

# St. Thomas East End Reserves Watershed Existing Conditions Report

## Appendix A

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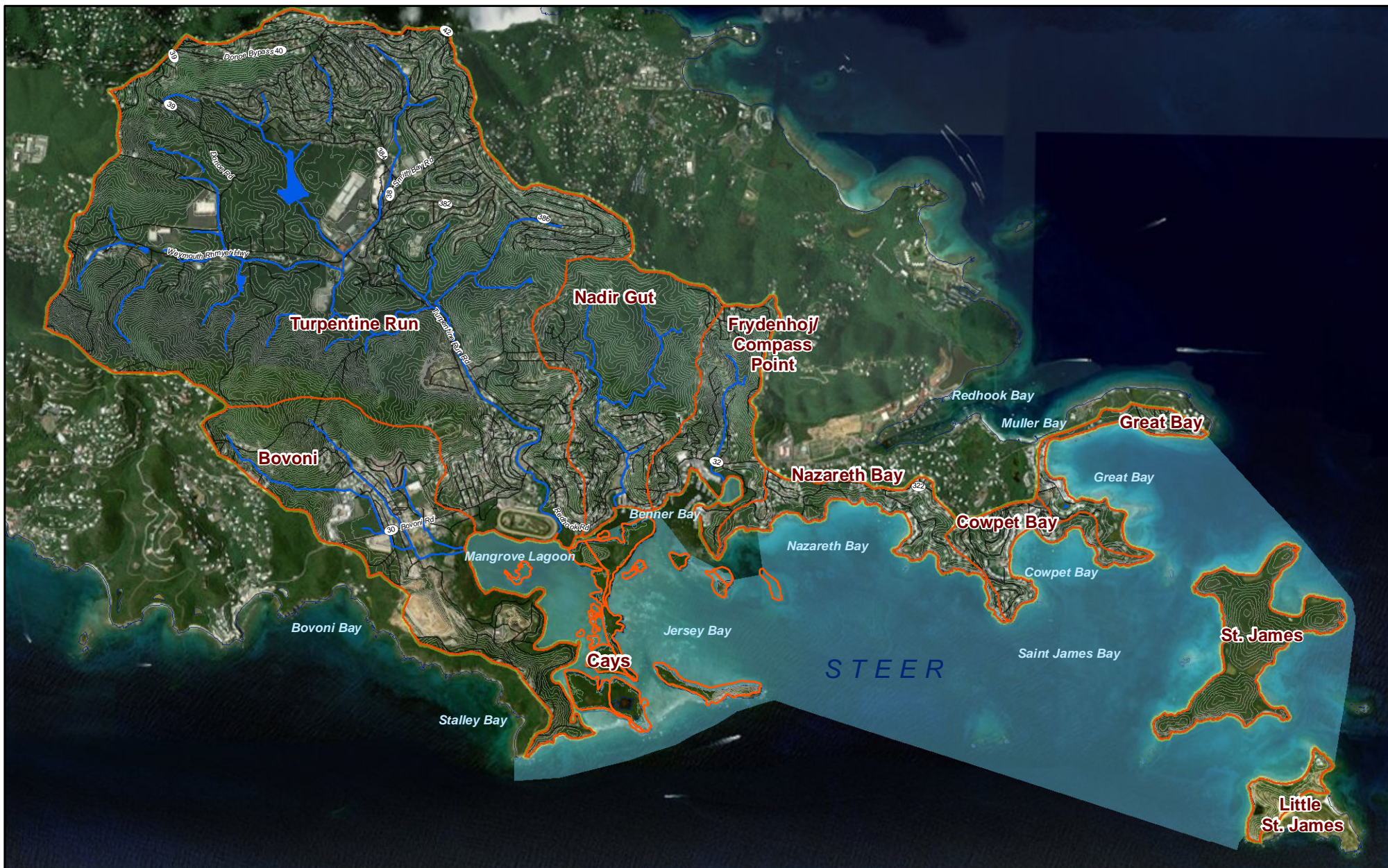
Map 12: Stormwater BMPs and Wellheads

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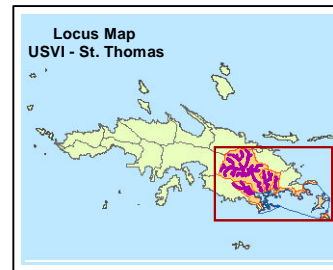
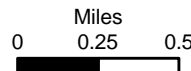




**Legend**

- Watershed Boundary (HW, 2011)
- Guts (HW revised from UVI 2007 wetlands inventory)
- STEER Boundary
- Freshwater Ponds (UVI-ECC, 2000)
- Contours - 20 ft ( Corps of Engineers, 2008)
- Roads

All data provided by DPNR, 2011 unless otherwise noted



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**Map 1: Subwatersheds  
STEER Watershed**

Date: 3/31/2013 - eym





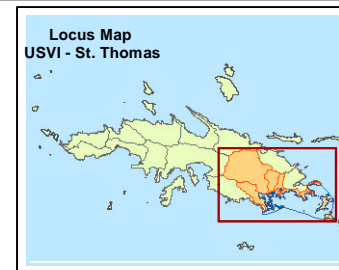
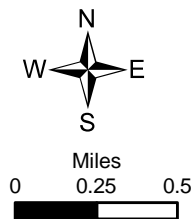
**Legend**

- Watershed Boundary (HW, 2011)
- STEER Boundary
- Parcels
- Freshwater Ponds (UVI-ECC, 2000)
- Guts (HW revised from UVI 2007 wetlands inventory)

**HSG Soils (NRCS, 2008)**

- No Data
- A
- B
- C
- D

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**Map 2. Hydrologic Soil Group (HSG)  
STEER Watersheds**

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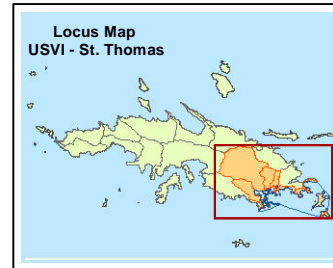
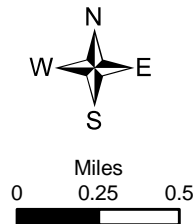




**Legend**

- |   |                          |                   |
|---|--------------------------|-------------------|
| Watershed Boundary (HW, 2011)                     | Wetlands (UVI-ECC, 2000) | Mangrove woodland |
| STEER Boundary                                    | Fresh pond               | Mixed swamp       |
| 100-year Flood Zone                               | Fringing mangrove        | Salt flat         |
| Guts HW revised from UVI 2007 wetlands inventory) | Mangrove forest          | Salt pond         |
| Parcels   | Mangrove shrubland       |                   |

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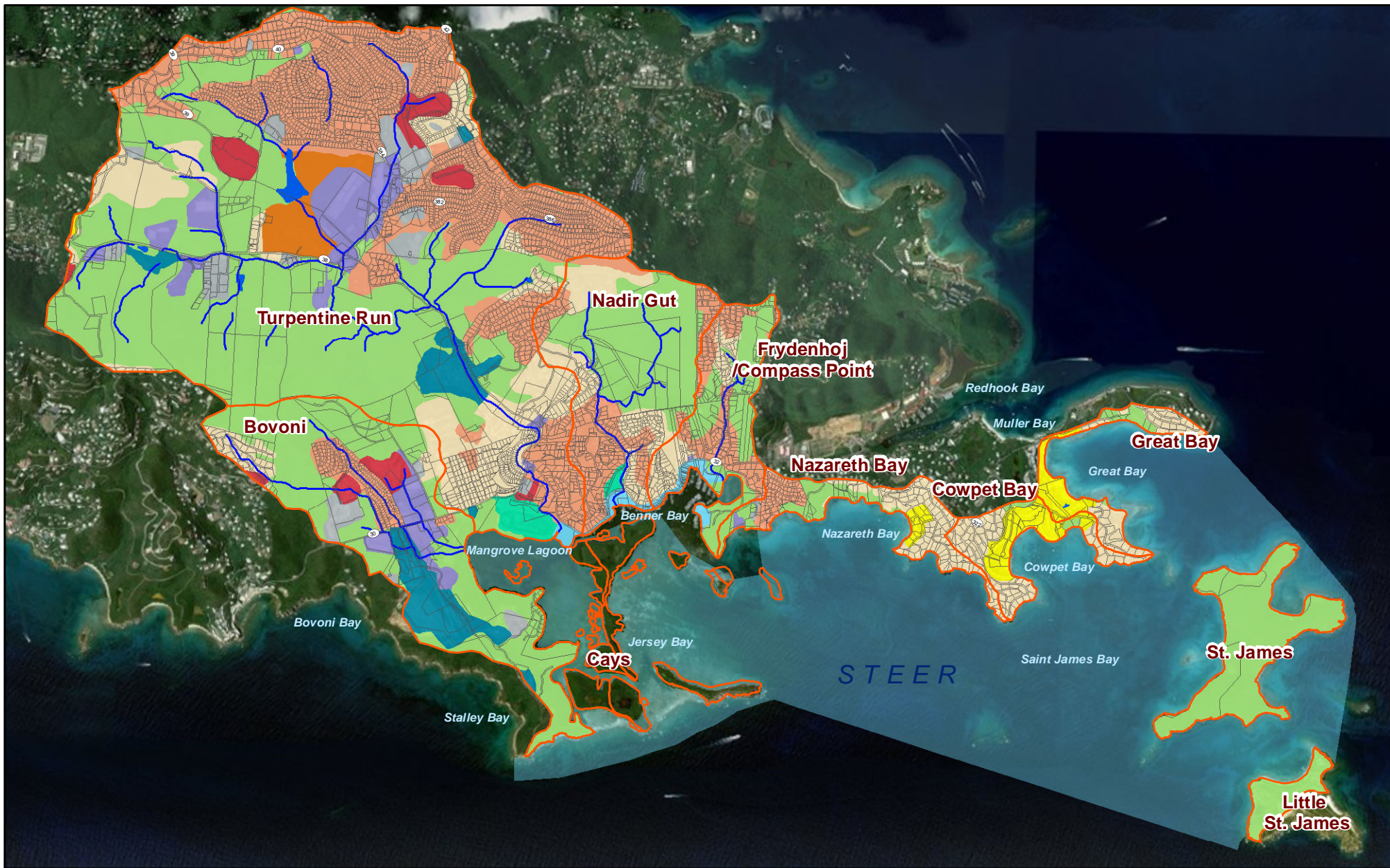


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**Map 3: Wetlands  
STEER Watershed**

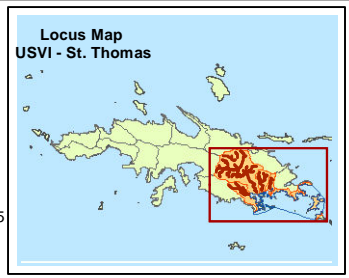
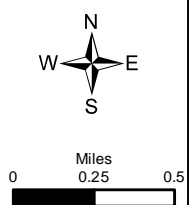
Date: 3/31/2013 - eym





**Legend**

- Watershed Boundary (HW, 2011)
  - Parcels
  - Freshwater Ponds (UVI-ECC, 2000)
  - Guts (HW revised from UVI 2007 wetlands inventory)
- |   |  |
|---|--|
| <p><b>Land Use (HW revised from IRF, 1989)</b></p> <ul style="list-style-type: none"> <li> Agriculture</li> <li> Hotel/Resort</li> <li> Industrial Manufacturing</li> <li> Parks/Recreation/Open Space</li> <li> Public Facilities</li> </ul> | <ul style="list-style-type: none"> <li> Residential (High Density)</li> <li> Residential (Medium Density)</li> <li> Residential (Low Density)</li> <li> Retail Commercial</li> <li> Undeveloped</li> <li> Waterfront/Marine</li> </ul> |
|---|--|



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**Map 4: Land Use  
STEER Watersheds**







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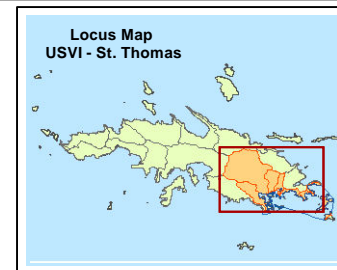
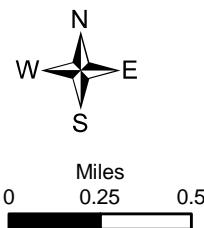




**Legend**

-  Watershed Boundary (HW, 2011)
-  STEER Boundary
-  Freshwater Ponds (UVI-ECC, 2000)
-  Guts (HW revised from UVI 2007 wetlands inventory)
-  Neighborhoods (HW 2012)
-  Resorts/Condos (HW 2012)

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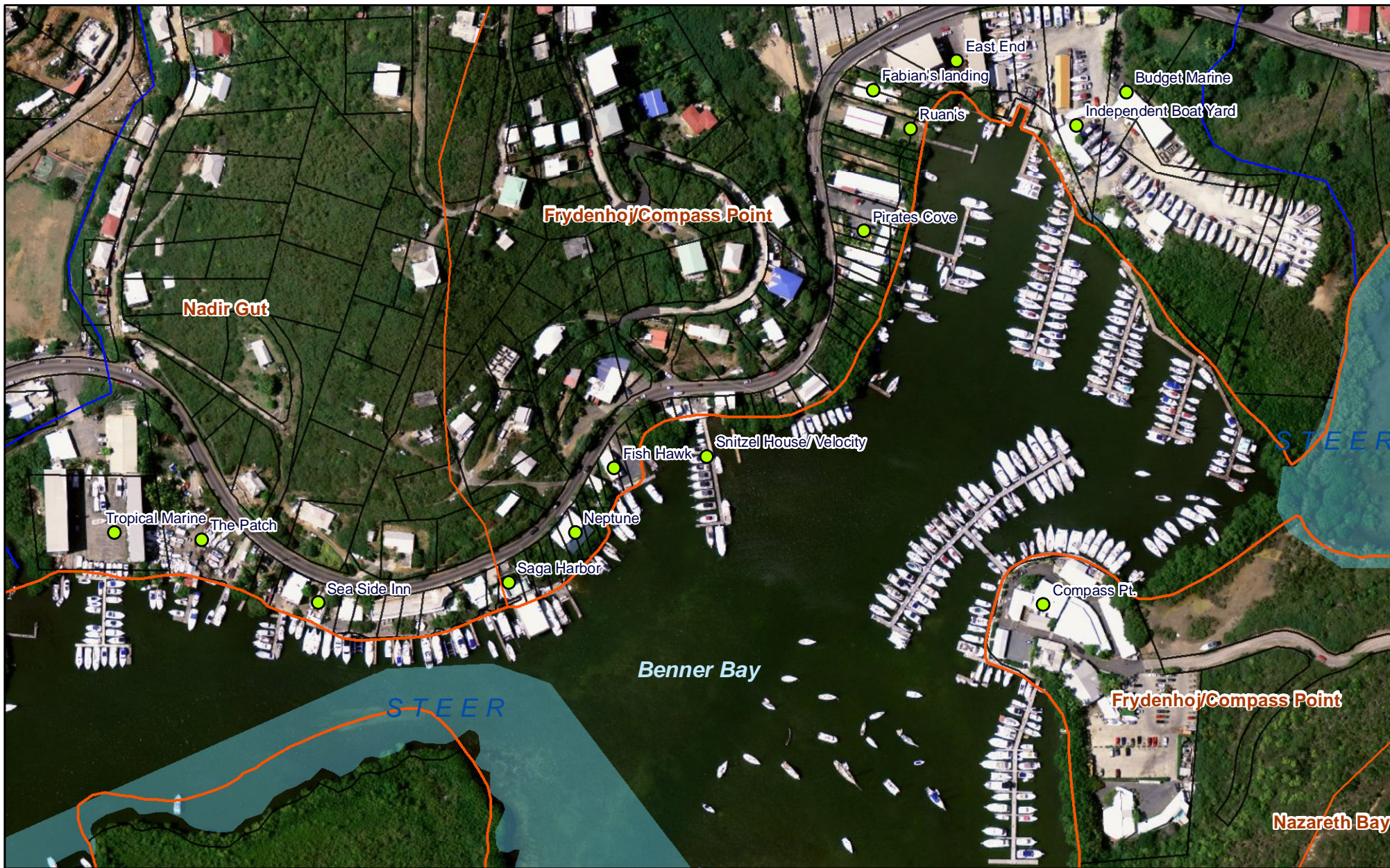


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**Map 4A: Residential & Resort Areas  
STEER Watershed**

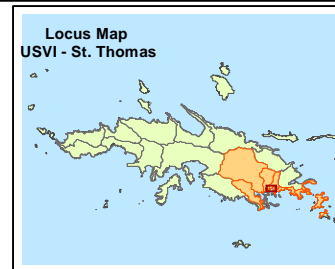
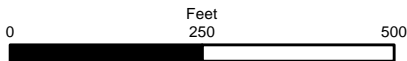
Date: 3/31/2013 - eym





**Legend**

-  Watershed Boundary (HW, 2011)
-  STEER Subwatersheds (HW 2011)
-  Guts (HW revised from UVI 2007)
-  Freshwater Ponds (UVI-ECC, 2000)
-  Parcels (DPNR 2011)
-  Marinas and Boatyards (HW 2012)

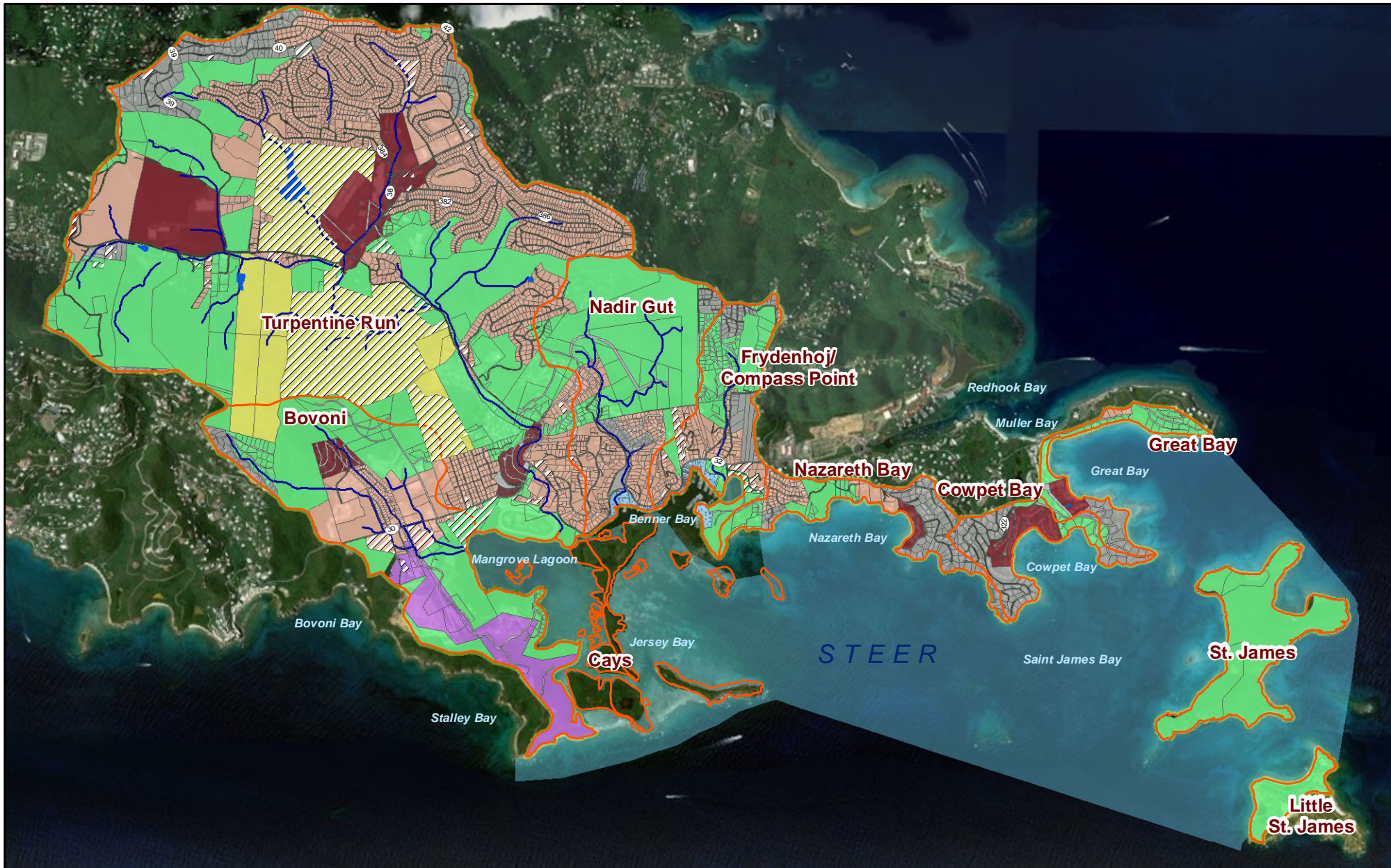


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**Map 4B: Marinas & Boatyards  
STEER Watershed**

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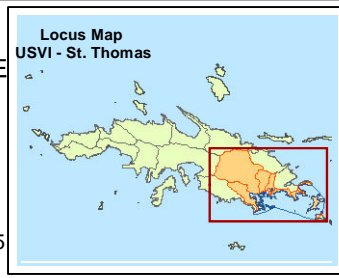


**Legend**

- Watershed Boundary (HW, 2011)
- Parcels
- STEER Boundary
- Freshwater Ponds (UVI-ECC, 2000)
- Guts (HW revised from UVI 2007 wetlands inventory)

**Zoning**

- 3W Waterfront - Moderate Density
- 4W Waterfront - High Density
- District A - Agriculture
- District 1 - Conservation
- Re-zoning
- District 2 - Low Density
- District 3 - Moderate Density
- District 4 - High Density
- District 6 - Industrial
- Road



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**Map 5: Zoning  
STEER Watershed**





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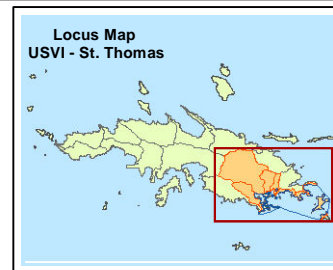
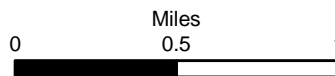
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**Legend**

-  Watershed Boundary (HW, 2011)
-  Impervious Cover (Digital Coastal Service, 2007)
-  Freshwater Ponds (UVI-ECC, 2000)
-  Guts (HW revised from UVI 2007 wetlands inventory)

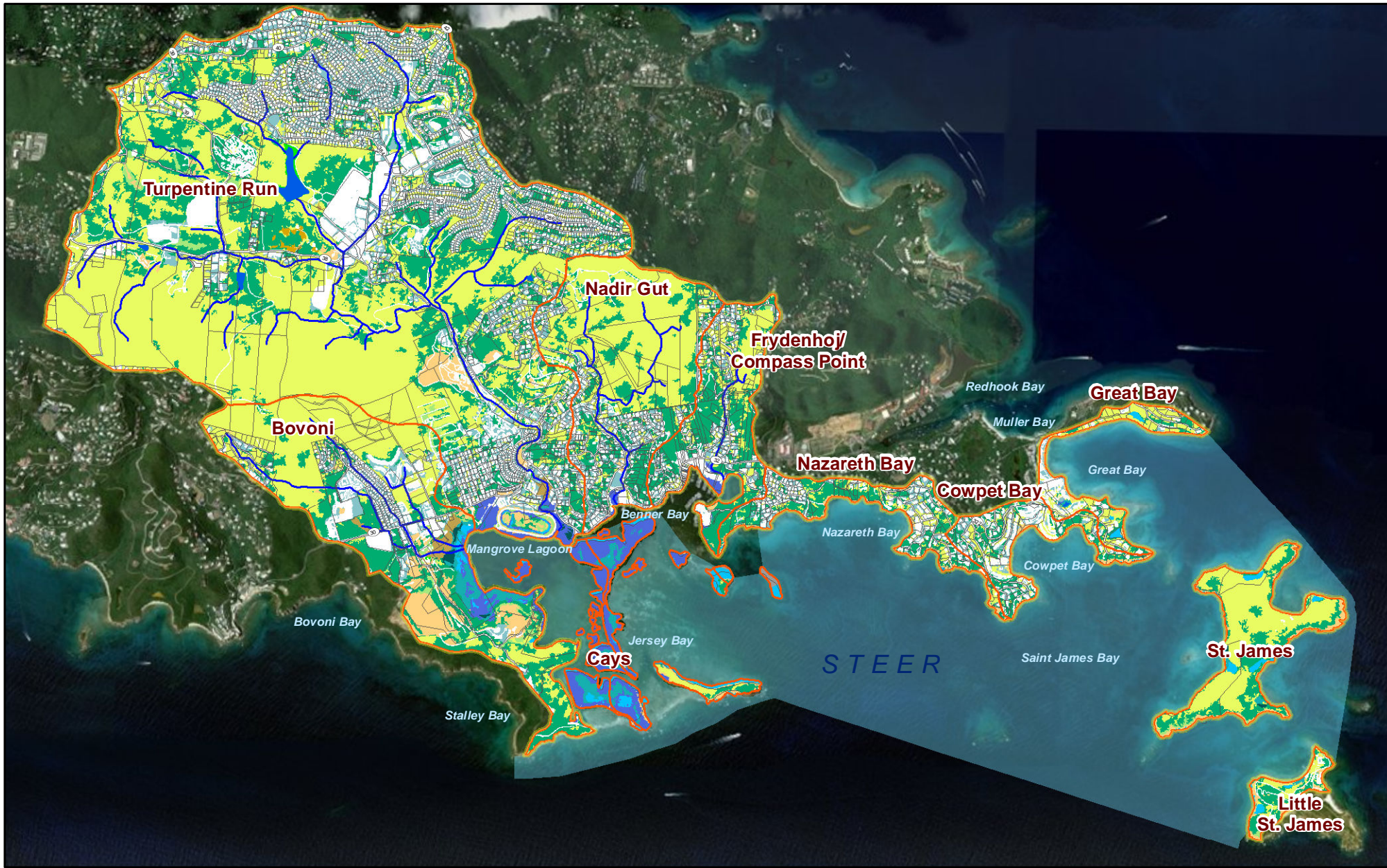


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**Map 6: Impervious Cover  
STEER Watershed**

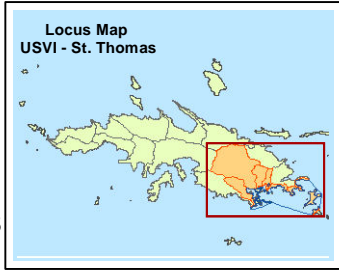
Date: 3/31/2013 - eym





- Legend**
- Watershed Boundary (HW, 2011)
  - STEER Boundary
  - Parcels
  - Freshwater Ponds (UVI-ECC, 2000)
  - Guts (HW revised from UVI 2007 wetlands inventory)

- LandCover (Digital Coast Data, 2007)**
- |                                |                      |
|--------------------------------|----------------------|
| Estuarine Emergent Wetland     | Grassland            |
| Estuarine Forested Wetland     | Bare Land            |
| Estuarine Scrub Shrub Wetland  | Pasture/Hay          |
| Palustrine Emergent Wetland    | Unconsolidated Shore |
| Palustrine Forested Wetland    | Open Space Developed |
| Palustrine Scrub Shrub Wetland | Impervious Surface   |
| Deciduous Forest               | Open Water           |
| Scrub Shrub                    | Unclassified         |



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

**Map 7: Terrestrial Vegetation  
STEER Watershed**

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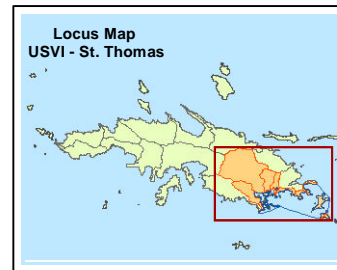
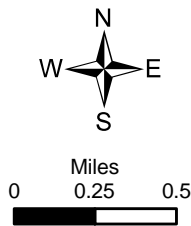




**Legend**

-  Watershed Boundary (HW, 2011)
-  STEER Boundary
-  Parcels
-  Freshwater Ponds (UVI-ECC, 2000)
-  Guts (HW revised from UVI 2007 wetlands inventory)
-  TIER 1 (DPNR-CZM, 2007)
-  TIER II (DPNR-CZM, 2007)

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**Map 8: Regulatory Tier I & II  
STEER Watershed**

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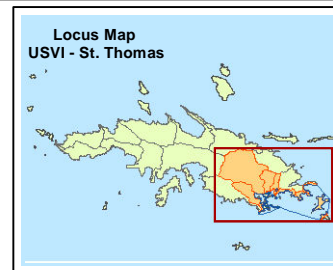
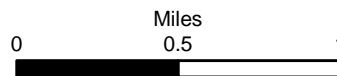
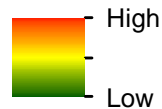




**Legend**

-  STEER Subwatersheds
-  Guts (HW revised 2012)
-  Parcels

**Relative Erosion Potential (WR/NOAA 2005)**

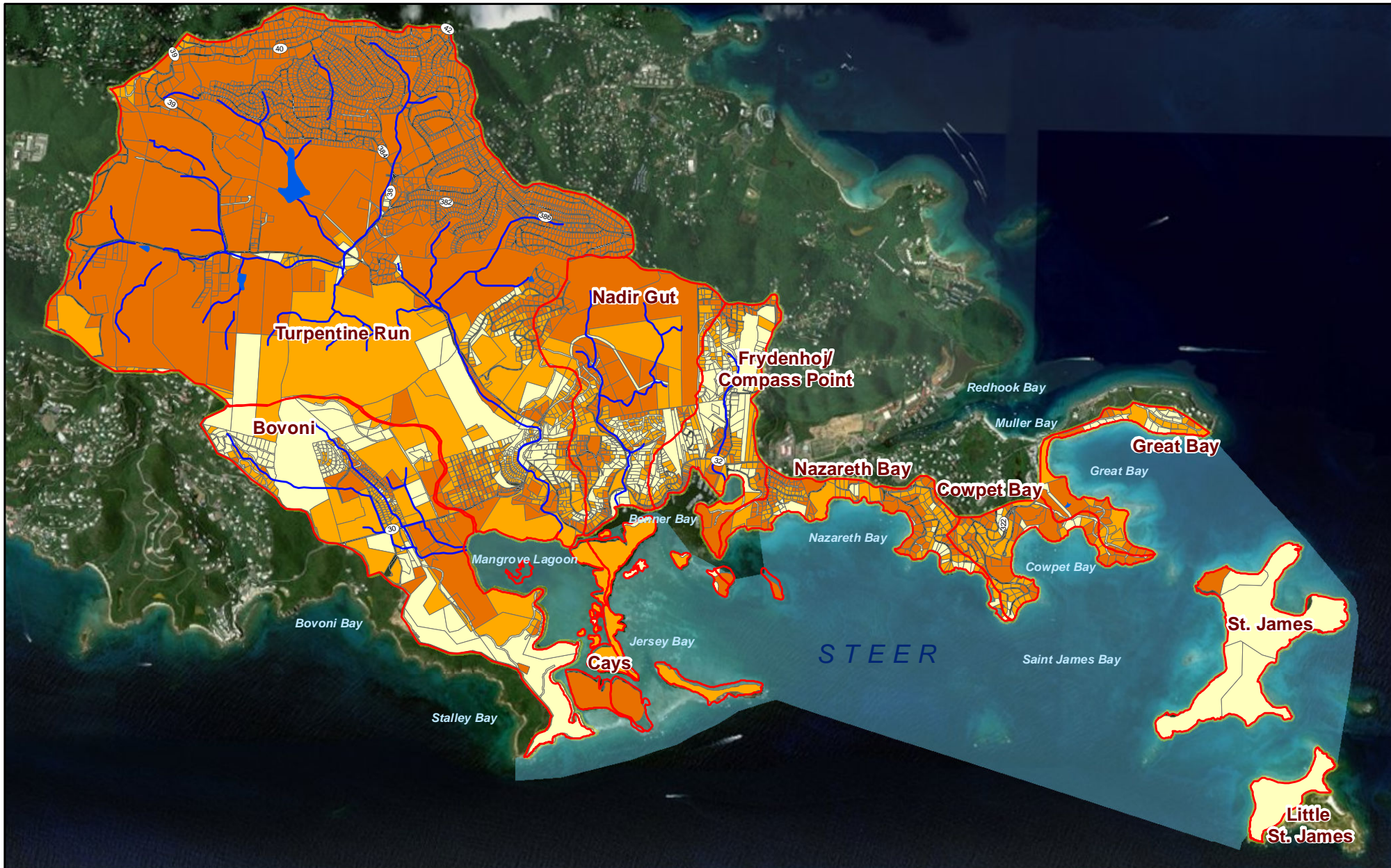


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**Map 9: Relative Erosion Potential STEER Watershed**

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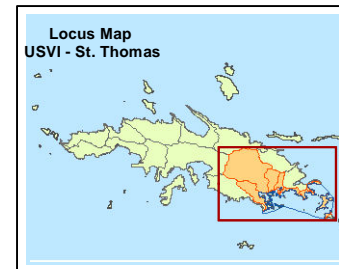
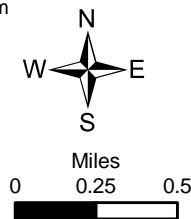


**Legend**

-  Watershed Boundary (HW, 2011)
-  STEER Boundary
-  Parcels
-  Freshwater Ponds (UVI-ECC, 2000)
-  Guts (HW revised from UVI 2007 wetlands inventory)

**Conventional On-Site Septic System Failure Potential (Cadmus, 2011)**

-  High (>35%)
-  Medium (5-35%)
-  Low (<5%)



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**Map 10: Septic System Failure Potential STEER Watershed**

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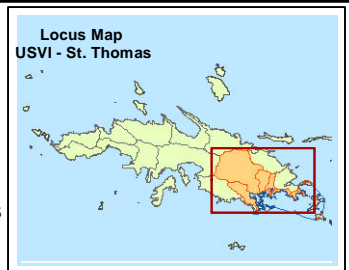
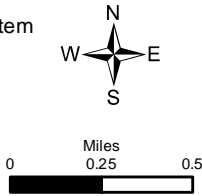




- Legend**
- Watershed Boundary (HW, 2011)
  - Package System Area (approx.)
  - Sewer Service Area (approx.)
  - Priority Service Extension
  - Sewer trunk lines (approx.)
  - Future Sewer Lines (approx.)

- Small Package Plants
- WWTP
- Pump Stations

- Conventional On-Site Septic System Failure Potential (Cadmus, 2011)
- High
  - Medium
  - Low

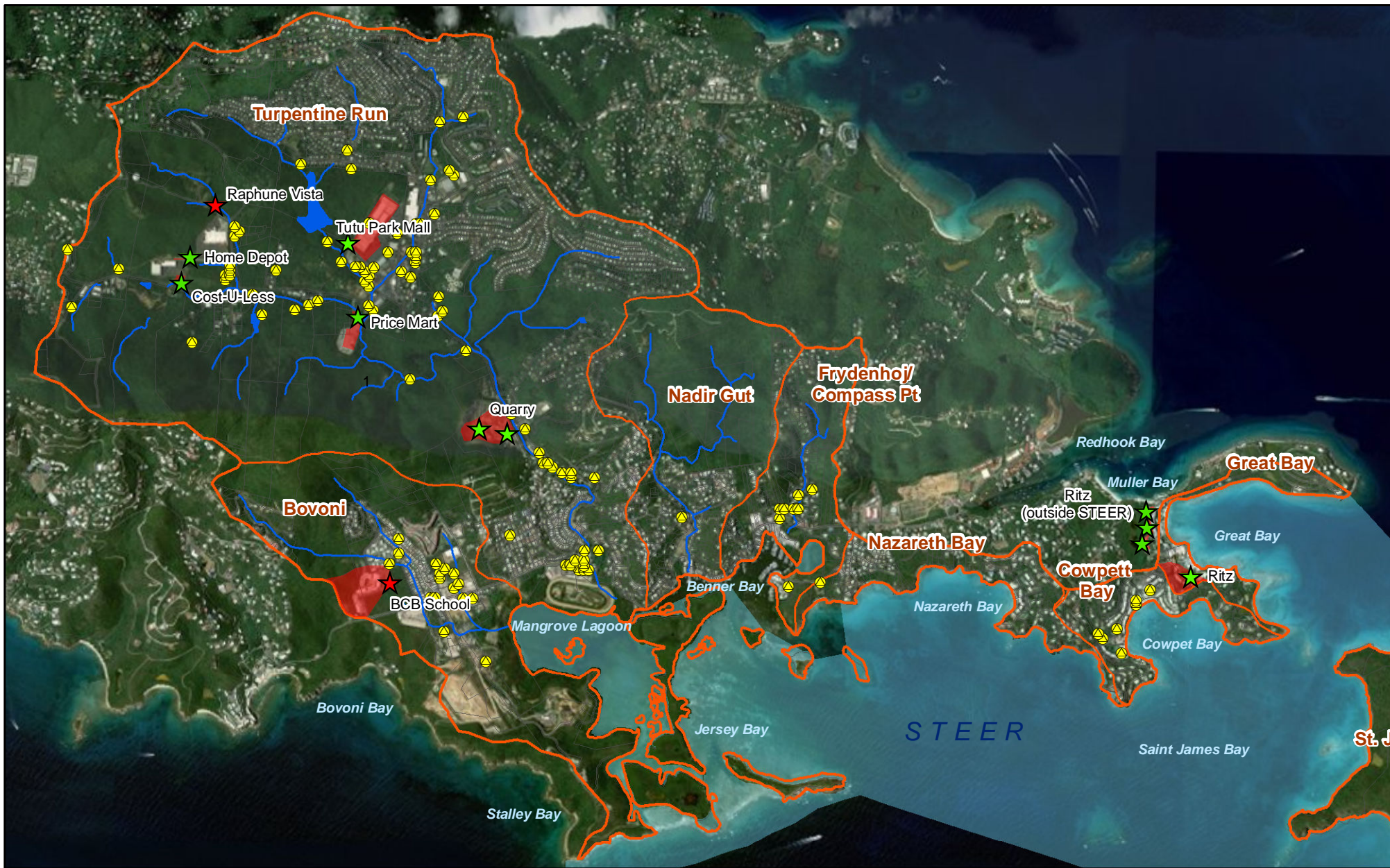


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**Map 11: Wastewater System**  
**STEER Watershed**

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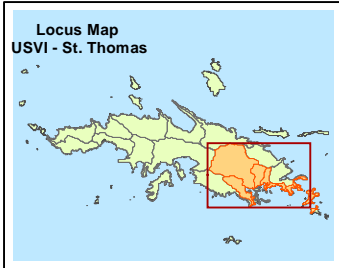
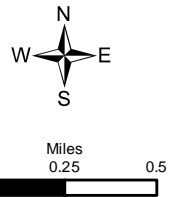


**Legend**

- Watershed Boundary (HW, 2011)
- STEER Subwatersheds
- Guts (interpreted from UVI 2007)
- Freshwater Ponds (UVI-ECC, 2000)
- Wellheads

- Existing BMPs
- Unfinished
  - Completed
  - Approx. Drainage Areas to BMPs

All data provided by DPNR, 2011 unless otherwise noted



**Map 12: Stormwater BMPs & Wellheads  
STEER Watershed**

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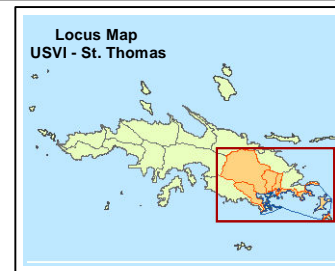
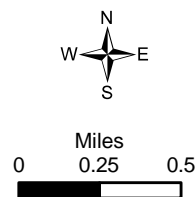


**Legend**

- Watershed Boundary (HW, 2011)
- STEER Boundary
- Parcels
- Freshwater Ponds (UVI-ECC, 2000)
- Guts HW revised from UVI 2007 wetlands inventory)

**Benthic Habitats**

- Algal plain
- Beachrock
- Bedrock Col/uncol
- Coral reef
- Hard pavement Col/uncol
- Mangrove
- Mud
- Patch reef
- Rubble
- Sand
- Seagrass
- Unknown



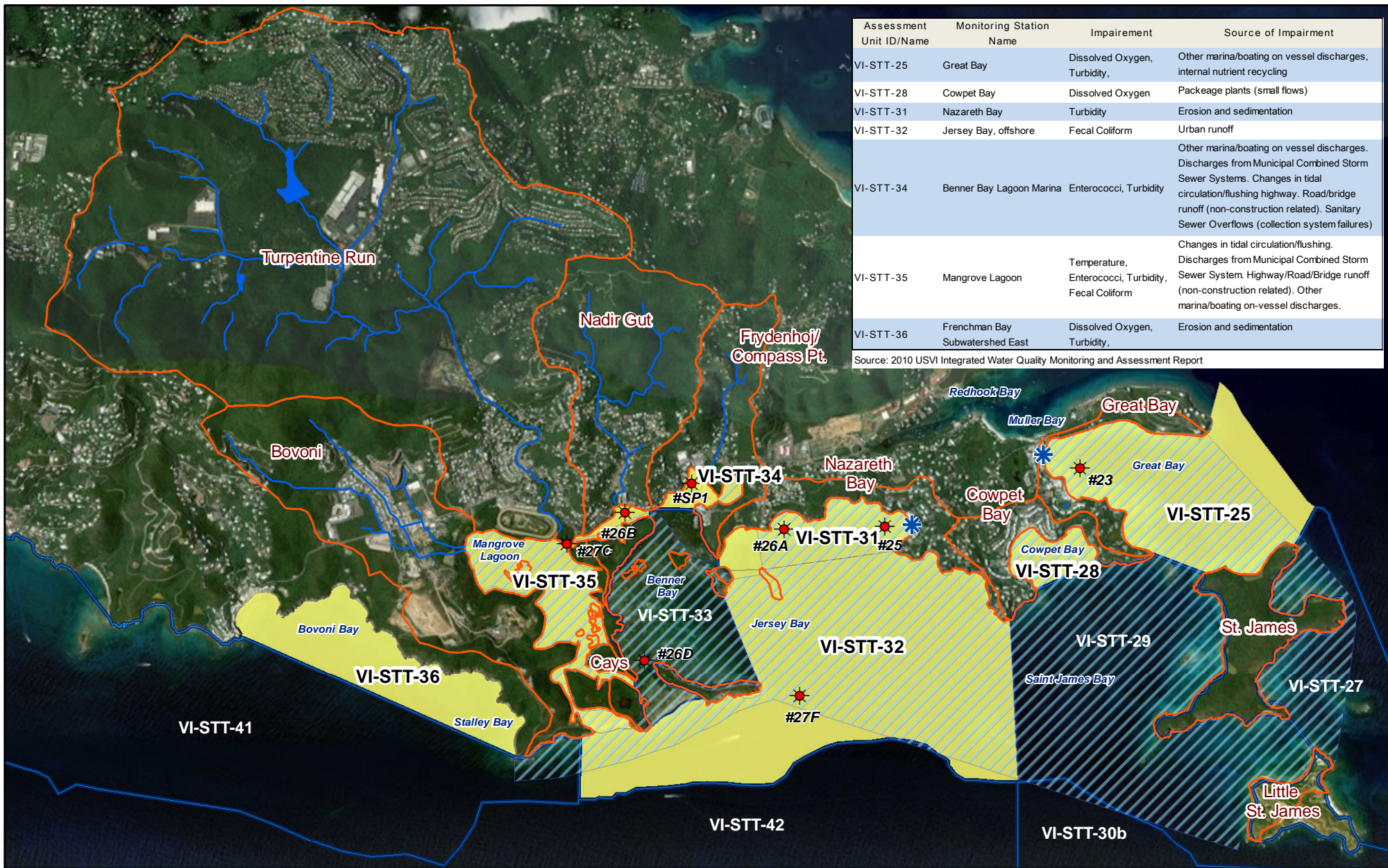
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**Map 13: Benthic Habitats  
STEER Watershed**

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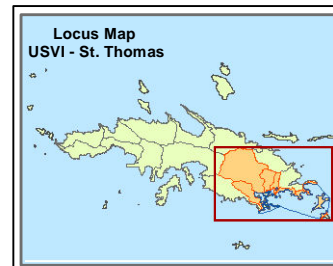
Assessment Unit ID/Name	Monitoring Station Name	Impairment	Source of Impairment
VI-STT-25	Great Bay	Dissolved Oxygen, Turbidity,	Other marina/boating on vessel discharges, internal nutrient recycling
VI-STT-28	Cowpet Bay	Dissolved Oxygen	Package plants (small flows)
VI-STT-31	Nazareth Bay	Turbidity	Erosion and sedimentation
VI-STT-32	Jersey Bay, offshore	Fecal Coliform	Urban runoff
VI-STT-34	Benner Bay Lagoon Marina	Enterococci, Turbidity	Other marina/boating on vessel discharges. Discharges from Municipal Combined Storm Sewer Systems. Changes in tidal circulation/flushing highway. Road/bridge runoff (non-construction related). Sanitary Sewer Overflows (collection system failures)
VI-STT-35	Mangrove Lagoon	Temperature, Enterococci, Turbidity, Fecal Coliform	Changes in tidal circulation/flushing. Discharges from Municipal Combined Storm Sewer System. Highway/Road/Bridge runoff (non-construction related). Other marina/boating on-vessel discharges.
VI-STT-36	Frenchman Bay Subwatershed East	Dissolved Oxygen, Turbidity,	Erosion and sedimentation

Source: 2010 USVI Integrated Water Quality Monitoring and Assessment Report

**Legend**

- Watershed Boundary (HW, 2011)
- STEER Boundary
- Parcels
- Freshwater Ponds (UVI-ECC, 2000)
- Guts (HW revised from UVI 2007 wetlands inventory)

- DPNR Water Quality Assessment Units
- 2010 Impaired Waters
- DPNR Beach Monitoring Sites
- DPNR Ambient Monitoring Sites



**Map 14: Impaired Waters & DPNR Monitoring STEER Watershed**

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