

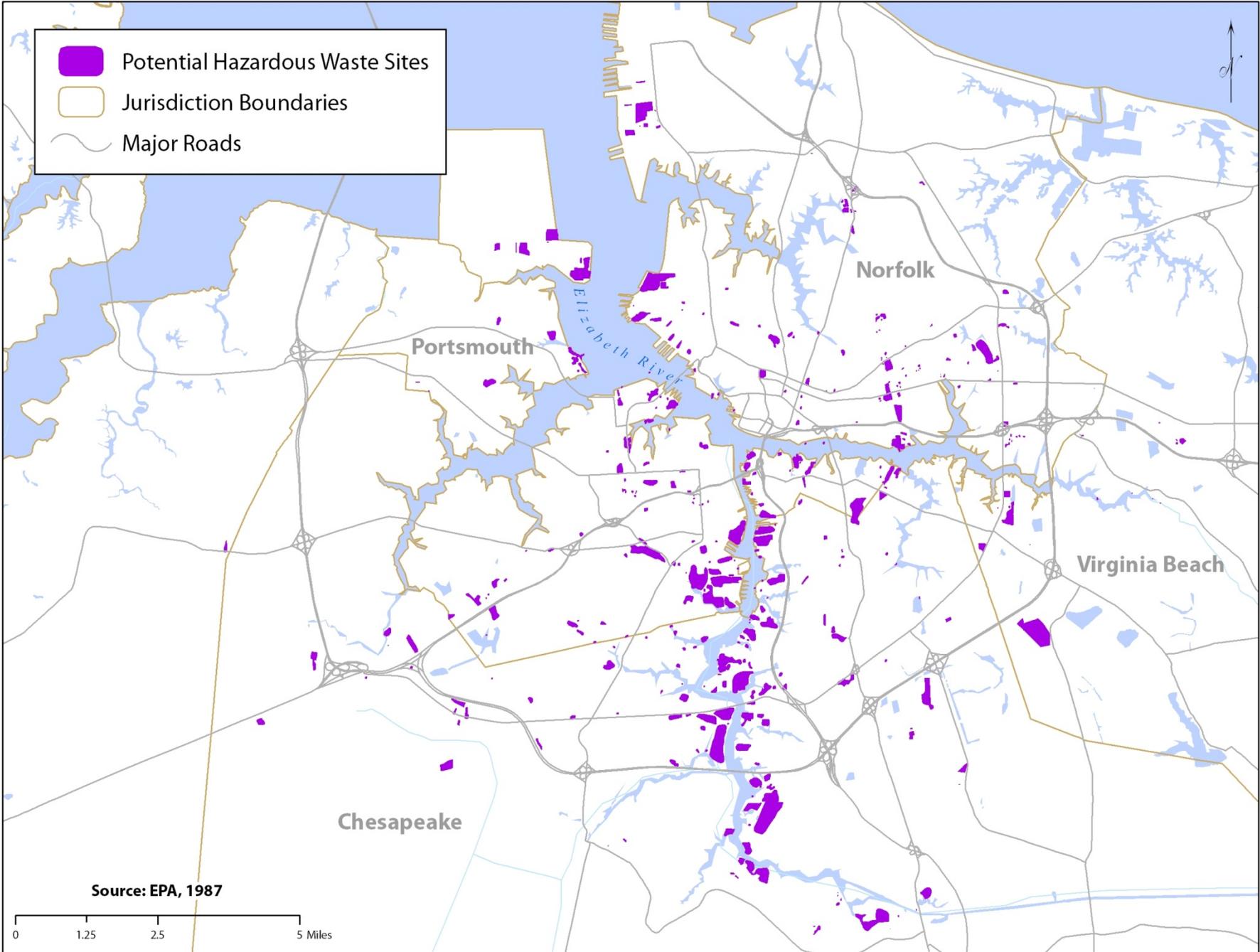
# BROWNFIELD REDEVELOPMENT OPPORTUNITIES IN THE ELIZABETH RIVER WATERSHED

Eric Walberg, AICP  
Planning Program Administrator  
Hampton Roads Planning District Commission



# Potential Hazardous Waste Sites

- ❑ EPA completed a study of the Elizabeth River Watershed in 1987
- ❑ Potential hazardous waste sites were identified from aerial photography
- ❑ Two products: Report documenting findings and set of USGS maps with the location of the sites



# Environmental Restoration in the Elizabeth River Watershed

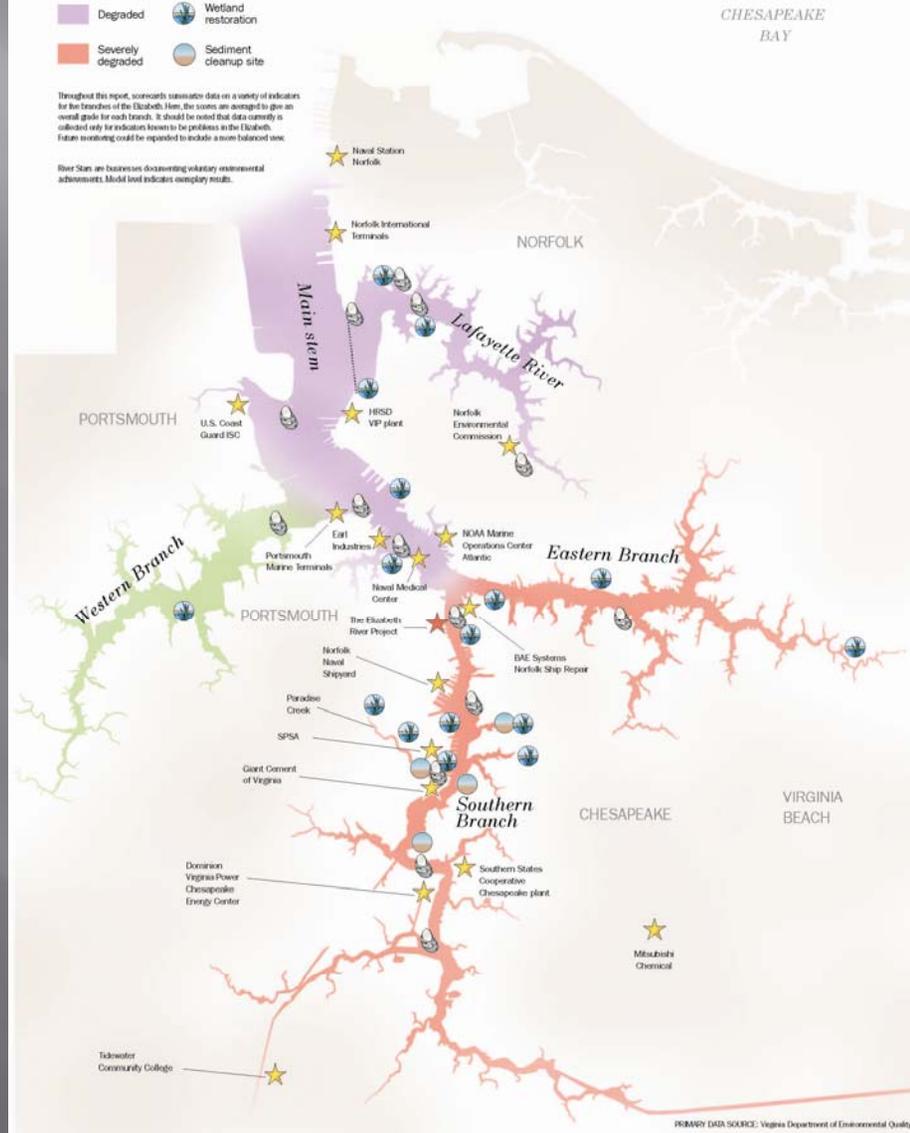
- ▣ Substantial environmental restoration efforts are underway in the watershed
- ▣ Projects include wetlands restoration, oyster restoration, sediment remediation, management of point and nonpoint source water pollution

# State of the Elizabeth River 2008

- | Health of the river                                     | Restoration Initiatives                                     |
|---|---|
| <span style="color: blue;">■</span> Good                | <span style="color: gold;">★</span> Model level River Stars |
| <span style="color: lightgreen;">■</span> Marginal      | Oyster restoration  |
| <span style="color: purple;">■</span> Degraded          | Wetland restoration   |
| <span style="color: orange;">■</span> Severely degraded | Sediment cleanup site                                       |

Throughout this report, scorecards summarize data on a variety of indicators for the branches of the Elizabeth River. The scores are averaged to give an overall grade for each branch. It should be noted that data currently is collected only for indicators known to be problems in the Elizabeth River. Future monitoring could be expanded to include a more balanced view.

River Stars are businesses documenting voluntary environmental achievements. Model level indicators exemplary results.



# Linking Brownfields Projects to Existing Environmental Restoration Efforts

- ▣ Seek opportunities for co-location with existing environmental restoration activities
- ▣ Include elements in the site design that enhance the existing restoration activities
  - Linking of wetlands restoration sites
  - Stormwater retrofits adjacent to oyster restoration sites
  - Seek opportunities for riparian corridor restoration and connectivity

# Regional Context for Environmental Restoration of the Elizabeth River

- ▣ Regional Green Infrastructure analysis initially completed in 2006
- ▣ Regional mapping is currently being updated to include new data
  - Local land use plans
  - Updated satellite imagery
  - Priority conservation areas
  - Park, recreation, open space and trail information

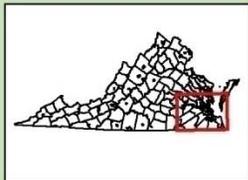
**Figure 8**  
**The Hampton Roads Conservation Corridor Study**  
**& Currently Protected Lands**

**Legend**

-  Opportunities for Connectivity
-  Protected Lands - Inside of Corridor
-  Protected Lands - Outside of Corridor

**Suitability for Conservation**

-  Low suitability
-  High suitability - WATER QUALITY
-  High suitability - HABITAT
-  High suitability - BOTH



**Notes:**

The Suitability for Conservation information identifies areas that are potentially most suitable for protection based on a wildlife habitat or water quality protection perspective. The suitability information was derived through weighted overlay analysis in GIS using the following data sources: National Land Cover Dataset, National Wetlands Inventory, Riparian corridors, and the Virginia Land Conservation Needs Assessment habitat cores. The map was refined based on the input from natural resource experts in the Hampton Roads region.

The Opportunities for Connectivity information highlights areas where there are opportunities to create a linked network of green infrastructure in Hampton Roads. Protected and unprotected greenspaces can be linked to each other, as well as to existing recreational areas.

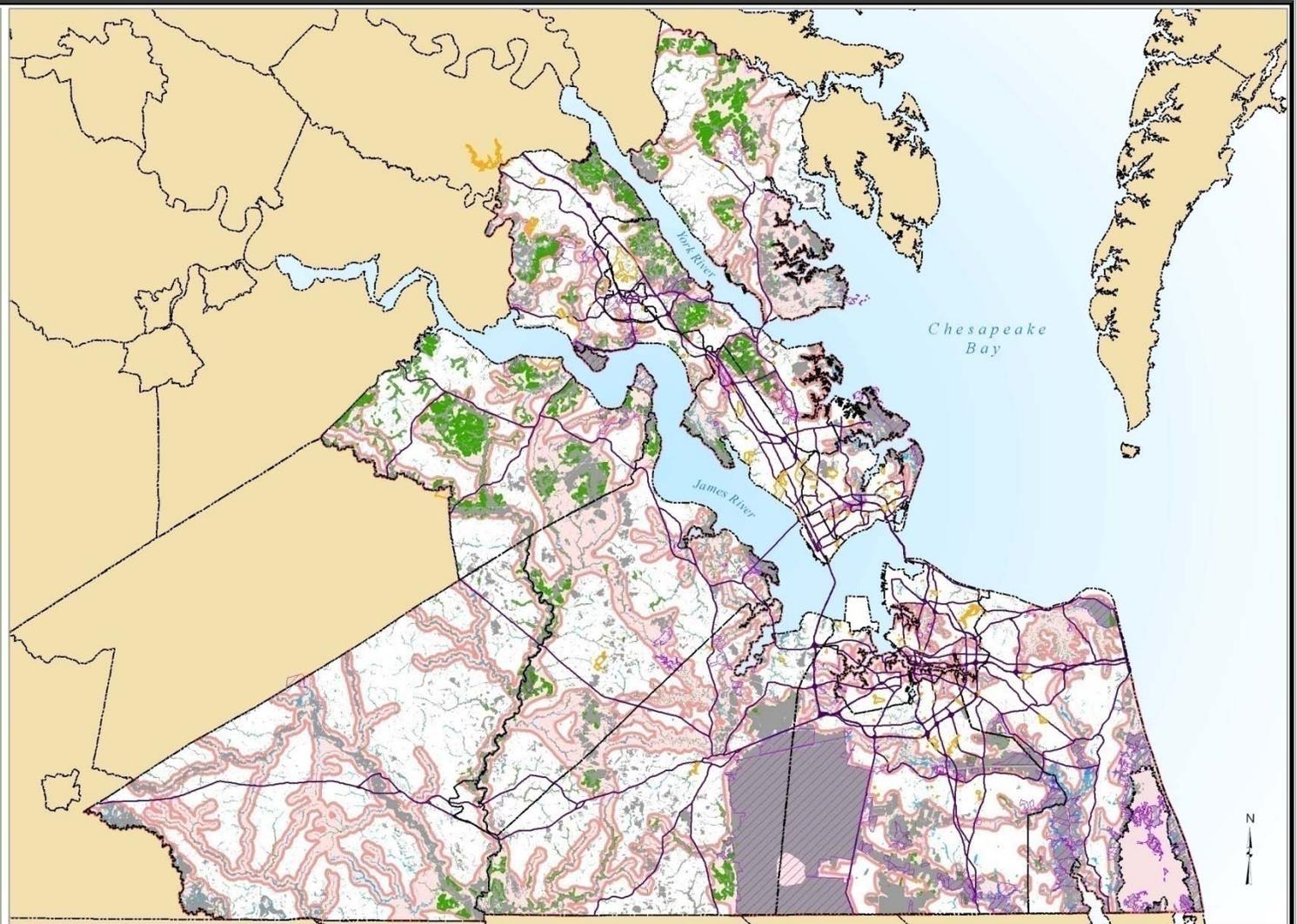
This map is intended as a tool to aid the regional planning process and does not necessarily reflect the actual future land use plans of individual Hampton Roads localities.



**Virginia Coastal Zone**  
 MANAGEMENT PROGRAM

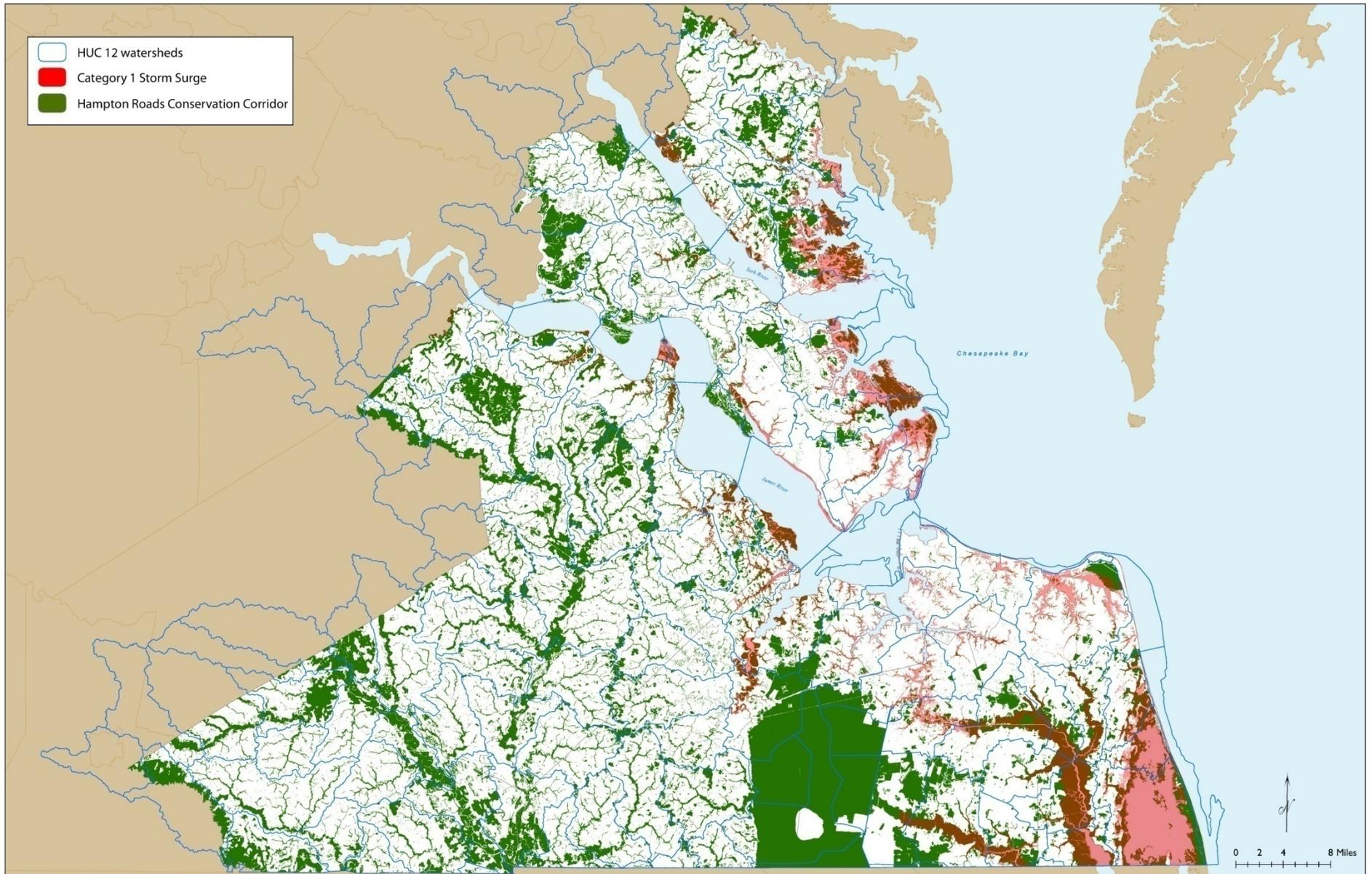


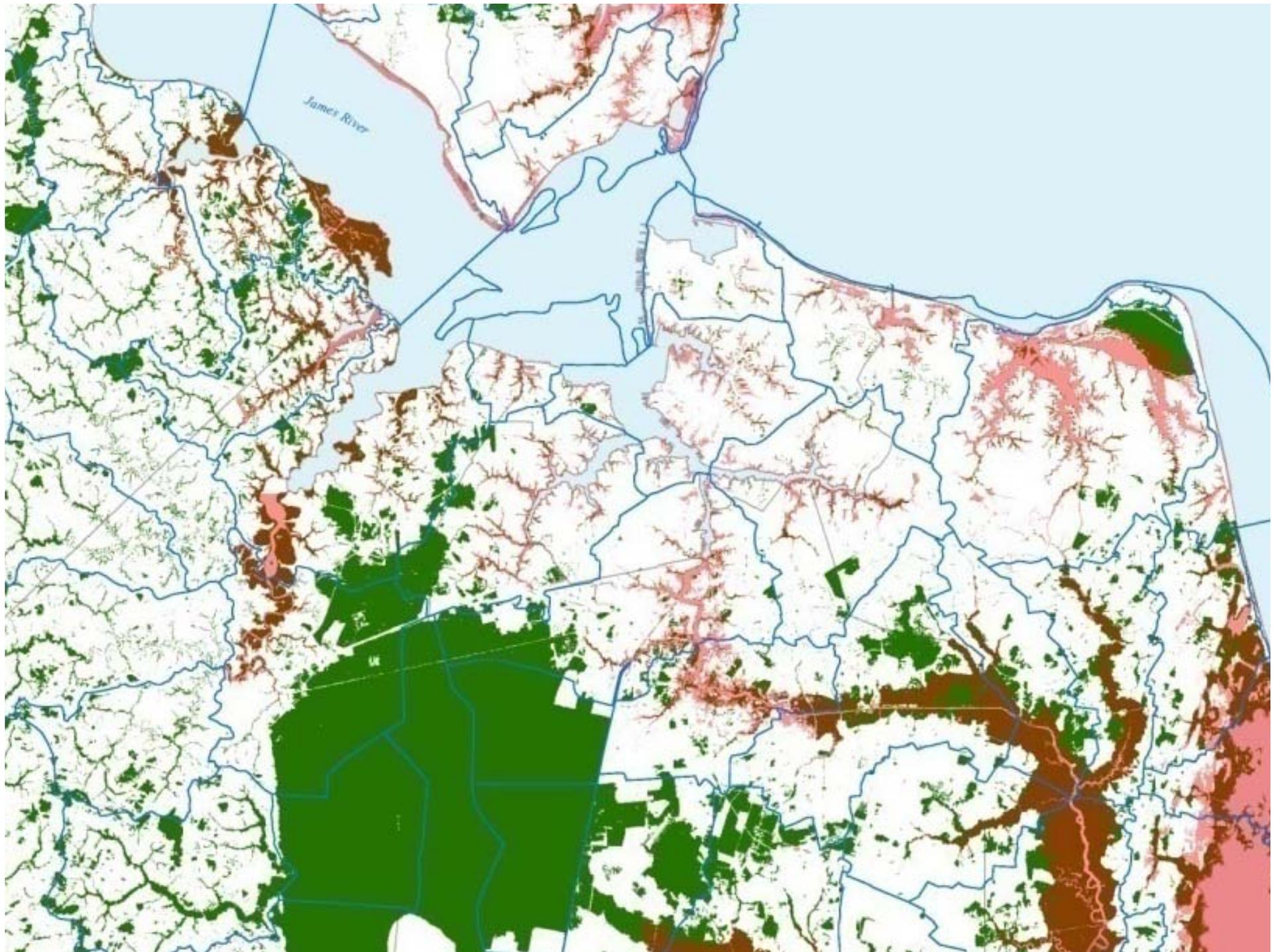
May 2006



# Adaptation to Climate Change

- ▣ Sea level rise and enhanced storm surge will impact the Elizabeth River
- ▣ Opportunity for landward migration of wetlands should be included in the selection criteria for restoration sites
- ▣ Brownfield projects could be used as demonstration sites for a living shorelines approach to dealing with sea level rise





# Brownfields and Economic Development

- ▣ The majority of the potential hazardous waste sites are located in the industrial section of the Southern Branch
- ▣ Coordinate brownfields redevelopment with efforts within the region to grow an alternative energy industry in Hampton Roads
- ▣ If a wind energy project is established along the Virginia coast the Elizabeth River would be an excellent location for support industries

# Brownfields and Green Building

- ▣ Several Hampton Roads localities are pursuing increased application of green building technologies
- ▣ Green building could be used in conjunction with site design as a showcase for best design practices
- ▣ Opportunities may exist for co-location of industries to enhance energy efficiency

# Summary

- ▣ The Elizabeth River, and in particular the Southern Branch, appear to offer numerous opportunities for brownfield restoration
- ▣ Creating linkages to existing environmental restoration sites could enhance the value of brownfield restoration projects in the watershed
- ▣ Given the prevalence of industry in the watershed a restoration effort coupled with an economic development project would be a good fit