Strategic Plan Approach

- Plan is modeled loosely on NEHRP Strategic Plan, per WWG guidance
- Gathered stakeholder input
  - NWIRP Strategic Planning Stakeholder’s Workshop, June 17, 2016, at NSF
    Over 80 participants from government, academia, and the private sector, including insurance and reinsurance companies, consultants, building product manufactures and trade associations, professional societies, and standards development organizations.
- Developed draft Plan considering
  - statutory requirements
  - key research needs and roadmap documents
  - previous NWIRP reports
  - stakeholder input
- WWG and ICC provided input, review, and approval
Vision and Mission

The NWIRP Vision is:
A nation that is windstorm-resilient in public safety and economic well-being.

The NWIRP Mission is:
To achieve major measurable reductions in the losses of life and property from windstorms through a coordinated Federal effort, in cooperation with other levels of government, academia, and the private sector, aimed at improving the understanding of windstorms and their impacts and developing and encouraging the implementation of cost-effective mitigation measures to reduce those impacts.
Strategic Goals (Chapter 2)

Goal A: Improve the Understanding of Windstorm Processes and Hazards
Goal B: Improve the Understanding of Windstorm Impacts on Communities
Goal C: Improve the Windstorm Resilience of Communities Nationwide
Goal A. Improve the Understanding of Windstorm Processes and Hazards

Objective 1: Advance understanding of windstorms and associated hazards

Objective 2: Develop tools to improve windstorm data collection and analysis

Objective 3: Understand long term trends in windstorm frequency, intensity, and location

Objective 4: Develop tools to improve windstorm hazard assessment
Goal B. Improve the Understanding of Windstorm Impacts on Communities

Objective 5: Advance understanding of windstorm effects on the built environment

Objective 6: Develop computational tools for use in wind and flood modeling on buildings and infrastructure

Objective 7: Improve understanding of economic and social factors influencing windstorm risk reduction measures

Objective 8: Develop tools to improve post-storm impact data collection, analysis, and archival

Objective 9: Develop advanced risk assessment and loss estimation tools
Goal C. Improve the Windstorm Resilience of Communities Nationwide

Objective 10: Develop tools to improve the performance of buildings and other structures in windstorms

Objective 11: Support the development of windstorm-resilient standards and building codes

Objective 12: Promote the implementation of windstorm-resilient measures

Objective 13: Improve windstorm forecast accuracy and warning time

Objective 14: Improve storm readiness, emergency communications and response
Linkage between Goals and Outcomes (Fig. 5)

NWIRP Collaboration on Windstorm R&D, Technology Transfer, Education and Outreach

Goal A
Improve Understanding of Windstorm Processes and Hazards
- Physics of hurricanes, tornadoes, thunderstorms and other windstorms
- Climatology of extreme wind events
- Engineering characteristics of extreme wind events
- Effects of long term trends in storm patterns on future hazards
- Probabilistic hazard assessments

Goal B
Improve Understanding of Windstorm Impacts on Communities
- Specific actions that can reduce impacts of windstorms
- How windstorm hazards impact communities
- Response of structures to windstorm hazards
- Tools for risk assessment and loss estimation

Goal C
Improve Windstorm Resilience of Communities Nationwide
- Tools for effective prediction and warning
- Tools for emergency responders
- Incentives to encourage mitigation
- Windstorm resistant building codes and standards
- New materials, products, and systems

Mechanisms to Implement NWIRP Outputs

Outcomes: Reductions in Loss of Life and Property

Better forecasts and emergency communications lead to more effective warnings and public response to disasters

Implementation of voluntary mitigation measures, such as retrofitting of homes and businesses, installing storm shelters, or constructing facilities to code-plus standards

Homes, buildings and infrastructure are safer and more resilient because improved building codes are adopted and enforced, windstorm design standards are updated, and construction practices are improved
Strategic Priorities (Chapter 3)

Special areas of focus for new and expanded efforts, including

- long-term research efforts to provide foundational windstorm hazard and loss data and models
- opportunities for more rapid windstorm impact reduction, building on existing programs
- crosscutting themes to enhance development of the Nation’s human resource base in windstorm hazard mitigation fields
## Strategic Priorities

<table>
<thead>
<tr>
<th>SP-1</th>
<th>Develop Baseline Estimates of Loss of Life and Property due to Windstorms</th>
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<td>SP-2</td>
<td>Obtain Measurements of Surface Winds and Storm Surge Current and Waves in Severe Storms</td>
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<td>SP-3</td>
<td>Develop Publicly Available Databases of Windstorm Hazards and Impacts</td>
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<td>SP-4</td>
<td>Develop Performance-Based Design for Windstorm Hazards</td>
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<td>SP-5</td>
<td>Expand Outreach and Partnerships to Improve Windstorm Preparedness and Hazard Mitigation</td>
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<td>SP-6</td>
<td>Enhance and Promote Effective Storm Sheltering Strategies</td>
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<td>SP-7</td>
<td>Develop the Nation’s Human Resource Base in Windstorm Hazard Mitigation Fields</td>
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Impact Reduction Process (Fig. 6)
Taking Plan to Completion

- Draft for Public Comment. Published March 14, Comments due May 15
- Accepting comments from other Agencies through mid-June
  - email marc.levitan@nist.gov
- National Advisory Committee on Windstorm Impact Reduction (NACWIR) Comments, June 2017
- WWG considers Public, NACWIR, and Agency comments, finalize Plan, Summer 2017
- Interagency Coordinating Committee (ICC) Review and Approval, late Summer