

National Infrastructure Advisory Council (NIAC)



Regional Resilience Working Group

July 29, 2013– Report #4

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Co-Chair*

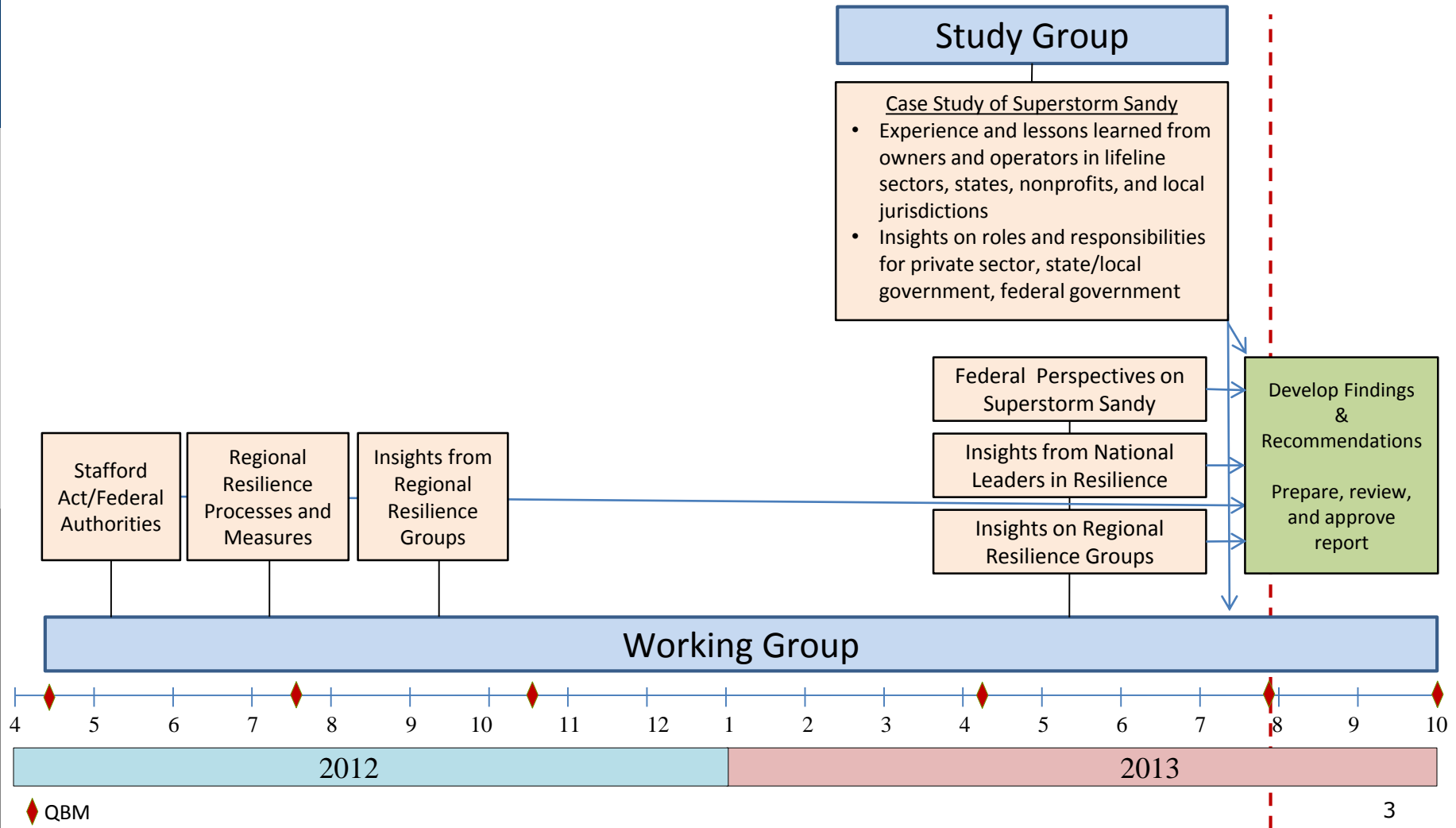
Dr. Beverly Scott

*General Manager
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Co-Chair*

Agenda

- Status Update
- Results of the Case Study on Superstorm Sandy
- Preliminary Findings of the Working Group
- Next Steps

Work Plan for Regional Resilience Study



Regional Resilience Study Update

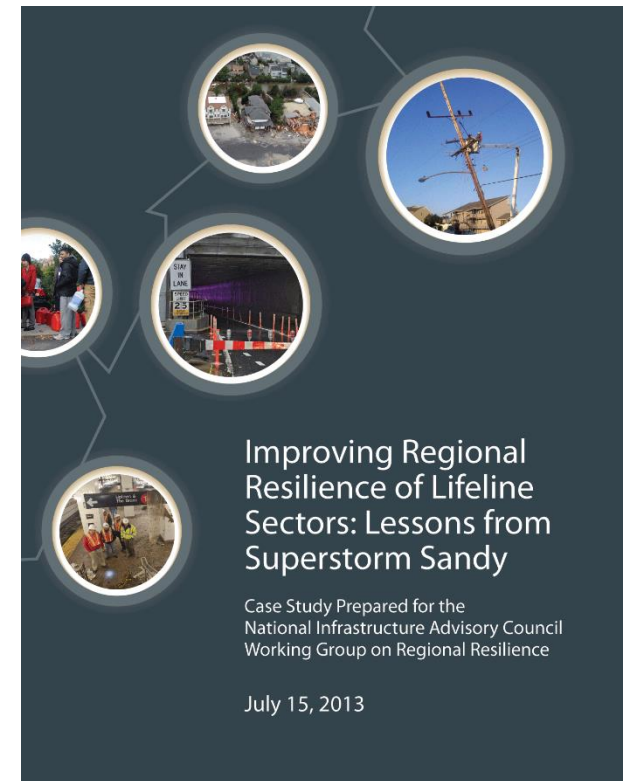
- Federal Perspectives on Superstorm Sandy
 - DOE ■ EPA ■ FEMA
- Insights from National Leaders in Resilience
 - Dr. Dane Egli, Applied Physics Lab, Johns Hopkins University
 - Mr. Richard Reed, American Red Cross
 - Adm. Thad Allen (Ret.), Booz Allen Hamilton
 - Dr. Stephen Flynn, Northeastern University
- Working Group deliberations on initial findings
- Study Group Delivered Final Report (7/15/13) –
Improving Regional Resilience of Lifeline Sectors: Lessons from Superstorm Sandy

Charge to the Superstorm Sandy Study Group

- Examine the planning, coordination, and response for Superstorm Sandy as it applies to the lifeline sectors in Philadelphia and the Mid-Atlantic region.
 - Understand regional impacts on the lifeline sectors (energy, transportation, communication, and water)
 - Identify failure mechanisms between interdependent sectors and gaps in regional resilience
 - Evaluate how Superstorm Sandy placed stress on one or more of the lifeline sectors
 - Examine the impact of physical and cyber disruptions on critical infrastructures, including impacts due to aging infrastructure
 - Examine lessons learned in the impacted areas stretching from New York to Washington, D.C.

Study Group Sources and Inputs

- ❑ Study Group member experiences and lessons learned
- ❑ 7 Sector-Specific Panel Discussions
 - Electricity, Oil & Natural Gas, Transportation, Communications, Water, State and Local Government, Non-Governmental Organizations
- ❑ Expert Interviews (PANYNJ, EEI, MBTA, Boston Police Dept., Philly311)
- ❑ 267 published reports, news stories, videos, webinars, and in-process studies on Superstorm Sandy impacts
- ❑ All-day Study Group workshop (5/31)



Study Group Key Findings

1. Maintaining the continuity of services of the lifeline sectors is paramount to regional resilience.
2. Strong public-private partnerships and cross-sector coordination were the most important success factors in preparing for and responding to Sandy.
3. Planning, analysis, and risk management at the regional level is essential for long-term resilience.
4. Impediments to rapid response and recovery remain despite efforts to remove them.
5. Effective communications at all levels, using multiple tools and methods, was pivotal to success during Sandy.
6. Regional resilience relies on the capacity of individuals and communities to strengthen local readiness and personal responsibility for short-term survival.

Working Group Preliminary Findings

Three areas of focus

- ❑ Foundational Findings on the Regional Resilience of Critical Infrastructure Sectors
- ❑ Regional Coordination and Communication
- ❑ Investment in Resilient Infrastructure

Foundational Findings

1. All regions are different, calling for a tailored approach to resilience that reconciles the types and density of a region's infrastructure with regional-based risk assessments.
2. Four lifeline sectors—energy, water, transportation, and telecommunications—are top priorities for strengthening resilience in all regions.
3. Strong public-private partnerships and active cross-sector coordination are the most important success factors in helping regions to achieve sustainable resilience.
4. Public-private partnerships based on executive-level engagement prove to be the most robust.
5. Non-profit and community groups play an essential role in building the capacity of communities to prepare for catastrophic events and assist them with long-term recovery.

Regional Coordination and Communication

6. The increasing interdependence and integration of lifeline infrastructures within regions has created hidden risks that are not widely understood by the businesses, governments, and communities that depend upon them for essential services.
7. Incident response personnel in critical sectors continue to encounter complex rules and regulations, inefficient processes for granting waivers and permits, and problems gaining rapid access to disaster areas to repair assets.
8. Social media has emerged as a powerful tool for communicating and collecting data that can improve situational awareness, inform public decision making, and mitigate rumors, yet businesses and government are just learning how to harness it.

Investment in Resilient Infrastructure

9. Owners and operators find it difficult to establish the strong value proposition needed to invest in new or upgraded infrastructure without public support and the ability to recoup costs.
10. Regions can mitigate long-term risks by applying innovative technologies to build resilience into new and replacement structures and rethinking system designs to create infrastructure that are inherently resilient.
11. A consistent, agreed-upon method that would enable owners and operators to benchmark their resilience posture would help regional partners to better understand the risks they face and identify specific steps that can be taken to improve their resilience.

Next Steps

- ❑ Finalize Working Group Findings
- ❑ Develop Recommendations
- ❑ Prepare the final report of the Working Group on Regional Resilience
- ❑ Present the recommendations and final report to the Council for deliberation at the October 7 Quarterly Business Meeting

Appendix

Working Group Members

WG Member	Sector Experience
Constance H. Lau , <i>President and Chief Executive Officer, Hawaiian Electric Industries, Inc. (HEI) Co-Chair</i>	Electricity, Financial Services
Beverly Scott , <i>General Manager, Massachusetts Bay Transportation Authority Co-Chair</i>	Transportation
Jack Baylis , <i>Executive Director and Senior Vice President for The Shaw Group</i>	Water
Glenn S. Gerstell , <i>Managing Partner, Milbank, Tweed, Hadley, & McCloy LLP</i>	Water, Telecommunications
David J. Grain , <i>Founder and Managing Partner, Grain Management</i>	Telecommunications
Margaret E. Grayson , <i>President, Grayson Associates</i>	IT, Defense Industrial Base
James A. Reid , <i>President, Eastern Division, CB Richard Ellis</i>	Commercial Facilities
Michael J. Wallace , <i>Former Vice Chairman and COO, Constellation Energy</i>	Electricity, Nuclear

Regional Resilience Study

Purpose: Identify ways regions can become more resilient and the steps the Federal Government can take to help regions accomplish resilience goals.

Objectives

- 1. Best Practices:** Identify the characteristics that make a region resilient and the steps that can be taken to improve resilience within a region.
- 2. Process Improvements:** Determine how public and private critical infrastructure partners can work together to improve regional resilience.
- 3. Federal Role:** Recommend how Federal Government capabilities and resources can help accomplish resilience goals and address any gaps that can help regions become more resilient.