

# Evaluating NOAA's Coastal Storms Program in the Gulf of Mexico Project Area

**Program goal:** The NOAA Coastal Storms Program (CSP) is a nationwide effort that works to reduce the impact of coastal storms, including loss of life, through increasing the resiliency of affected communities. To date, the program has developed a series of 3- to 5-year regional initiatives in several areas. This project evaluated the success of the program in the Gulf of Mexico project area from 2007 – 2012 focusing on activities in the Mississippi-Alabama area.

## Key Program Activities and Outputs

- Funded an **Outreach Coordinator (OC) position** to coordinate the program's work in the region and to perform outreach and education related to coastal storm resiliency across the region
- Issued **two rounds of small grants** to fund development of products and tools to address coastal storm issues in the Gulf region
- Developed **web sites** to disseminate information and information exchange
- Expanded the scope and use of the **Unstructured Grid Catalog** to the region to assist in better storm risk modeling
- Performed **facilitated sessions** with communities using the **Community Resiliency Index (CRI)** and the **Critical Facilities Tool** to increase community-level resiliency
- Developed a **"Homeowner's Handbook"** to assist homeowners in understanding risk and resiliency
- Developed **television programs** to inform the public about storm risks and resiliency

**The data we collected to perform the evaluation included:**

- Interviews with 12 key program staff
- Interviews with nine principal investigators covering a total of 11 grants under the program
- Interviews with local leaders in 13 of the 16 communities in the Mississippi-Alabama area that participated in the Community Resiliency Index (CRI) sessions
- A survey of program stakeholders in the Gulf of Mexico, resulting in a total of 60 survey responses
- A social network analysis (SNA) of regional program stakeholders
- Data from the National Flood Insurance Program (NFIP) Community Rating Scale (CRS) data on communities in the Mississippi-Alabama area as well as comparative information on counties in North Carolina and Florida

## Some Key Findings

### Awareness, use, and usefulness of program products

*Awareness of the CPS products/services tended to be moderate to low among stakeholders, but...*

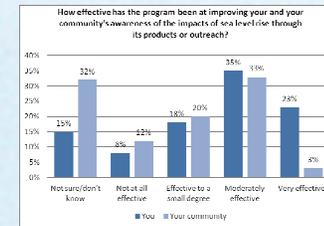
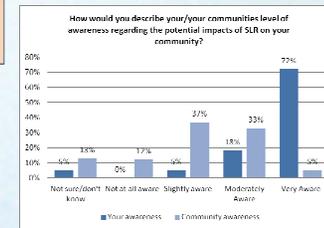
*When stakeholders were aware of products and services, they rated the usefulness of those products and services very highly*

Product	Percent of Survey Respondents Aware	Percent of Those Aware Who Used the Product	Percent of Those Who Used That Rated as "Very Useful" or "Essential"
Community Resiliency Index	55%	47%	67%
Homeowners Handbook	53%	-	69%
Gulf Storms Web Portal	43%	88%	65%
TV series	42%	-	64%
StormSmart Coasts	42%	72%	55%
StormSmart Connect	28%	53%	75%
Critical Facilities Tool	25%	70%	85%
Billboard	15%	-	20%
Unstructured Grid Catalog	12%	50%	100%

### Attitudinal change

*CSP was moderately to very effective at improving awareness of SLR impacts among an already very aware set of survey respondents*

*Only effective to small degree to moderately effective at improving awareness of SLR impacts within the slightly to moderately aware communities*



### Benefits

*18 new communities in Mississippi, Alabama, and Louisiana joined the CRS program and 35 communities improved their CRS classes*

*These CRS improvements led to reduced annual premiums for flood insurance...*

Policy and Level of Coverage (building/contents, in thousands of dollars)	Annual Premium	Five Percent Savings on Base Premium	Present Value Over 30-Year Timeframe
<b>Residential</b>			
<b>Standard-rated policy for zones B, C, and X</b>			
125/20	\$212	\$29	\$577
100/30	\$1,204	\$60	\$1,215
250/100	\$1,958	\$98	\$1,976
<b>Commercial</b>			
<b>Standard-rated policy for zones B, C, and X</b>			
100/50	\$1,666	\$83	\$1,682
300/200	\$4,310	\$216	\$4,351
500/500	\$6,588	\$329	\$6,650

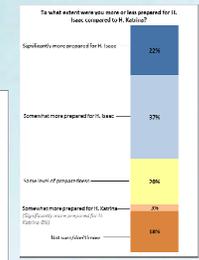
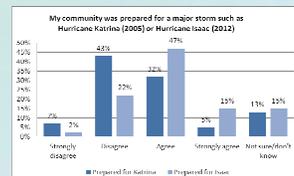
*The above table provides per-policy discounts based on F1 2104 premiums for selected levels of coverage and selected classes of residential and commercial properties. ERG did not have the scope to develop a full estimate of savings.*

### Increased resiliency

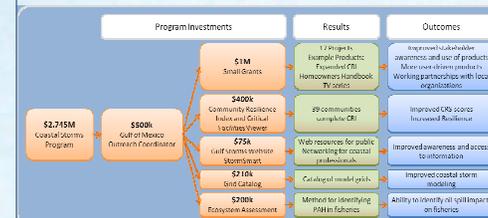
*Comparing FEMA Community Rating Scale (CRS) classes in AL/MS to NC (control): communities in AL and MS improved their CRS classes at a faster rate than those in NC*

*CRI interviews: strong results – nearly all said the session made their communities more resilient*

*Survey: 59 percent of respondents felt somewhat or significantly more prepared for Isaac compared to Katrina*



### Cost Effectiveness



*NOAA made a \$400,000 investment in CRI and the Critical Facility Viewer. If we assume, conservatively, that the average policy in a Special Flood Hazard Area (SFHA) was \$2,000, then the average savings from a one-CRS class improvement for a SFHA policy was \$100 (5 percent of \$2,000). Thus, there would need to be 4,000 policies in that category to make the \$400,000 investment worthwhile. Baldwin County, AL (one of the communities that experienced an improvement in CRS class) alone had more than 5,000 of these types of policies in 2008. Thus, total savings across the 35 counties should significantly exceed \$400,000 for just the SFHA policies.*

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