

A photograph of a residential street that is completely flooded with water. In the foreground, a yellow police barrier with the text "CHAS POLICE DEPT" is partially submerged. To the right, a red octagonal stop sign with a smaller "ALL WAY" sign below it stands in the water. A dark-colored SUV is visible in the distance, driving away from the viewer. The background shows houses and trees, all partially obscured by the floodwater.

Leveraging the Community Rating System for Climate Adaptation

**Southeast and Caribbean Climate
Community of Practice**

Webinar Series
23 March 2015



Today's Speakers:

Shana Jones, J.D., Carl Vinson Institute of Government at the University of Georgia

Shannon Jarbeau, CFM, Wetlands Watch

Ed DiTommaso, AICP, GISP, Ecological Planning Group

Allison Hardin, CFM, City of Myrtle Beach, South Carolina

* Presentation given by Liz Fly, CISA & SC Sea Grant Consortium

Please MUTE your phones!
(*6)

Type your questions into
the chat box for Q&A at the
end

LEVERAGING CRS FOR CLIMATE ADAPTATION


CARL
VINSON INSTITUTE
OF GOVERNMENT
The University of Georgia



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WWW.WETLANDSWATCH.ORG



Shana Jones, Carl Vinson Institute of Government, UGA
Shannon Jarbeau, Wetlands Watch
Southeast & Caribbean Climate Community of Practice

AGENDA

NFIP: A Quick Overview

Recent Changes to NFIP

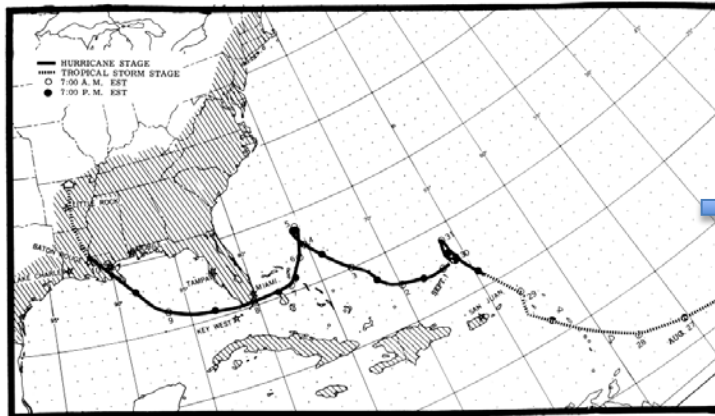
CRS Overview & Sea Level Rise

Leveraging Existing CRS Activities for
Adaptation



NFIP & CRS: A QUICK OVERVIEW

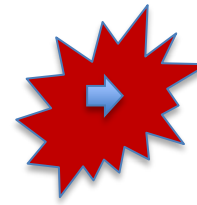
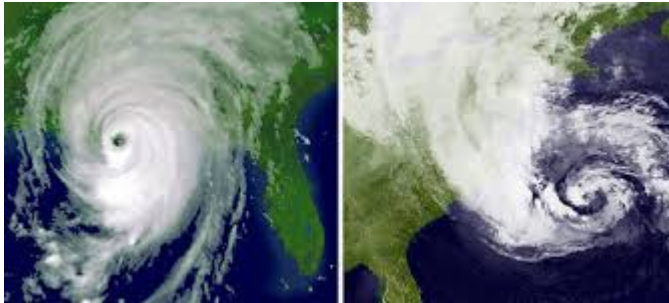
HURRICANE Betsy Track
Aug. 27 – Sept. 12, 1965



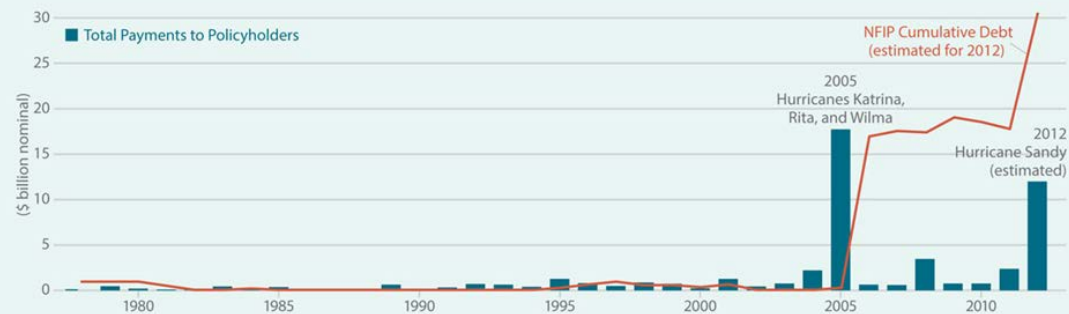
- Identification of flood risk → Flood maps
- Development of building standards in high risk areas → Flood ordinance: minimum standards
- Make flood insurance available in participating communities → Federally-subsidized flood insurance



NFIP: RECENT CHANGES



National Flood Insurance Program Debt Grows

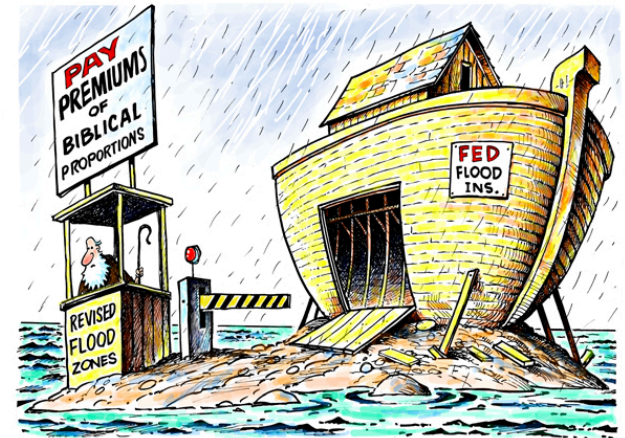


Sources: FEMA 2013a; estimate for 2012 NFIP payments for Hurricane Sandy from King 2013; estimate for 2012 NFIP debt based on its borrowing limit of \$30.4 billion set by the Hurricane Sandy Relief Act.



NFIP: PREMIUM INCREASES

- Non-primary residences, non-residential properties, Severe Repetitive Loss, or substantially damaged/improved properties will increase 25% per year
- All other properties: Average 10% increase, maximum of 18% annual increase
- **BUT** these increases does not include HFIAA surcharge or Federal Policy Fee
- True rate increase will be 20% on average, could be up to 37% for subsidized structures that are not primary homes



DAVE GRANLUND © www.davegranlund.com

Source: www.davegranlund.com



NFIP: RECENT CHANGES

New/Increased Fees	
HFIAA Surcharge	\$25 for primary residence; \$250 for all others
Federal Policy Fee	\$22 for lowest risk, \$45 for all others
Reserve Fund Assessment	10% for lowest risk, 15% for all others



CRS: A QUICK OVERVIEW



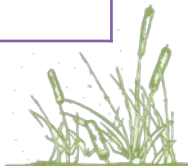
*CRS is a **voluntary** program offering discounts on flood insurance to reward good floodplain management within a community. A primary goal is to reduce flood damage to insurable property.*



CRS: A QUICK OVERVIEW

CRS Rating Table

Class	Points	Premium Reduction
1	4500+	45%
2	4000-4499	40%
3	3500-3999	35%
4	3000-3499	30%
5	2500-2999	25%
6	2000-2499	20%
7	1500-1999	15%
8	1000-1499	10%
9	500-999	5%
10	0-499	0%



CRS: A QUICK OVERVIEW



300 Series: Public Information

Elevation certificates, outreach, hazard disclosure

400 Series: Mapping and Regulations

Open space preservation, stormwater management

500 Series: Flood Damage Reduction

Acquisition/relocation, floodplain management planning

600 Series: Warning and Response

Flood warning and response, dams, levees



CRS & SEA LEVEL RISE: A QUICK OVERVIEW

*In 2013, Section 110-15 of the Manual listed credits “for community efforts to **anticipate the future** insofar as it relates to flood risk and natural floodplain functions, and to take actions that can mitigate any adverse impacts that could materialize.”*

This is a good first step for policy. BUT the credits possible are less robust than first appears – focus on other activities already in the Manual are likely to do more for adaptation purposes AND generate more credits.



Category	Measure	Maximum credits available
Public Information Activities (Series 300)	Map Information Service: provide inquirers with information about local flood hazard and about flood-prone areas that are predicted to be susceptible to flooding in the future	20 pts.
	Hazard Disclosure: real estate agents disclose to prospective buyers a property's potential flood hazard before the lender notifies the prospective buyers of the need for flood insurance	8 pts.
Mapping and Regulation (Series 400)	Program Prerequisite: community must demonstrate that it has programs which minimizes increases in future flooding	Prerequisite to become a Class 4 or better community
	Program Prerequisite: community is using regulatory flood elevations in the V and coastal A zones that reflect future conditions, including sea level rise	Prerequisite to become a Class 1 or better community
	Floodplain Mapping: based on future-conditions hydrology, provided that the community's floodplain development regulations use base flood elevations based on future. When on the coast, a community must use an estimate of the sea level rise anticipated by the year 2100 or later.	160 pts.
	Stormwater: if a community's stormwater program regulates runoff from future development. Must regulate runoff from a 10-year storm or larger. Must be legally enforceable.	380 pts.
	Stormwater: community's Watershed Master Plan manages future peak flows so that they do not exceed present values	315 pts.
Flood Damage Reduction Activities (Series 500)	Floodplain Management Planning: flood hazard assessment and problem analysis address areas likely to flood and flood problems that are likely to get worse in the future <u>Step 4:</u> requires community planners to review and analyze data from existing flood studies to asses the sources, frequency, extent, and causes of flooding <u>Step 5:</u> requires community planners to collect and summarize data on what is at risk	Step 4: 35 pts. Step 5: 52 pts.
		Total credits available: 870

CRS & SEA LEVEL RISE: A QUICK OVERVIEW



Hunter Jones, a third-year law student at the University of Georgia School of Law, is preparing policy memos focusing on the participation of coastal Georgia cities and counties in the Community Rating System (CRS), a federal program incentivizing communities to take steps to reduce their flood risk. Jones has focused her legal studies on environmental law and is interested in a career in environmental policy. She served as co-chair of the 2015 Red Clay Conference, an environmental law conference at the UGA School of Law.

CRS AND SEA LEVEL RISE: LEVERAGING EXISTING ACTIVITIES FOR ADAPTATION

3 Adaptation Approaches:



Management/Retreat



Accommodation



Protection



CRS AND SEA LEVEL RISE: MANAGEMENT/RETREAT

- Open space planning tools
 - Cluster development
 - Low-density zoning
 - Land preservation tax credits
- Open space preservation
- Acquisition/relocation



CRS AND SEA LEVEL RISE: ACCOMMODATION

- Local ordinances
 - Freeboard
 - Coastal A-Zone regulations
 - Limiting development in the floodplain
- Building mitigation
- Stormwater Management
- Emergency warning and response



CRS AND SEA LEVEL RISE: PROTECTION

- Structural flood control
- Dune protection
- Beach nourishment
- Wetland protection, creation, and restoration



WETLANDS WATCH CRS REPORT

March 2015

FLOOD PROTECTION PAY-OFFS

A LOCAL GOVERNMENT GUIDE TO THE
COMMUNITY RATING SYSTEM



WETLANDS
WATCH

WWW.WETLANDSWATCH.ORG

Lead Author: Shannon Hulst Jarbeau, CFM
Contributing Author: Mary-Carson Stiff, JD, CFM

Review Draft

Flood Protection Pay-Offs: A Local Government Guide to the Community Rating System

www.wetlandswatch.org/WetlandScience/SeaLevelRise/CRSGuide.aspx

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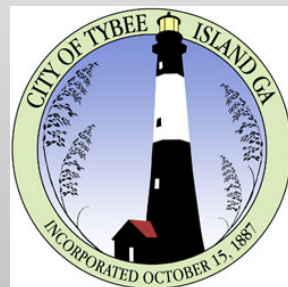




CRS AUDIT

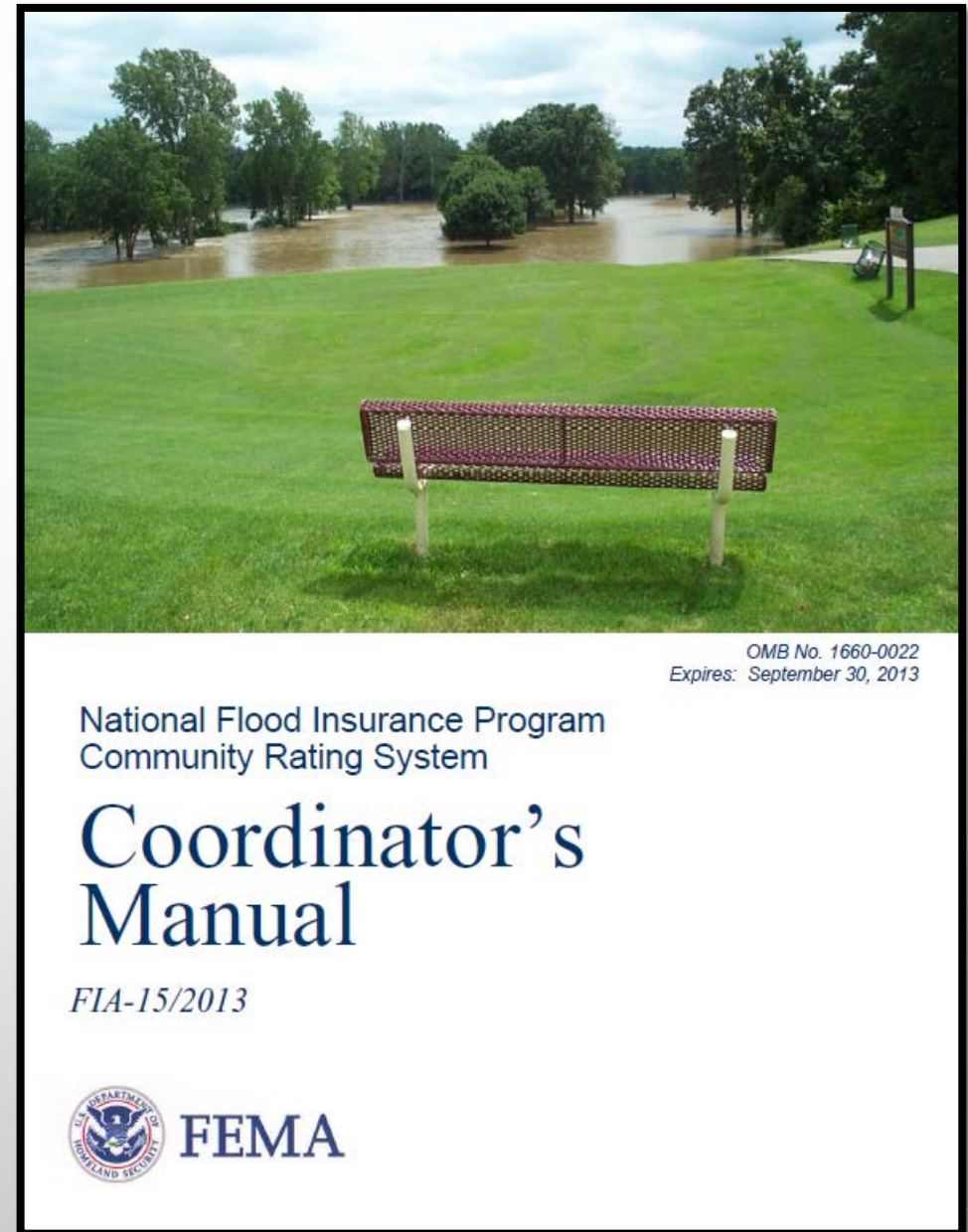
A STUDY ON TYBEE ISLAND'S CRS AND OPEN SPACE PROGRAM

National Flood Insurance Program
Community Rating System
March 23, 2015



BACKGROUND

- CRS RECERTIFICATION & CYCLE VISIT
APRIL 2014
- NEW CRS MANUAL 2013
- CHANGES TO ACTIVITIES / CREDITS
- BIGGERT WATERS ACT/HOMEOWNER
FLOOD INSURANCE AFFORDABILITY
ACT OF 2014



TYBEE ISLAND – CRS PROGRAM AUDIT

CATEGORIES OF FLOODPLAIN MANAGEMENT ACTIVITIES:

- PUBLIC INFORMATION
- MAPPING AND REGULATIONS
- FLOOD DAMAGE REDUCTION
- WARNING AND RESPONSE



<i>Activity</i>		<i>Activity Name</i>	<i>2007 Manual</i>	<i>Tybee Score (2009)</i>	<i>Percent</i>	<i>2013 Manual</i>	<i>Percent Change</i>
300	310	Elevation Certificates	162	56	35%	116	-28%
	320	Map Information Service	140	140	100%	90	-36%
	330	Outreach Projects	315	207	66%	350	11%
	340	Hazard Disclosure	81	10	12%	80	-1%
	350	Flood Protection Information	102	83	81%	125	23%
	360	Flood Protection Assistance	71	54	76%	110	55%
	370	Flood Insurance Promotion	65	0	0%	110	69%
400	410	Floodplain Mapping	1346	10	1%	802	-40%
	420	Open Space Preservation	900	160	18%	2020	124%
	430	Higher Regulatory Standards	2740	201	7%	2042	-25%
	440	Flood Data Maintenance	239	56	23%	222	-7%
	450	Stormwater Management	670	15	2%	755	13%

OPEN SPACE PRESERVATION

• Open Space Preservation (OSP)	1 450 POINTS
• Deed Restrictions (DR)	50 POINTS
• Natural Functions Open Space (NFSP)	350 POINTS
• Special Flood-Related Hazard Open Space (SHOS)	50 POINTS
• Open Space Incentives (OSI)	250 POINTS
• Low-Density Zoning (LZ)	600 POINTS
• Natural Shoreline Protection (NSP)	1 20 POINTS

OPEN SPACE PRESERVATION

- Open Space Preservation (OSP)
- Deed Restrictions (DR)
- Natural Functions Open Space (NFSP)
- Special Flood-Related Hazard Open Space (SHOS)

- Open Space Incentives (OSI)
- Low-Density Zoning (LZ)
- Natural Shoreline Protection (NSP)

**Credit specific to
properties**

**Credits local
regulations**

Total Site
6 Acres

Area in SFHA
3 Acres



Total Site
6 Acres

Area in SFHA
3 Acres

Impervious Area in
SFHA

0.75 Acres

OSP Eligible
2.25 Acres



Total Site

6 Acres

Area in SFHA

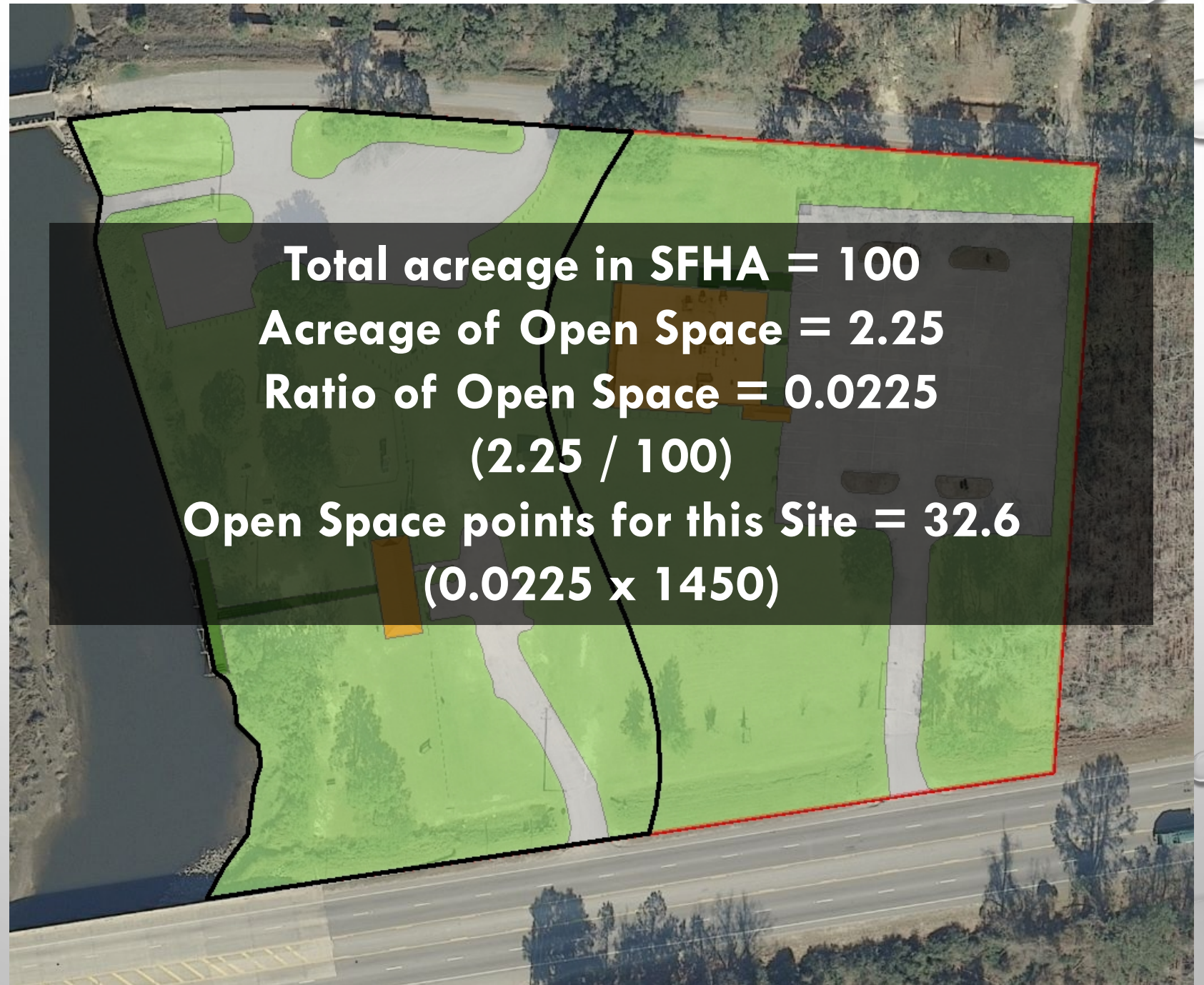
3 Acres

Impervious Area in
SFHA

0.75 Acres

OSP Eligible

2.25 Acres



OPEN SPACE PRESERVATION

- TOTAL ACREAGE OF THE CITY
 - 2,046 ACRES
- TOTAL ACREAGE OF SPECIAL FLOOD HAZARD AREA
 - 1,768 (86% OF CITY)
 - AE ZONE, 1,200 ACRES (59%)
 - VE ZONE, 568 ACRES (28%)
- Beach
- Dunes
- Parks
- Coastal Marshlands
- Conservation Easements
- Other

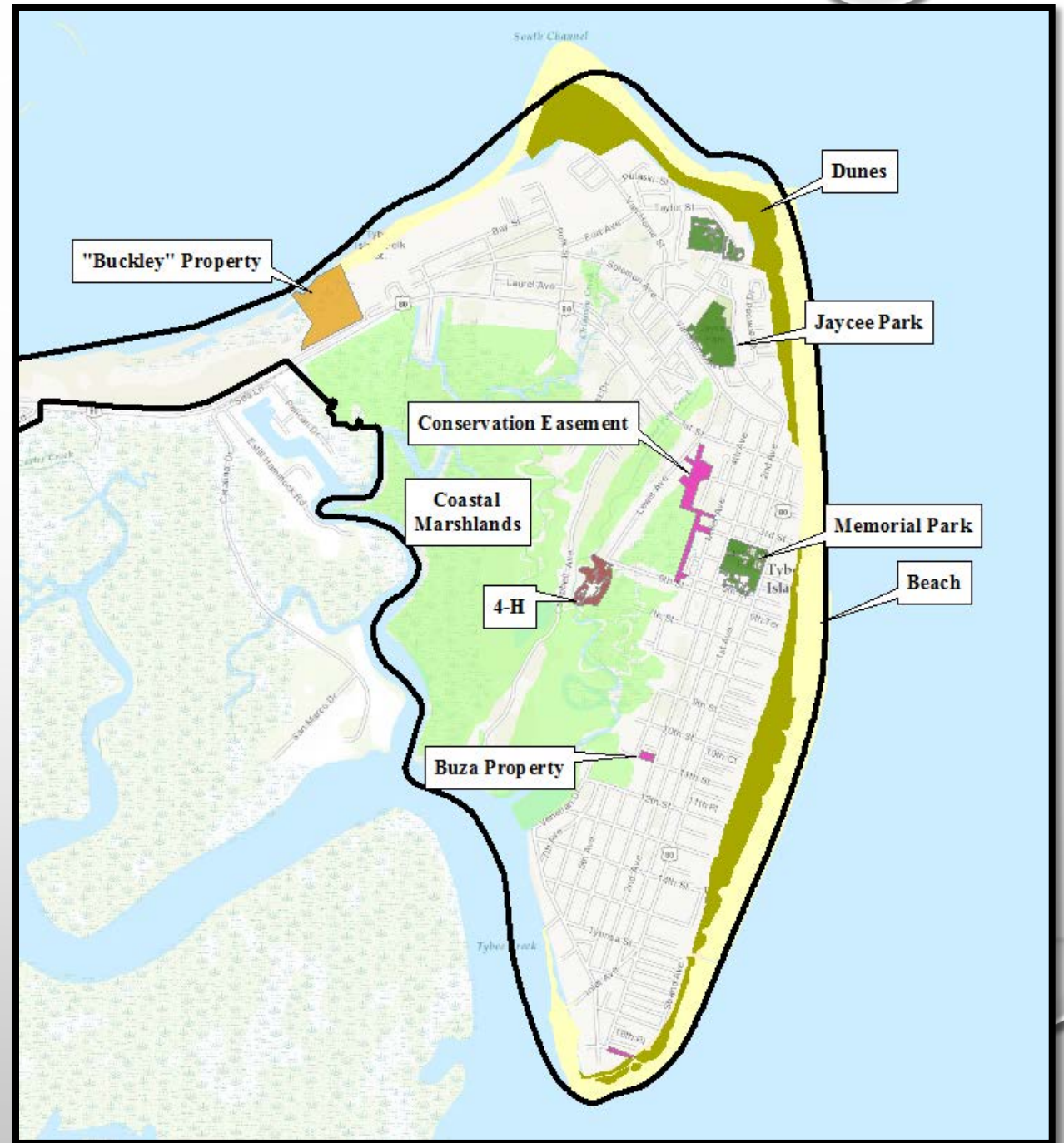
$$aOSP / aSFHA = rOSP$$

$$rOSP * 1450 = \text{Open Space Points}$$

OPEN SPACE PRESERVATION (OSP)

	<i>αOSP</i>	<i>$rOSP = (OSP / \alpha SFHA)$</i>	<i>OSP Points ($rOSP * 1450$)</i>
Beach	200.1	0.113	164.11
Dunes	108.6	0.061	89.07
Memorial Park	7.2	0.004	5.90
Jaycee Park	9.4	0.005	7.71
<i>Tybee Lighthouse *</i>	6	0.003	4.92
Coastal Marshlands	502.25	0.284	411.92
<i>4-H Center *</i>	6.31	0.004	5.18
Buza Property	0.6	0.000	0.49
Sallie Pearce	7.4	0.004	6.07
19th Street - Conservation	0.6	0.000	0.49
Buckley Property - Hwy 80	16.4	0.009	13.45

OPEN SPACE PRESERVATION



COASTAL MARSHLANDS / SHORELINE PROTECTION ACT

- GENERAL ASSEMBLY DECLARES THAT COASTAL MARSHLANDS OF GA ARE A VITAL NATURAL RESOURCE SYSTEM
- MARSHLANDS / SHORELINES PROVIDE THE FOLLOWING
 - HABITAT
 - NUTRIENTS
 - BUFFERS AGAINST FLOODING AND EROSION
 - DISSEMINATE POLLUTANTS
 - NATURAL RECREATIONAL RESOURCE
 - ECONOMIC RESOURCE





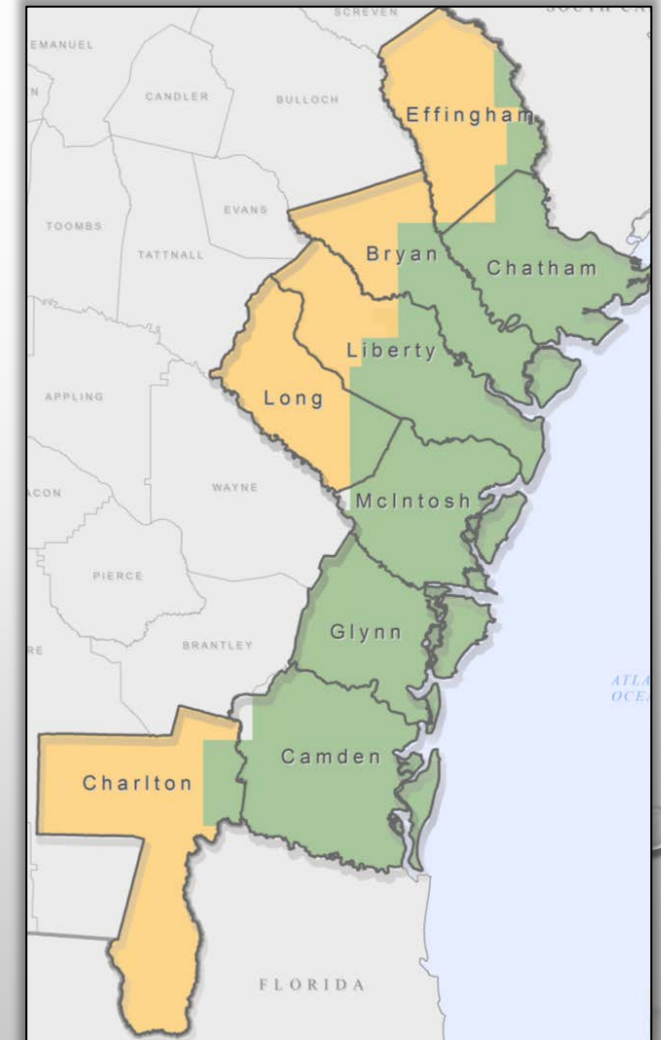
ONGOING COASTAL INITIATIVES THAT BENEFIT NFIP AND CRS PROGRAMS

National Flood Insurance Program
Community Rating System
March 23, 2015



OTHER COASTAL RELATED INITIATIVES

COASTAL STORMWATER SUPPLEMENT ELEMENTS
COUNTY HAZARD MITIGATION PLAN
COASTAL GEORGIA FLOOD MAP PROJECT
ONLINE GIS RESOURCES
COASTAL GEORGIA CRS USER GROUP
GENERAL STORMWATER O&M



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Making Things Better

How the CRS Helped Myrtle Beach, SC



Timing is Everything

- We joined the CRS program 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

CRS Had Our Back

- Freeboard to the max (3 ft, or 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

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

Flood Plains in the City of Myrtle Beach





Team CRS

- Now: Floodplain Management/Hazard Mitigation plan update meetings often include CRS point discussions, projects
- Now: Elected officials have pride in the rating and pay attention when potential regulations may impact the rating
 - No one wants to be “that guy” that made everyone pay 25% more insurance premiums

Results

- Citizens with floodplain policies in the city limits save over \$1 million annually due to programs – that's money that stays in our community.



CRS – Just Do It!

Allison Hardin, CFM
Planner

City of Myrtle Beach
PO Box 2468

Myrtle Beach, SC 29578
843.918.1059

ahardin@cityofmyrtlebeach.com

<http://www.cityofmyrtlebeach.com/flood.html>

Community:	VIRGINIA BEACH, CITY OF	State:	VIRGINIA
County:	VIRGINIA BEACH CITY 	CID:	515531

Current CRS Class = 10

[\[Printable Version\]](#)

		TOTAL	SFHA *	X-STD/AR/A99 **	PRP ***
	PIF	24,039	9,302	3,457	11,280
	PREMIUM	\$14,112,971	\$7,539,326	\$1,847,684	\$4,725,961
	AVERAGE PREMIUM	\$587	\$811	\$534	\$419
CRS Class					
09	Per Policy	\$20	\$41	\$27	\$0
	Per Community	\$469,358	\$376,973	\$92,385	\$0
08	Per Policy	\$35	\$81	\$27	\$0
	Per Community	\$846,321	\$753,936	\$92,385	\$0
07	Per Policy	\$51	\$122	\$27	\$0
	Per Community	\$1,223,294	\$1,130,909	\$92,385	\$0
06	Per Policy	\$70	\$162	\$53	\$0
	Per Community	\$1,692,643	\$1,507,873	\$184,770	\$0
05	Per Policy	\$86	\$203	\$53	\$0
	Per Community	\$2,069,615	\$1,884,846	\$184,770	\$0
04	Per Policy	\$102	\$243	\$53	\$0
	Per Community	\$2,446,579	\$2,261,809	\$184,770	\$0
03	Per Policy	\$117	\$284	\$53	\$0
	Per Community	\$2,823,552	\$2,638,782	\$184,770	\$0
02	Per Policy	\$133	\$324	\$53	\$0
	Per Community	\$3,200,515	\$3,015,746	\$184,770	\$0
01	Per Policy	\$149	\$365	\$53	\$0
	Per Community	\$3,577,488	\$3,392,718	\$184,770	\$0

* SHFA (Zones A, AE, A1-A30, V, V1-V30, AO, and AH): Discount varies depending on class.

** SFHA (Zones A99, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO): 10% discount for Classes 1-6; 5% discount for Classes 7-9.

*** Preferred Risk Policies are not eligible for CRS Premium Discounts.