



## APPENDIX C: Summary of Updates

### Summary of 2018 Updates

#### CHAPTER 1 – SUMMARY AND MITIGATION STRATEGY UPDATES

##### Introduction

- The highlights from 2013 through 2017 were presented for mitigation funding as well as projects that were completed, and the status of 2013 mitigation items was touched upon.

##### *Planning Strategy and Public Outreach Activities*

- The planning strategies and the public outreach activities were updated to reflect additional efforts and outcomes from public opinion.
- Public comments were incorporate into the plan, planning process, and future maintenance and update strategy.

##### *Mitigation Strategy*

- The mitigation strategy was expanded upon to include updating the list of mitigation action categories to those mentioned in the Local Mitigation Planning Handbook (Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, and Education and Awareness Programs).
- Added mitigation action item implementation strategy overview and expanded upon this for top ten action items.
- Added project challenges section at the end of the previous mitigation action items section to address any projects that are not progressing as planned.

#### CHAPTER 2 – STATE PROFILE UPDATES

##### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

#### CHAPTER 3 – HAZARDS UPDATES

##### 3.1 WILDFIRE

##### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).



## *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county and Tribal Nation; results were summarized by geographic region in the 2013 HMP.

An exposure analysis was conducted to determine what assets are located in the Idaho Bureau of Land's Relative Risk to Wildfire hazard areas.

Statewide demographic and building stock data are assessed.

Canals are considered critical infrastructure and included in the risk analysis.

Risk to State-owned and State-leased buildings from the Risk Management Technical Records were included in the vulnerability assessment update.

U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.2 FLOOD**

### *Risk Assessment*

The 2013 State HMP had flood and dam/levee/canal failures as individual hazards. For the purpose of the 2018 Plan Update, the flood profile will include flood (riverine, flash, ice jam, and alluvial fan) and dam/levee/canal failure combined into the flood profile.

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Flood and dam/levee/canal failure events that occurred in Idaho from January 1, 2012 through October 1, 2017 were researched for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

### *Vulnerability Assessment*

A flood depth grid was generated for the counties in which FEMA DFIRMs are available.

Vulnerability assessment results are summarized by individual county and Tribal Nation; the 2013 HMP summarized by geographic region.

A dam failure exposure analysis was conducted for Black Canyon and Lucky Peak dams.

A levee failure exposure analysis was conducted for the available levee-protected areas delineated in FEMA's National Flood Hazard Layer.

Canals are discussed as a source of flooding, and as critical infrastructure that was evaluated in the riverine, levee and dam exposure analyses.

Risk to State-owned and State-leased buildings from the Risk Management Technical Records were included in the vulnerability assessment update.

EPA ICLUS data was used to access Development Trend Impacts.

## **3.3 SEVERE STORM**



## *Risk Assessment*

The 2013 State HMP had tornadoes and high wind, and lightning as individual hazards and winter storms and hail combined as one hazard (severe storms). For the purpose of the 2018 Plan Update, winter storms, hail, tornadoes, straight-line wind, and lightning were combined into the severe storm profile.

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Severe storm events that occurred in Idaho from January 1, 2012 through October 1, 2017 were researched for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

## *Vulnerability Assessment*

Results are summarized by individual county and Tribal Nation; whereas, the 2013 State HMP summarized results by geographic region.

A spatial exposure analysis was conducted utilizing the 2002 NREL Annual Average Wind Resource Potential of the Northwestern United States at a 50 meter height dataset.

Statewide demographic and building stock data were included in the analysis.

Canals are considered critical infrastructure and included in the risk analysis.

Risk to State-owned and State-leased buildings from the Risk Management Technical Records were included in the vulnerability assessment update.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.4 AVALANCHE**

### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.



### 3.5 DROUGHT

#### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Drought from January 1, 2012 through October 1, 2017 were researched and added for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

#### *Vulnerability Assessment*

Vulnerability assessment results are summarized by Individual County; whereas the 2013 State HMP summarized results by geographic region.

The 2012 United States Department of Agriculture's Census of Agriculture data used to assess local vulnerability.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

### 3.6 EARTHQUAKE

#### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Earthquake events that occurred in Idaho from January 1, 2010 through October 1, 2017 were researched for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

#### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county and Tribal Nation; the 2013 State HMP summarized by geographic region.

Three earthquake scenarios and one historic event were modeled using Hazus-MH.

An exposure analysis was conducted utilizing the 2014 USGS Ground Acceleration map to align with the 2015 Idaho Multi-Hazard Risk Portfolio.

Demographic and building stock data included in exposure assessment.

Canals are considered critical infrastructure and have been included in the risk assessment.

A State-owned and State-leased building inventory is available and was included in the risk assessment.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to access development trend impacts.



## 3.7 LANDSLIDE

### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Landslide from January 1, 2012 through October 1, 2017 were researched and added for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

### *Vulnerability Assessment*

- Results are summarized by Individual County and Tribal Nation; the 2013 State HMP summarized results by geographic region.
- A spatial exposure analysis was conducted utilizing the USGS Landslide Incidence and Landslide Susceptibility spatial dataset.
- Statewide demographic and building stock data were included in the analysis.
- Canals are considered critical infrastructure and included in the risk analysis.
- Risk to State-owned and State-leased buildings from the Risk Management Technical Records were included in the vulnerability assessment update.
- U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## 3.8 VOLCANIC

### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Volcanic Eruptions from January 1, 2012 through October 1, 2017 were researched and added for this HMP Update.

New and updated figures from federal and state agencies are incorporated.

### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## 3.9 CIVIL DISTURBANCE



### *Risk Assessment*

The hazard profile has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

Civil disturbance events that occurred in Idaho from January 1, 2012 through October 1, 2017 were researched for this HMP Update.

### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.10 CYBER DISRUPTION**

### *Risk Assessment*

This hazard profiles has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

New and updated figures from federal and state agencies are incorporated.

### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.11 HAZARDOUS MATERIAL**

### *Risk Assessment*

- This hazard profiles has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).
- New and updated figures from federal and state agencies are incorporated

### *Vulnerability Assessment*

- Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.
- The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.12 PANDEMIC**



## *Risk Assessment*

- This hazard profiles has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).
- New and updated figures from federal and state agencies are incorporated.

## *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

Data from the U.S. Census Bureau and Centers for Disease Control and Prevention (CDC) were used to assess State vulnerability.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.13 RADIOLOGICAL**

### *Risk Assessment*

This hazard profiles has been significantly enhanced to include a detailed hazard description, location, extent, impacts (severity, warning time, secondary impacts), previous occurrences, and probability of future occurrence (including climate change).

New and updated figures from federal and state agencies are incorporated.

### *Vulnerability Assessment*

Vulnerability assessment results are summarized by individual county; whereas, results were summarized by geographic region in the 2013 HMP.

The U.S. EPA Integrated Climate and Land-Use Scenarios (ICLUS) data was used to assess development trend impacts.

## **3.14 LOCAL PLAN HAZARD ASSESSMENT AND LOSS ESTIMATION ROLLUP**

Removed county plan information from chapter 4 and created single location that shows each hazard assessed by the local plans within the state, and emphasizes which hazards each county and tribe deem as a high hazard

## **CHAPTER 4 – POLICY AND PROGRAM CAPABILITY UPDATES**

Updated State Policies and Statutes.

Local Mitigation Capability Assessment was updated to include the updated County and Tribal Plan information.

New Hazard Mitigation Assistance Programs and Mitigation Resources were added

## **CHAPTER 5 – ENHANCED PLAN ADDITION**



## Appendix C

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### *Enhanced Plan*

Chapter Five was added as a new chapter, incorporating all of the components as required by CFR 44 for the Enhanced State Hazard Mitigation Plan.



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