2015 Snohomish County Hazards Mitigation Plan Update

Planning Committee Meeting
County Administration Building East – Public Hearing Room, 1st Floor
July 24, 2014
9:00 to 11:00 AM
Today’s Agenda

- 9:00 – 9:05 AM  Welcome and Purpose (Dara Salmon, SC DEM)
- 9:05 – 9:10 AM  Past Efforts (Heidi Kandathil, UW)
- 9:10 – 9:25 AM  Future Vision of the County (Clay White, SC PDS)
- 9:25 – 9:40 AM  Mitigation & the Future Vision (Bob Freitag, UW)
- 9:40 – 9:50 AM  Past Action Items (Jonathan Olds, UW)
- 9:50 to 10:05 AM BREAK
- 10:05 – 10:50 AM Focus Groups – “How can mitigating risks achieve community vision?” (UW)
- 10:50 – 11:00 AM Closing & Next Steps (SC DEM, UW)
2015 NHMP Status

• October 2013 – Hazard & Impact Ranking
• February 2014 – Objective Development
• July 2014 – Risk Assessment, Mitigation Action Ideas and Tools Development
SC NHMP Process

Plan Review, Resource Identification

Goal and Objective Development

Area Wide Risk Assessment
- Earthquakes
- Flooding
- Landslides & Mass Movements
- Severe Weather
- Climate Change
- Dam & Levy Failure
- Wildland Fire
- Volcano
- Avalanche
- Tsunami/Seiche

Mitigation Actions ideas & potential Implementation tools (TODAY)

Area-specific HMP Annexes
- Unincorporated Snohomish County
- Municipalities
- Special Purpose Districts (Fire, Water, Diking, Other)
  - To include
    - Hazards based on all county risk assessment
    - Mitigation Action Items

Final SC NHMP
- All County Risk Assessment
- Area – Specific Annexes
- Area – specific Mitigation Action Items
- All County Mitigation Action Items
Overall Hazards Ranking

1. Earthquake
2. Severe Weather
3. Flooding
4. Landslide & Mass Movements
5. Climate Change
6. Dam Failure
7. Tsunami/Seiche
8. Wildland Fire
9. Avalanche & Volcano
10. Hazardous Materials – Tier II/ Pipelines
11. Levy Failure
Overall Impacts Ranking

1. Resilience of infrastructure
2. Reliability of local emergency operations
3. Vulnerability of structures
4. Insufficient warning of damaging events
5. Disruption of local government operations
6. Cost-effectiveness of mitigation projects
7. Isolation & Insufficient incentives for hazards mitigation
8. Insufficient actionable risk reduction information available to public
9. Threats posed by competing floodplain management and agricultural objectives
10. Threatened natural values (ecosystem goods and services)
11. Reduced available open space
NHMP Goals

1. Reduce natural hazard-related injury and loss of life.
2. Reduce property damage.
3. Promote a sustainable economy.
4. Maintain, enhance and restore the natural environment’s capacity to absorb and reduce the impacts of natural hazard events.
5. Increase public awareness and ability to respond to disasters.
1. **Discourage growth** within high risk areas where risks cannot be reduced to a tolerable levels and within flood risk areas where land uses are not water dependent.

2. **Relocate uses** where safety to life or vital ecosystem services cannot be assured.

3. **Support risk reduction mitigation measures**, on lands where life safety and ecosystem services can be assured.

4. **Strengthen tools**, such as the transfer and purchase of development rights (TDRs and PDRS) to remove threatened uses from hazardous areas or uses that degrade natural and beneficial functions.

5. **Support actions that mitigate the causes of climate change** and adapt to expected impacts.

6. **Provide incentives that support the mitigation of impacts** to critical manufacturing and manufacturing support facilities and operations.

7. **Reduce the adverse impact** of disasters on isolated communities.

8. Reduce the adverse impacts, and **exploit beneficial functions**, of natural hazards to resource lands.
Integrating the NHMP with the Comprehensive Plan
Future Vision of Snohomish County

• Provide for a supply and distribution of land use types to accommodate the majority of county population and employment growth within urban growth areas
• Reduce land consuming urban development patterns and provide structure for urban development within neighborhoods or urban centers
• Reduce development pressures and patterns of sprawl within rural areas
• Conserve agricultural, forest and mineral resource lands of long-term commercial significance
• Preserve and protect open space, scenic and cultural resources.
Future Land Use Map
**How does SC HMP Support SC Comprehensive Plan?**

<table>
<thead>
<tr>
<th>Snohomish County Comprehensive plan / Hazards Mitigation Plan Objectives.</th>
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The table above outlines how the Snohomish County Comprehensive plan and Hazards Mitigation Plan support SC Comprehensive Plan objectives through specific actions and strategies.
Types of Mitigation

- Do nothing
- Relocate/Avoid
- Accommodate
- Protect
Tools to Implement Mitigation

- Local Revenue
- Regulation (Police Powers)
- Grants (opportunistic)
- Warning (hazard disclosure)
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<th>Mitigation Approaches</th>
<th>Risk Reduction</th>
<th>Increase Opportunities</th>
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| Action Item: ______________________________ |

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<th>Relocate/Avoid</th>
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Past Action Items

- Relocate/Avoid
- Accommodate
- Protect
2010 NHMP Mitigation Measures

Example

% by Hazard

% by Mitigation Approach
BREAK – 15 minutes
Risk and Opportunities

CALAMITY FOR SOME IS OPPORTUNITY FOR OTHERS...
How can mitigating risks achieve community vision?

– Landslides
– Earthquake
– Flooding
– Winter Storms
– Other
Landslides & Mass Movements

- Relocate/Avoid
- Accommodation
- Protection

Map 14-1
Landslide Hazard Areas

- DNR Landslide Hazard Areas
- Other Landslide Potential Areas

*The Department of Natural Resources, Ecology and Rural Development, Washington, with cooperation from the U.S. Geological Survey, prepared this map as a part of a project intended to provide a broad overview of landslide hazard areas.

July 2014

Data Sources:
- Washington State Department of Natural Resources
- U.S. Geological Survey
- U.S. Forest Service

Washington State Department of Natural Resources, Division of Geology and Earth Resources
Landslides & Mass Movements

1. Scale
   a. Individual
   b. Group

2. Object
   a. Direct
   b. Indirect

3. EM Phase
   a. Before
   b. After

Action Item: ______________________________

Mitigation Approaches

- Relocate/Avoid
- Accommodate
- Protection

Risk Reduction

- Mitigation
  - Local Revenue
  - Regulation (Police Powers)
  - Grants (Opportunistic)
  - Warning (Hazard Disclosure)

Increase Opportunities

- Comprehensive Plan
  - Tools
  - Risk Reduction
  - Increase Opportunities

- Actions
  - Provide land use types to accommodate growth within urban growth areas
  - Provide structure for urban development within neighborhoods or urban centers
  - Reduce development pressures and patterns of sprawl within rural areas
  - Conserve resource lands
  - Preserve and protect open space, scenic and cultural resources.
Earthquake – South Whidbey 7.4

Relocate/Avoid

Accommodate

Protection (Tsunami)
Earthquake – 100-year Probabilistic

- Relocate/Avoid
- Accommodate
- Protection (Tsunami)

Map 12-1
Earthquake
Peak Ground Acceleration
100-year Probabilistic Scenario

Mercalli Scale: Potential Damage
- IV, None
- V, Very Light
- VI, Light
- VII, Moderate
- VIII, Moderate Heavy
- IX, Heavy
Earthquake – South Whidbey 7.4

Mitigation Approaches

- Local Revenue
- Regulation (Police Powers)
- Grants (Opportunistic)
- Warning (Hazard Disclosure)

1. Scale
   - a. Individual
   - b. Group

2. Object
   - a. Direct
   - b. Indirect

3. EM Phase
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   - b. After

Risk Reduction

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Increase Opportunities

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Mitigation Approaches

- Relocate/Avoid
- Accommodate
- Protection

Increase Opportunities

- Comprehensive Plan

- Risk Reduction

Tools

- Local Revenue
- Regulation (Police Powers)
- Grants (Opportunistic)
- Warning (Hazard Disclosure)
Flooding

- Relocate/Avoid
- Accommodate
- Protect
Flooding

1. Scale
   a. Individual
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- Provide land use types to accommodate growth within urban growth areas
- Provide structure for urban development within neighborhoods or urban centers
- Reduce development pressures and patterns of sprawl within rural areas
- Conserve resource lands
- Preserve and protect open space, scenic and cultural resources.
Climate Change & Severe Weather

Relocate/Avoid

Protect

Accommodate

Hottest June Ever on Earth Follows Record-Setting May Temps
Climate Change & Severe Weather
Geographic Region Brainstorming Session

• Key questions:
  – What actions do we take to reduce risk and mitigate hazards?
  – How do these mitigation action items support the vision of the Comprehensive Plan?
  – What tools should we focus on to implement these measures?
Next Steps

• Assess Status & Solicit New Revised Action Items – Summer 2014
• Complete Risk Assessment – August 2014
• Suggest Mitigation Action Items – September 2014
• Develop Municipal and Special District Annexes - September 2014
• Draft Area-wide Plan - October 2014
• Area Specific Public Meetings – October/November 2014