EVALUATING COMMUNITY RESILIENCE

Assessment of County-Level Hazard Mitigation Plans

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BACKGROUND

Hurricane Irene, Tropical Storm Lee, and Hurricane Sandy had devastating impacts on communities throughout New York State.

To protect the life and property of New Yorkers, state and local governments have created Hazard Mitigation Plans across various counties based on the Community Development Block Grant Action Plan.



PROJECT SCOPE

- Evaluate countylevel Hazard Mitigation Plans (HMPs)
- Determine the impact HMPs have on reducing floodwater damage
- Make recommendations to New York State



DATA

The following criteria were used to evaluate the HMPs:

- 1. Plan basics
- 2. Participation
- 3. Inter-Organizational Coordination
- 4. Hazard Identification
- 5. Capability Assessment
- 6. Goals
- 7. Proposed Actions

8. Monitoring

FEMA Sections and Requirements	Corresponding Principles (Modified from UNC-CH instrument for NYS-RISE)
Planning Process Documents planning process, coordination among agencies, and program integration	Participation, Inter- Organizational Coordination
Hazard Identification & Risk Assessment Identifies and profiles hazards, assesses vulnerability and estimates potential losses	Hazard Identification
Mitigation Strategy Identifies goals, mitigation actions, and implementation information	Goals, Proposed Actions, Capability Assessment
Plan Review, Evaluation, and Implementation Monitoring, evaluating and updating the plan, and monitoring the progress of mitigation actions	Plan Basics, Inter- Organizational Coordination, Monitoring

DATA

Evaluation Of Hazard Mitigation Plans In The Local Level Based On **FEMA Principles**







Lower Quality- Standard Deviation from the Mean <- 1.0

High Quality- 0.0 Standard Deviation from the Mean<1.0

Higher Quality-Standard Deviation from the Mean>1.0

200 Miles

Data Resource: Local Mitigation Plan Review Guide, FEMA, 2011. Local hazard mitigation plan quality protocol-Technical Report, 2011.

http://nysrise.org/Workshops/2014-07-24/1.1-Griffis,Bokuniewicz.pdf

No Data

50 100











RESULTS

After evaluating and scoring each available HMP based on the eight criteria, the scores were normalized on a 0.0 to 10.0 scale.

Based on the aggregate HMP normalized scores, the county with the highest rated HMP is Ulster, receiving a score of 7.9. The county with the lowest rated HMP is Chemung, receiving a score of only 4.8.



RESULTS

Another aspect of this project was to evaluate the HMPs based on how well they incorporate resiliency measures. Of the eight HMP evaluation criteria, the last five relate directly to resiliency including:

- 4. Hazard Identification
- 5. Capability Assessment
- 6. Goals
- 7. Proposed Actions
- 8. Monitoring



RESULTS

Based on the aggregate ^{10.0} HMP normalized scores ^{9.0} using only the resiliency ^{8.0} criteria, the county with ^{7.0} the highest rated HMP is ^{6.0} Orange with a score of ^{5.0} bave the second highest ^{4.0} score of 5.4. ²⁰

The counties with the lowest rated HMPs are Chemung and Oneida, receiving a score of only 2.8.



CONCLUSIONS



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Expectation is that when Resiliency score goes up, the dollar damage comes down. But, the graph shows that there is no coordination between the damages that occurred due to Hurricane Sandy, Tropical Storm Lee and Hurricane Irene in each county with their Resiliency score.

