Addressing Barriers to Local Government Planning for Future Conditions

Wetlands Watch

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December 1, 2022

CBP Local Government Advisory Committee

Overview

- Local governments control nearly all the factors necessary for adaptation to future conditions

- Local government staff (especially in smaller/rural localities) face numerous barriers to acting on future conditions:
  - lack of resources,
  - lack of best practice information,
  - uncertainty on future condition impacts,
  - questionable legal basis for action, and
  - lack of support/understanding by appointed/elected leadership

Overview

- Partnerships with professional organizations/existing trusted training centers provide a basis for information exchange

- Co-production of training with end users (local government staff) is essential

38,967

What Adaptation Feels Like at the Local Level

Local Government Guide - 2015

Wetlands Watch conducted a needs assessment of local government staff (n~70) to develop information resources for localities in Virginia. (co-production)

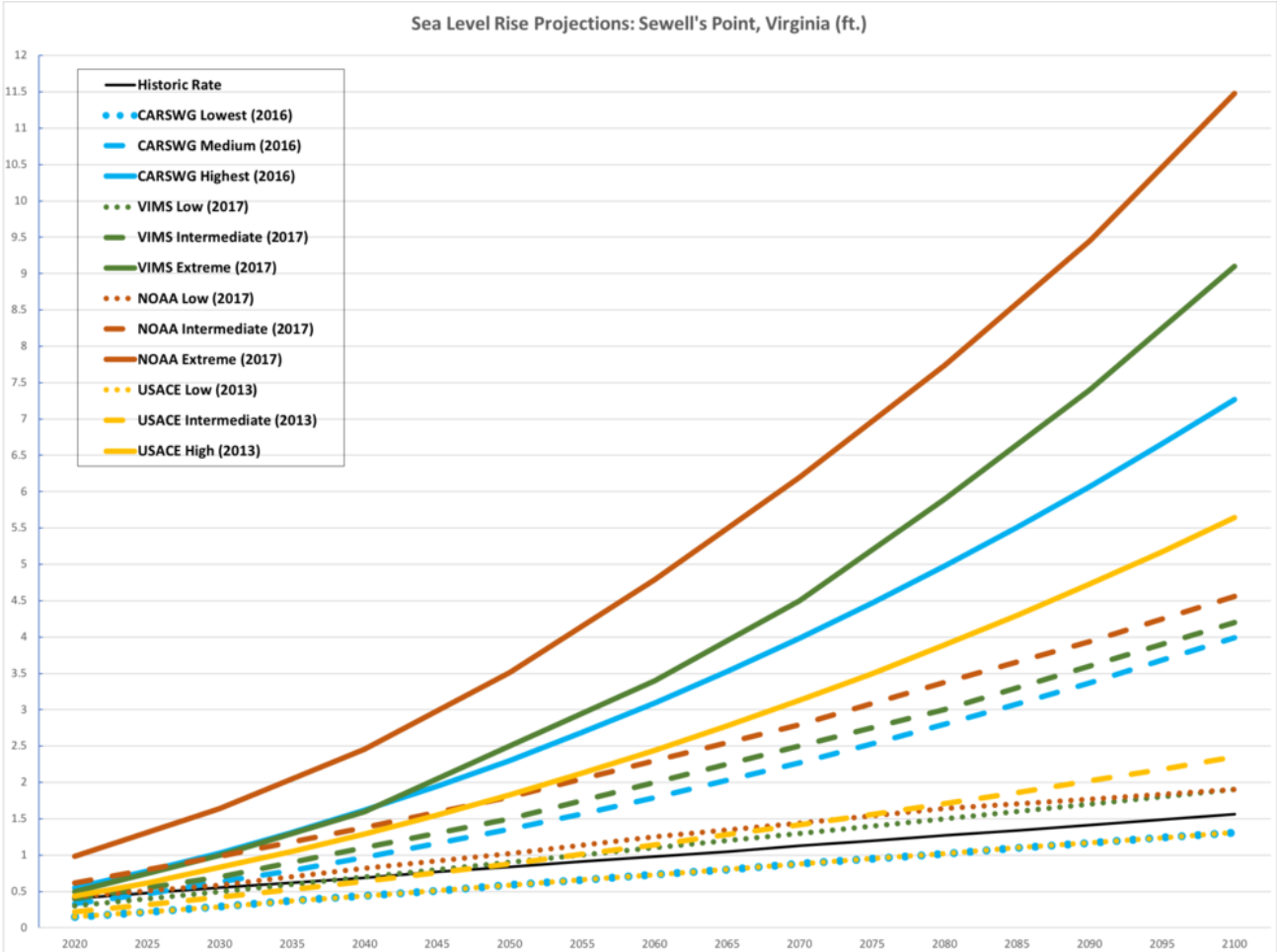
Issues clustered around:

- Education - need for it but also too many meetings & studies
- Data – national/academic data not of much use
- Authority – uncertainty about ability to act
- Rural/Urban – much of the info did not apply to rural areas
- Need for interdepartmental coordination – not just the planners

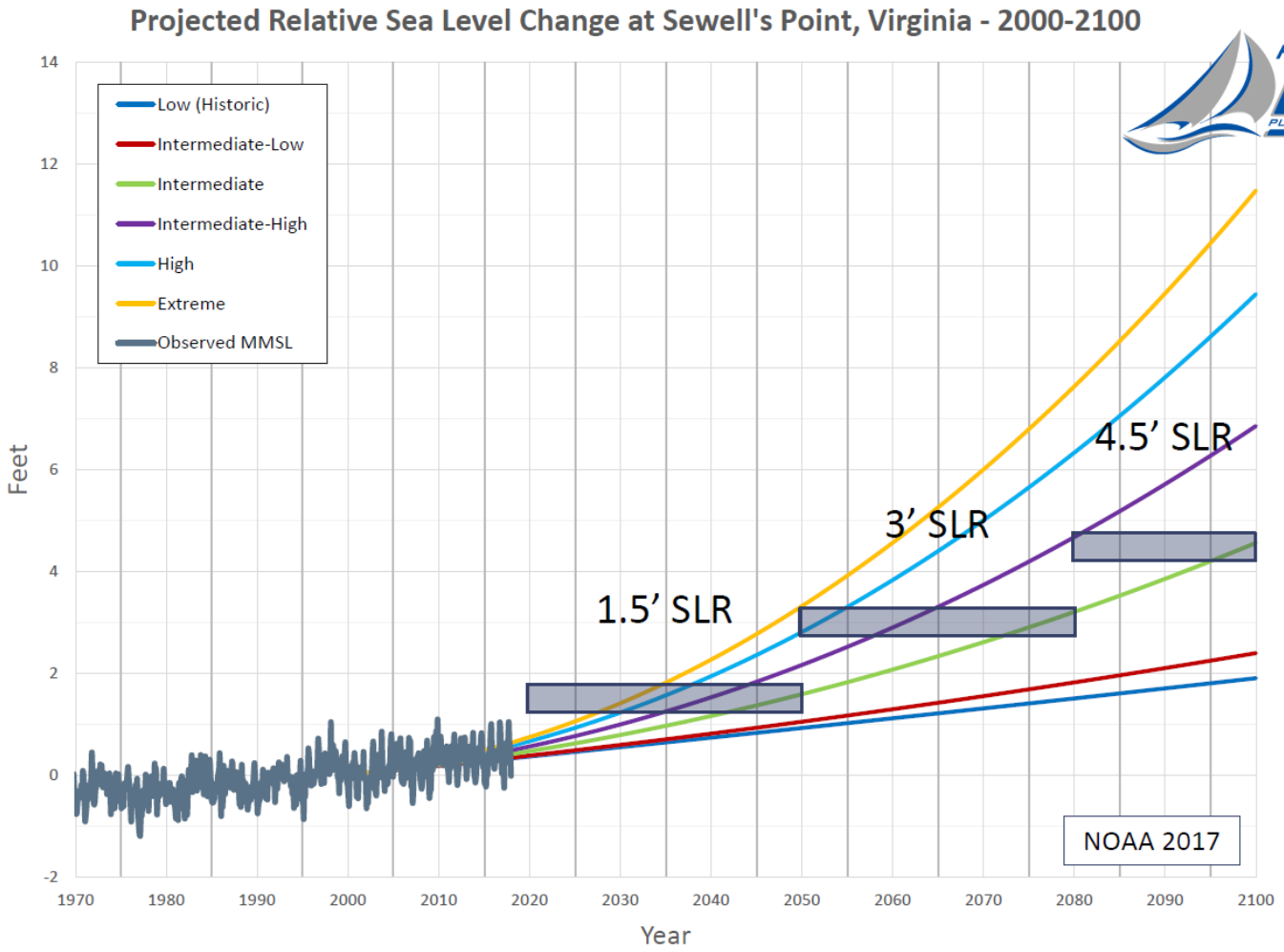
Conventional Data Delivery by Government

Conventional Data Delivery by Academia

Lots of Information ≠ Useful Information



Regional Governments Acting Together



HAMPTON ROADS PDC
PLANNING DISTRICT COMMISSION

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Local Government Guide - 2015

PLANNING

- Comprehensive Plan
- Green Infrastructure Plan
- Watershed-Based Planning
- Transportation Planning
- Hazard Mitigation Plan
- Capital Improvement Program

OPEN SPACE PRESERVATION

- Conservation Easement
- Rolling Easement
- Land Use Value Assessment
- Transfer of Development Rights
- Purchase of Development Rights

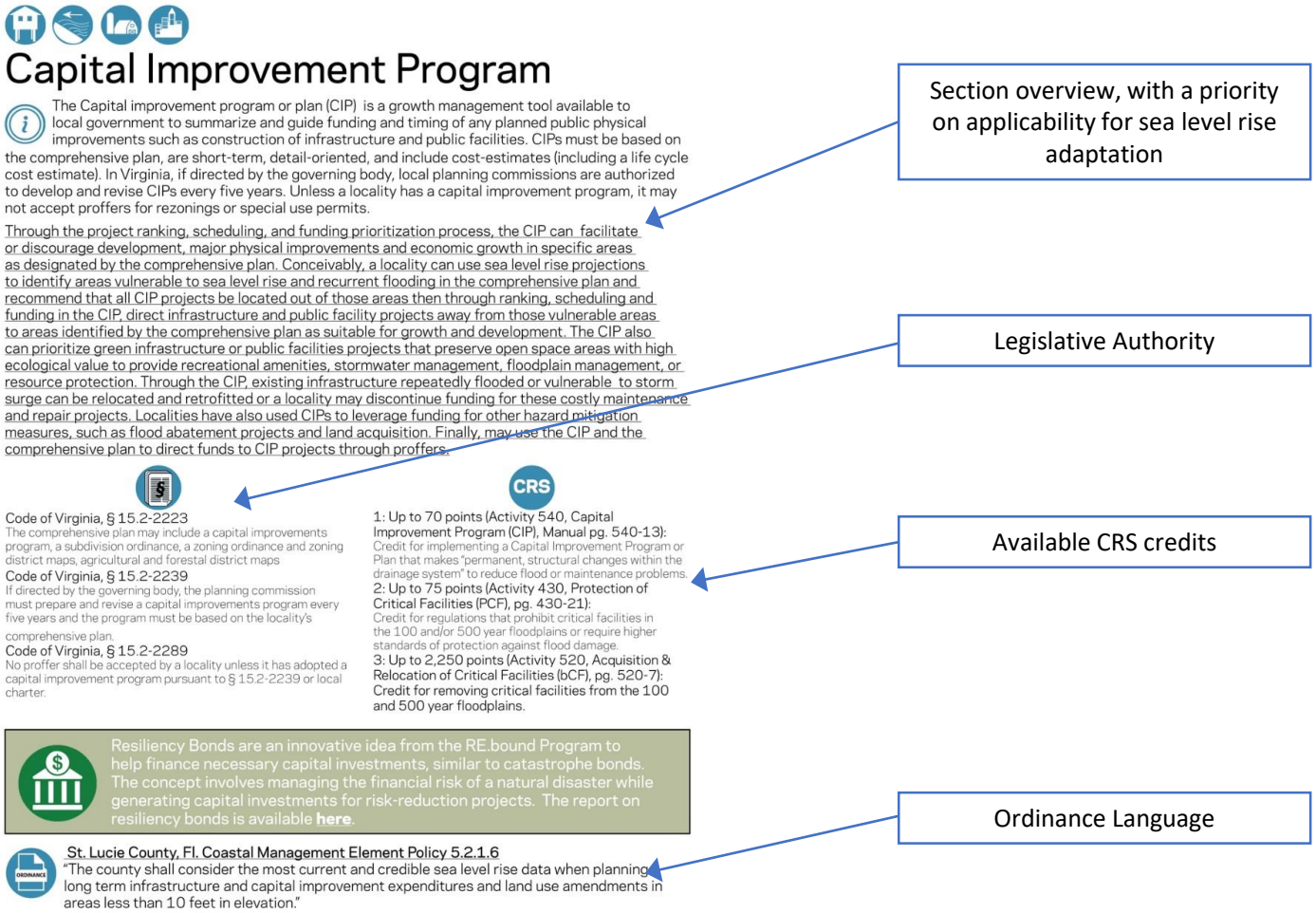
REGULATORY

- Resilient Zoning
- Floodplain Management
- Building Code
- Freeboard Requirements
- Chesapeake Bay Preservation Act
- MS4 Stormwater Management
- non-MS4 Stormwater Management

CONSTRUCTION

- Property Acquisition and Demolition
- Design Standards
- Structure Elevation
- Hard Armoring
- Soft Armoring
- Beach Replenishment

Local Government Guide - 2015



Section overview, with a priority on applicability for sea level rise adaptation

Legislative Authority

Available CRS credits

Ordinance Language

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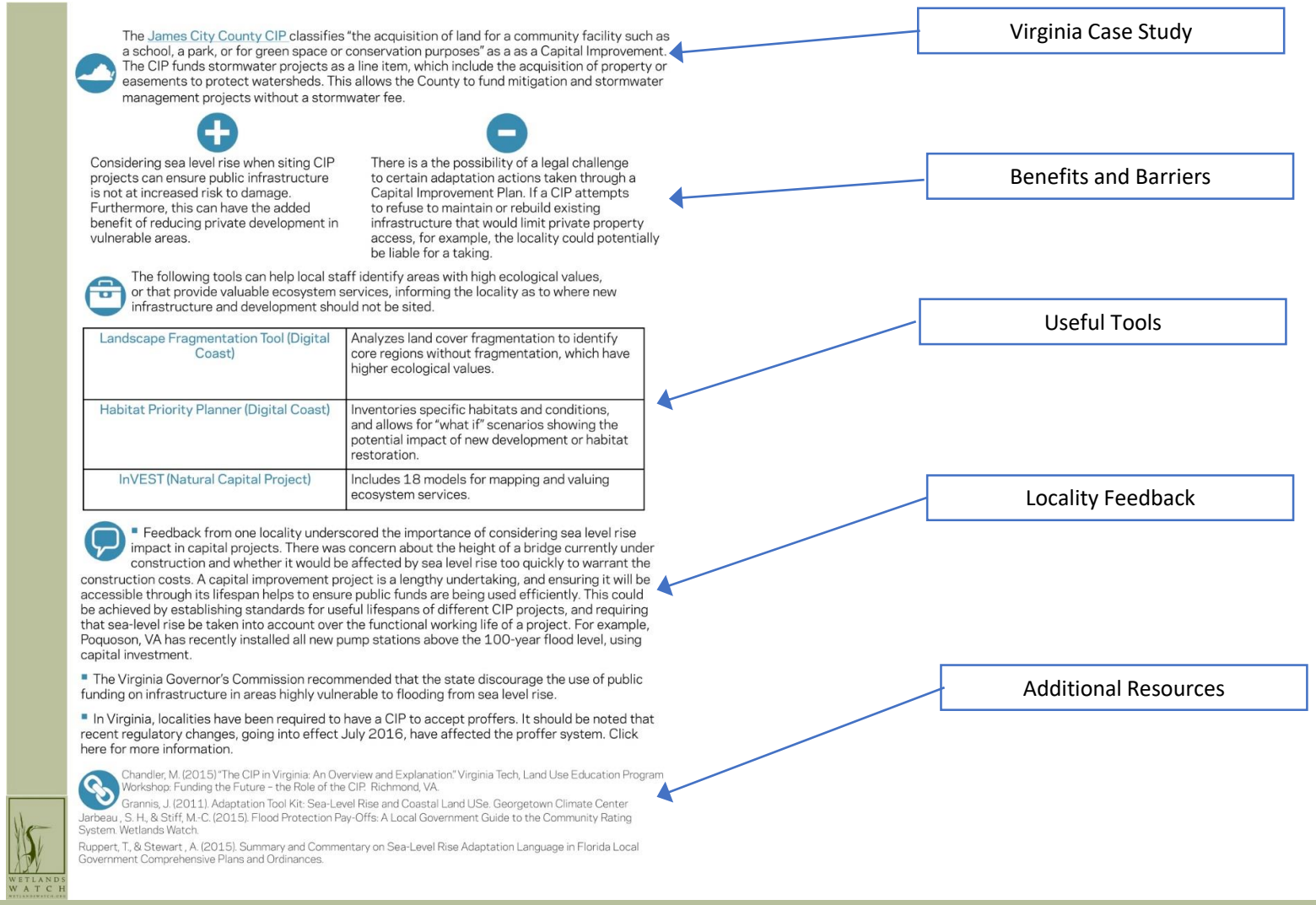
https://wetlandswatch.org/adaptation-guide-directory

Local Government Guide - 2015



The James City County CIP classifies "the acquisition of land for a community facility such as a school, a park, or for green space or conservation purposes" as a as a Capital Improvement. The CIP funds stormwater projects as a line item, which include the acquisition of property or easements to protect watersheds. This allows the County to fund mitigation and stormwater management projects without a stormwater fee.

Considering sea level rise when siting CIP projects can ensure public infrastructure is not at increased risk to damage. Furthermore, this can have the added benefit of reducing private development in vulnerable areas.

There is a the possibility of a legal challenge to certain adaptation actions taken through a Capital Improvement Plan. If a CIP attempts to refuse to maintain or rebuild existing infrastructure that would limit private property access, for example, the locality could potentially be liable for a taking.

The following tools can help local staff identify areas with high ecological values, or that provide valuable ecosystem services, informing the locality as to where new infrastructure and development should not be sited.

Landscape Fragmentation Tool (Digital Coast)	Analyzes land cover fragmentation to identify core regions without fragmentation, which have higher ecological values.
Habitat Priority Planner (Digital Coast)	Inventories specific habitats and conditions, and allows for "what if" scenarios showing the potential impact of new development or habitat restoration.
InVEST (Natural Capital Project)	Includes 18 models for mapping and valuing ecosystem services.

- Feedback from one locality underscored the importance of considering sea level rise impact in capital projects. There was concern about the height of a bridge currently under construction and whether it would be affected by sea level rise too quickly to warrant the construction costs. A capital improvement project is a lengthy undertaking, and ensuring it will be accessible through its lifespan helps to ensure public funds are being used efficiently. This could be achieved by establishing standards for useful lifespans of different CIP projects, and requiring that sea-level rise be taken into account over the functional working life of a project. For example, Poquoson, VA has recently installed all new pump stations above the 100-year flood level, using capital investment.
- The Virginia Governor's Commission recommended that the state discourage the use of public funding on infrastructure in areas highly vulnerable to flooding from sea level rise.
- In Virginia, localities have been required to have a CIP to accept proffers. It should be noted that recent regulatory changes, going into effect July 2016, have affected the proffer system. Click here for more information.

Chandler, M. (2015) "The CIP in Virginia: An Overview and Explanation." Virginia Tech, Land Use Education Program Workshop: Funding the Future – the Role of the CIP. Richmond, VA.

Grannis, J. (2011). Adaptation Tool Kit: Sea-Level Rise and Coastal Land USe. Georgetown Climate Center

Jarbeau , S. H., & Stiff, M.-C. (2015). Flood Protection Pay-Offs: A Local Government Guide to the Community Rating System. Wetlands Watch.

Ruppert, T., & Stewart , A. (2015). Summary and Commentary on Sea-Level Rise Adaptation Language in Florida Local Government Comprehensive Plans and Ordinances.

Virginia Case Study

Benefits and Barriers

Useful Tools

Locality Feedback

Additional Resources

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https://wetlandswatch.org/adaptation-guide-directory

Issue with Elected and Appointed Leadership

Planning Commissioners and Board of Zoning Appeals members get some basic education (%?) but NO education on future conditions and adaptation.

SO…

We engaged the statewide education program for Planning Commissioners (LUEP) and the state chapter of the American Planning Association.

We proposed an education module on future conditions – mostly flooding resilience to address sea level rise and increased rainfall intensity.

Pilot Modules - 2022

Jan – May 2022 – two training sessions with 40 local government planning commissioners attending

Two locality requests for full briefings:

Harrisonburg – brief full planning commission and economic development department staff

Henrico County – brief city staff on their Climate Action Plan

Wetlands Watch – VA APA Webinars to Date

Climate Change Impacts and Virginia's Responses: Planning for Resiliency Webinar Series

June 27, 2022: Updates to Sea Level Rise and Precipitation Projections, and Incorporating Climate Change into Department of Transportation Design Standards

August 22, 2022: Updates to the Stormwater Management and Erosion & Sediment Control Programs

September 26, 2022: Housing Impacts

October 28, 2022: Updates to the National Flood Insurance Program- Risk Rating 2.0 and the Community Rating System

November 28, 2022: CBPA Regulations and VMRC Tidal Wetlands Guidance

January 23, 2022: Septic/VDH

Next Steps?

Work with other local government professionals “on the front lines” of resilience and adaptation:

- Floodplain Managers – partner with VFMA
- Stormwater Engineers – ASCE-Va Chapter
- Emergency Managers
- Etc.

RELATED LOCAL GOVERNMENT PARTNERSHIPS

CRS Partnership with Local Government

Community Rating System (CRS) can “monetize” open space in the floodplain: more open space, lower flood insurance costs.

CRS is complicated and FEMA regs and processes are cumbersome. Low resource localities are not participating.

Wetlands Watch chairs the local government user group and does “circuit riding” throughout the state helping local governments enroll and improve their ratings.

Collaborative Design Laboratory = Collaboratory

STUDENTS DEVELOP AND PRESENT ADAPTATION DESIGNS AND PLANS

To Community and Local Government

Collaboratory = Designs + Future Workforce

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Other Partnerships

Land trusts partner with local governments on FEMA-acquired properties.

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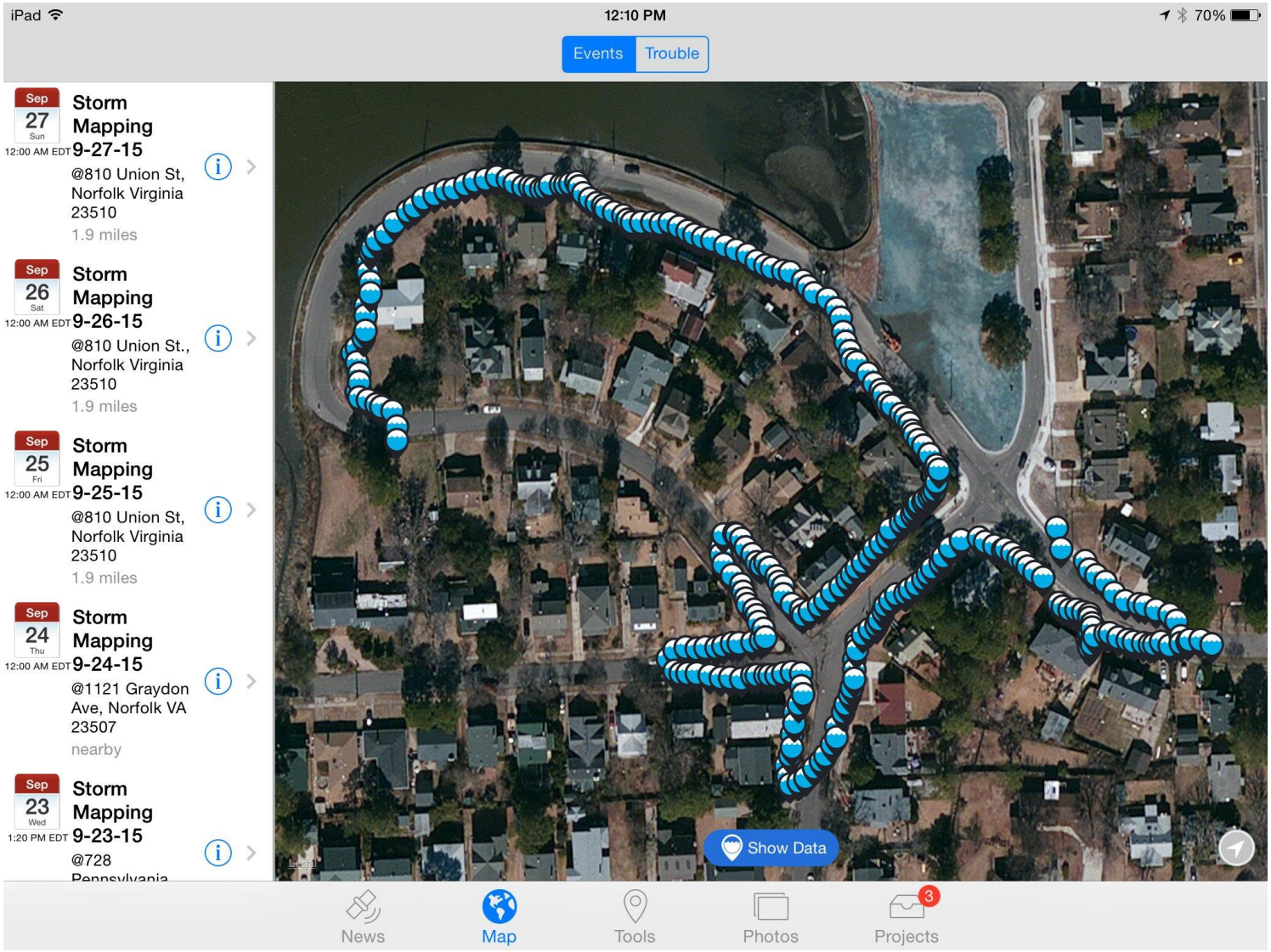
Other Partnerships

Land trusts partner with local governments on FEMA-acquired properties.

Citizen Science flood mapping using a smart phone.

Data Point Collection During “King Tide”



ENDNOTES

Addressing future conditions will ONLY happen through local government action.

Resources produced in concert with the end user have the most utility – listen to local governments on resilience and adaptation issues.

Partnerships with fact-based environmental organizations can extend local government programming (and find resources!)

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