



*Coastal Resilience through Community
Engagement Webinar Series*




Courtesy Jeannette Falvey, U.S. EPA

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



Courtesy Jeannette Falvey, U.S. EPA



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.

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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

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COMMUNITY RESILIENCE INITIATIVE


Phillip E. Hinesley
AL. Dept. of Conservation
and Natural Resources
State Lands Division
Coastal Section

IT IS GREAT TO LIVE NEAR THE WATER



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BUT SOMETIMES IT CAN BE A PROBLEM



A satellite image showing a large tropical storm system with a distinct eye, positioned over the Gulf of Mexico and the southeastern United States coast.

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EVEN SMALL TROPICAL SYSTEMS CAN CAUSE ISSUES



A live news broadcast still image showing a flooded causeway. A yellow 'LIVE' box is in the top right. A blue banner at the bottom reads: 'TROPICAL STORM CINDY CAUSEWAY FLOODING AFFECTS MORNING COMMUTE'. The scene shows a road completely submerged in water with some vehicles and utility poles visible in the distance.

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LARGER AND STRONGER STORMS CAUSE MAJOR DAMAGE (HURRICANE HARVEY)



17

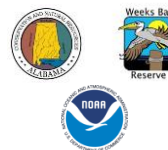
IT IS ESTIMATED AFTER HARVEY ONLY 1 IN 5 RESIDENTS HAD FLOOD INSURANCE



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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.

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TIMELINE

	Year 1	Year 2	Year 3	Year 4	Year 5
	Establish Advisory Committee				
	Research needs and gaps	Training Workshops			
	Conduct Needs Assessment	Guidebook primer, presentations, outreach, technical bulletins	Continue to refine and develop technical bulletins as addendums to the primer		
	FEMA CRS Quick Check Tool	Initiate pilot program for 1 st of 2 communities	Enroll 2 or 3 communities in CRS	Enroll additional communities in CRS	
		Develop request for proposals	Solicit proposals		

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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)

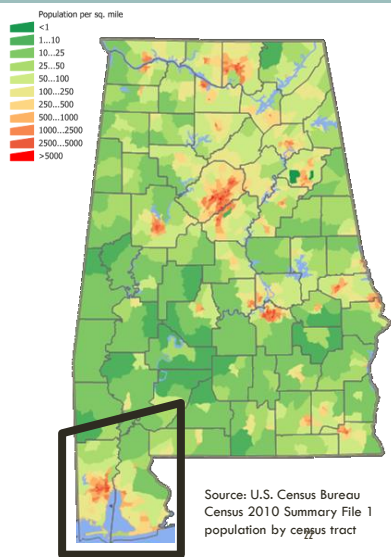


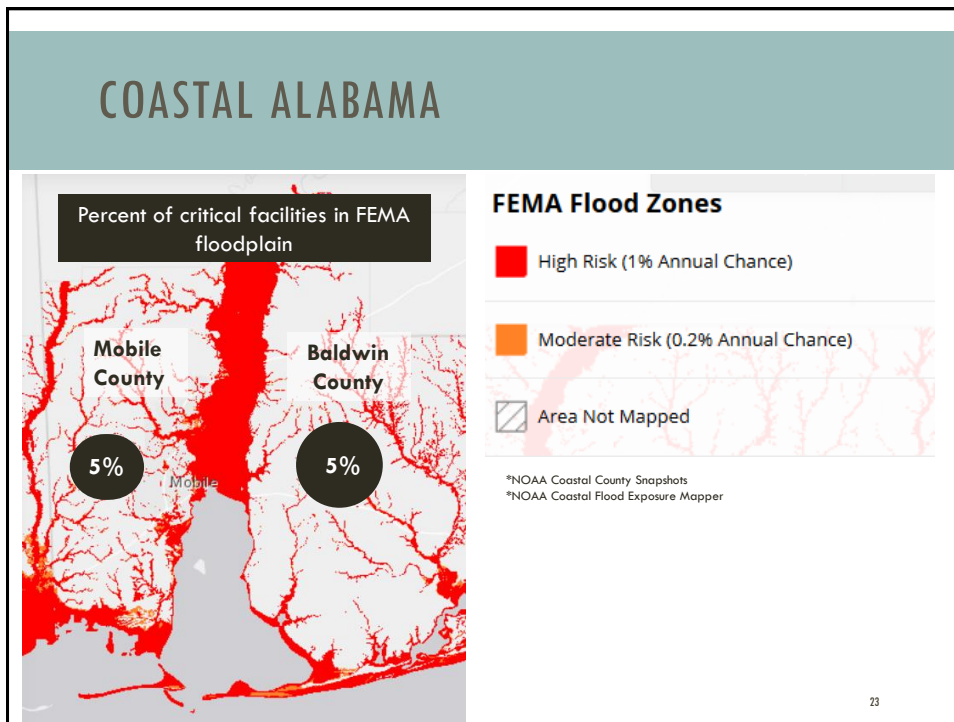
COASTAL ALABAMA

64% **# Policies In-Force** (as of 8/31/16)
 State: 54,877
 Coastal Counties: 35,189

59% **Premium Paid** (as of 8/31/16)
 State: \$36,040,538
 Coastal Counties: \$21,090,688

88.6% **Total Paid on Losses** (1978-8/31/16)
 State: \$1,022,102,182
 Coastal Counties: \$905,364,840






TIMELINE (AGAIN)

Year 1	Year 2	Year 3	Year 4	Year 5
Establish Advisory Committee				
Research needs and gaps	Training Workshops			
Conduct Needs Assessment	Guidebook primer, presentations, outreach, technical bulletins	Continue to refine and develop technical bulletins as addendums to the primer		
FEMA CRS Quick Check Tool	Initiate pilot program for 1 st of 2 communities	Enroll 2 or 3 communities in CRS	Enroll additional communities in CRS	
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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

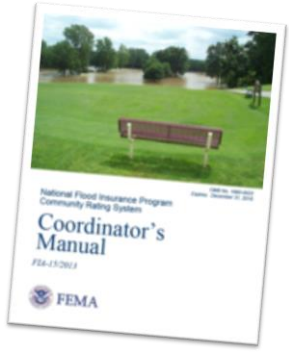


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FEMA'S CRS PROGRAM OVERVIEW

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

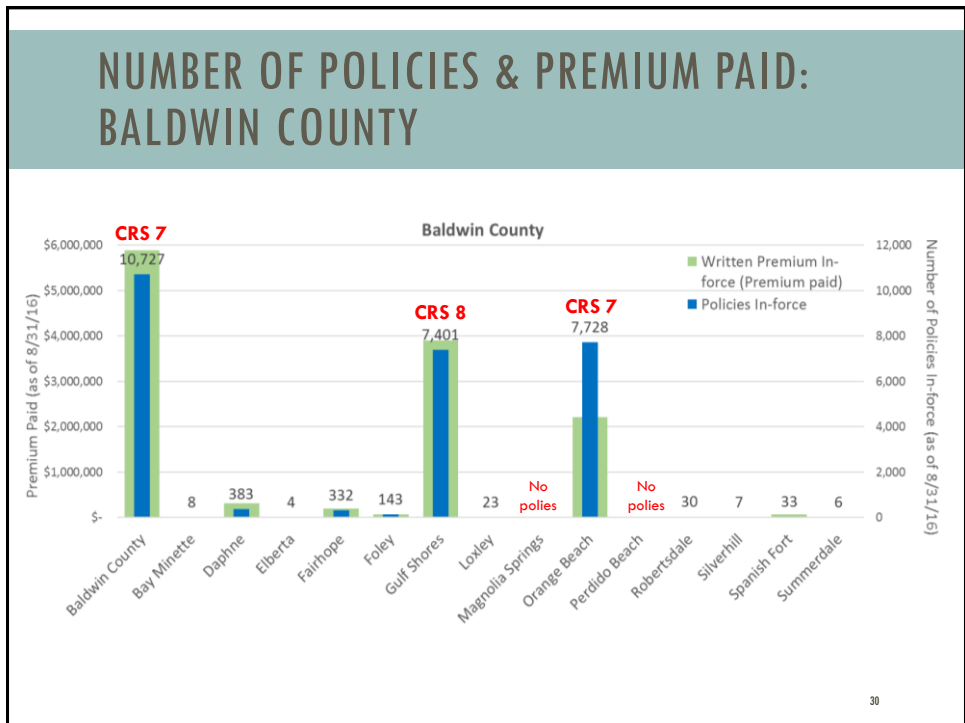
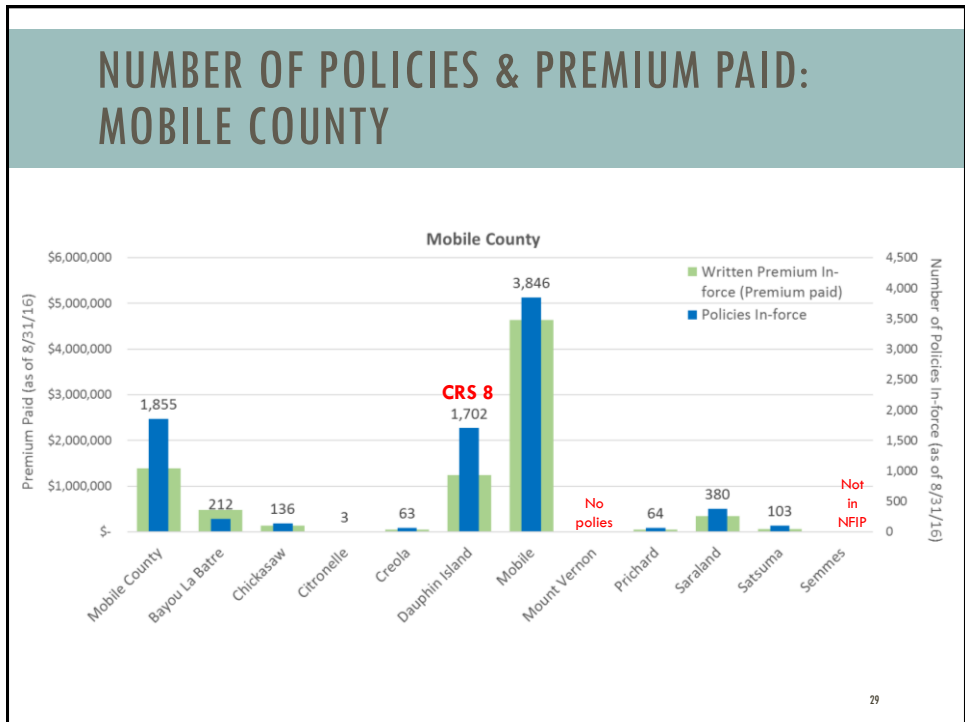
TARGET COMMUNITIES

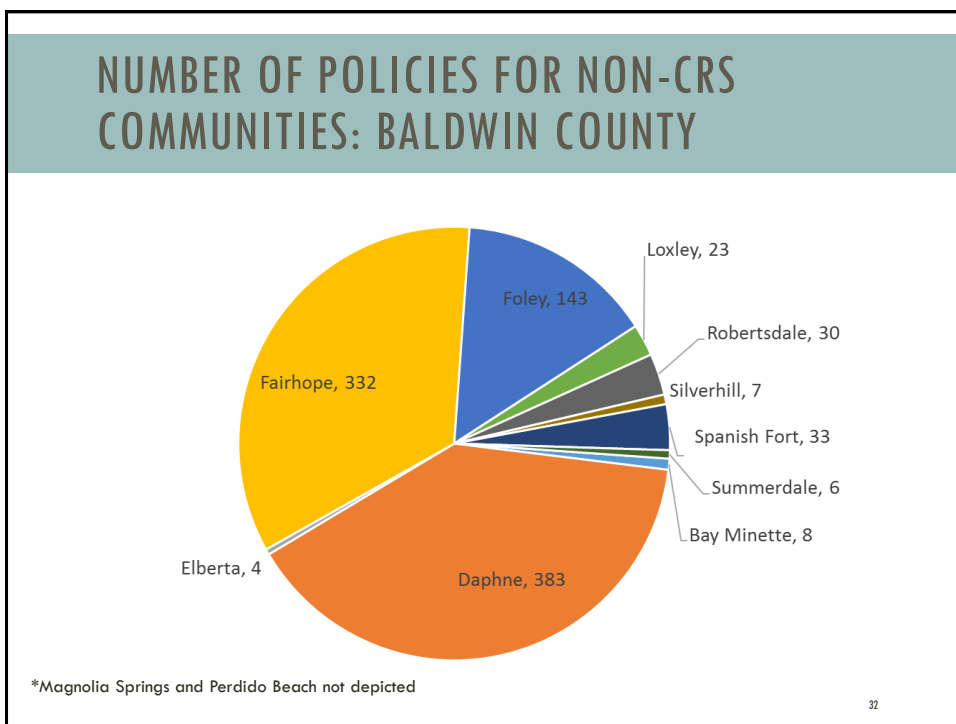
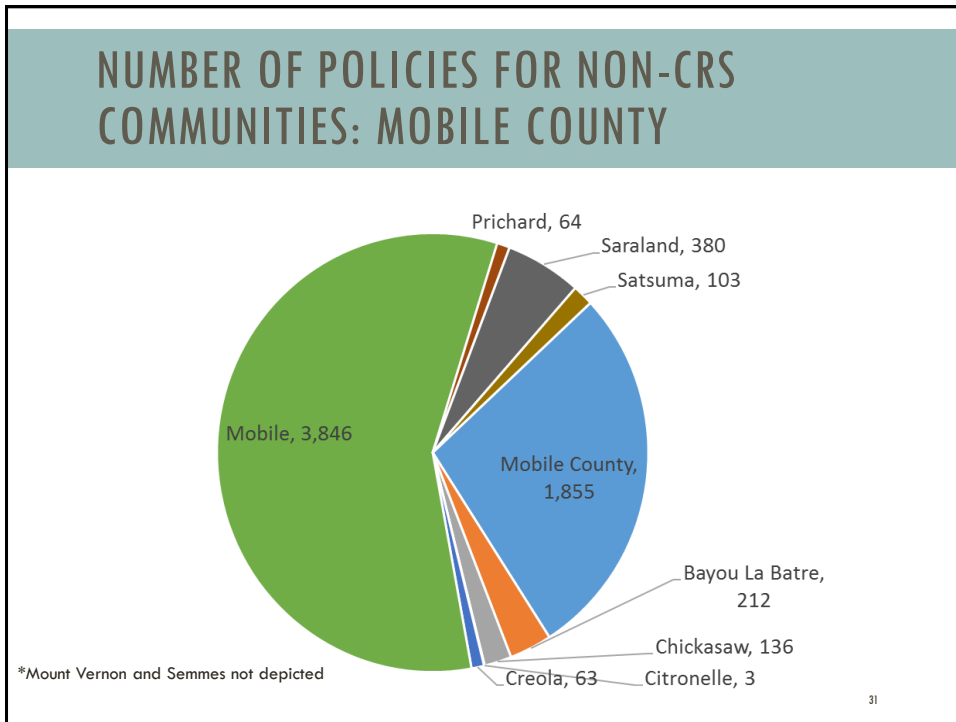
Mobile County

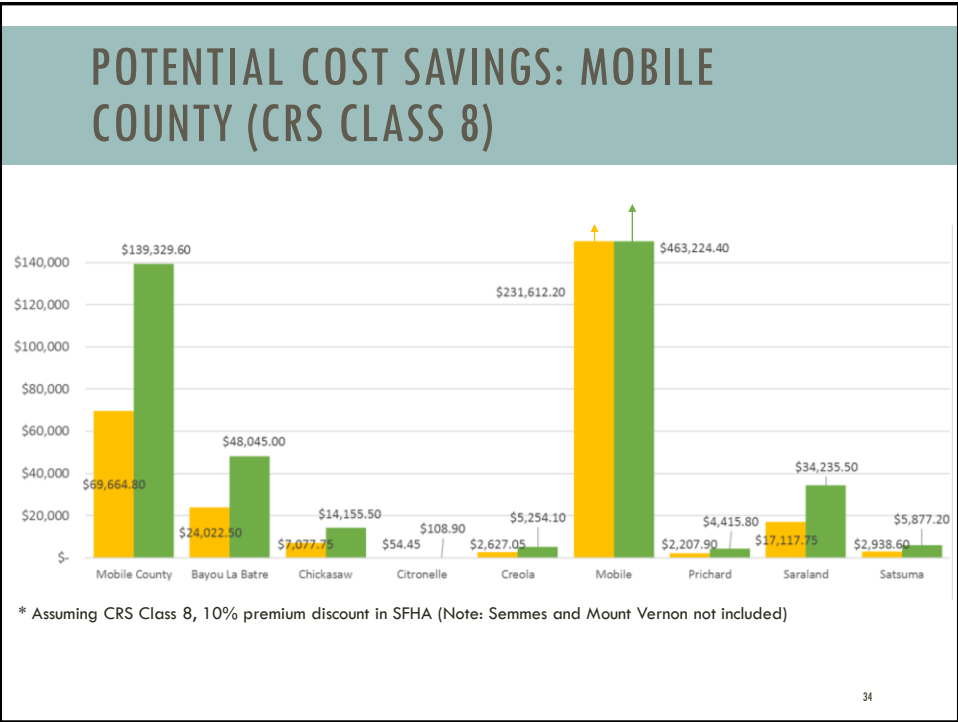
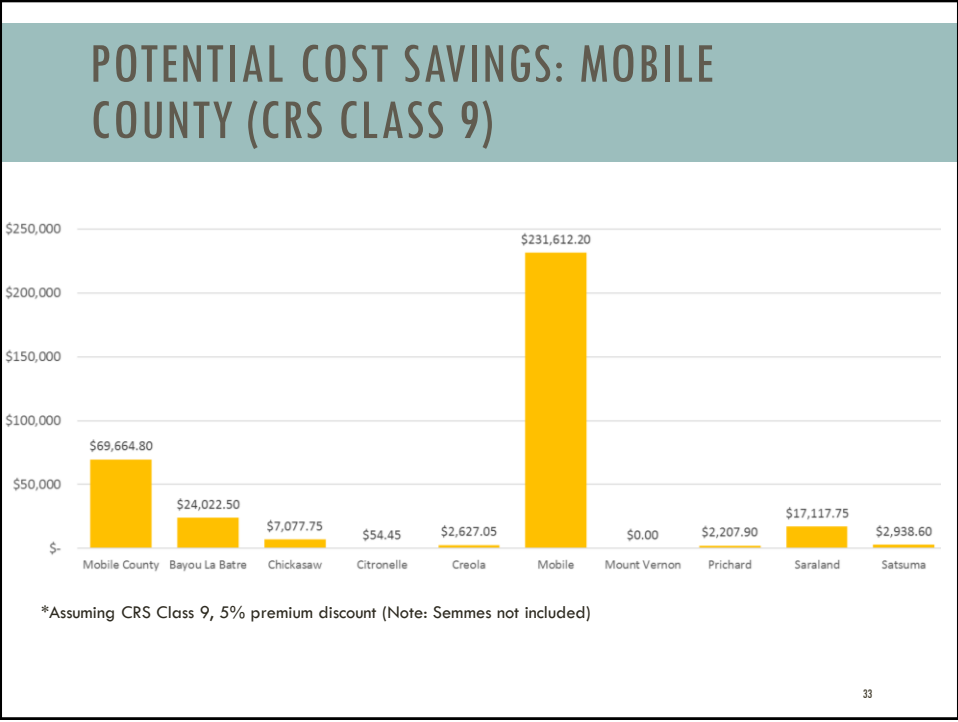
- 11 municipalities
- Semmes not in NFIP
- Mount Vernon in NFIP, no policies
- Dauphin Island in CRS

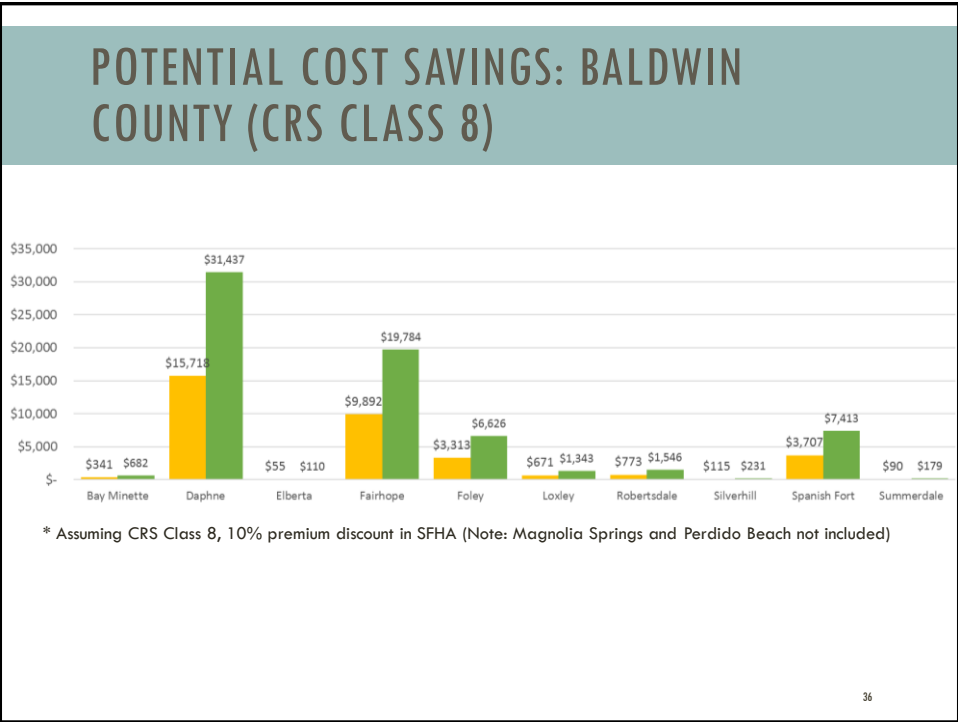
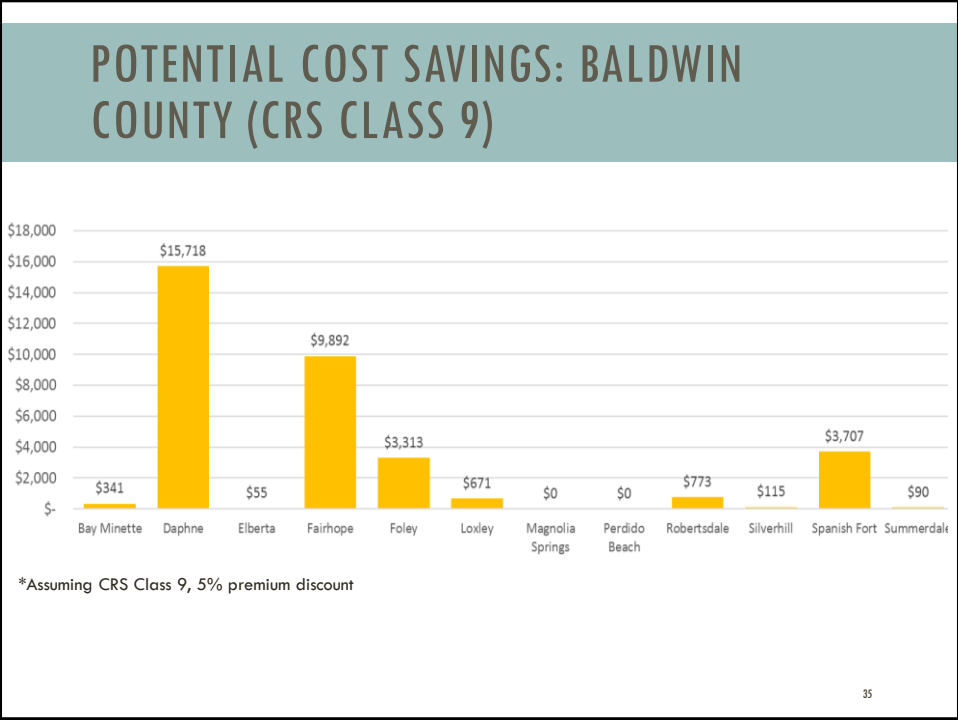
Baldwin County

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









TIMELINE

Year 1	Year 2	Year 3	Year 4	Year 5
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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

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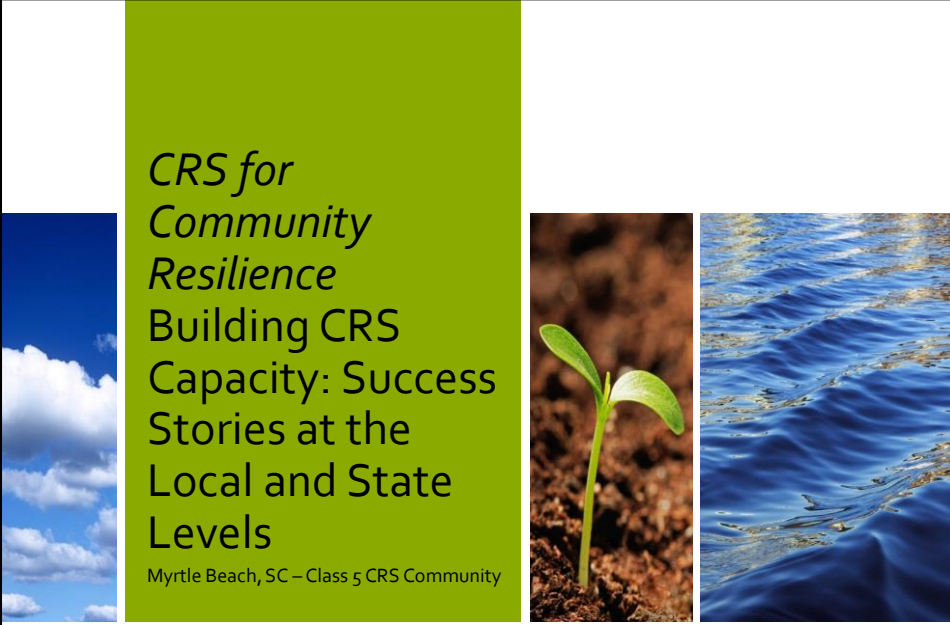
Phillip E. Hinesley
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251-621-1216

QUESTIONS?



*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

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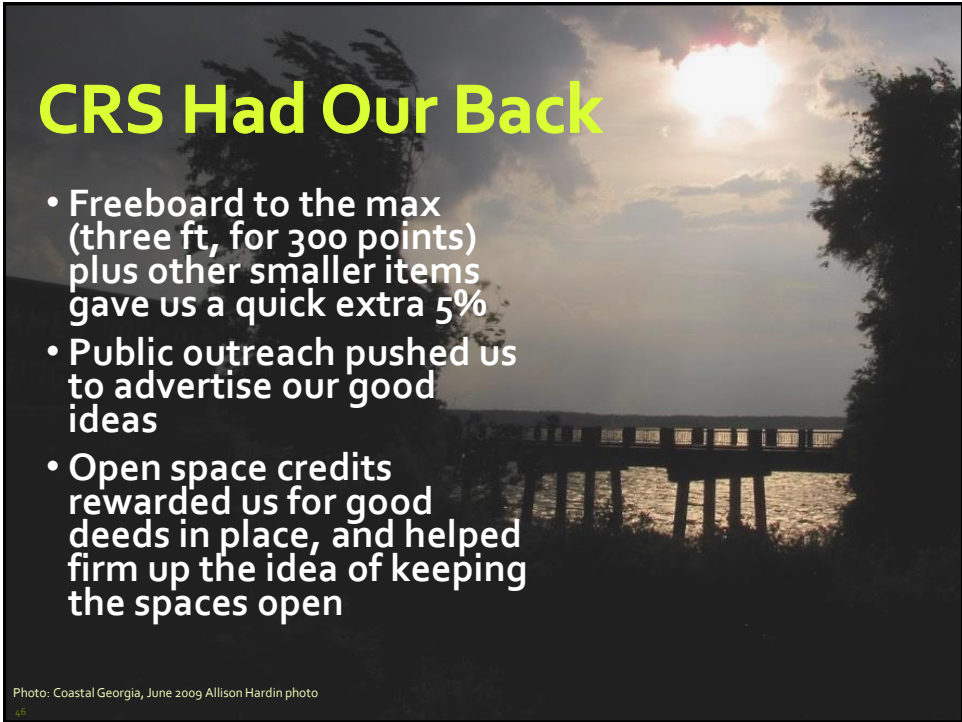




Timing is Everything

- 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

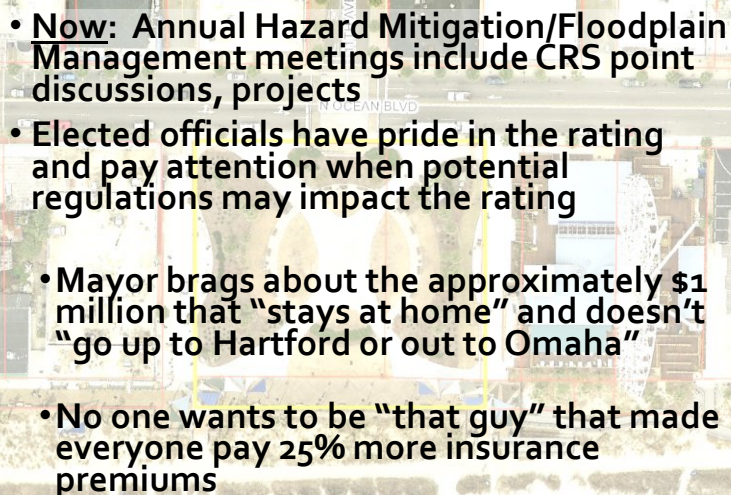
Photo: Coastal Georgia, June 2009 Allison Hardin photo

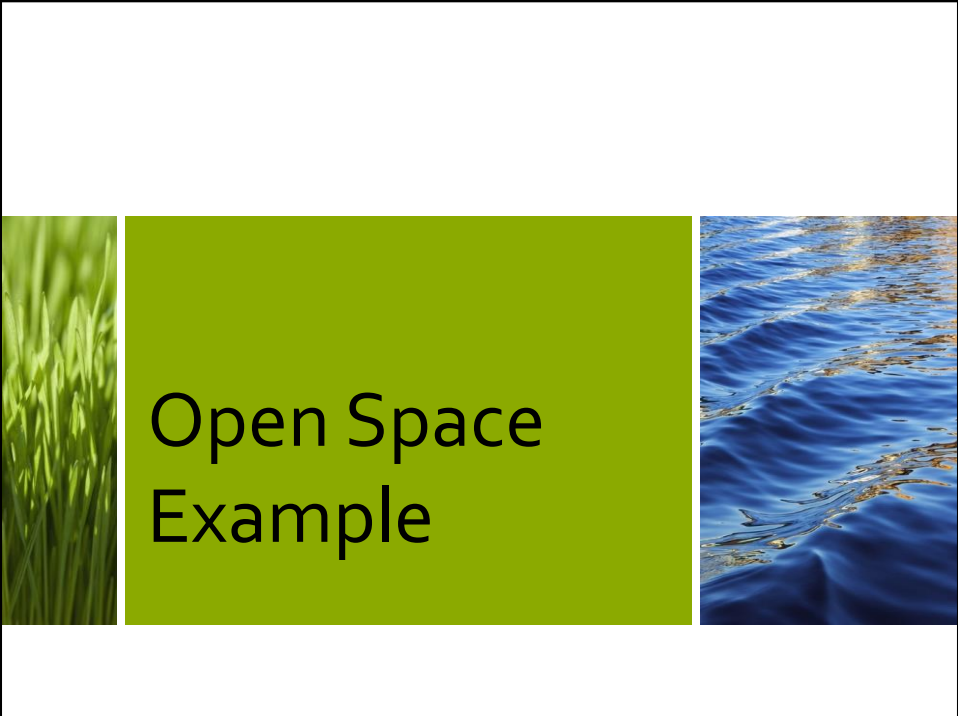
We Had to Work Together for CRS

- 
- Flood Plains in the City of Myrtle Beach
- 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

- 
- WITHERS ALY
OCEAN BLVD
- 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 420 Open Space Preservation is, on average, \$3,532 per community per year (Highfield & Brody, 2013).





Photo: Thomaston, Maine May 2012 – Allison Hardin photo

Element Name	Possible Points
422.g. Natural Floodplain Functions (M17)	20 points
432.a. Outreach Projects (OP)	200 points
432.d. Stakeholder Delivery (STK)	50 points
422.e. More Restrictive Floodway Standard (FWS)	140 points
422.a. Open Space Preservation (OSP)	1,450 points
422.b. Deed Restrictions (DR)	50 points
422.c. Natural Functions Open Space (NFOS)	350 points
422.d. Special Flood Related Hazards Open Space (SHOS)	150 points
422.e. Coastal Erosion Open Space (CEOS)	750 points
422.f. Open Space Incentives (OSI)	250 points
422.g. Low Density Zoning (LZ)	600 points
422.h. Natural Shoreline Protection (NSP)	120 points
432.a. Development Limitations (DL)	1,330 points
432.i. Special Flood-Related Hazard Regulations (SHR)	100 points
432.n. Coastal Erosion Hazard Regulations (CER)	370 points
442.d. Erosion Data Maintenance (EDM)	20 points
452.a. Stormwater Management Regulations (SMR)	380 points
452.b. Watershed Master Plan (WMP)	315 points
452.c. Erosion and Sediment Control Regulations (ESC)	40 points
452.d. Water Quality Regulations (WQ)	20 points
52.c. Natural Floodplain Functions Plan (NFP)	100 points
Activity 520	
522.a. Buildings Acquired or Relocated (bAR), 522.b. Buildings on the Repetitive Loss List (bRL), and 522.c. Severe Repetitive Loss Properties (bSRL)	2,250 points
542.c. Capital Improvement Program (CIP)	70 points

Example: Green (Open) Space Possible Points



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

Photos: Myrtle Beach - Boardwalk/Plyler Park, A-10 Wetland Trail, 2011-- Allison Hardin photos

Open Space Sources

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



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.

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

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The banner features a central green bar with the text 'Tools That Help' in large black font, and 'Maps, Training, Data, Programs...' in smaller black font below it. To the left of the green bar is a vertical image of green grass. To the right is a vertical image of blue water with ripples. On the green bar, there are three logos: a blue water drop containing the ASPPE logo, the APA logo, and the Digital Coast 10 Year Anniversary logo.

The cover of the 'NAI How-To Guide for Planning' features a scenic view of a river and a forest. The title 'NAI How-To Guide for Planning' is prominently displayed. Below the title, it says 'No Adverse Impact Planning How-to Guide • July 2014' and 'Planning' in a stylized font. The table of contents is organized into five sections:

- SECTION ONE: The NAI Approach**
 - 2 Introduction
 - 3 Who Should Use this Guide?
 - 5 Common Terminology used throughout this Guide
 - 7 Section One: The NAI Approach to Floodplain Management
 - 13 The No Adverse Impact Appn
- SECTION TWO: Planning & Floodplain Management**
 - 17 Section Two: Planning & Floodplain Management
 - 19 Types of Plans
 - 22 Eight Factors for Effective Planning
- SECTION THREE: Planning Tools**
 - 25 Section Three: Planning Tools
 - 27 Tool 1: Comprehensive Planning
 - 31 Tool 2: Hazard Mitigation Planning
 - 36 Tool 3: Post-Disaster Planning
 - 44 Tool 4: Risk Assessment
 - Tool 5: Public Involvement
- SECTION FOUR: Case Studies**
 - 54 Section Four: Case Studies & Good Examples of Communities Implementing NAI Planning Tools
 - 55 Plans for the Riverfront: Davenport, IA
 - 60 Plans for Future Flood Risk: Lewis, DE
 - 64 Pre-Disaster Plan for Post-Disaster Redevelopment: Hillsborough County, FL
 - 69 Post-Disaster Hazard Mitigation Plan: Conway, SC
 - 74 Working with Allies in Contra Costa County, CA
 - 76 Examples of coordinated plans
- SECTION FIVE: Resources & Fact Sheet**
 - 81 Section Five: Resources & Fact Sheet

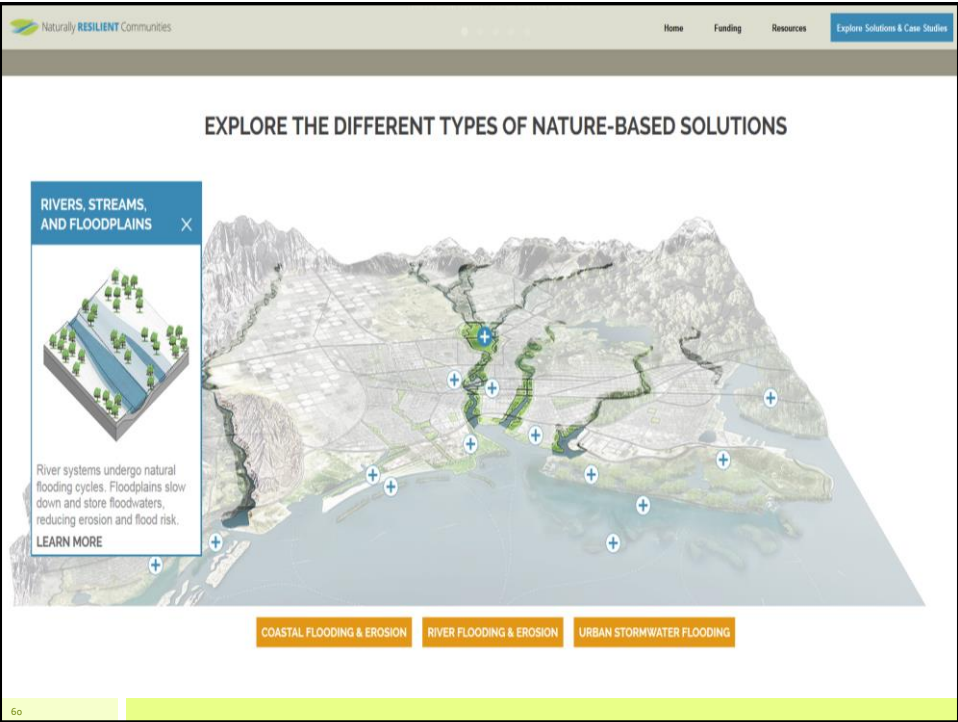
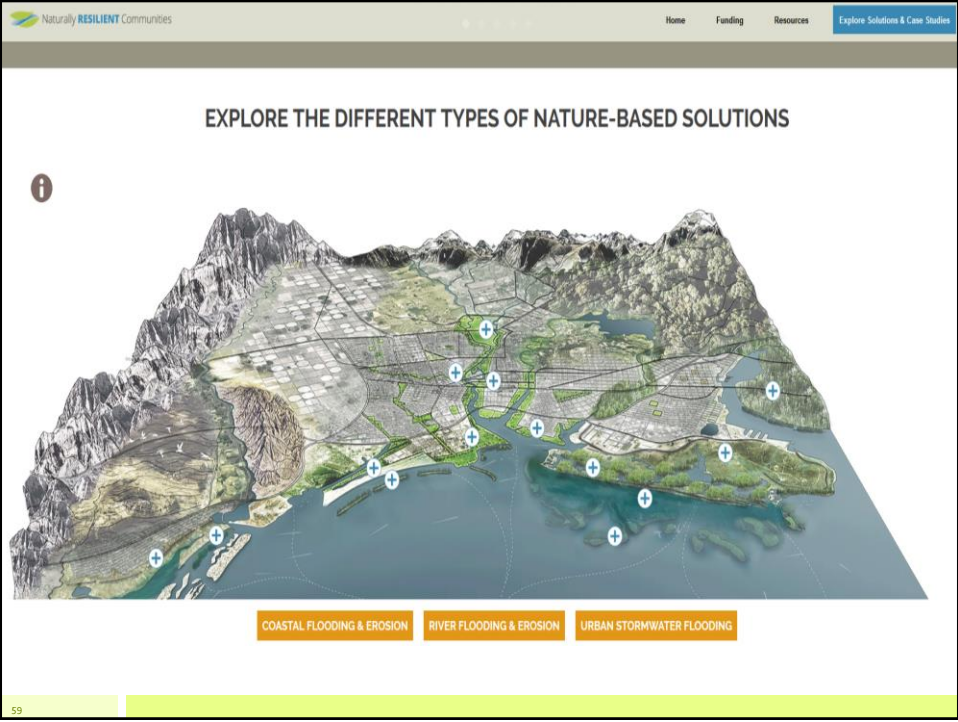
- Find the NAI Guidebooks at www.floods.org
- No membership needed to download the resources on site
- CNAI handbook last updated in 2007
 - Takes the NAI and puts the principles to use in the coastal environment

The screenshot shows the website for the Association of State Floodplain Managers (ASFPM). The main navigation menu includes: About ASFPM, ASFPM Membership Information, Certification Program (CFM™), Conferences & Events, Training and Education, Committees, Chapter and State Contacts, State/Local Resources and Tools, Flood Maps & Data, National Policy and Programs, Publications and Policy Papers, Press Room, and Job/RFP Postings. The 'No Adverse Impact (NAI)' section is highlighted, listing the 'NAI Toolkit' and 'NAI Toolkit How-to Guides' which include:

- Regulations & Development Standards How-to Guide (4/2017) **New**
- Education & Outreach How-to Guide (9/2015)
- Planning How-to Guide (9 MB) (5/2015)
- Mitigation How-to Guide (8/2016)
- Infrastructure How-to Guide (8/2016)

 Other NAI Resources listed include:

- NAI - A Common Sense Strategy for Floodplain Management (1.9MB)
- NAI Publications
- NAI Legal Issues
- NAI Case Studies, 2004
- Good Examples Brochure
- NAI Coastal Zone Handbook
- NAI Coastal Zone Handbook - Spanish Version
- NAI in the Coastal Zone - Case Studies
- Case Histories: Light Station Relocation Project
- CFM Certification Helped Support Disaster Response
- Louisiana - GIS Makes Storm Risk Graphic
- Oregon Coastal Atlas



<http://nrcsolutions.org/>

- No membership needed to access the web site
- 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](#) includes the following partners:

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 promote 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 flood risk reduction.

[ABOUT](#) [DATA](#) [TOOLS](#) [TRAINING](#) [TOPICS](#) [STORIES](#) [SEARCH](#)

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.

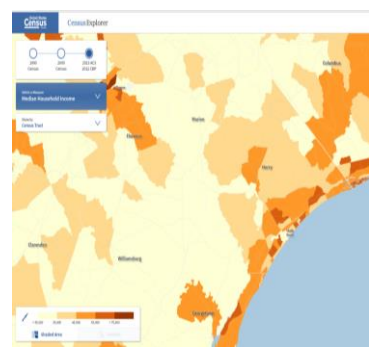
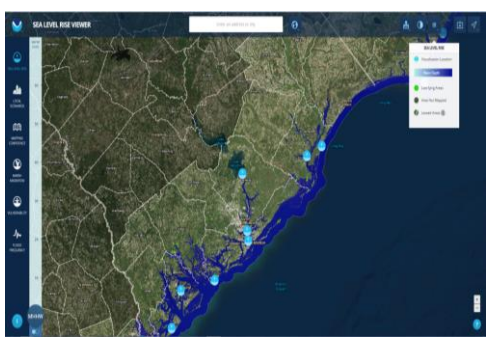
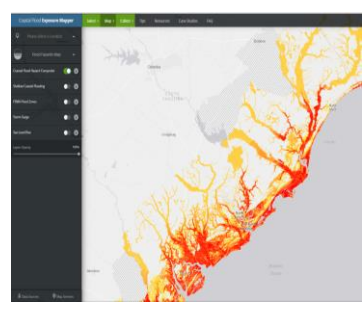
What is Digital Coast?

Top
5
Popular
Staff Picks
New

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.

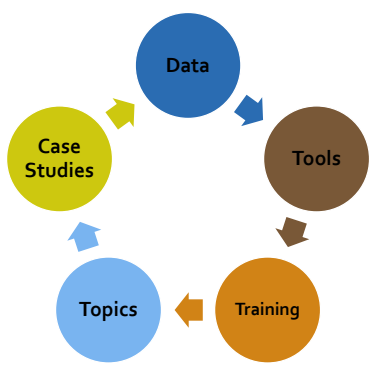
Learn more in our About section, or just dive in. And please provide feedback as often as possible. Hearing from you is what makes the Digital Coast work.



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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



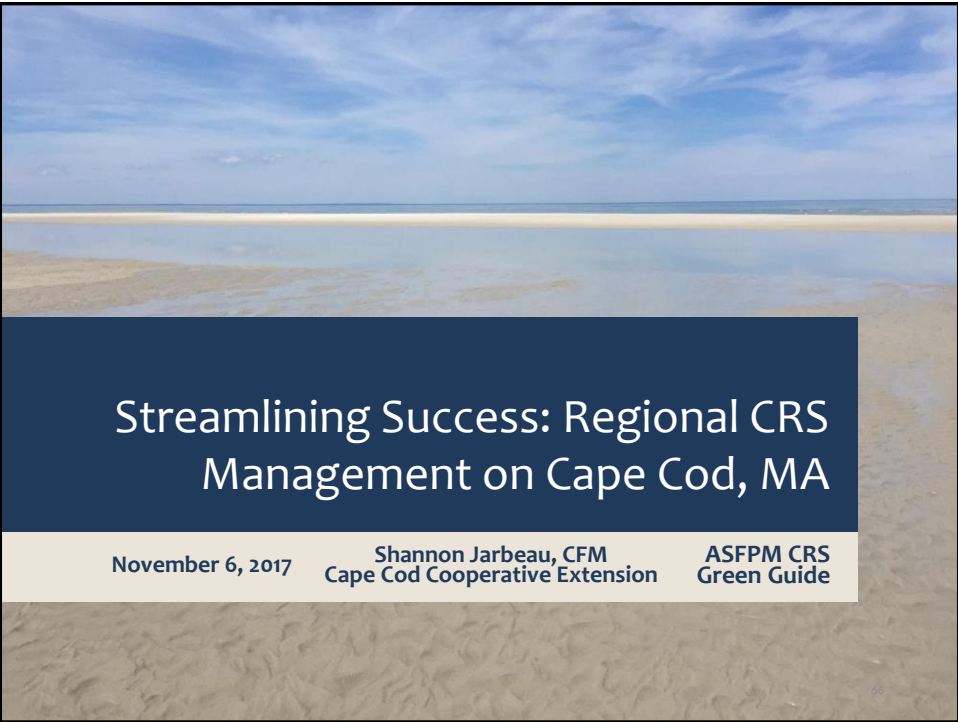
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Thank you!

Allison Hardin, CFM
ahardin@cityofmyrtlebeach.com
843-918-1059

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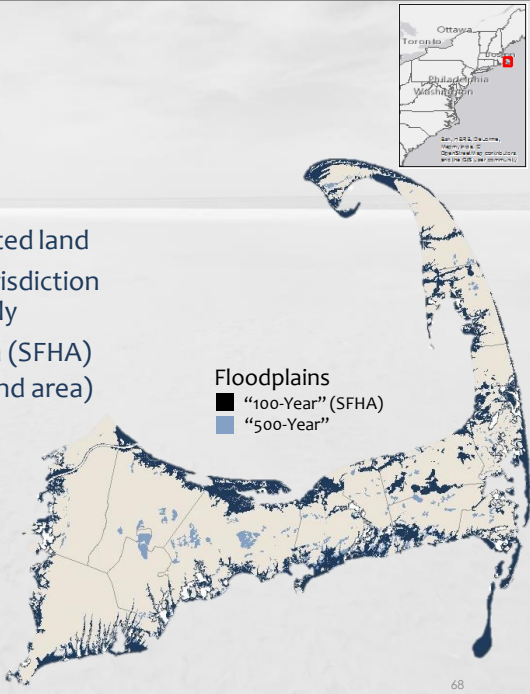
Streamlining Success: Regional CRS
Management on Cape Cod, MA

November 6, 2017 Shannon Jarbeau, CFM
Cape Cod Cooperative Extension ASFPM CRS
Green Guide



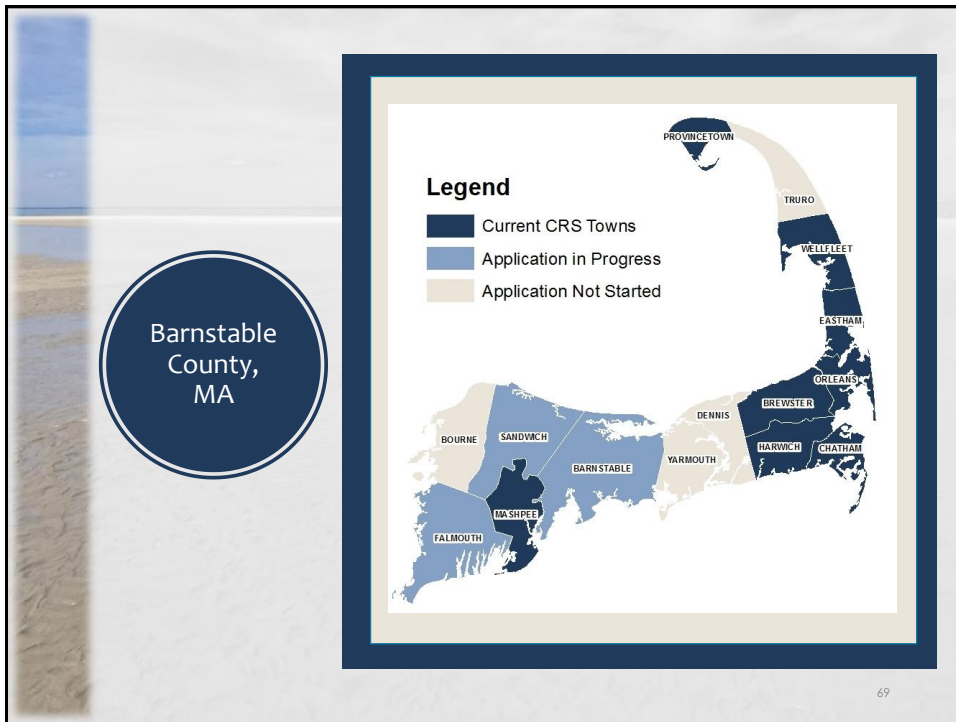
Background

- 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



Floodplains
■ "100-Year" (SFHA)
■ "500-Year"

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Cape Cod CRS Communities

Community	Discount	Total Savings	Policyholders
Brewster	5%	\$2,341	39
Chatham	10%	\$46,363	316
Eastham	10%	\$14,323	110
Harwich	10%	\$56,297	605
Mashpee	10%	\$56,923	500
Orleans	5%	\$11,467	133
Provincetown	5%	\$67,734	1048
Wellfleet	10%	\$21,413	156
TOTAL	NA	\$277,000	3,000

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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

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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

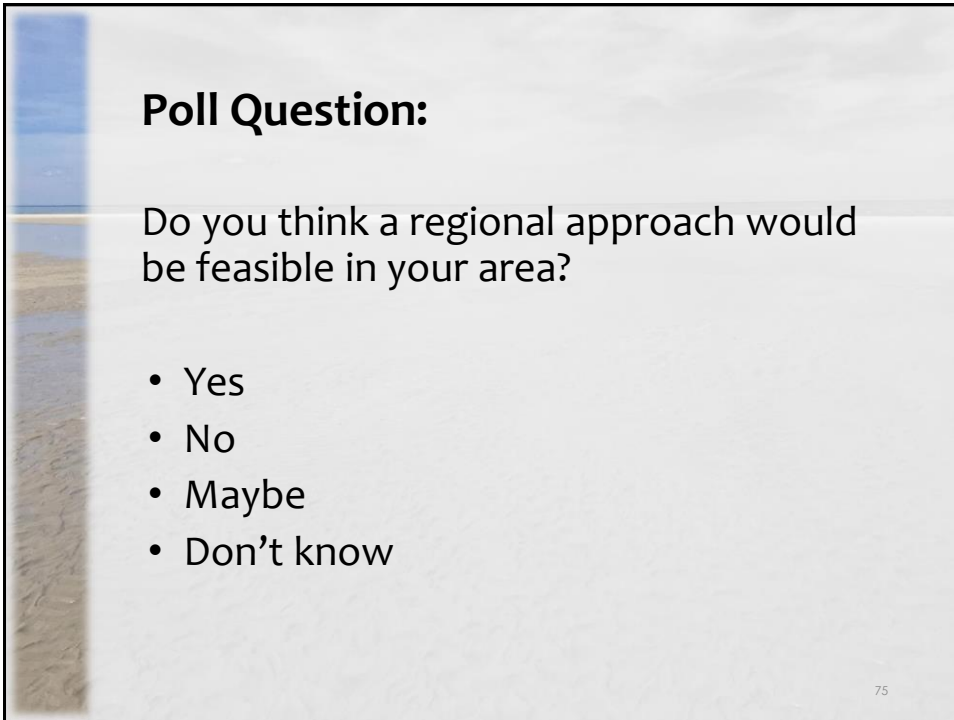


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Successes from the First Two Years

- 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

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Open Space and
the CRS

Open Space Preservation




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

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

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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")

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Questions?

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(508) 375-6952

Coastal Resilience Webinars 

Coastal Resilience through Community Engagement Webinars

<https://www.floodsciencecenter.org/products/crs-community-resilience/webinars/>

-OR-

<http://bit.ly/2ys6650>

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