Key Considerations from Primer

The program must play an essential role to report on this measure described by stakeholders and partners as essential for the project's ultimate success.

When a program has a non-essential role, describe the the project's impacts or accomplishments in narrative form for the annual report but do not include these the performance measures and metrics.

- Not everything needs a number
- Count what you can count
- Sometimes a story is best
- If it's too complicated, report it as an Impact or Accomplishment
- Do not seek out nor shy away from large numbers. Larger benefits are ok but should be reviewed with added rigor
- Do not use multipliers
- Include citations in reporting to enhance clarity, defensibility, and transparency.

FEMA Community Rating System[1]

The FEMA Community Rating System (CRS) is a voluntary program for communities that participate in the National Flood Insurance Program (NFIP). Sea Grant programs often conduct community preparedness activities to mitigate the severity of flooding that go beyond the NFIP's minimum requirements. These activities can result in CRS credit, which can improve a community's CRS score and result in savings on flood insurance premiums for policyholders within that community. For each improvement in CRS class, a community receives a 5 percent discount on its premiums—allowing for a total potential savings of 45 percent. This methodology guide can help you calculate and communicate these important cost savings whether Sea Grant actions provide enough credit for a full class advancement or simply contribute credit toward the next advancement. Sea Grant programs have many other benefits that are not captured in this guide, including enhanced public safety, reduced damage from flooding, less economic disruption, and environmental protection. You can qualitatively capture these benefits in an impact or accomplishment statement within Sea Grant's Planning, Implementation, and Evaluation Resources (PIER) database, or in other program communication and outreach with stakeholders.

Examples

Here are some slightly modified examples of FEMA CRS cost savings reported to Sea Grant's PIER[2] database. For each example, we provide our thoughts on what the Sea Grant program did well and what could be improved.

1. Sea Grant supported a sea level rise adaptation plan that directly impacted the surrounding economy by helping to improve the community's CRS rating. During the planning process, the community went from a class 7 to a class 5 in the CRS, enabling $3 million in flood insurance savings for property owners.

✅ Sea Grant clearly documented the impact—change in CRS class.

❌ For defensibility, Sea Grant needs to specify what "support" it provided, because it is hard to understand Sea Grant's added value without elaboration. It would have been more transparent to document the cost savings in a little more detail—e.g., eligible property owners saved an additional 10 percent by going from a class 7 to a class 5.

2. Sea Grant explained the incentive programs available to communities through the Building Code Effectiveness Grading Schedule and the FEMA CRS; as a result, coastal communities were able to recover over $925,821 in 2016.

✅ Sea Grant clearly documented what it did.

❌ It would have been more compelling to emphasize the importance of Sea Grant's role, because it can be very difficult for communities to join the CRS system. A little more transparency in the calculation (e.g., we talked to X communities, which resulted in an improved CRS score of Y and Z percent cost savings) would be helpful to better understand the measurable change.

1. This methodology guide was developed to help Sea Grant and other coastal engagement programs calculate and characterize the economic benefits and impacts of their program activities. This methodology guide is a tool and does not constitute official guidance from the National Sea Grant Office for reporting economic benefits and impacts.

2. Sea Grant programs use PIER to submit their impacts, accomplishments, performance measures, and metrics to the National Sea Grant Office.

3 Due to Sea Grant's integrated research and extension efforts, one community implemented a new flood damage prevention ordinance, adopted new standard operating procedures for flood response, and entered the FEMA CRS at a class 7, resulting in average savings of $107 per household in flood insurance premiums. This adds up to citywide savings of $87,740 annually.

- ✅ Sea Grant clearly documented what was impacted—the CRS score and resulting community savings.
- ❌ It would have been more compelling to provide more detail about the exact extension efforts (e.g., end-user workshops, co-production of knowledge activities).

Present Your Story as a Value Chain

Value chains illustrate the sequence of events or activities that result in an economic impact or benefit. Consider developing a value chain diagram to help you tell a compelling and defensible story about how your Sea Grant program, product, or service generated a measurable result.

Let's modify one of the earlier examples to illustrate how to create a strong value chain. ***Sea Grant** [the program/product/service] **helped to improve the community's CRS rating** [what was affected] **by providing technical expertise and assistance in the development of a sea level rise adaptation plan** [what was done to get impact]. **This plan helped the community earn points and improve its CRS score from a class 7 to a class 5,** [measurable change] **enabling $3 million in annual flood insurance savings for policy holders in the community** [societal economic impact].*

Recommended Methodology and Best Practices

Recommended Methodology: Cost savings/potential cost savings on community's insurance premiums

Description: To implement this method, calculate the program's contribution to a community's cost savings on insurance premiums as a result of joining the FEMA CRS or reducing the community's existing FEMA CRS score (or class). In calculating Sea Grant's impact, it is important to calculate only the **incremental** savings the program helped the community and its policyholders achieve. You can also use this methodology to calculate the ***potential*** cost savings in situations where your program helps a community earn points, but not enough to improve its CRS score and achieve a premium reduction.

Key Steps and Best Practices:

1. Determine the insurance premium each community paid *prior* to Sea Grant assistance.
   - Method 1 (preferred): Contact your state's NFIP coordinator to ask for the data. View an up-to-date list of state coordinators online.
   - Method 2: Go to FEMA's countrywide policy statistics webpage and select the community or communities in which you worked. The "Written Premium In-force" column (far right in Figure 1) shows the total value of premiums for the community. Note: The insurance premium database does not come as a time series, and there may be limitations for pulling data from the period of time desired.

Policy Statistics
Alabama
AS OF 01/31/2018

County Name	Community Name	Policies In-force	Insurance In-force whole $	Written Premium In-force
AUTAUGA COUNTY	AUTAUGA COUNTY *	81	17,077,000	[illegible]
	AUTAUGAVILLE, TOWN OF	21	1,993,300	5,027
	MILLBROOK, CITY OF	195	35,518,700	116,514
	MONTGOMERY, CITY OF	1,329	304,398,300	948,572
	PRATTVILLE, CITY OF	202	49,200,500	140,556
BALDWIN COUNTY	BALDWIN COUNTY*	11,413	2,759,767,200	6,326,621
	BAY MINETTE, CITY OF	12	3,430,800	6,973
	DAPHNE, CITY OF	391	91,879,300	333,264
	ELBERTA, TOWN OF	8	1,610,000	2,457
	FAIRHOPE, CITY OF	377	96,952,600	222,847
	FOLEY, CITY OF	173	45,067,900	70,813
	GULF SHORES, CITY OF	7,563	1,526,846,600	4,052,565

Figure 1. Screen shot of premium in-force by community.

2. Split the "premium in-force" data into communities in special flood hazard areas (SFHAs) and non-SFHAs. Policies in SFHAs earn a greater insurance premium discount than those in non-SFHAs. See columns 3 and 4 of Table 1 under "Tools for Implementation" in this guide.
   - Ask your state's NFIP coordinator for the breakdown—a list of state coordinators is available online (see above).
3. Calculate each community's percent cost savings (or potential cost savings) for policies in both SFHAs and non-SFHAs. See Table 1 in the guide to help calculate the percent cost savings.

   Situation A: If Sea Grant helps a community improve its CRS score and achieve a premium reduction, determine the incremental premium reduction for both SFHA and non-SFHA policies.

   Example 1: Sea Grant helps a SFHA community improve from a CRS class 7 (15 percent reduction) to a class 5 (25 percent reduction). The incremental savings is a 10 percent premium reduction (i.e., 25 - 15 = 10) for SFHA policies (column 3 of Table 1).

   The same class improvement for a non-SFHA community wold result in a 5 percent savings (i.e. 10-5 =5) for non-SFHA policies (column 4 of Table 1).

   - Example 2: Sea Grant helps a community enter the CRS program and achieve a class 6 score. A class 6 will be equal to a 20 percent premium reduction for SFHA policies and a 10 percent premium reduction for non-SFHA policies (Table 1).

   Situation B: If Sea Grant helps a community gain CRS points, but not enough to decrease the CRS score and achieve cost savings, the program can determine the incremental premium reduction if the community were to improve (lower) its CRS score by 1 in the future.

   - Example 3: Sea Grant helps a community earn points, but the community still has a CRS score of class 8. If the community *were* to reach a class 7, this would be an incremental premium reduction of 5 percent for SFHA policies (i.e., 10 percent to 15 percent). Non-SFHA policies would not experience an incremental premium reduction when moving from a class 8 to a class 7.

4. Once the cost savings or potential cost savings are known, calculate Sea Grant's contribution to the premium reduction. Several activities (each earning points) often contribute to improving (lowering) a CRS score. This step adjusts the percent from step 3 based on Sea Grant's contribution.

   Situation A: If Sea Grant helps a community improve its CRS score and achieve a premium reduction, divide the points Sea Grant helped earn by the total points earned to calculate Sea Grant's contribution.

   - Example 1: A community earned 900 points to improve its score from a class 7 to a class 5. Sea Grant contributed to activities earning 300 points. Sea Grant's contribution is 33 percent (i.e., 300/900) of the premium reduction.

   - Example 2: A community earned 2,100 points to enter the CRS program and achieved a class 6 score. Sea Grant contributed to activities earning 550 points. Sea Grant's contribution is 25 percent (i.e., 550/2,100) of the premium reduction.

   Situation B: If Sea Grant helps a community gain CRS points, but not enough to decrease the CRS score and achieve cost savings, determine the incremental premium reduction if the community were to improve (lower) its CRS score by 1 in the future.

   Example 3: Sea Grant helps a community earn points, but the community still has a CRS score of class 8. If the community were to reach a class 7, this would be an incremental premium reduction of 5 percent for SFHA policies (i.e., 10 percent to 15 percent). Non-SFHA policies would not experience an incremental premium reduction when moving from a class 8 to a class 7.

5. Perform the final calculation. Multiply the premium in-force (step 2) by the percent cost savings for SFHA and non-SFHA policies in each community (step 3), then add everything together, and finally multiply the amount by Sea Grant's percent contribution (step 4). For all three examples under steps 3 and 4 above, let's assume a $1 million premium in-force, broken into $750,000 for SFHA policies and $250,000 for non-SFHA policies. Report this as "cost savings" for actual cost savings (example 1 and 2 below) and an "other economic benefit," in the case of potential savings, where the program helped a community get closer to cost savings (Example 3 below).

   - Example 1: Sea Grant helped a community improve from a class 7 to a class 5. That is an incremental premium insurance ***reduction*** of 10 percent for SFHA policies (i.e., 25 percent - 15 percent) and 5 percent for non-SFHA policies (i.e., 10 percent - 5 percent). Sea Grant also contributed 33 percent of the points earned to achieve these reductions.
     - Incremental SFHA premium reduction = $75,000 (i.e., $750,000 * 10 percent)
     - Incremental non-SFHA premium reduction = $12,500 (i.e., $250,000 * 5 percent)
     - Total premium savings = $87,500 (i.e., $75,000 + $12,500)
     - Premium savings attributed to Sea Grant = $29,138 (i.e., $87,500 * 33 percent)

   - Example 2: Sea Grant helped a community enter CRS and achieve a class 6 score. Sea Grant activities contributed 25 percent of the total points earned to achieve the improved score.
     - Incremental SFHA premium reduction = $150,000 (i.e., $750,000 * 20 percent)
     - Incremental Non-SFHA premium reduction = $25,000 (i.e., $250,000 * 10 percent)
     - Total premium savings = $175,000 (i.e., $150,000 + $25,000)
     - Premium savings attributed to Sea Grant = $43,750 (i.e., $175,000 * 25 percent)

   - Example 3: Sea Grant helped a community earn 250 points, but the community still has a CRS score of class 8. If the community were to earn more points and achieve a class 7 score, this would be an incremental premium reduction of 5 percent for SFHA policies and 0 percent for non-SFHA policies. Sea Grant activities contributed 50% to the activities that could result in the premium savings.
     - Potential incremental SFHA premium reduction = $37,500 (i.e., $750,000 * 5 percent)
     - Potential incremental Non-SFHA premium reduction = $0 (i.e., $250,000 * 0 percent)
     - Total premium savings = $37,500 (i.e., $37,500 + $0)
     - Potential premium savings attributed to Sea Grant = $18,750 (i.e., $37,500 * 50 percent)

Factors to Consider in Communicating Benefits

You should consider the following differences when reporting your economic impact or benefit to Sea Grant's PIER database versus communicating its value in other outreach pieces (e.g., fact sheets, websites, impact statements, accomplishment statements).

	Performance Measure Reporting in PIER	Impact Statements and Other Outreach
Recurring Benefits	Before the CRS score is reviewed for an update (this occurs in cycles), report your contribution in an impact statement (do not report it as an economic benefit). After the CRS score is reviewed, report your cost savings or potential cost savings as an economic benefit or impact until the next CRS cycle verification (in approximately three to five years). Once that next cycle verification occurs, only count cost savings associated with any new work with the community.	
Attribution	Avoid double counting when **multiple Sea Grant programs are involved.** Multiply the final $value by the fraction of your level of effort (LOE) divided by total **Sea Grant LOE** (e.g., you provided 400 hours, Sea Grant program 2 provided 600 hours, and another organization provided 500 hours). Multiply the final $value by 40% (i.e., your 400 hours / **1,000 total Sea Grant hours** [600 + 400]). The other Sea Grant program will multiply by 60%. Together, the two Sea Grant programs are now claiming they were essential contributors to the full $value (without double counting). Note, the Sea Grant programs are claiming they were an essential contributor to the full value, but not the only contributors to this full value.	Attribute according to step 4 above based on the proportion of points you helped the community achieve. Note, you do not have to be the only entity contributing to each of the measures that achieved points, but you should not count activities (and the associated points) for which you were not an essential contributor.
Very Large Benefits	Do not shy away from reporting very large impacts or benefits under this methodology, as long as you make a strong case for helping a community gain CRS points by implementing a measure to get closer to cost savings or achieve enough points to improve its CRS score and achieve actual cost savings. Clearly indicate Sea Grant's involvement by presenting the story as a well-written value chain.	

Tools for Implementation

The following table shows the cost savings in flood reduction at each CRS class.

Table 1. Table of Cost Savings by CRS Class

Credit Points	Class	Premium Reduction SFHA	Premium Reduction Non-SFHA*
4,500+	1	45%	10%
4,000 – 4,499	2	40%	10%
3,500 – 3,999	3	35%	10%
3,000 – 3,499	4	30%	10%
2,500 – 2,999	5	25%	10%
2,000 – 2,499	6	20%	10%
1,500 – 1,999	7	15%	5%
1,000 – 1,499	8	10%	5%
500 – 999	9	5%	5%
0 – 499	10	0	0

* Preferred Risk Policies are available only in B, C, and X zones for properties that are shown to have a minimal risk of flood damage. The Preferred Risk Policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. The CRS credits for AR and A99 zones are based on non-SFHAs (B, C, and X zones). Credits are: classes 1–6, 10 percent, and classes 7–9, 5 percent.

The following resources provide additional background information on the FEMA CRS:

- CRS Fact Sheet
- NFIP CRS Coordinator's Manual: explains the CRS program, what activities communities can engage in, how activities are credited, how insurance premium savings rates are determined, and much more
- CRS Communities and Their Classes (as of 2016)
- Hazard Mitigation Planning
- Hazard Mitigation Assistance