CLIMATE CHANGE AND SEA LEVEL RISE IN HAMPTON ROADS

VA Coastal Zone Partners Workshop

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Hampton Roads Planning District Commission

December 7, 2010

Image courtesy of Dr. David Powell – Portsmouth, VA

Hampton Roads Climate Change Initiative

- 3-year grant project with the Virginia Coastal Zone Management Program
- Year 1: Stakeholder Process and Broad Impacts
- Year 2: Regional Impact Analysis
- Year 3: Policy Development

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Year 1 Report

- Climate Change Effects
- Sector Impacts
- Impacts on Natural Resources
- Case Studies
- Stakeholder Involvement
- Next steps

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Sector Impacts

- Built Environment
- Natural Environment
- Water Supply
- Economy
- Human Health and Society

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Impacts

- More frequent and persistent flooding from storms
- Permanent inundation
- Risk to industry, private property, and infrastructure
- Water quality
- Water supply
- Changes to local and regional ecosystems

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Responding to Climate Change

- Mitigation: reducing emissions
- Adaptation
  - Protection
  - Accommodation
  - Retreat

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Ongoing Work

- Regional impact analysis using regional data layers
- Storm Surge vulnerability (current)
- Sea level rise vulnerability (projected)
- Research planning recommendations

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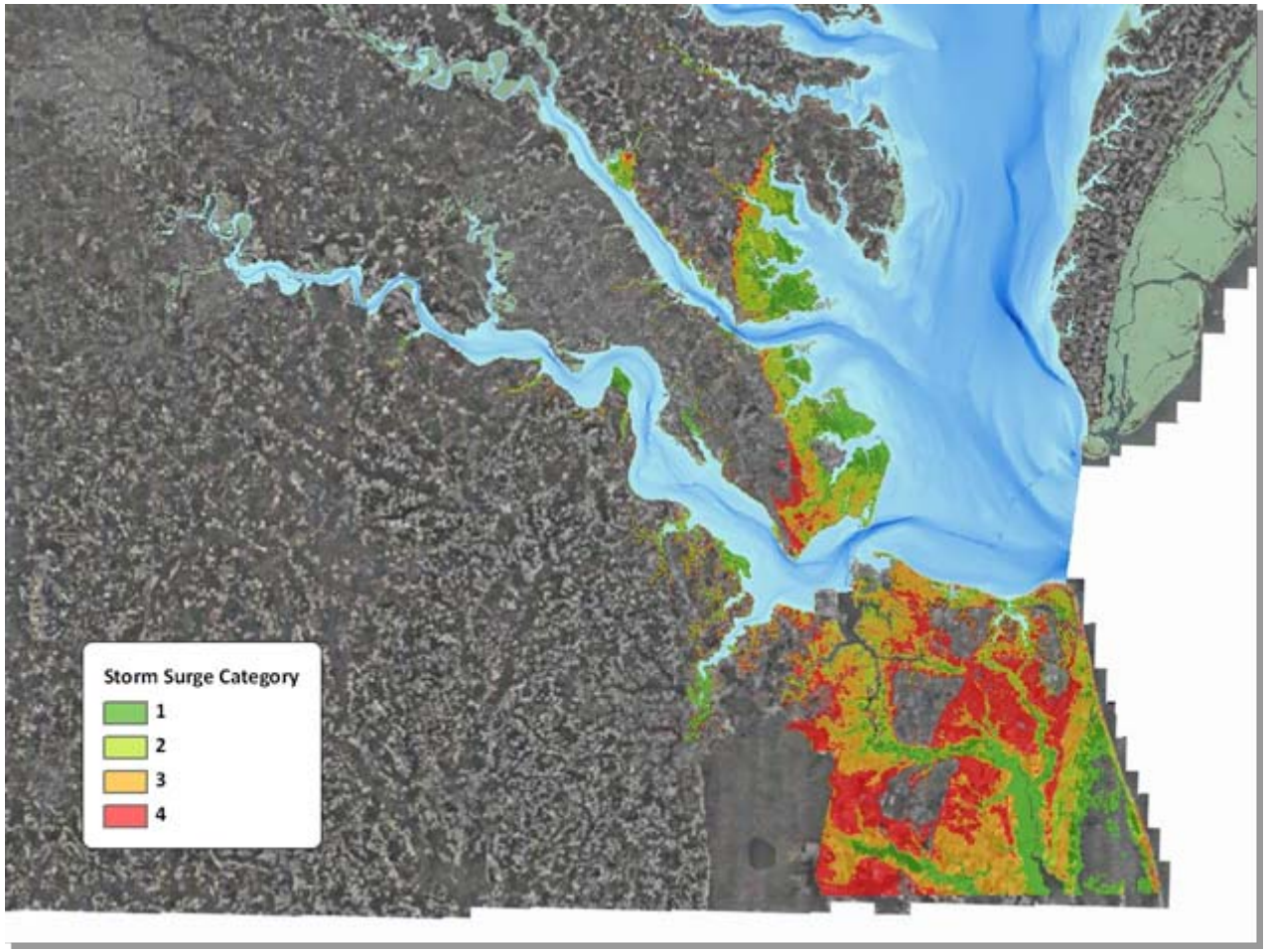

Storm Surge Vulnerability

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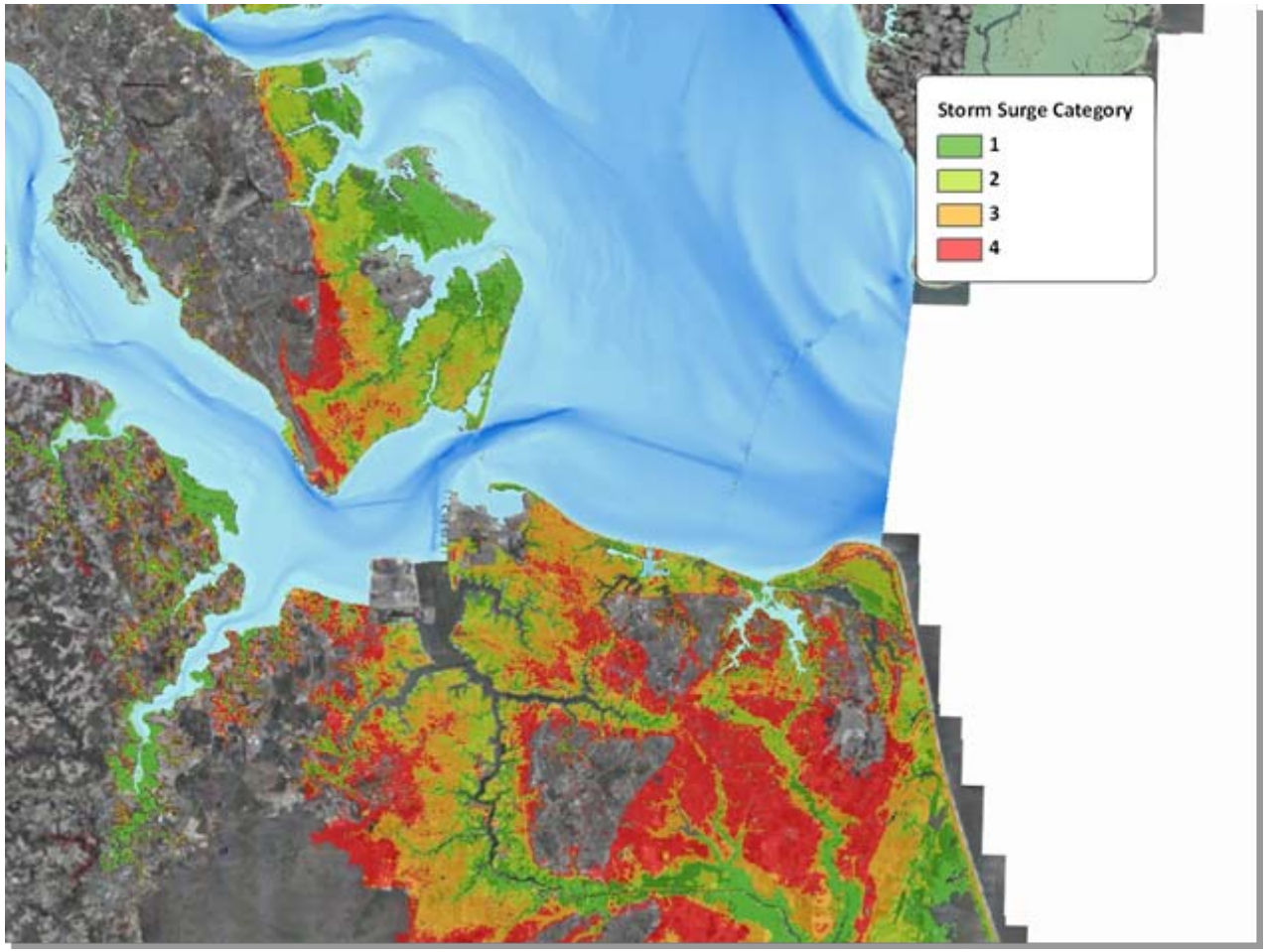

Storm Surge Vulnerability

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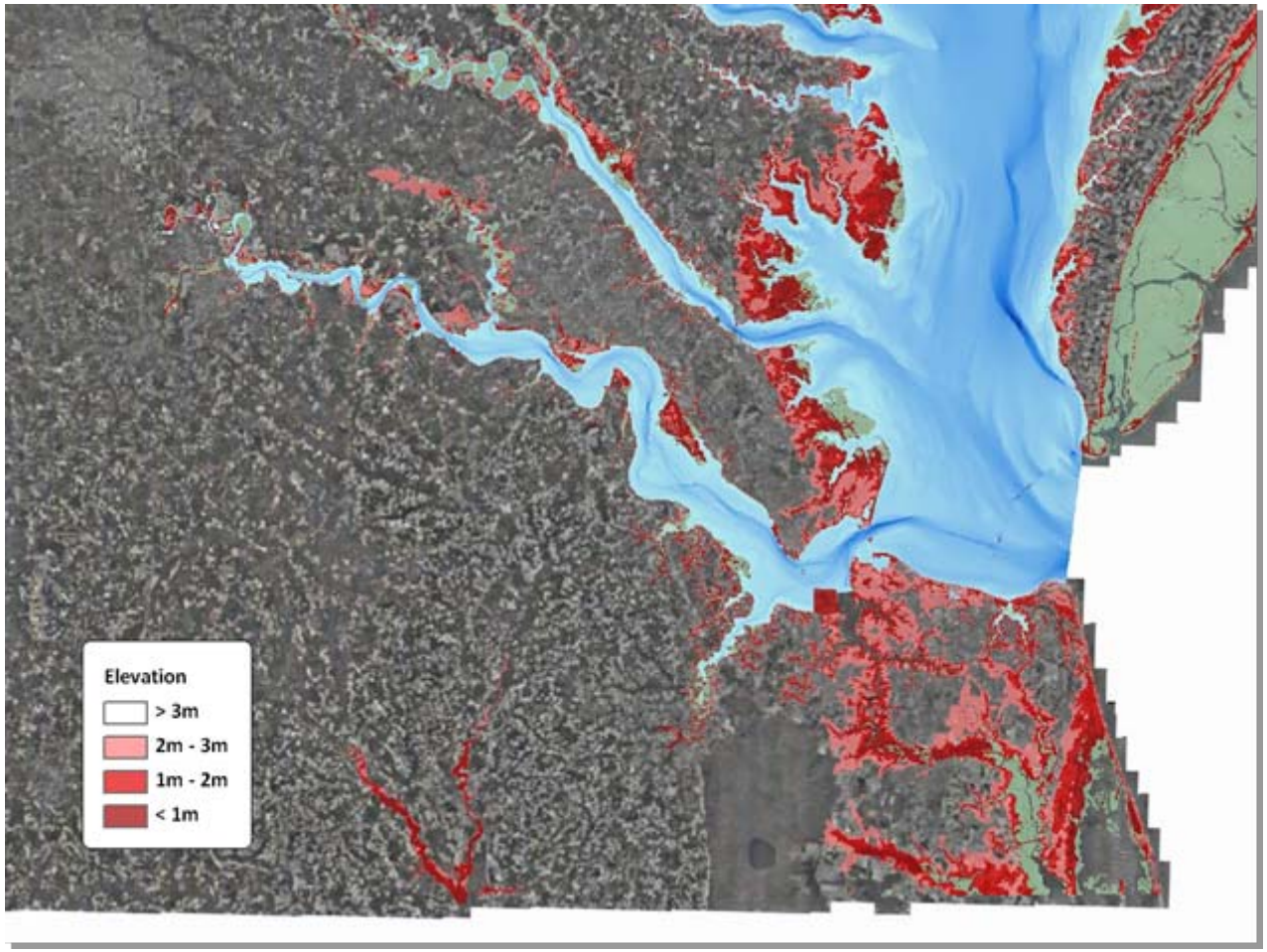

Sea Level Rise Vulnerability

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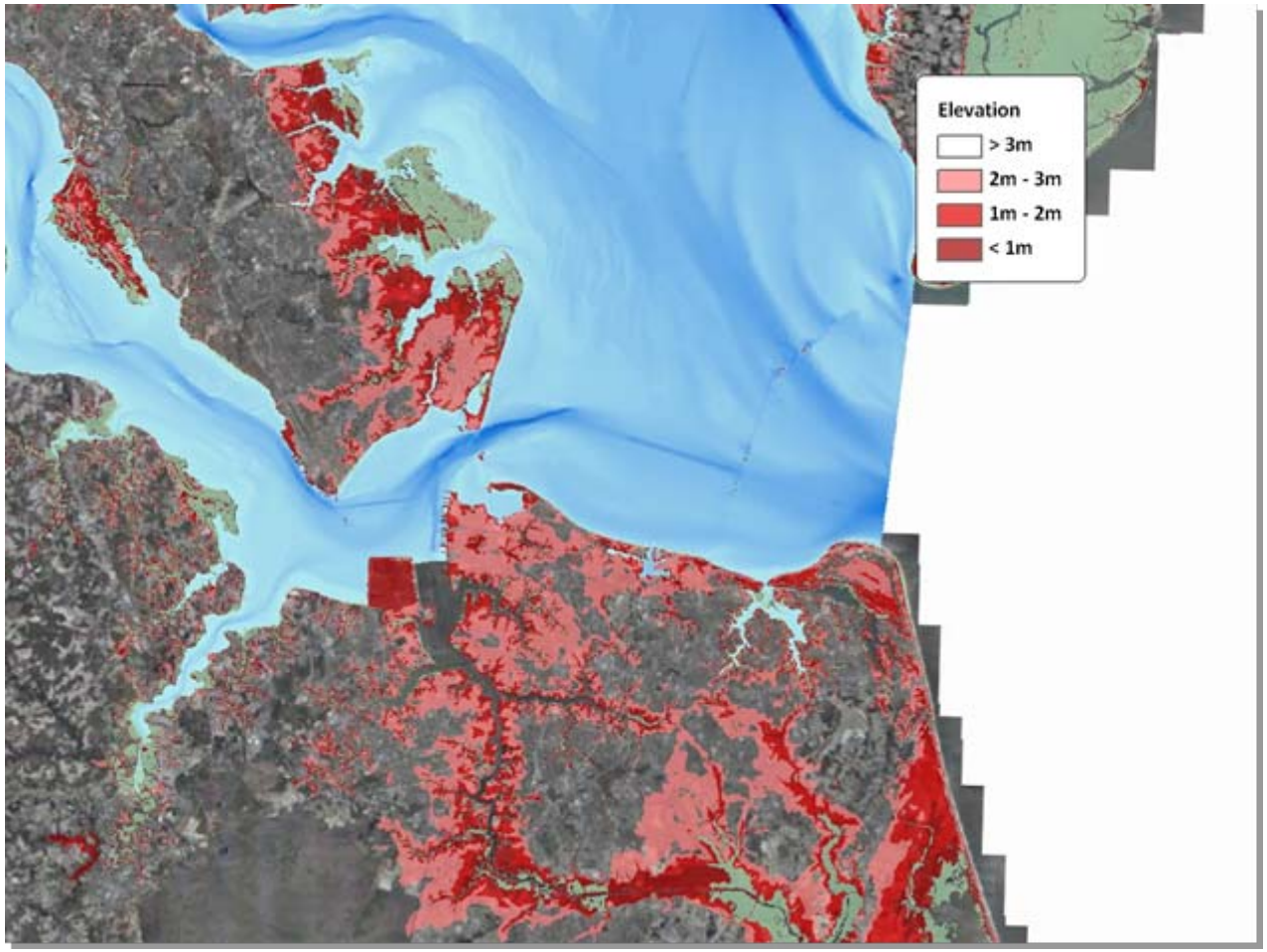

Sea Level Rise Vulnerability

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Next Steps

- Continue HRPDC efforts
  - Locality-level analysis
  - Planning recommendations
- Work with other groups/projects:
  - UVA/IEN/Virginia Sea Grant
  - Regional Hazard Mitigation Planning

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Example: VIMS/Noblis/CBOS

- Chesapeake Inundation Prediction System
- Forecasts storm surge combined with sea level rise to project future impacts
- Analysis looks at impacts to Hampton Roads Conservation Corridor System from Hurricane Isabel and Sea Level Rise

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Planning for Climate Change

- Legal, Economic, Political, and Scientific Challenges
- Data and modeling needs

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Contact Information

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