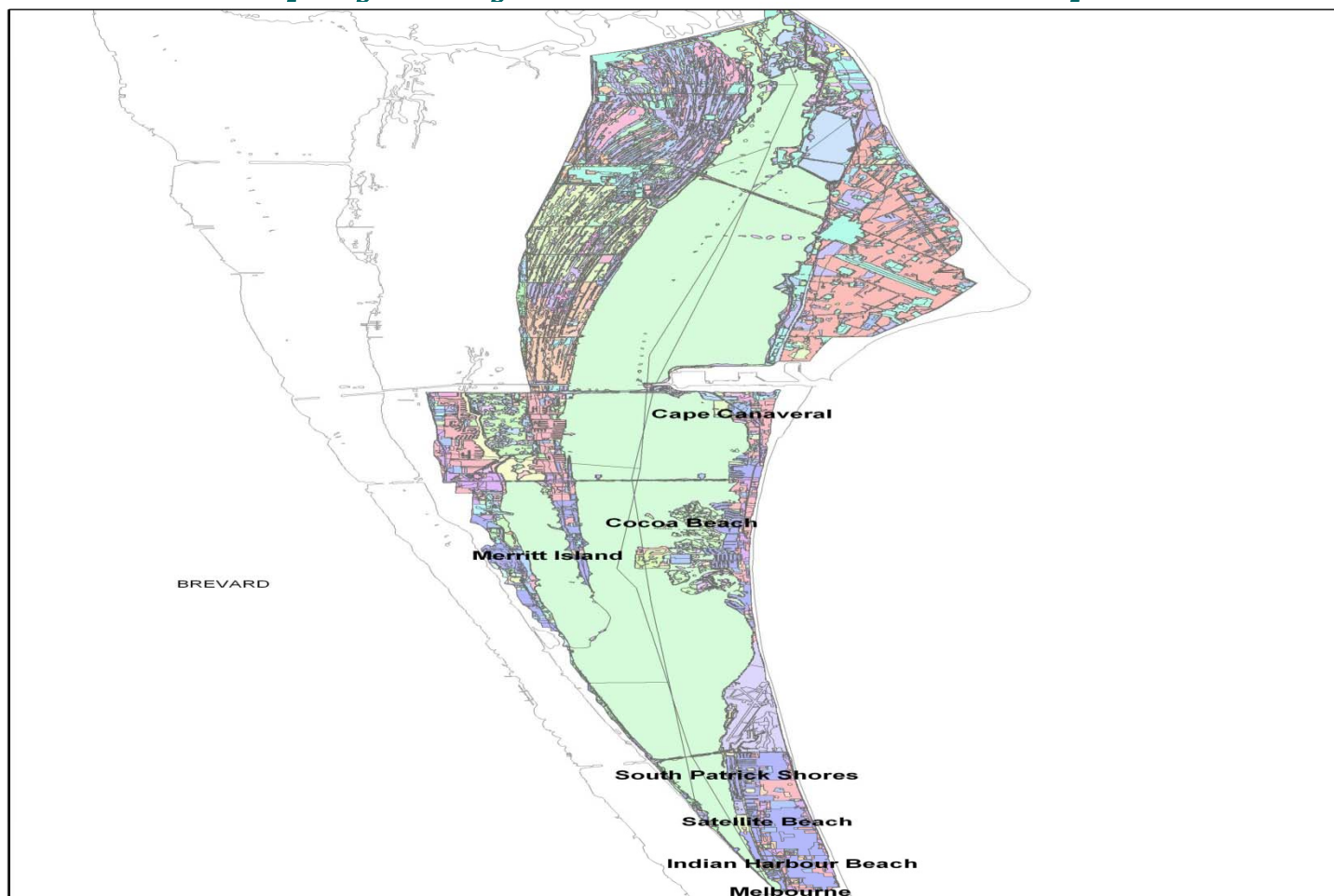


GIS PROCESSING STEPS



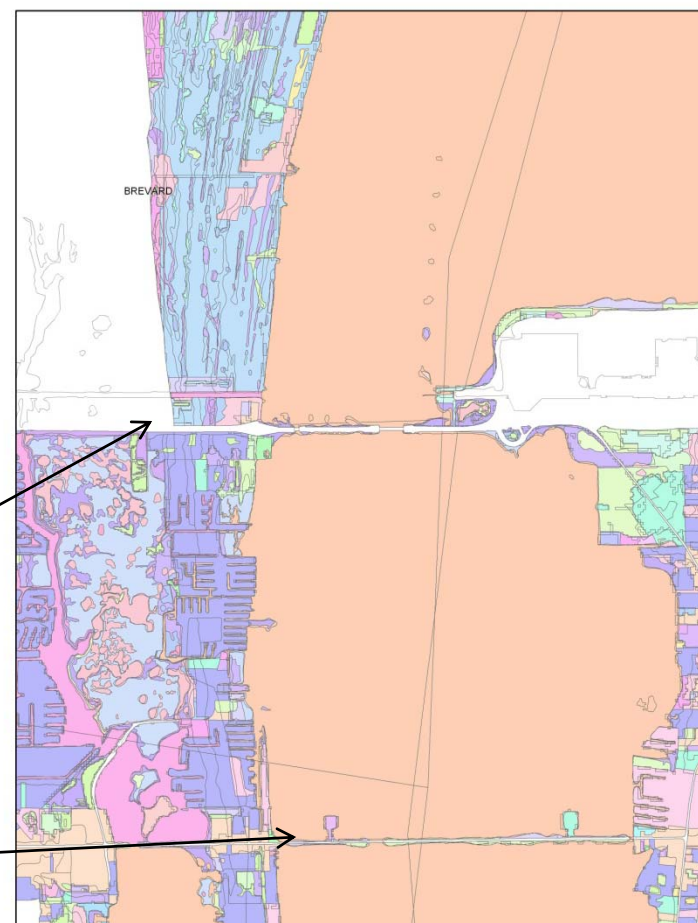
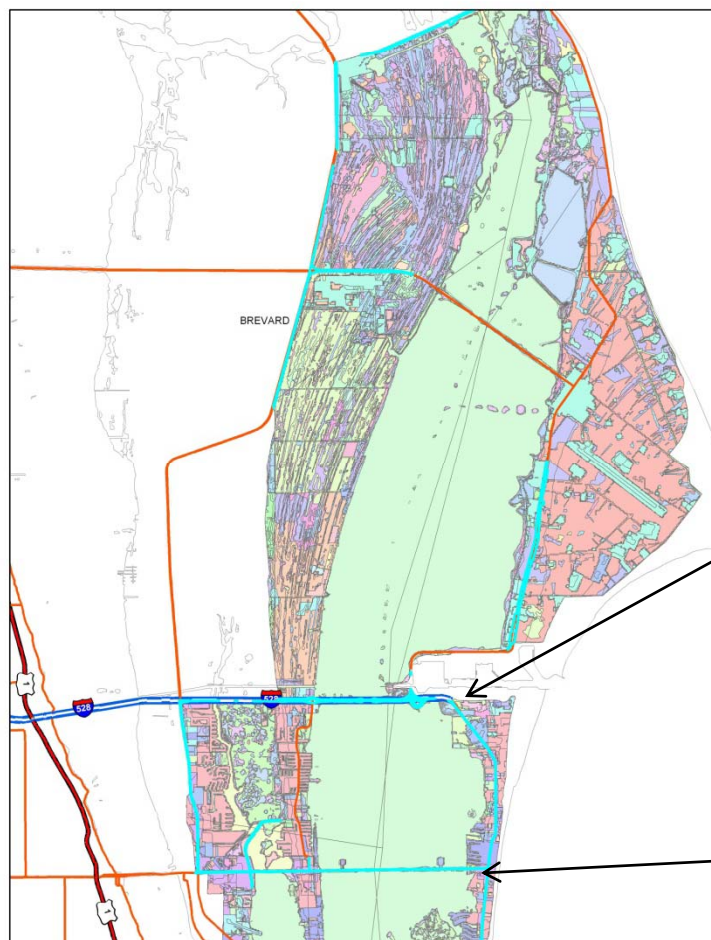


Use Shapefile from PLSM Output





Base Map Minus FDOT Roads

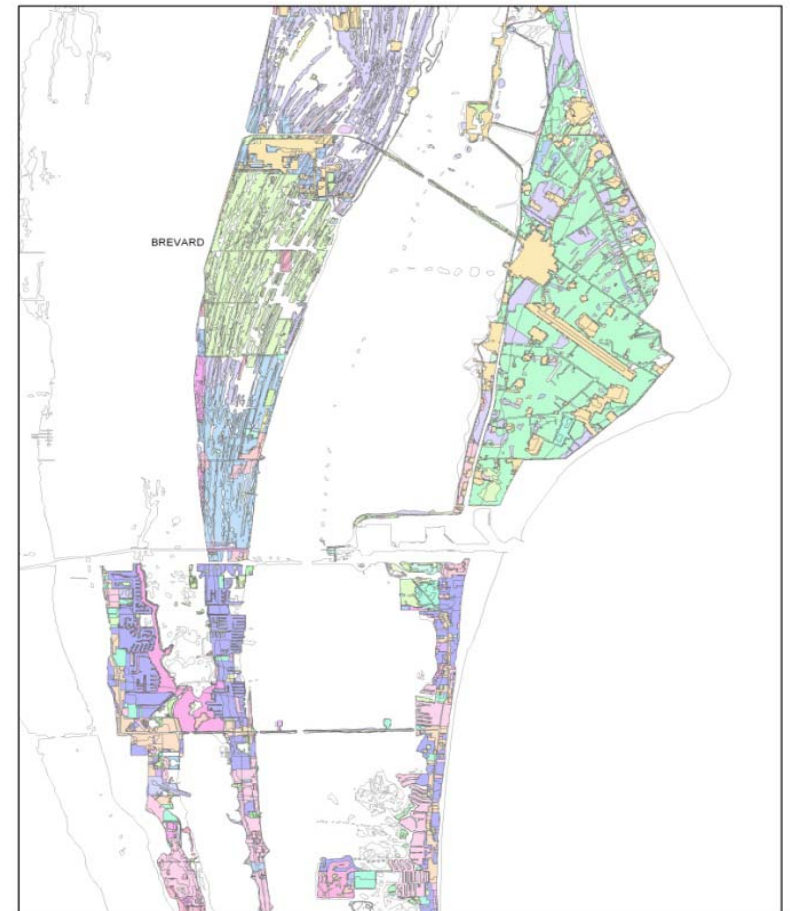
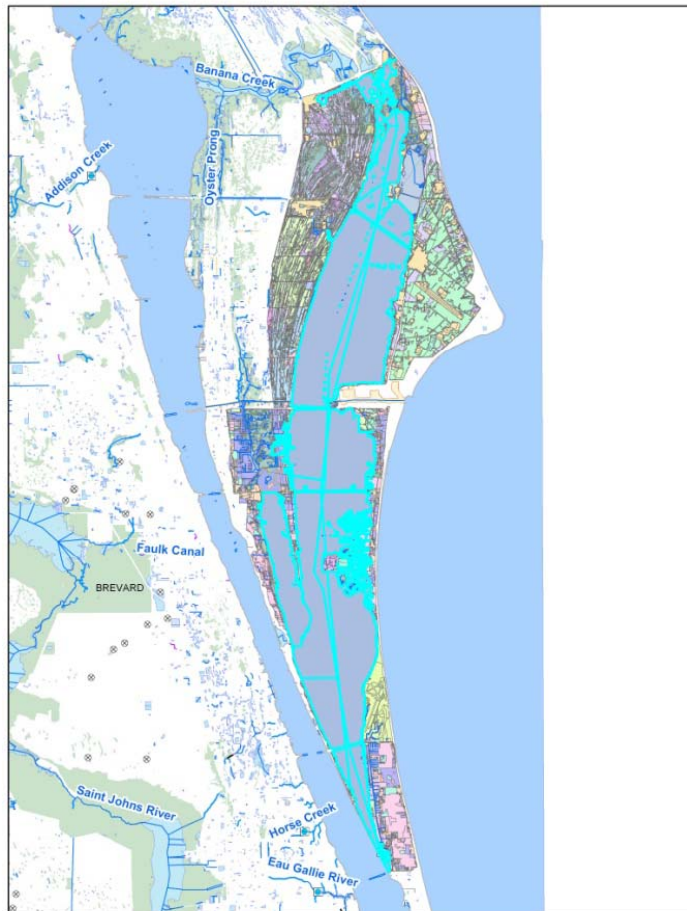




Base Map Minus Zero EMC Values

EMCs with Zero Value

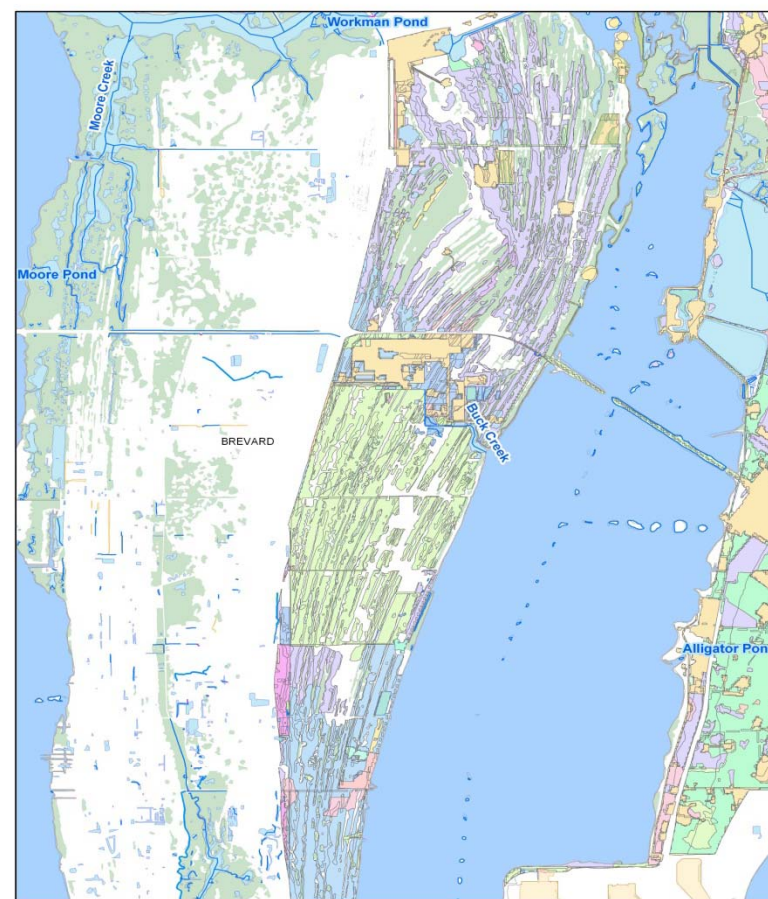
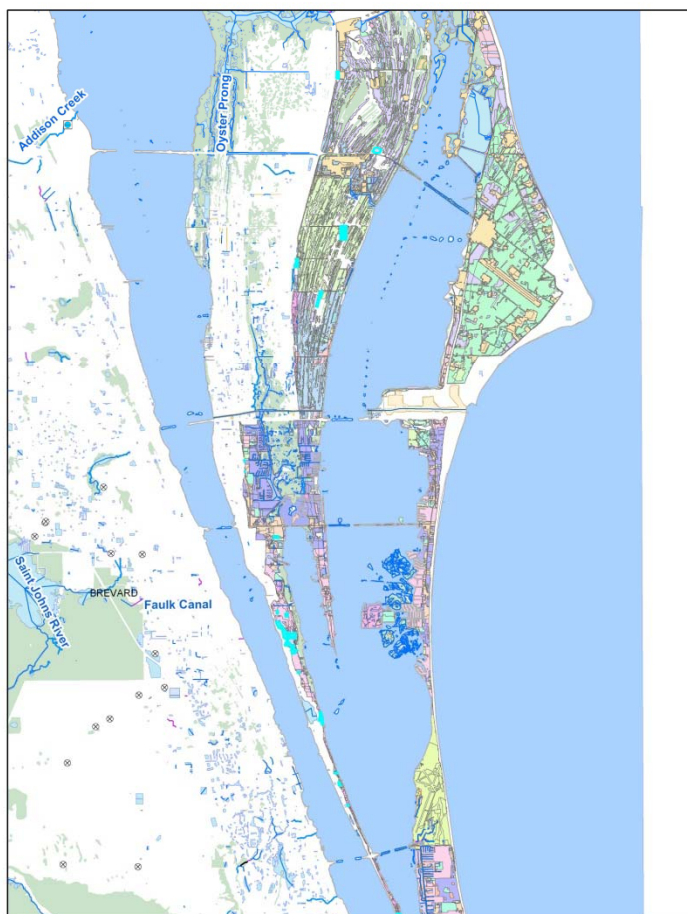
New Base Map





Base Map Minus Agriculture

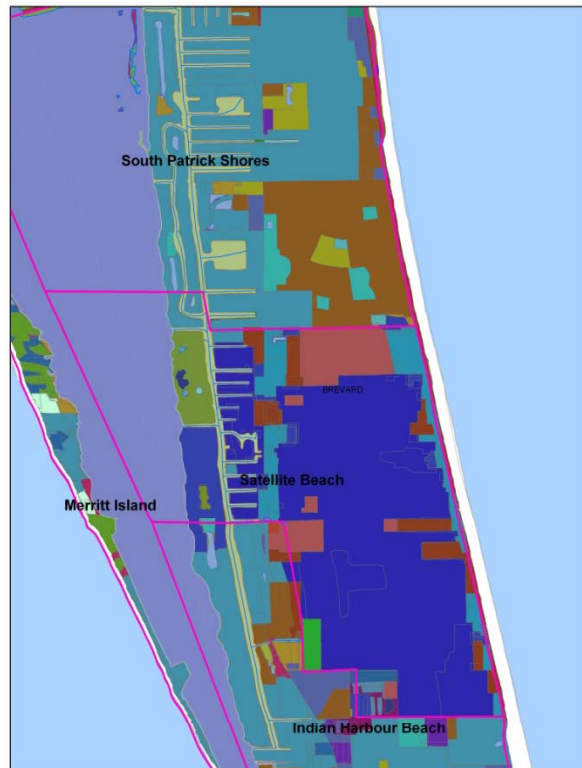
Agriculture outlined in Teal Base Minus Agriculture





Base Map Minus Cities, Towns

Cities on Base Map

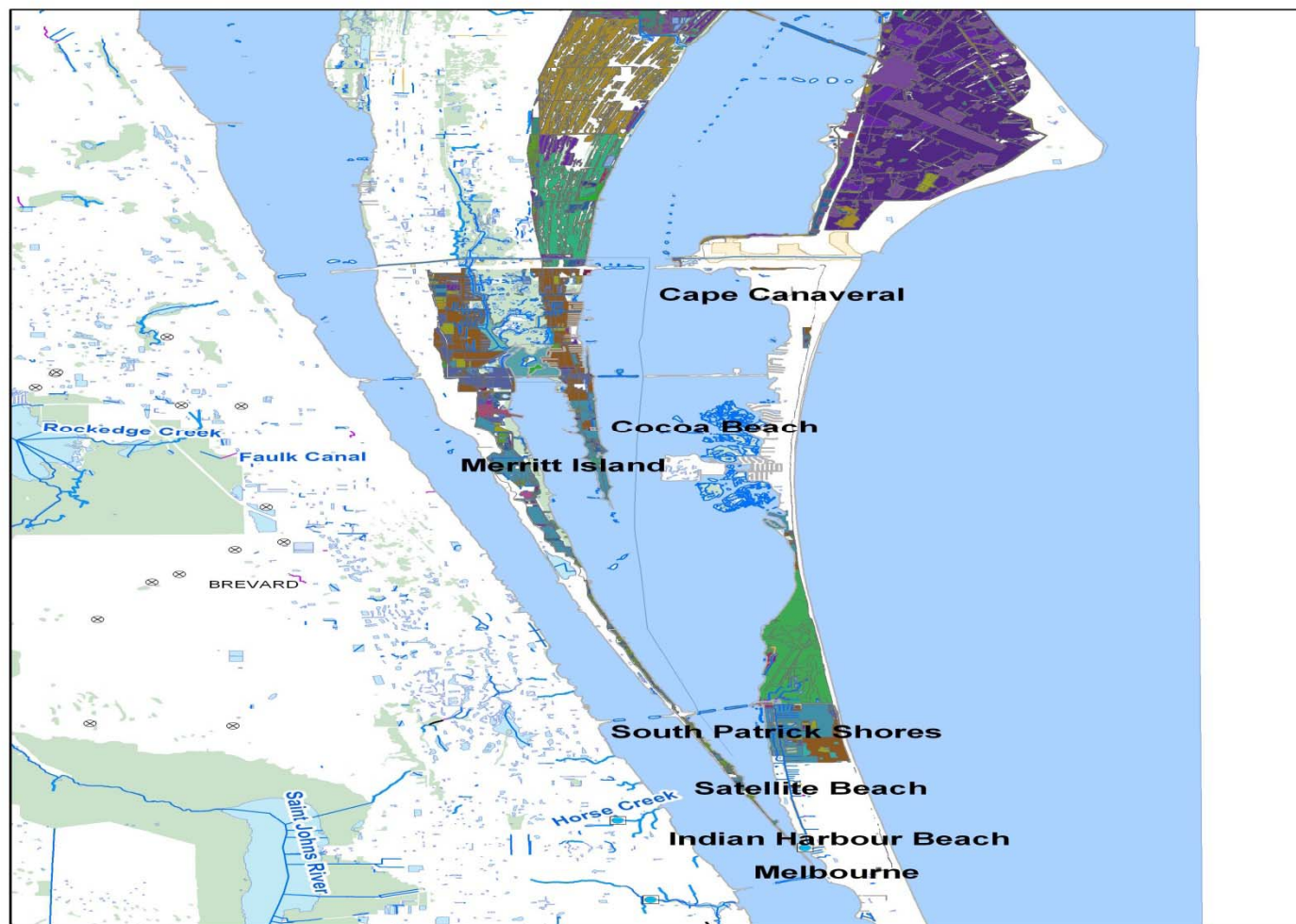


Satellite Land Use Removed from Base Map





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 basin target load from the TMDL calculate an 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.
- Begin Monitoring Plan Discussions.
- FDEP provide guidelines for project submission and discuss how TN and TP credit will be applied to entities allocation.





QUESTIONS?

