Coastal Resilience through Community Engagement Webinar Series

Part 2: Building CRS Capacity: Success Stories at the Local & State Levels

November 6, 2017
1:00–2:30pm CT

Today’s Moderator

Bradley Watson
Acting Executive Director, CSO
CRS for Community Resilience Webinar 2:
Building CRS Capacity: Success Stories at the
Local & State Levels

Thanks to our funders!

Funding for this project is provided by the Department of the Interior
through a grant from the National Fish and Wildlife Foundation’s
Hurricane Sandy Coastal Resiliency Competitive Grant Program.

Coastal Resilience through Community Engagement
Webinar Series

Building CRS Capacity: Success Stories at the Local & State Level

Philip Hinesley
Coastal Section Chief
Alabama Dept. of
Conserv. & Natural
Resources

Allison Hardin, CFM
Planner
City of Myrtle Beach, SC

Shannon Jarbeau, CFM
CRS & Floodplain Coord.
Barnstable County, MA
It is great to live near the water.
BUT SOMETIMES IT CAN BE A PROBLEM

EVEN SMALL TROPICAL SYSTEMS CAN CAUSE ISSUES
LARGER AND STRONGER STORMS CAUSE MAJOR DAMAGE (HURRICANE HARVEY)

IT IS ESTIMATED AFTER HARVEY ONLY 1 IN 5 RESIDENTS HAD FLOOD INSURANCE
COMMUNITY RESILIENCY INITIATIVE: PLANNING FOR RESILIENT COMMUNITIES

- Five year project (CZM Section 309)
- Funding from NOAA to ADCNR, Coastal Section to enhance the state’s Coastal Area Management Program

**GOAL**

To help Alabama’s coastal communities mitigate and adapt to coastal hazards and stressors through enhanced floodplain management, technical assistance, and public outreach programs.

**TIMELINE**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
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<tbody>
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Phillip E. Hinesley, phillip.hinesley@dcnr.alabama.gov, 251-621-1216
CRS for Community Resilience Webinar 2:
Building CRS Capacity: Success Stories at the
Local & State Levels

November 6, 2017
1:00pm – 2:30pm

ADVISORY COMMITTEE

- ADECA, Office of Water Resources
- City of Orange Beach
- Coastal States Organization
- FEMA
- Grand Bay National Estuarine Research Reserve
- MS-AL Sea Grant Consortium
- NOAA Office for Coastal Management
- Smart Home America
- South AL Regional Planning Commission (SARPC)

COASTAL ALABAMA

# Policies In-Force (as of 8/31/16)

- 64%
- State: 54,877
- Coastal Counties: 35,189

Premium Paid (as of 8/31/16)

- 59%
- State: $36,040,538
- Coastal Counties: $21,090,688

Total Paid on Losses (1978-8/31/16)

- 88.6%
- State: $1,022,102,182
- Coastal Counties: $905,364,840

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COASTAL ALABAMA

Percent of critical facilities in FEMA floodplain

Mobile County | Baldwin County
5% | 5%

FEMA Flood Zones
- High Risk (1% Annual Chance)
- Moderate Risk (0.2% Annual Chance)
- Area Not Mapped

*NOAA Coastal County Snapshots
*NOAA Coastal Flood Exposure Mapper

TIMELINE (AGAIN)

<table>
<thead>
<tr>
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FEMA’S CRS PROGRAM OVERVIEW

- Began in 1990
- Encourage exceeding minimum NFIP requirements
- Points system for floodplain management activities
- Number of points determines flood insurance premium discounts

19 creditable activities organized under four categories

1. Public Information Activities
   - Elevation certificates, outreach projects, etc.
2. Mapping and Regulations
   - Open space preservation, floodplain mapping
3. Flood Damage Reduction Activities
   - Acquisition and relocation, flood protection
4. Warning and Response
   - Flood warning and response, levees, dams

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<table>
<thead>
<tr>
<th>CRS Class</th>
<th>Credit Points</th>
<th>Insurance Premium Reduction In Special Flood Hazard Area (SFHA)</th>
<th>Outside of SFHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4500+</td>
<td>45%</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>4,000–4,500</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>3,500–3,999</td>
<td>35%</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>3,000–3,499</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>2,500–2,999</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>2,000–2,499</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>7</td>
<td>Baldwin County, Orange Beach</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Dauphin Island, Gulf Shores</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>500–999</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>0–499</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**TARGET COMMUNITIES**

**Mobile County**
- 11 municipalities
- Semmes not in NFIP
- Mount Vernon in NFIP, no policies
- Dauphin Island in CRS

**Baldwin County**
- 14 municipalities
- Magnolia Springs and Perdido Beach in NFIP, no policies
- Baldwin County, Gulf Shores, Orange Beach in CRS

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NUMBER OF POLICIES & PREMIUM PAID: MOBILE COUNTY

<table>
<thead>
<tr>
<th>Location</th>
<th>Premium Paid</th>
<th>Policies In-force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile</td>
<td>1,855</td>
<td>29</td>
</tr>
<tr>
<td>Bay La Brea</td>
<td>292</td>
<td>No polies</td>
</tr>
<tr>
<td>Chickasaw</td>
<td>136</td>
<td>No polies</td>
</tr>
<tr>
<td>Citronelle</td>
<td>3</td>
<td>No polies</td>
</tr>
<tr>
<td>Dauphin</td>
<td>63</td>
<td>1,702</td>
</tr>
<tr>
<td>Dauphin Island</td>
<td>3</td>
<td>No polies</td>
</tr>
<tr>
<td>Mobile</td>
<td>3,846</td>
<td>Not in NFIP</td>
</tr>
</tbody>
</table>

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NUMBER OF POLICIES & PREMIUM PAID: BALDWIN COUNTY

<table>
<thead>
<tr>
<th>Location</th>
<th>Premium Paid</th>
<th>Policies In-force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baldwin County</td>
<td>20,727</td>
<td>CRS 8</td>
</tr>
<tr>
<td>Bay Minette</td>
<td>8</td>
<td>No polies</td>
</tr>
<tr>
<td>Dauphin</td>
<td>383</td>
<td>No polies</td>
</tr>
<tr>
<td>Elberta</td>
<td>4</td>
<td>No polies</td>
</tr>
<tr>
<td>Fairhope</td>
<td>332</td>
<td>No polies</td>
</tr>
<tr>
<td>Foley</td>
<td>143</td>
<td>No polies</td>
</tr>
<tr>
<td>Gulf Shores</td>
<td>23</td>
<td>CRS 7</td>
</tr>
<tr>
<td>Gulf Shores</td>
<td>7,401</td>
<td>No polies</td>
</tr>
<tr>
<td>Hangtown</td>
<td>30</td>
<td>No polies</td>
</tr>
<tr>
<td>Orange Beach</td>
<td>7</td>
<td>No polies</td>
</tr>
<tr>
<td>Orange Beach</td>
<td>33</td>
<td>No polies</td>
</tr>
<tr>
<td>Orange Beach</td>
<td>6</td>
<td>No polies</td>
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CRS for Community Resilience Webinar 2: Building CRS Capacity: Success Stories at the Local & State Levels

November 6, 2017
1:00pm – 2:30pm

POTENTIAL COST SAVINGS: MOBILE COUNTY (CRS CLASS 9)

*Assuming CRS Class 9, 5% premium discount (Note: Semmes not included)

POTENTIAL COST SAVINGS: MOBILE COUNTY (CRS CLASS 8)

* Assuming CRS Class 8, 10% premium discount in SFHA (Note: Semmes and Mount Vernon not included)
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COMMUNITY NEEDS ASSESSMENT

Targeting NFIP lead in each community
- 4 CRS communities and 23 non-CRS communities

Better understand
- Flood risk awareness
- Resource and training needs
- Interest in enhanced floodplain management activities
COMMUNITY NEEDS ASSESSMENT

CRS Communities (4)

- Baldwin County
- Gulf Shores
- Orange Beach
- Semmes

Non-CRS Communities (23)

- Foley
- Silverhill
- Spanish Fort
- Mobile County
- Baldwin County (75%)

FUTURE COORDINATION EFFORTS

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QUESTIONS?
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CRS for Community Resilience
Building CRS Capacity: Success Stories at the Local and State Levels
Myrtle Beach, SC – Class 5 CRS Community
Friendly Reminders

• NFIP = National Flood Insurance Program
• NAI = No Adverse Impact
• CNAI = Coastal No Adverse Impact
• CRS = Community Rating System
• NOAA = National Oceanic and Atmospheric Administration
• ASFPM = Association of State Floodplain Managers
• APA = American Planning Association

Community Rating System

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Timing is Everything

- CRS began in 1991
- Myrtle Beach – still recovering from Hurricane Hugo in 1989
- South Carolina was pushing municipalities to pass Beach Management Plans
- Developers were pushing to keep regulations lax, even after having to rebuild

Photo: Boardwalk aftermath of Hurricane Hugo – City of Myrtle Beach image, September 1989

CRS Had Our Back

- Freeboard to the max (three ft, for 300 points) plus other smaller items gave us a quick extra 5%
- Public outreach pushed us to advertise our good ideas
- Open space credits rewarded us for good deeds in place, and helped firm up the idea of keeping the spaces open

Photo: Coastal Georgia, June 2009 Allison Hardin photo

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We Had to Work Together for CRS

- Collaboration between departments became vital
- Public Works/Stormwater (NPDES tie-ins)
- Construction Services
- Planning
- Public Information
- Cultural & Leisure Services (Parks)
- Police/Fire/Risk Management
- Administration

Team CRS

- Now: Annual Hazard Mitigation/Floodplain Management meetings include CRS point discussions, projects
- Elected officials have pride in the rating and pay attention when potential regulations may impact the rating
  - Mayor brags about the approximately $1 million that “stays at home” and doesn’t “go up to Hartford or out to Omaha”
  - No one wants to be “that guy” that made everyone pay 25% more insurance premiums
A recent study estimated that the savings associated with a one point increase in CRS Activity 4.20 Open Space Preservation is, on average, $3,532 per community per year (Highfield & Brody, 2013).
**Example: Green (Open) Space Possible Points**

<table>
<thead>
<tr>
<th>Element Name</th>
<th>Possible Points</th>
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<tbody>
<tr>
<td>322.a. Natural Floodplain Functions (MF)</td>
<td>20 points</td>
</tr>
<tr>
<td>322.b. Outreach Projects (OP)</td>
<td>200 points</td>
</tr>
<tr>
<td>322.d. Stakeholder Delivery (STK)</td>
<td>50 points</td>
</tr>
<tr>
<td>322.e. More Restrictive Floodway Standard (FWS)</td>
<td>140 points</td>
</tr>
<tr>
<td>322.f. Open Space Preservation (OSP)</td>
<td>1,450 points</td>
</tr>
<tr>
<td>322.g. Deed Restrictions (DR)</td>
<td>50 points</td>
</tr>
<tr>
<td>322.c. Natural Functions Open Space (NFOS)</td>
<td>350 points</td>
</tr>
<tr>
<td>322.d. Special Flood Related Hazards Open Space (SHOS)</td>
<td>250 points</td>
</tr>
<tr>
<td>322.e. Coastal Erosion Open Space (CEOS)</td>
<td>750 points</td>
</tr>
<tr>
<td>322.f. Open Space Incentives (OSI)</td>
<td>250 points</td>
</tr>
<tr>
<td>322.g. Low Density Zoning (LZ)</td>
<td>600 points</td>
</tr>
<tr>
<td>322.h. Natural Shoreline Protection (NSP)</td>
<td>120 points</td>
</tr>
<tr>
<td>322.i. Development Limitations (DL)</td>
<td>1,330 points</td>
</tr>
<tr>
<td>322.j. Special Flood-Related Hazard Regulations (SHR)</td>
<td>100 points</td>
</tr>
<tr>
<td>322.k. Coastal Erosion Hazard Regulations (CER)</td>
<td>370 points</td>
</tr>
<tr>
<td>422.a. Open Space Preservation (OSP)</td>
<td>1,450 points</td>
</tr>
<tr>
<td>422.b. Deed Restrictions (DR)</td>
<td>50 points</td>
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<td>100 points</td>
</tr>
<tr>
<td>422.k. Coastal Erosion Hazard Regulations (CER)</td>
<td>370 points</td>
</tr>
<tr>
<td>422.l. Stormwater Management Regulations (SMR)</td>
<td>380 points</td>
</tr>
<tr>
<td>422.m. Watershed Master Plan (WMP)</td>
<td>315 points</td>
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<tr>
<td>422.n. Erosion and Sediment Control Regulations (ESC)</td>
<td>40 points</td>
</tr>
<tr>
<td>422.o. Water Quality Regulations (WQ)</td>
<td>20 points</td>
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<tr>
<td>432.a. Natural Floodplain Functions Plan (NFP)</td>
<td>100 points</td>
</tr>
<tr>
<td>432.b. Buildings Acquired or Relocated (BAR),</td>
<td>2,250 points</td>
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<tr>
<td>432.c. Buildings on the Repetitive Loss List (BRL), and</td>
<td></td>
</tr>
<tr>
<td>432.d. Severe Repetitive Loss Properties (SSRL)</td>
<td></td>
</tr>
<tr>
<td>442.a. Capital Improvement Program (CIP)</td>
<td>70 points</td>
</tr>
</tbody>
</table>

**Open Space Sources**

- Public beaches
- Estuaries/marshes
- Wetlands
- River buffers
- Parks
- Forests
- Trails
- State programs?
- Etc

Photos: Withers Swash Park and Atlantic Ocean, City of Myrtle Beach images

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CRS Benefits to the Community

Safety Benefits

- Citizens and property owners in CRS communities have increased opportunities to learn about risk, evaluate their individual vulnerabilities, and take action to protect themselves, as well as their homes and businesses.
- CRS floodplain management activities provide enhanced public safety, reduced damage to property, and reduced response costs.
- Technical assistance in designing and implementing some activities is available to community officials at no charge.
- CRS communities have incentives to maintain and improve their flood programs over time.
- Communities can evaluate the effectiveness of their flood programs against a nationally recognized benchmark.

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Planning Benefits

- CRS ties in to the base reasons for planning – **public health and safety** – as well as more recent topics – **sustainability, resilience**
- Program goals **underpin good planning practices** that lead to better communities – open space for recreation, cluster development to better organize growth, resilient building and site planning
- Plans in place in your community probably **already have point-ready projects or components** that help the community increase their rating
- Planning activities **encourage partnerships** that you may not have made yet or might have had difficulty with in the past
- Ready list of a **wide range of case studies**, sample projects, ordinances and programs that others have successfully implemented

Tools That Help

Maps, Training, Data, Programs...

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• Find the NAI Guidebooks at www.floods.org
• No membership needed to download the resources on site
• CNAI handbook last updated in 2007
• Takes the NAI and puts the principles to use in the coastal environment
http://nrcsolutions.org/

- No membership needed to access the website
- Partners includes those shown plus:
  - ASFPM
  - Environmental & Water Resources Institute (EWRI)
  - The Kresge Foundation

NATURALLY RESILIENT COMMUNITIES

Communities today face more challenges than ever before. From weather-related disasters and public health crises to needs for economic development, the demands on our communities' limited resources are growing. This is where the work of the Naturally Resilient Communities partnership comes in.

Naturally Resilient Communities is a partnership of county governments, professional engineers, community planners, floodplain managers, and conservationists who work with communities to improve their quality of life and economies. The Naturally Resilient Communities project is made possible with support from the Kresge Foundation.

The partnership is focused on helping communities use nature-based solutions that address multiple needs with a focus on reducing impacts from floods and storms, improved water quality, enhanced recreational opportunities, and better habitat for fish and wildlife. We help communities determine what nature-based solutions are best for them. We provide the best examples of communities that use nature-based solutions to solve multiple problems and produce multiple benefits. And we advance local, state and national policies and programs that enable consideration of and provide funding for solutions that produce multiple benefits, including food risk reduction.

https://coast.noaa.gov/digitalcoast/

MORE THAN JUST DATA

Dive into the Digital Coast to Get the Data, Tools, and Training Communities Need to Address Coastal Issues.

What is Digital Coast?
What is Digital Coast?

This NOAA-sponsored website is focused on helping communities address coastal issues and has become one of the most-used resources in the coastal management community. The dynamic Digital Coast Partnership, whose members represent the website’s primary user groups, keeps the effort focused on customer needs.

Learn more in our About section, or just dive in. And please provide feedback as often as possible. Hearing from you is what makes the Digital Coast work.

Digital Coast – for Decision Makers

- Provides data for those comfortable with GIS
- Provides tools for those who don’t work with GIS regularly
- Training programs available online and in person
- Topics are suites of related data and tools to accomplish a common goal (risk communication, coastal storms, water quality, etc)
- “Stories” (Case Studies) show how others are using Digital Coast

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Thank you!

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Streamlining Success: Regional CRS Management on Cape Cod, MA

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Cape Cod Cooperative Extension
ASFPM CRS
Green Guide
Cape Cod and the CRS

Background

- 15 towns, no unincorporated land
- County does NOT have jurisdiction → technical assistance only
- Special Flood Hazard Area (SFHA)
  - 52,000 acres (20% of land area)
  - 28,000 parcels
  - $10.5 billion value
- Flood Insurance Policies
  - 9,000 in SFHA
  - 3,000 outside of SFHA
  - 10,000 CRS-eligible

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Cape Cod CRS Communities

<table>
<thead>
<tr>
<th>Community</th>
<th>Discount</th>
<th>Total Savings</th>
<th>Policyholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brewster</td>
<td>5%</td>
<td>$2,341</td>
<td>39</td>
</tr>
<tr>
<td>Chatham</td>
<td>10%</td>
<td>$46,363</td>
<td>316</td>
</tr>
<tr>
<td>Eastham</td>
<td>10%</td>
<td>$14,323</td>
<td>110</td>
</tr>
<tr>
<td>Harwich</td>
<td>10%</td>
<td>$56,297</td>
<td>605</td>
</tr>
<tr>
<td>Mashpee</td>
<td>10%</td>
<td>$56,923</td>
<td>500</td>
</tr>
<tr>
<td>Orleans</td>
<td>5%</td>
<td>$11,467</td>
<td>133</td>
</tr>
<tr>
<td>Provincetown</td>
<td>5%</td>
<td>$67,734</td>
<td>1048</td>
</tr>
<tr>
<td>Wellfleet</td>
<td>10%</td>
<td>$21,413</td>
<td>156</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>NA</strong></td>
<td><strong>$277,000</strong></td>
<td><strong>3,000</strong></td>
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</tbody>
</table>
Regional CRS Management

Creation

- Flood insurance costs skyrocket
  - 2014 new FIRMs
  - 2012/2014 BW-12/HFIAA
    - So many second homes → top 1% of counties in nation affected by HFIAA
    - 43% of County policies are subsidized
- High vulnerability to storm surge + sea level rise
- Solution: regional CRS Coordinator
  - Seed funding from Woods Hole Sea Grant
Management
- Each town has a Coordinator!
- Interpret CRS Manual
- Walk town through activities
- Assist with application
- GIS/mapping work
- Templates (letters, ads, logs, SOPs)
- Review by-laws
- Assist with program maintenance
- Staff turnover
- NFIP/floodplain technical assistance

Successes from the First Two Years
- 4 new CRS communities
- 2 5-year Cycle Visits (one community class improvement, one community kept from dropping out of program)
- 3 pending applications
- More attention paid to floodplain regulations; more interest in and incentive for resilience-building activities
- 3,000 policyholders saving $277K annually throughout 8 towns
- ASFPM's 2017 James Lee Witt Local Award for Excellence in Floodplain Management
Poll Question:

Do you think a regional approach would be feasible in your area?

- Yes
- No
- Maybe
- Don’t know

Open Space and the CRS
Open Space Preservation

<table>
<thead>
<tr>
<th>Town</th>
<th># Points</th>
<th>% of Total Pts</th>
<th>$ Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brewster</td>
<td>633</td>
<td>94%</td>
<td>$1,500</td>
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<tr>
<td>Chatham</td>
<td>519</td>
<td>43%</td>
<td>$20,000</td>
</tr>
<tr>
<td>Eastham</td>
<td>607</td>
<td>50%</td>
<td>$7,000</td>
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<tr>
<td>Harwich</td>
<td>629</td>
<td>60%</td>
<td>$36,000</td>
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<tr>
<td>Mashpee</td>
<td>676</td>
<td>51%</td>
<td>$30,000</td>
</tr>
<tr>
<td>Orleans</td>
<td>1031*</td>
<td>67%*</td>
<td>$17,000*</td>
</tr>
<tr>
<td>Provincetown</td>
<td>148</td>
<td>22%</td>
<td>$15,000</td>
</tr>
<tr>
<td>Wellfleet</td>
<td>691</td>
<td>50%</td>
<td>$11,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>$138,000</td>
</tr>
</tbody>
</table>

*waiting for verification; very close between Class 8/Class 7

Tips and Tricks for Open Space Calculation

- Clip NFHL to border of community; make sure it doesn’t reach out into open water (you’re not regulating open water!)
- Depending on size of community, might be able to eliminate smaller parcels
- Consider time investment for DR
- Double-check federal properties – who owns/manages them?
- Make use of available tools for guidance (e.g. NOAA “How To”)
Coastal Resilience Webinars

Coastal Resilience through Community Engagement Webinars


-OR-


Questions?
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