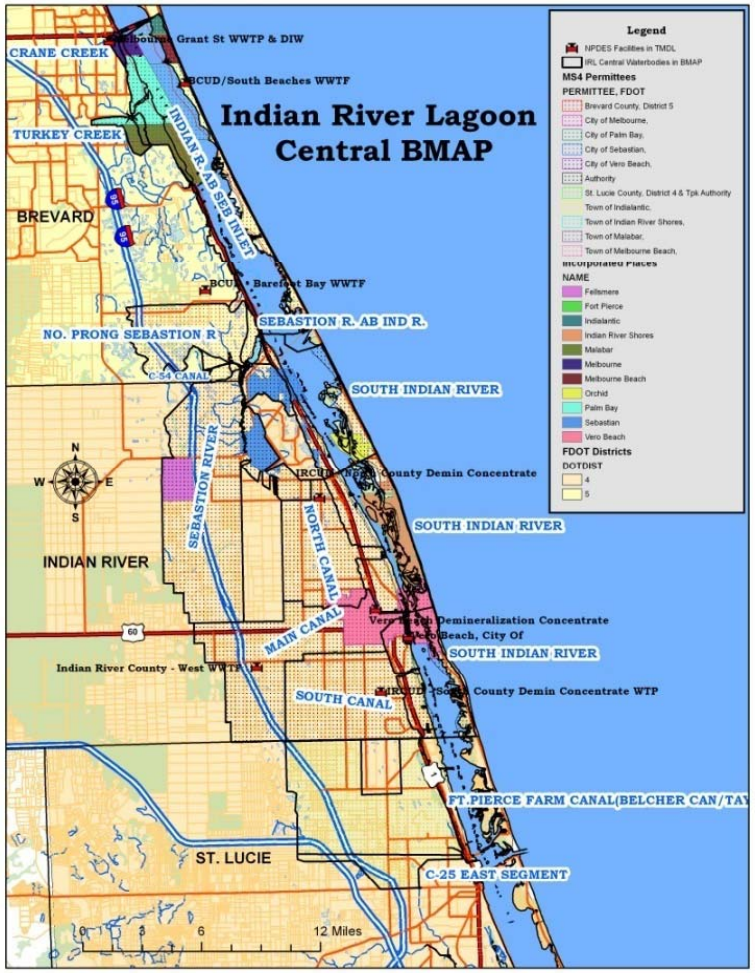
Florida Department of Environmental Protection

Detailed Allocation Procedure

IRL Central BMAP Meeting

January 15, 2010

IRL Central BMAP



Central IRL Required Reductions

- WBIDs 5003D & 2963A
  - TN: 615,583 lbs/yr
  - TP: 99,100 lbs/yr

- WBIDs 5003B & 5003C
  - TN: 240,826 lbs/yr
  - TP: 46,645 lbs/yr

Without Atmospheric Deposition

Central TN & TP Target Loads

- WBIDs 5003D & 2963A
  - TN: 578,015 lbs/yr
  - TP: 109,177 lbs/yr

- WBIDs 5003B & 5003C
  - TN: 243,267 lbs/yr
  - TP: 52,806 lbs/yr

Without Atmospheric Deposition

Stakeholders in the Central IRL

WWTFs

- Barefoot Bay
- South Beaches
- Hobart (RO)
- South County RO
- West Regional
- Melbourne - Grant Street
- Vero Beach
- Vero Beach RO

Non-MS4s

- Town of Grant-Valkaria
- Town of Melbourne Village
- Town of Orchid
- Turnpike Authority

MS4s

- Indian River County
- Brevard County
- St. Lucie County
- City of Fort Pierce
- City of Melbourne
- City of Palm Bay
- City of Sebastian
- City of Vero Beach
- City of West Melbourne
- Town of Indialantic
- Town of Indian River Shores
- Town of Malabar
- Town of Melbourne Beach
- Florida Department of Transportation (FDOT) District 4
- FDOT District 5

Stakeholders Continued

Water Control Districts (WCDs)

- Fellsmere WCD
- Fort Pierce Farms WCD
- Indian River Farms WCD
- Melbourne-Tillman WCD
- North St. Lucie River WCD
- Sebastian River Improvement District
- Vero Lakes WCD

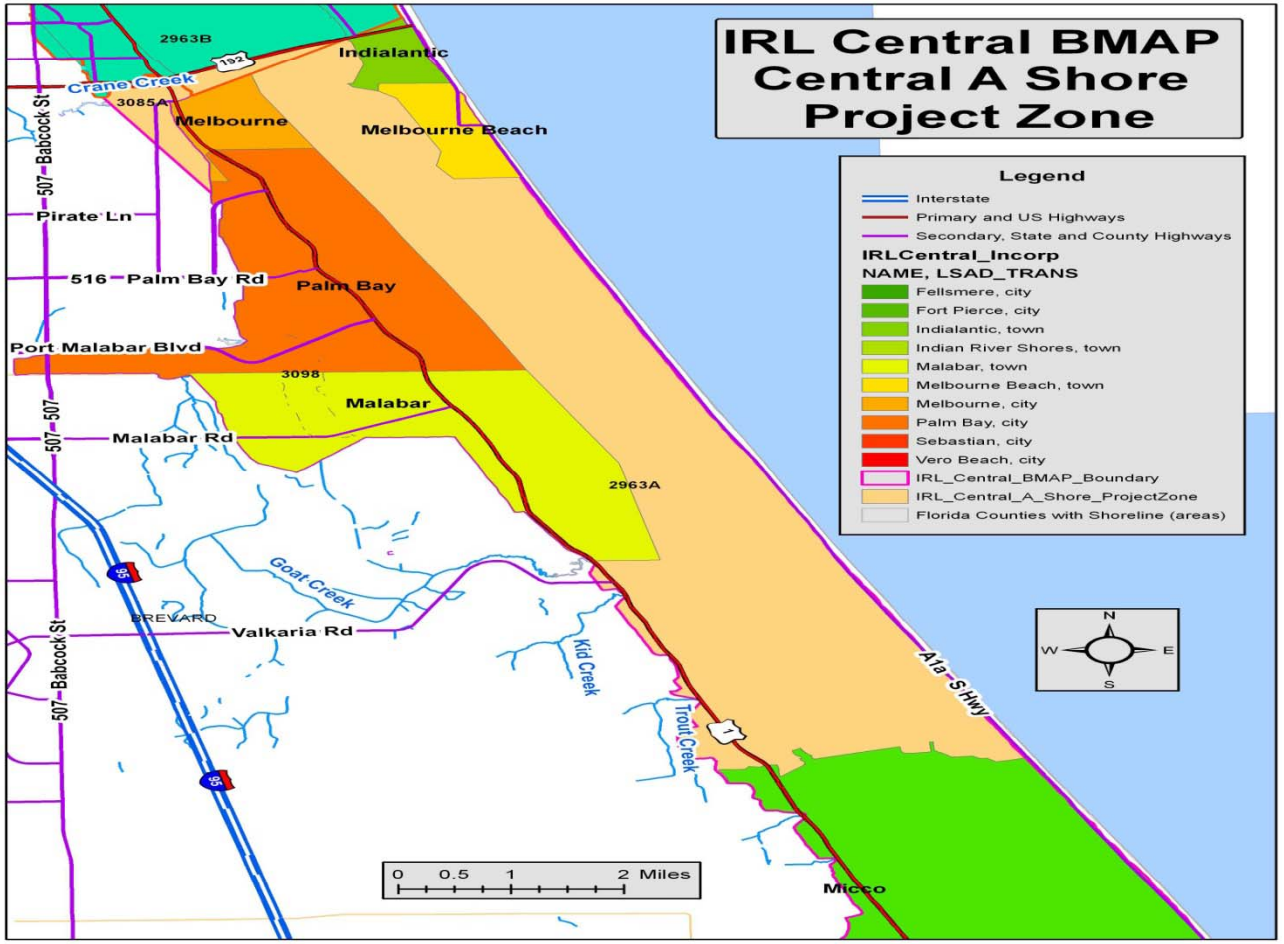
Other

- Agriculture

Project Zones

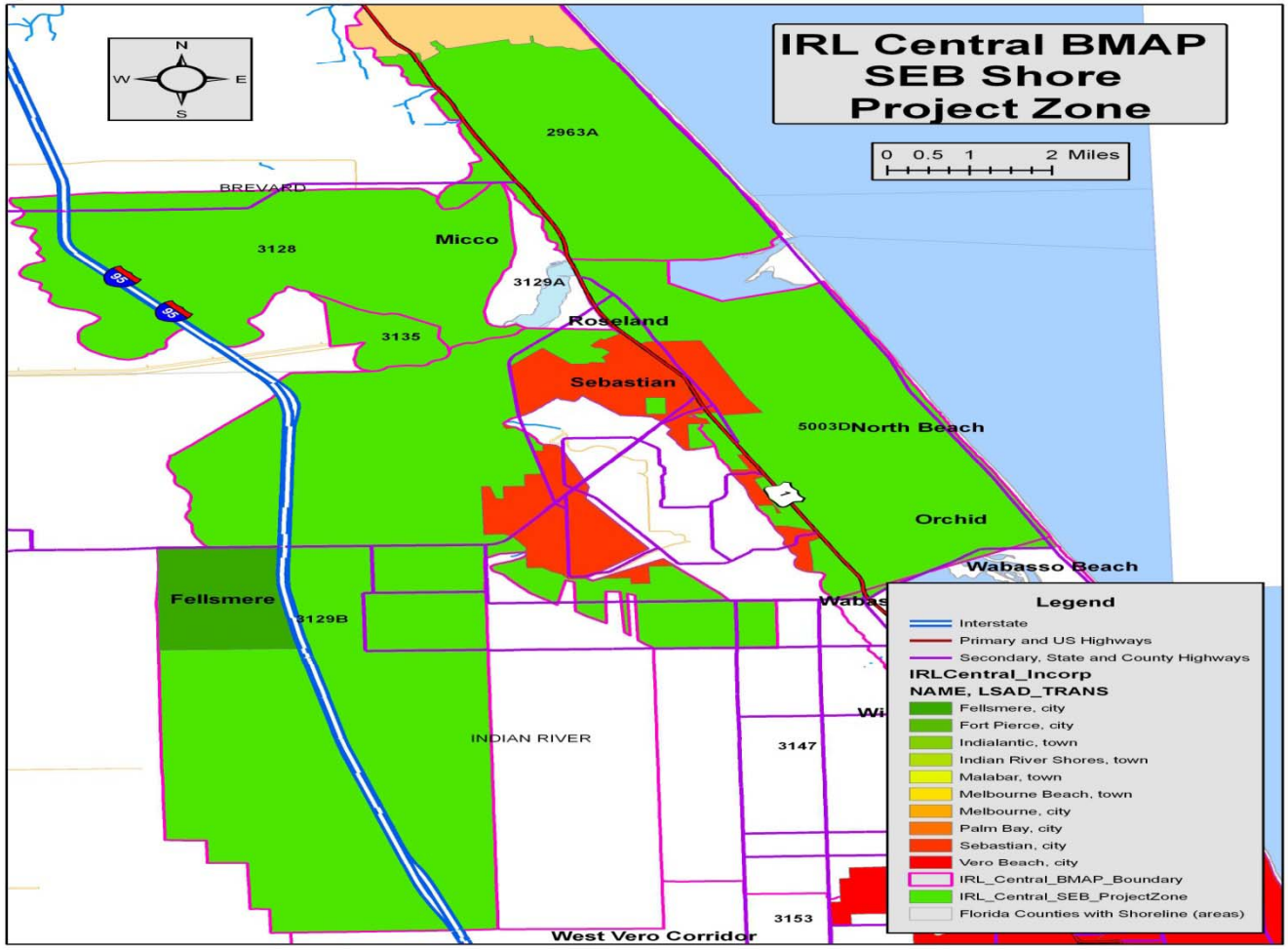
- Project zones represent the differing residence times within segments of the IRL
- Helps to introduce flexibility to stakeholders by allowing project credit outside of their respective jurisdictions
- The Central BMAP has three project zones:
  - Central A
  - Central SEB
  - Central B

Central A Project Zone



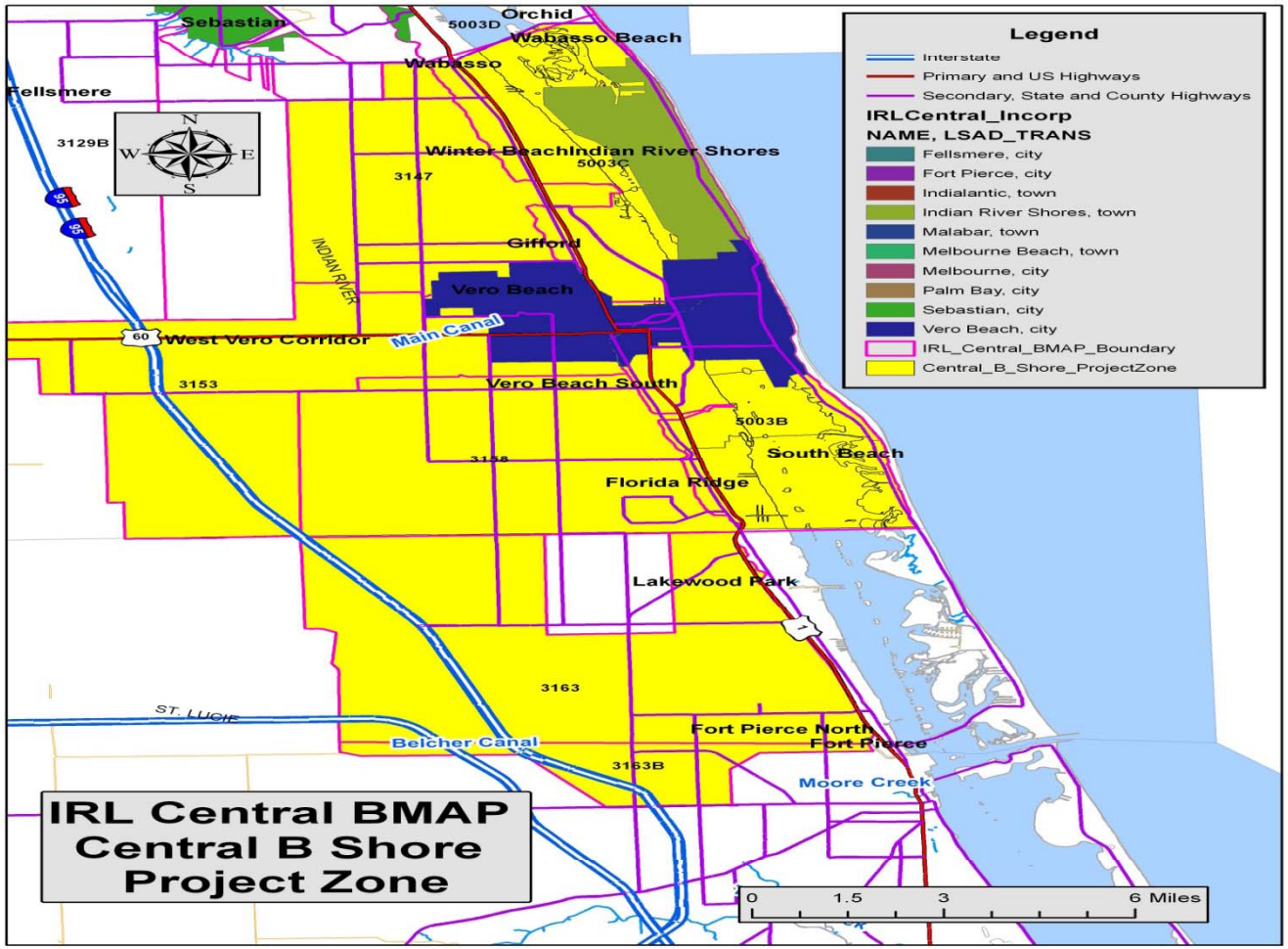
Melbourne Causeway to Grant Farm Island

Central SEB Project Zone



Grant Farm Island to Wabasso Causeway (CR 510)

Central B Project Zone



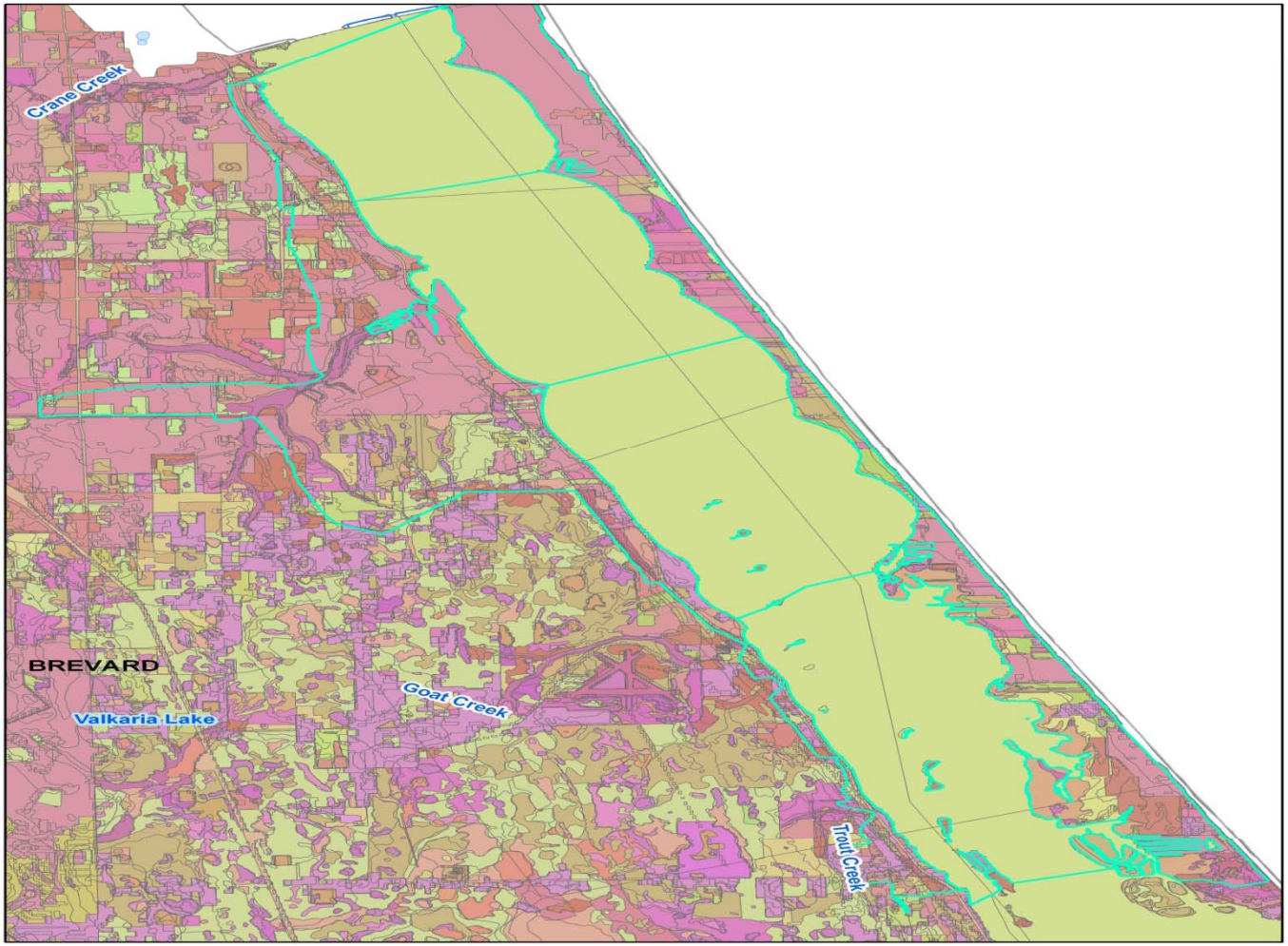
Wabasso Causeway to the C-25 Canal

Methodology for Calculations

- Geographic Information System (GIS) based
- Uses Pollutant Load Screening Model (PLSM) shapefile for the Central 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



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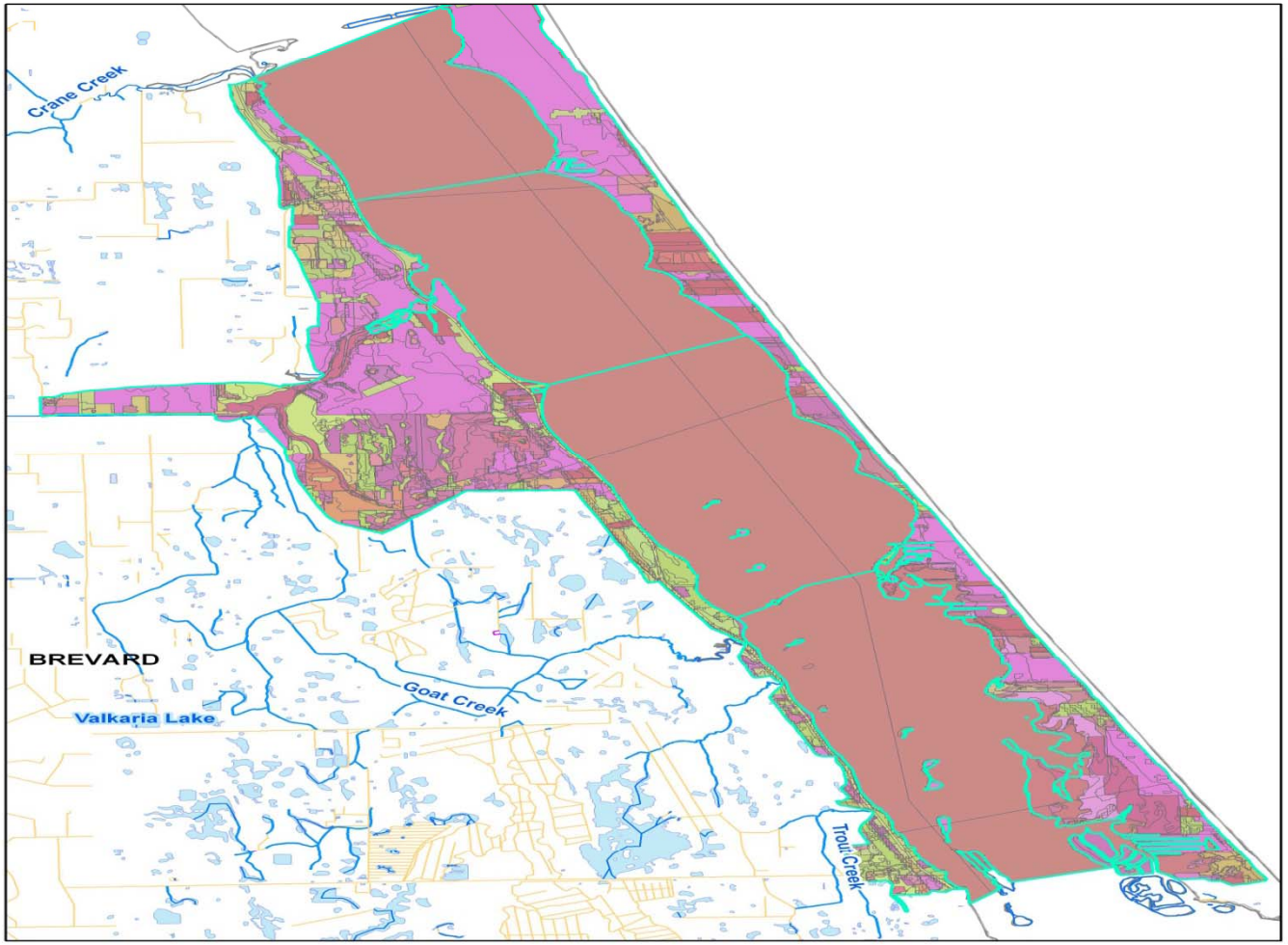
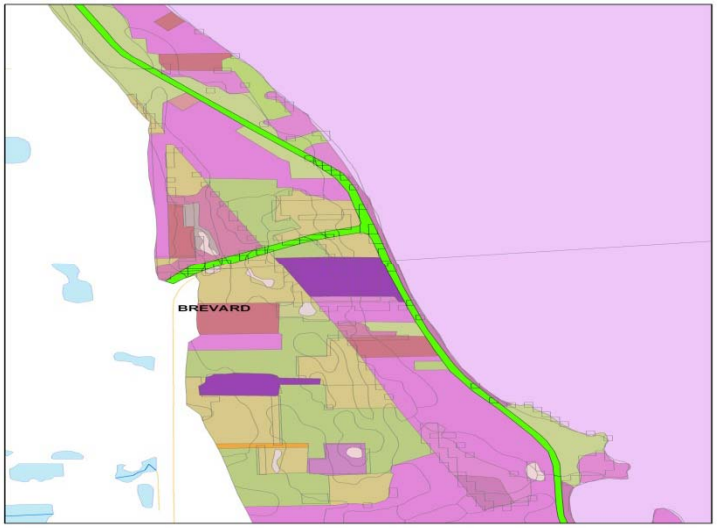
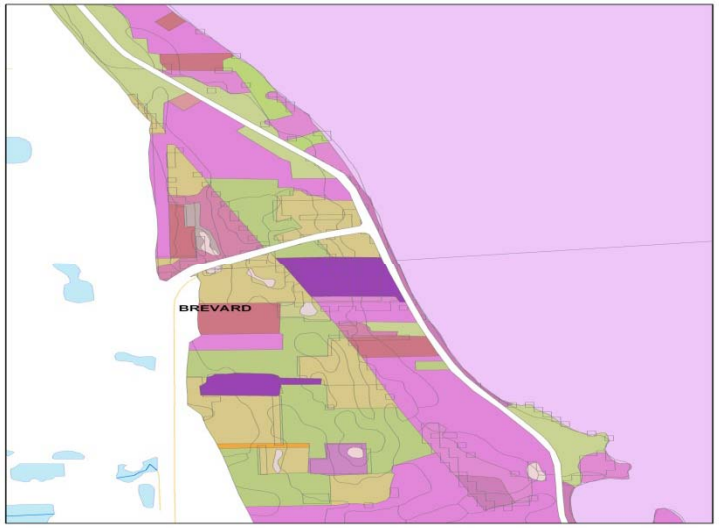
Base Map



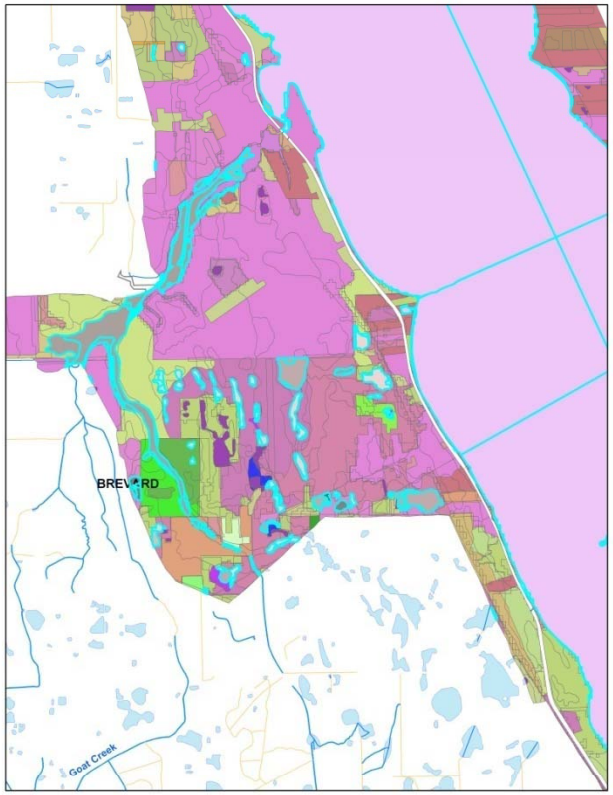
Base Map Minus FDOT Roads



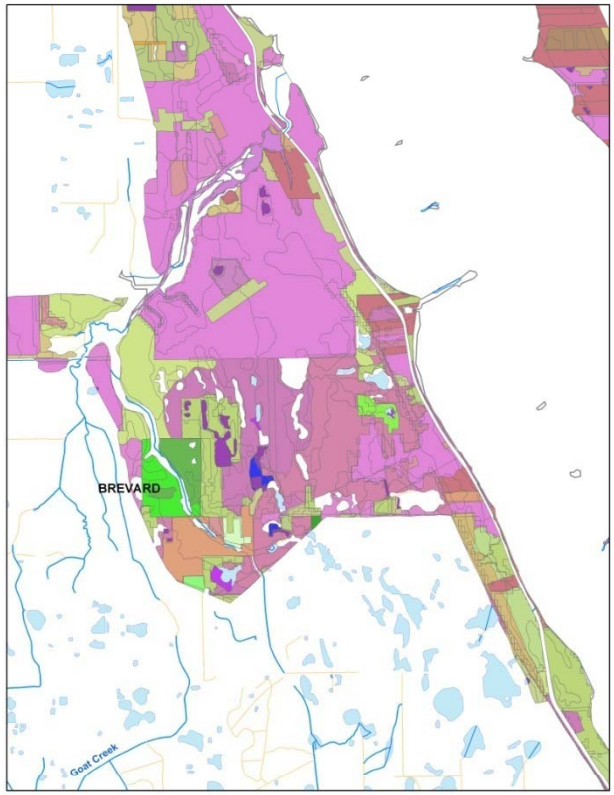


Base Map Minus Zero EMC Values

EMCs with Zero Value

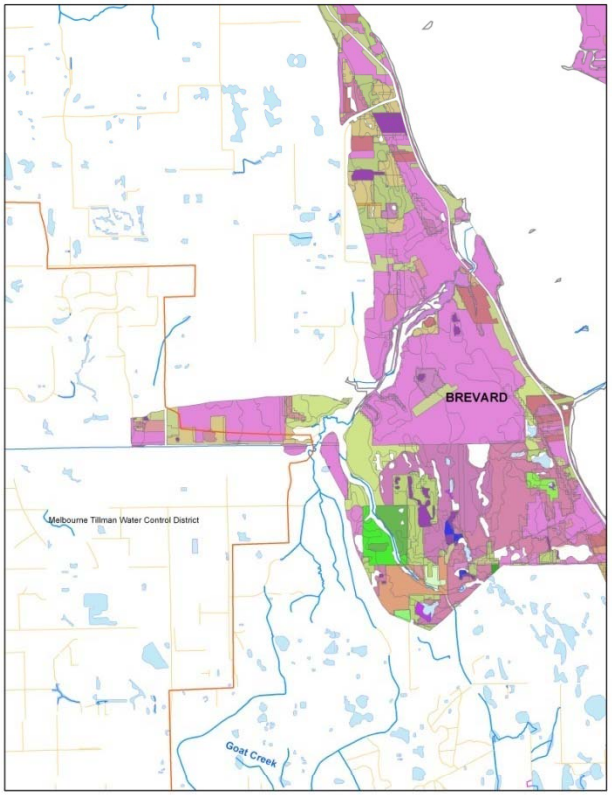


New Base Map

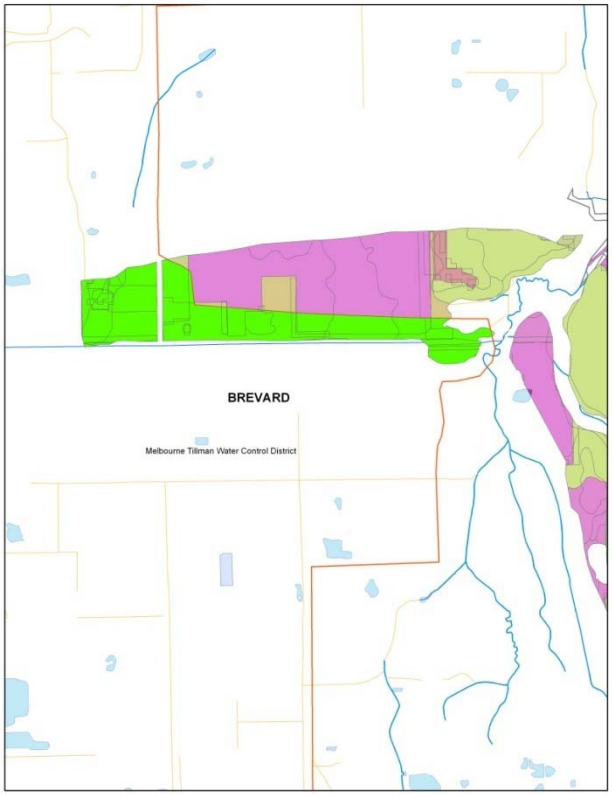


Base Map Minus Water Control District

Melbourne - Tillman



Minus Melbourne- Tillman



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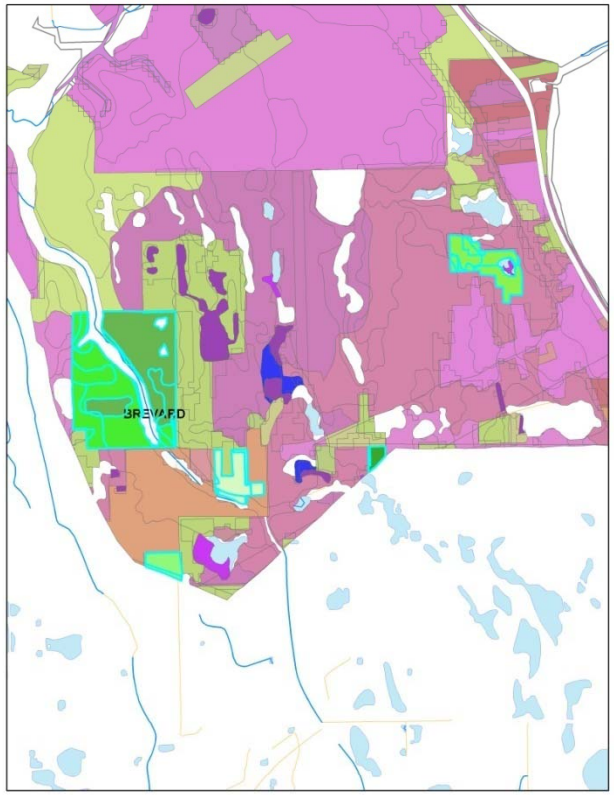
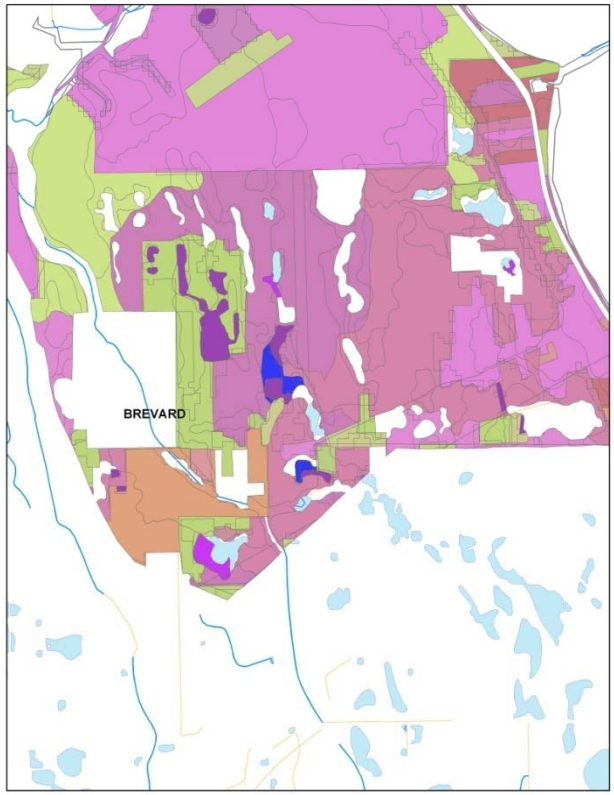
Base Map Minus Agriculture

Agriculture outlined in Teal

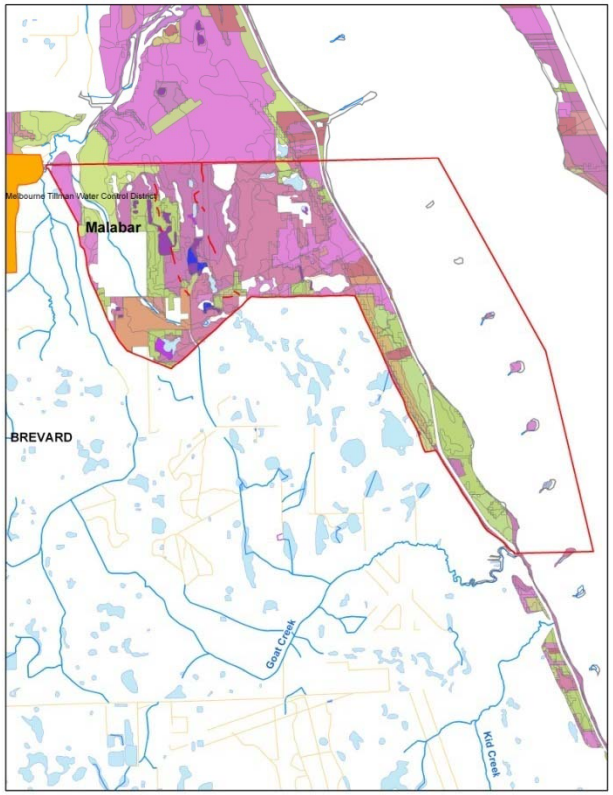


Base Minus Agriculture

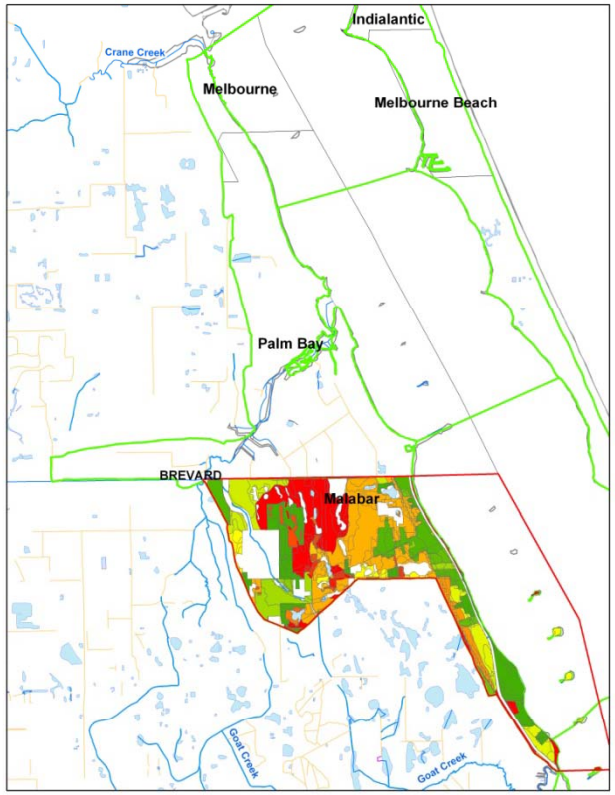


Base Map Minus Cities, Towns

Malabar on Base Map



Malabar's Land Use Clipped from Base Map



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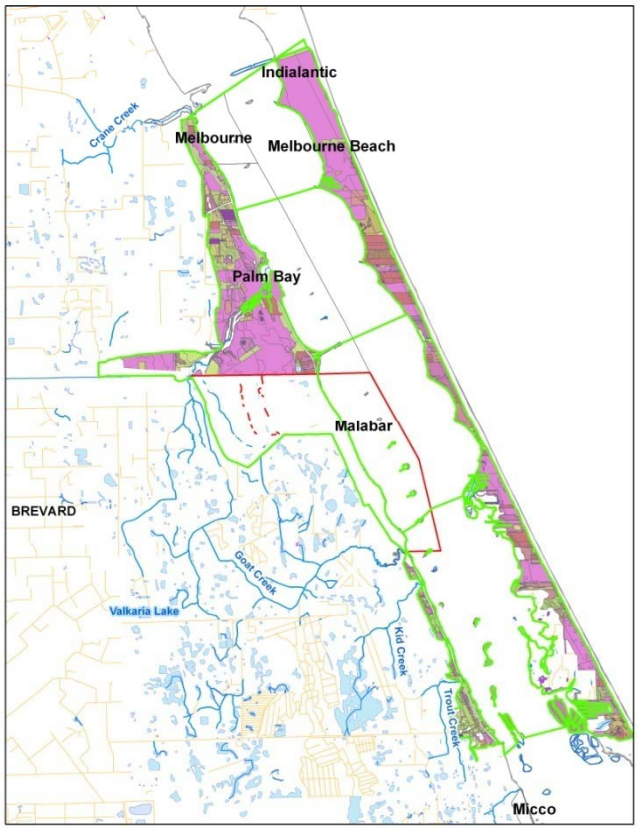
Base Map – Remaining County



Calculation of 2000 Base Loadings

- Example:
  - City of Utopia:
    - 1,520 acres after roads, zero EMCs, WCD, 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?