



September 2016

# 2016 Ada County Multi-Hazard Mitigation Plan

Volume 2—Planning Partner Annexes



TETRA TECH



# 2016 Ada County Multi-Hazard Mitigation Plan: Volume 2—Planning Partner Annexes

September 2016

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- Appendix A. Planning Partner Expectations
- Appendix B. Procedures for Linking to This Plan
- Appendix C. Annex Instructions and Templates

# INTRODUCTION

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## BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. All participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

“Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.” (Section 201.6.a(4))

For the 2016 Ada County Multi-Hazard Mitigation Plan, a planning partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act (DMA) for eligible local governments in Ada County. The DMA defines a local government as follows:

“Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.”

There are two types of Planning Partners that participated in this process, with distinct needs and capabilities:

- Incorporated municipalities (cities and the County)
- Special purpose districts.

Each participating planning partner has prepared a jurisdiction-specific annex to this plan. These annexes, as well as information on the process by which they were created, are contained in this volume.

## THE PLANNING PARTNERSHIP

### Initial Solicitation and Letters of Intent

The planning team solicited the participation of the County and all County-recognized special purpose districts at the outset of this project. A kickoff meeting was held on January 19, 2016 at the Ada County Public Safety complex to confirm potential stakeholders and planning partners for this process. The purpose of the meeting was to introduce the plan update process to jurisdictions in the County that could have a stake in the outcome of the planning effort. All eligible local governments within the planning area were invited to attend. Various agency and citizen stakeholders were also invited to this meeting. The goals of the meeting were as follows:

- Provide an overview of the Disaster Mitigation Act.
- Provide an update on the planning process to date.
- Outline the Ada County plan update work plan.

- Describe the benefits of multi-jurisdictional planning.
- Outline planning partner expectations.
- Solicit planning partners.

All interested local governments were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation. Local governments wishing to join the planning effort were asked to provide the planning team with a “notice of intent to participate” that agreed to the planning partner expectations (see Appendix A) and designated a point of contact for their jurisdiction. In all, formal commitment was received from 22 planning partners by the planning team, and the Ada County Planning Partnership was formed. This partnership includes Boise State University which is participating as a stakeholder planning partner and not a fully obligated planning partner. Boise State is covered by the Idaho State Hazard mitigation Plan, but wanted to support the Ada County planning effort due to its relevance within the planning area. The letters of intent to participate are on file with Ada County Emergency Management (ACEM) and are available for review upon request.

Maps for each participating city are provided in the individual annex for that city in this volume. Maps showing the location of participating special purpose districts by district type are provided at the end of this introduction. These maps will be updated periodically as changes to the partnership occur, either through linkage or by a partner dropping out due to a failure to participate.

### **Groups Involved in The Planning Process**

One of the goals of the multi-jurisdictional approach to natural hazard mitigation planning is to efficiently achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. Several groups were involved in this process at different levels:

- **Planning Team**—The Tetra Tech team and ACEM staff responsible for the facilitation of the planning process and the development of the plan document.
- **Steering Committee**—Representative members from the planning partnership and stakeholders that serve as the oversight body. They are responsible for many of the planning milestones and decisions prescribed for this process to help reduce the burden of time required by each planning partner.
- **Planning Partners**—Jurisdictions or special purpose districts that are developing an annex to the regional plan.
- **Planning Stakeholders**—The individuals, groups, businesses, academia, etc., from which the planning team gains information to support the various elements of the plan. This group may also be referred to as coordinating stakeholders.

### **Planning Partner Expectations**

The planning team developed the following list of planning partner expectations, which were confirmed at the kickoff meeting held on January 19, 2016:

- Each partner will provide a “Letter of Intent to Participate.”
- Each partner will support and participate in the selection and function of the Steering Committee overseeing the development of the update. Support includes allowing this body to make decisions regarding plan development and scope on behalf of the partnership.
- Each partner will provide support for the public involvement strategy developed by the Steering Committee in the form of mailing lists, possible meeting space, and media outreach such as newsletters, newspapers or direct-mailed brochures.
- Each partner will participate in plan update development activities such as:

- Steering Committee meetings
- Public meetings or open houses
- Workshops and planning partner training sessions
- Public review and comment periods prior to adoption.

Attendance will be tracked at such activities, and attendance records will be used to track and document participation for each planning partner. No minimum level of participation will be established, but each planning partner should attempt to attend all such activities.

- Each partner will be expected to perform a “consistency review” of all technical studies, plans, and ordinances specific to hazards identified within the planning area to determine the existence of plans, studies or ordinances not consistent with the equivalent documents reviewed in preparation of the County plan. For example: if a planning partner has a floodplain management plan that makes recommendations that are not consistent with any of the County’s basin plans, that plan will need to be reviewed for probable incorporation into the plan for the partner’s area.
- Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide jurisdiction-specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- Each partner will be expected to review the mitigation recommendations chosen for the overall county and determine if they will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the overall plan recommendations will need to be identified, prioritized and reviewed to determine their benefits and costs.
- Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- Each partner will be required to complete its normal pre-adoption process prior to submitting the plan to its governing body for adoption. For example, if it is the community’s normal process to submit a planning document to a Planning Commission prior to submittal to council for adoption, then that process must be followed for the adoption of this plan.
- Each partner will be required to formally adopt the plan.

By adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria may result in a partner being dropped from the partnership by the Steering Committee, and thus losing eligibility under the scope of this plan.

## Linkage Procedures

Eligible local jurisdictions that did not participate in development of this regional plan update may comply with DMA requirements by linking to this plan following the procedures outlined in Appendix B.

## ANNEX-PREPARATION PROCESS

### Templates

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special purpose districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of Section 201.6 of 44 CFR would be met, based on the partners’ capabilities and mode of operation. Templates available for the planning partners’ use were specific as to whether the partner is a municipality or a special purpose district and whether the annex is an update to a previous hazard mitigation plan or a first-time hazard plan. Each partner was asked to participate in a technical assistance workshop during which key elements of the template were completed by a designated point

of contact for each partner and a member of the planning team. The templates were set up to lead each partner through a series of steps that would generate the DMA-required elements that are specific for each partner. The templates and their instructions can be found in Appendix C to this volume of the Multi-Hazard Mitigation Plan.

## Workshop

Workshops were held for Planning Partners to learn about the templates and the overall planning process. Topics included the following:

- DMA
- Ada County plan background
- The templates
- Risk ranking
- Developing your action plan
- Cost/benefit review.

Separate sessions were held for special purpose districts and municipalities, in order to better address each type of partner's needs. The sessions provided technical assistance and an overview of the template completion process. Attendance at this workshop was mandatory under the planning partner expectations established by the Steering Committee. There was 100-percent attendance of the partnership at these sessions.

In the risk-ranking exercise, each planning partner was asked to rank each risk specifically for its jurisdiction, based on the impact on its population or facilities. Cities were asked to base this ranking on probability of occurrence and the potential impact on people, property and the economy. Special purpose districts were asked to base this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities and the facilities' functionality after an event. The methodology followed that used for the countywide risk ranking presented in Volume 1. A principal objective of this exercise was to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes. Tools utilized during these sessions included the following:

- The risk assessment results developed for this plan
- Hazard maps for all hazards of concern
- Special district boundary maps that illustrated the sphere of influence for each special purpose district partner
- Hazard mitigation catalogs
- Federal funding and technical assistance catalogs
- Copies of partners' prior annexes, if applicable.

## Prioritization

44 CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team and steering committee developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44 CFR. The actions were prioritized according to the following criteria:

- **High Priority**—An action that meets multiple objectives, has benefits that exceed cost, has funding secured or is an ongoing action and meets eligibility requirements for a grant program. High priority actions can be completed in the short term (1 to 5 years). The key factors for high priority actions are that they have funding secured and can be completed in the short term.
- **Medium Priority**—An action that meets multiple objectives, that has benefits that exceed costs, and for which funding has not yet been secured, but is eligible for funding. Action can be completed in the short term, once funding is secured. Medium priority actions will become high priority actions once funding is

secured. The key factors for medium priority actions are that they are eligible for funding, but do not yet have funding secured, and they can be completed within the short term.

- **Low Priority**—An action that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, and for which the time line for completion is long term (1 to 10 years). Low priority actions may be eligible for grant funding from other programs that have not yet been identified. Low priority actions are generally “blue-sky” or “wish-list.” actions. Financing is unknown, and they can be completed over a long term.

Grant pursuit priorities were established using the following considerations:

- **High Priority**—An action that has been identified as meeting grant eligibility requirements, assessed to have high benefits, is listed as high or medium priority, and where local funding options are unavailable or where dedicated funds could be utilized for actions that are not eligible for grant funding.
- **Medium Priority**—An action that has been identified as meeting grant eligibility requirements, assessed to have medium or low benefits, is listed as medium or low priority, and where local funding options are unavailable.
- **Low Priority**—An action that has not been identified as meeting grant eligibility requirements, or has low benefits.

## Benefit/Cost Review

44 CFR requires the prioritization of the action plan to emphasize a benefit/cost analysis of the proposed actions. Because some actions may not be implemented for up to 10 years, benefit/cost analysis was qualitative and not of the detail required by FEMA for project grant eligibility under relevant grant programs. A review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to costs and benefits as follows:

Benefit ratings were defined as follows:

- **High**—Action will have an immediate impact on the reduction of risk exposure to life and property.
- **Medium**—Action will have a long-term impact on the reduction of risk exposure to life and property, or action will provide an immediate reduction in the risk exposure to property.
- **Low**—Long-term benefits of the action are difficult to quantify in the short term.

Cost ratings were defined as follows:

- **High**—Requires an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed action.
- **Medium**—Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
- **Low**—Possible to fund under existing budget. Action is or can be part of an existing ongoing program.

Using this approach, actions with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial. For many of the strategies identified in this action plan, the partners may seek financial assistance under the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation (PDM) Program, both of which require detailed benefit/cost analyses. These analyses will be performed on actions at the time of application using the FEMA benefit-cost model. For actions not seeking financial assistance from grant programs that require detailed analysis, the partners reserve the right to define “benefits” according to parameters that meet the goals and objectives of this plan.

## Analysis of Mitigation Initiatives

Each planning partner reviewed its recommended initiatives to classify each initiative based on the hazard it addresses and the type of mitigation it involves. Mitigation types used for this categorization are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

## COMPATIBILITY WITH PREVIOUS APPROVED PLANS

The jurisdictions listed in Table 1 participated in the 2011 Ada County mitigation planning effort. The table lists the dates that each of these jurisdictions adopted the previous hazard mitigation plan.

**Table 1. Jurisdictions that Participated in Previous Hazard Plan**

Jurisdiction	Previous Annex Adoption Date
Ada County	11/30/2011
Boise	12/6/2011
Eagle	11/17/2011
Garden City	11/17/2011
Kuna	12/20/2011
Meridian	12/6/2011
Star	12/6/2011
Eagle Fire Protection District	11/15/2011
Kuna Rural Fire District	11/9/2011
North Ada County Fire & Rescue	11/14/2011
Whitney Fire Protection District	11/10/2011
Ada County Highway District	12/14/2011
Ada County Paramedics	12/13/2011
Boise School District	11/14/2011
Boise Warm springs Water District	11/16/2011
Drainage District #4	12/7/2011
Flood Control District #10	11/17/2011
Greater Boise Auditorium District	12/20/2011
Joint School District #2	11/16/2011

Ada County Emergency Management used the 2011 plan update process to comprehensively revise the original (2006) hazard mitigation plan. This plan differed from its predecessor for a variety of reasons:

- Better guidance existed at the time of its development.
- The scope of the plan was expanded to include Special Purpose District planning partners not involved in the initial planning effort. These district planning partners were considered to be true stakeholders in mitigation within the planning area.
- Newly available data and tools provided for a more detailed and accurate risk assessment. The initial plan did not use tools such as FEMA’s Hazards U.S. Multi-Hazard (Hazardus-MH) computer model or new data such as FEMA’s countywide Digital Flood Insurance Rate Maps (DFIRMs).
- The risk assessment was prepared to better support future grant applications by providing risk and vulnerability information that would directly support the measurement of “cost-effectiveness” required under FEMA mitigation grant programs.
- Science and technology had improved since the development of the initial plan.
- The plan was developed such that it met program requirements of the Community Rating System, thus reducing flood insurance premiums in participating jurisdictions.
- There was a strong desire on the part of ACEM for this plan to be a user-friendly document that is understandable to the general public and not overly technical.
- The plan identified actions rather than strategies. Strategies provide direction, but actions are fundable under grant programs. This plan replaced strategies with a guiding principal, goals and objectives. The identified actions met multiple objectives that were measurable, so that each planning partner can measure the effectiveness of their mitigation actions.
- The plan identified and prioritized 230 initiatives to be implanted by the Planning Partnership. The status of these initiatives was monitored over the plan performance period by a plain maintenance strategy identified in the plan that included annual progress reporting.

## FINAL COVERAGE UNDER THE PLAN

Of the 22 committed planning partners, 22 fully met the participation requirements specified by the Steering Committee. The principal requirement not met by the other partners was the completion of the jurisdictional annex template following the workshops. All 22 partners that attended the workshop subsequently submitted completed templates. Only those 22 jurisdictions are included in this volume and will seek DMA compliance under this plan. The remaining jurisdictions will need to follow the linkage procedures described in Appendix B of this volume. Table 2 lists the jurisdictions that submitted letters of intent and their ultimate status in this plan.

**Table 2. Planning Partner Status**

	Letter of Intent Date	Attended Workshop?	Completed Template?	Covered by This Plan?
<b>Municipalities</b>				
Ada County	2/16/2016	Yes	Yes	Yes
City of Boise	1/22/2016	Yes	Yes	Yes
City of Eagle	2/19/2016	Yes	Yes	Yes
City of Garden City	2/19/2016	Yes	Yes	Yes
City of Kuna	2/3/2016	Yes	Yes	Yes
City of Meridian	4/10/2016	Yes	Yes	Yes
City of Star	1/25/2016	Yes	Yes	Yes
<b>Other Planning Partners</b>				
Ada County Highway District	1/22/2016	Yes	Yes	Yes
Drainage District #4	2/12/2016	Yes	Yes	Yes
Eagle Fire Protection District	2/22/2016	Yes	Yes	Yes
Eagle Sewer District	2/25/2016	Yes	Yes	Yes
Flood Control District #10	2/12/2016	Yes	Yes	Yes
Greater Boise Auditorium District	2/19/2016	Yes	Yes	Yes
Independent School District of Boise #1	2/11/2016	Yes	Yes	Yes
Joint School District #2	3/4/2016	Yes	Yes	Yes
Kuna Rural Fire District	4/3/2016	Yes	Yes	Yes
North Ada County Fire & Rescue	1/19/2016	Yes	Yes	Yes
Star Joint Fire Protection District	1/21/2016	Yes	Yes	Yes
Star Sewer and Water District	5/6/2016	Yes	Yes	Yes
Whitney Fire Protection District	2/11/2016	Yes	Yes	Yes
Boise State University <sup>a</sup>	02/19/2016	Yes	Yes	No

a. Boise State University is not an official planning partner to this plan but is a significant stakeholder.

## ACRONYMS AND ABBREVIATIONS

The following terms are used in the planning partner annexes:

- ACC—Ada County Code
- ACEM—Ada County Emergency Management
- ACEMSD—Ada County Emergency Medical Services District
- ACHD—Ada County Highway District
- AFG—Assistance to Firefighters Grants
- CFDA—Catalog of Federal Domestic Assistance
- CFM—Certified Floodplain Manager
- COMPASS CIM 2040—Community Planning Association of Southwest Idaho Communities in Motion 2040
- CTA—Conservation Technical Assistance
- CWPP—Community Wildfire Protection Plan
- DD4—Drainage District #4
- DEQ—Department of Environmental Quality
- DHS—Department of Homeland Security
- EFD—Eagle Fire District

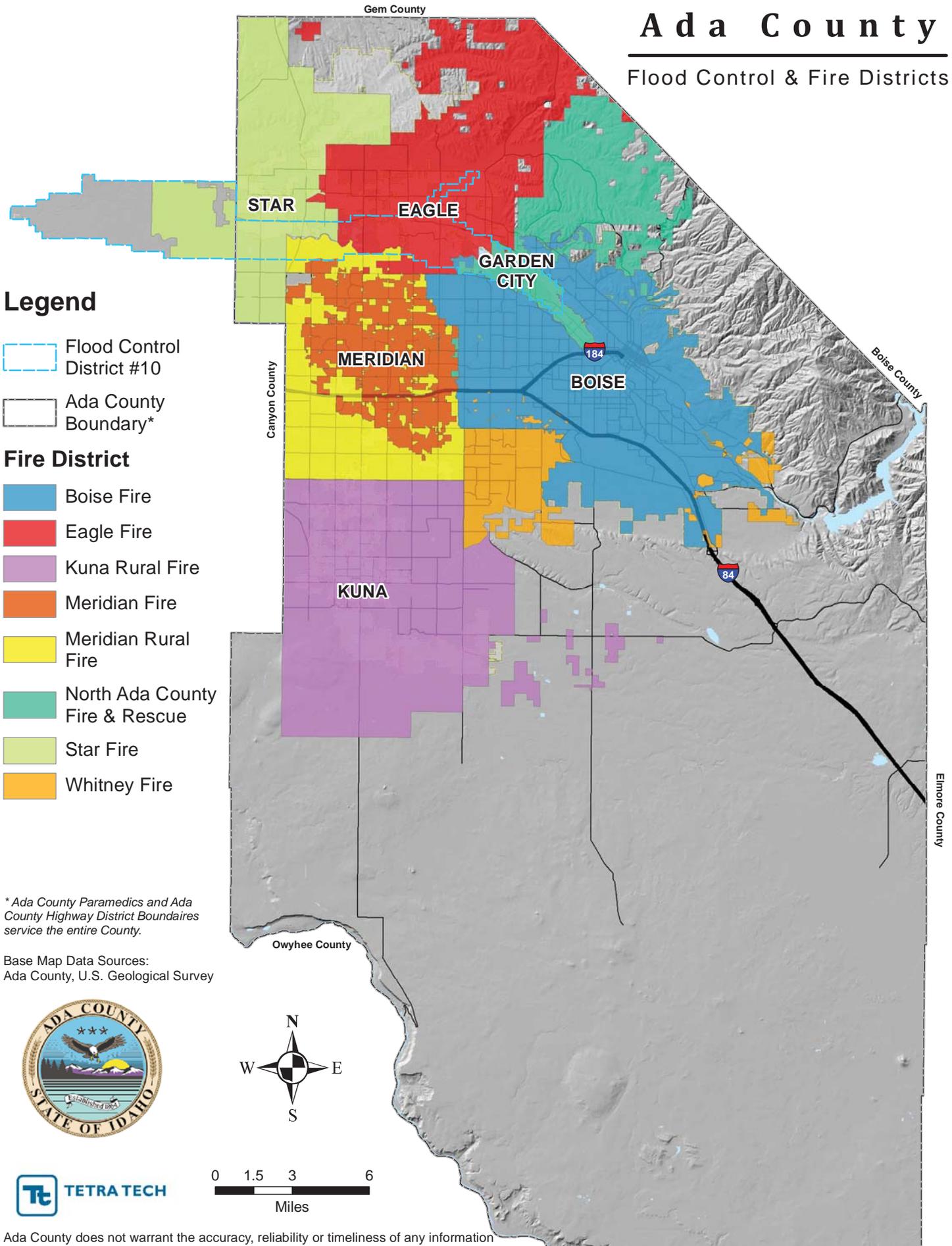
- EMPG—Emergency Management Performance Grant
- EOC—Emergency Operations Center
- EOP—Emergency Operations Plan
- EPA—Environmental Protection Agency
- ESD—Eagle Sewer District
- EWP—Emergency Watershed Protection
- FCD—Flood Control District
- FEMA—Federal Emergency Management Agency
- FMA—USDA Flood Mitigation Assistance
- FPMSP—Floodplain Management Services Program
- FWS—Fish & Wildlife Service
- GBAD—Greater Boise Auditorium District
- HMGP—Hazard Mitigation Grant Program
- HOA—Homeowners Association
- HSGP—Homeland Security Grant Program
- IFYWP—Integrated Five Year Work Plan
- IOEM—Idaho Office of Emergency Management
- IPAWS—Integrated Public Alert & Warning System
- ISAWS—Idaho State Alert & Warning System
- ICC—International Code Council
- IDWR—Idaho Department of Water Resources
- ITD—Idaho Transportation Department
- KMC—Kuna Municipal Code
- KRFD—Kuna Rural Fire Protection District
- MS4—Municipal Separate Storm Sewer System
- NACFR—North Ada County Fire & Rescue
- NEHRP—National Earthquake Hazard Reduction Program
- NFIP RFC—National Flood Insurance Program Repetitive Flood Claims
- NFIP—National Flood Insurance Program
- NFPA—National Fire Protection Association
- NIMS—National Incident Management System
- NOAA—National Oceanic and Atmospheric Administration
- NPDES—National Pollutant Discharge Elimination System
- NRCS CTA—Natural Resource Conservation Service Conservation Technical Assistance
- NRCS—Natural Resource Conservation Service
- PDM—Pre-Disaster Mitigation grant program
- POC—Point of Contact
- RFC—Repetitive Flood Claims
- RTCA—Rivers, Trails and Conservation Assistance
- SCADA—Supervisory Control and Data Acquisition
- SFD—Star Joint Fire Protection District
- USDA FNS—U.S. Department of Agriculture Food & Nutrition Service
- USGS—U.S. Geological Survey
- WFPD—Whitney Fire Protection District
- WUI—Wildland Urban Interface
- WWTP—Wastewater Treatment Plan

## **SPECIAL PURPOSE DISTRICT MAPS**



# Ada County

## Flood Control & Fire Districts



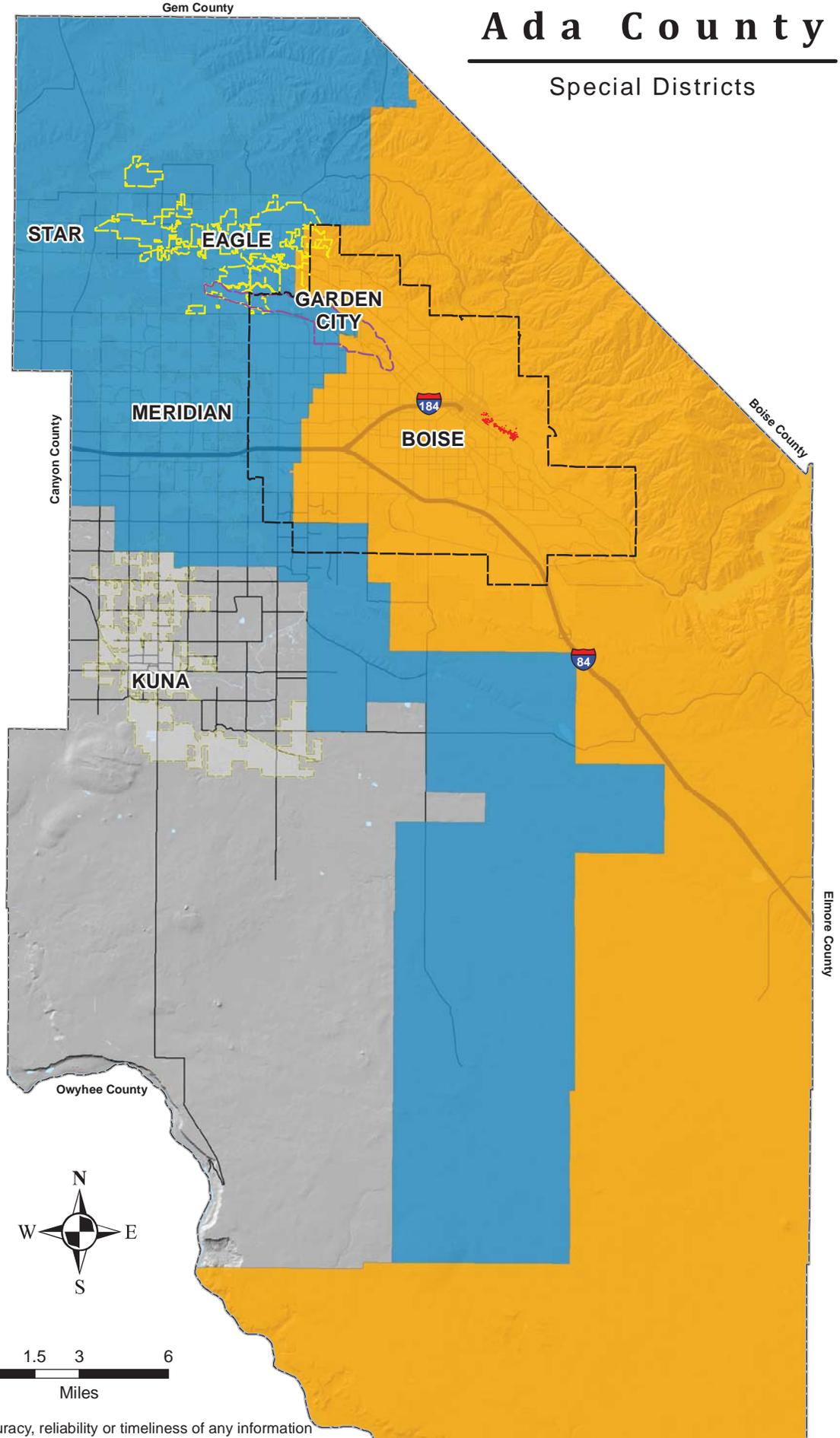
Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# Ada County

## Special Districts

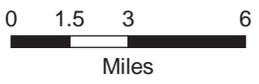
### Legend

-  Ada County Boundary\*
-  Boise Auditorium
-  Drainage District #4
-  Eagle Sewer District
-  Warm Springs Water District
-  Boise School District #1
-  Meridian School District #2



\* Ada County Paramedics and Ada County Highway District Boundaries service the entire County.

Base Map Data Sources:  
Ada County, U.S. Geological Survey



Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# 1. UNINCORPORATED ADA COUNTY

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## 1.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Doug Hardman, Director, ACEM  
7200 Barrister Drive  
Boise, ID 83704  
Telephone: 208-577-4750  
E-mail Address: dhardman@adaweb.net

### Alternate Point of Contact

Paul Marusich, Emergency Planner, ACEM  
7200 Barrister Drive  
Boise, ID 83704  
Telephone: 208-577-4750  
e-mail Address: pmarusich@adaweb.net

## 1.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—Established December 22, 1864
- Current Population—Estimated 409,239 as of 2014 (U.S. Census American Community Survey 5-year estimates)
- Population Growth—Between 2000 (total population: 300,904) and 2010 (total population: 392,365), Ada County experienced a 30.4% increase in population for an approximate average of 3% per year. Based on 2014 population estimates, the County has experienced an additional 4.3% population increase between 2010 and 2014.
- Location and Description—Ada County is located in the southwestern part of Idaho, and encompasses a land area of 1,060 square miles (including 5 miles of water). Ada County is the State of Idaho’s most populated county, containing nearly 25% of the state’s population. It is home to the capital city of Boise, which is also the largest city and the county seat where most of the county offices are located. In addition, the county is home to five other cities, Meridian, Eagle, Garden City, Star, and Kuna. Ada County is also home to the nation’s only countywide highway district, the Ada County Highway District (ACHD) which is served by a separate elected board. Surrounding counties are Boise (NE), Canyon (NW), Elmore (SE), Gem (N), and Owyhee (SW) as shown below.



The following highways run through Ada County: Interstate Highway 84/184, US 20, US 26, US 30, State Highway 21, State Highway 44, State Highway 55, and State Highway 69.

Major dams on the Boise River in Ada County include Lucky Peak and Arrow Rock Reservoir.

Additionally, Anderson Ranch dam is another large dam that lies in Elmore County, up river of Ada County's Lucky Peak Reservoir. Ada County has a number of smaller dams as well, including Barber dam—located on the Boise River just below Lucky Peak. There are a total of 26 dams in the county, 13 of which are classified as high-hazard dams. More information on dams is available via Ada County's Emergency Management site at [ACEM.org](http://ACEM.org).

Key geographic features include the Boise River, which flows through the northern part of the county and the City of Boise. The northeastern part of Ada County is bordered by the foothills of the Boise Mountains (the foothills of the Rocky Mountains). The southwestern part of Ada County borders the Snake River.

Ada County is also home to the Boise Airport (Gowen Field), Gowen Field Air National Guard Base, and Boise State University—the state's largest university with nearly 20,000 students, which lies within the City of Boise.

- **Brief History**—Ada County was created by the Idaho Territorial Legislature on December 22, 1864. It is named after Ada Riggs, the first pioneer child born in the county, and daughter of H.C. Riggs, the co-founder of the City of Boise.
- **Climate**—Ada County has a high desert climate with four distinct seasons. Temperatures range from an average winter low of 22 degrees to an average high in summer of 87 degrees. Average precipitation is about 11-12 inches per year.
- **Governing Body Format**—Ada County is headed by an elected three-member group, the Board of Ada County Commissioners. The Board directly oversees departments, as there is no County Manager position. Other county elected offices include a County Clerk, Treasurer, Assessor, Prosecutor, Coroner, and Sheriff. The Board of County Commissioners is responsible for the adoption of this plan, Ada County Emergency Management is responsible for its implementation.
- **Development Trends**—In 2006, development was at an all-time high, but the boom turned to bust shortly thereafter. In recent months, the market seems to have hit bottom and small signs of recovery are emerging. In 2010, Ada County issued 494 residential and 109 commercial building permits within unincorporated parts of the county. A small number of single-family residential lots (11) and one 17-lot commercial subdivision were approved by the county in 2010. The commercial subdivision was later annexed into the City of Eagle.

### 1.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 1-1. An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-4. Classifications under various community mitigation programs are presented in Table 1-5. An assessment of education and outreach capabilities is presented in Table 1-6.

**Table 1-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Title 7, Chapter 2, Ada County Code adopts the 2012 IBC, 01/6/2015</i>	Yes	No	Yes
Zoning Code <i>Comment: Title 8, ACC adopted: 12/8/2010</i>	Yes	No	No
Subdivisions <i>Comment: Title 8, Chapter 6, ACC, adopted 12/8/2010</i>	Yes	No	No
Stormwater Management <i>Comment: Title 8, Chapter 4, ACC adopted: 12/8/2010</i>	Yes	No	Yes
Post-Disaster Recovery	No	No	No
Real Estate Disclosure	No	No	No
Growth Management <i>Comment: Ada County Comprehensive Plan, adopted 11/26/2007; Ada Co. Zoning ordinance-Title 8, ACC, adopted 12/8/2010 Comprehensive plan update initiated in 2016</i>	Yes	No	No
Site Plan Review <i>Comment: Title 8, Chapter 4-ACC adopted: 12/8/2010</i>	Yes	No	No
Environmental Protection	No	No	No
Flood Damage Prevention <i>Comment: Title 8, Chapter 3-ACC, Article F adopted 12/3/2014</i>	Yes	No	No
Emergency Management <i>Comment: Idaho Code § 46-1009</i>	Yes	No	No
Climate Change	No	No	No
Other <i>Comment: Flood Hazard Overlay District: Title 8, Chapter 3, article F, ACC, adopted: 2/12/2003 Wildland Urban Interface Overlay District: Title 8, Chapter 3, Article B, ACC, adopted: 7/12/2006 Southwest Planning Area Overlay District: Title 8, Chapter 3, article C, ACC adopted: 7/12/2006 Boise River Greenway Overlay District. Title 8, Chapter 3, article G, ACC, adopted: 6/14/2000 Hillside Overlay District. Title 8, Chapter 3, article H, ACC. Adopted: 12/8/2010 Cartwright Ranch Planned Community Zoning Ordinance, Title 8, Chapter 3, article K, ACC. Adopted: 2/10/2010 Dry Creek Planned Community Zoning Ordinance. Title 8, Chapter 3, article n, ACC. Adopted: 2/10/2010 Hidden Springs Zoning Ordinance &amp; Specific Plan. Title 8, Ch. 21. Adopted: 3/12/1997 Private Roads. Title 8, Ch. 4, Article D, ACC. Adopted 7/12/2006</i>	Yes	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes Comment: Ada County Comprehensive Plan, adopted 11/26/2007 Comprehensive Plan update initiated in 2016</i>	Yes	No	No
Capital Improvement Plan <i>What types of capital facilities does the plan address? Transportation Infrastructure How often is the plan updated? 4-year performance period, reviewed and updated annually Comment: ACHD 2013 CIP</i>	Yes	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
Floodplain or Watershed Plan <i>Comment: The 2016 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.</i>	Yes	No	No
Stormwater Plan <i>Comment: Phase I Stormwater Mgmt. Plan – December 2013; Ada County Highway District</i>	Yes	No	No
Habitat Conservation Plan	No	No	No
Economic Development Plan	No	No	No
Shoreline Management Plan	N/A	No	No
Community Wildfire Protection Plan <i>Comment: Mitigation Plan will serve as CWPP as approved by the Idaho Department of Lands</i>	Yes	No	Yes
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other		No	No
Comprehensive Emergency Management Plan <i>Comment: Ada County EOP (2014) and hazard specific plans fulfill this function .</i>	Yes	No	No
Threat & Hazard Identification & Risk Assessment <i>Comment: Ada County THIRA 2015, Ada County Multi-Hazard Mitigation Plan</i>	Yes	No	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan	Yes	No	No
Public Health Plan <i>Comment: Central District Health Department Emergency Operations Plan, 2013</i>	No	Yes	No

**Table 1-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Sewer-yes; Water-no; gas or electric-no
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	None

**Table 1-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Development Services/Planning & Zoning
Engineers or professionals trained in building or infrastructure construction practices	Yes	Development Services/Building Division
Planners or engineers with an understanding of natural hazards	Yes	Development Services/Engineering Division
Staff with training in benefit/cost analysis	Yes	Ability to contract for service
Surveyors	Yes	Development Services/Engineering Division
Staff capable of making substantial damage estimates	Yes	Development Services/Engineering Division
Personnel skilled or trained in GIS applications	Yes	Information Technology/GIS Info System Tech
Scientist familiar with natural hazards in local area	Yes	Planning partners available through universities and Idaho Office of Emergency Management
Emergency manager	Yes	Ada County Emergency Management (ACEM)
Grant writers	Yes	Ability to contract for service

**Table 1-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	12/18/84
When did the Flood Insurance Rate maps become effective (current)?	10/02/03
What local department is responsible for floodplain management?	Development Services/Engineering Division
Who is your floodplain administrator? (department/position)	Director or appointee - Development Services (per flood ordinance)
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	12/03/2014
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Exceed 1-foot freeboard
When was the most recent Community Assistance Visit or Community Assistance Contact?	August, 2012
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	Funding for CFM ongoing training.
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> </ul>	Yes
How many Flood Insurance policies are in force in your jurisdiction?	313
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$80,684,300 \$178,955
How many total loss claims have been filed in your jurisdiction?	18
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	10 \$41,049.13

**Table 1-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes	6	10/1/13
Building Code Effectiveness Grading Schedule	Yes	10	N/A
Public Protection	See Fire District Planning Partner Annex		
Storm Ready	Yes	Gold	N/A
Firewise	Wilderness Ranch		2002
	Avimor		2007
	Hidden Springs		2009
	Central Foothills Neighborhood Association		2010
	Warm Springs Mesa		2010
	Morningside Heights HOA		2012
	Columbia Village		2013

**Table 1-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Information regarding current and past hazard mitigation planning initiatives is easily accessible on the website.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Current Emergency Management Facebook page and Twitter account used for general EM education and outreach. Ability to post mitigation-specific information.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes There is citizen representation on the Hazard Mitigation Steering Committee. Mitigation updates and initiatives are also discussed at the Local Emergency Planning Committee meetings.
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes ACEM conducts regular outreach through social media, website, public presentations, safety/preparedness events and public school programs.
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.  Ada County Emergency Management developed a Joint Information System Plan that delineates the processes with developing a regional joint information system and center for coordinating public information messaging.

## 1.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the Multi-Hazard Mitigation Plan into local planning mechanisms.

### 1.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Ada County Comprehensive Plan—The Comprehensive Plan for Ada County currently includes mitigation related policies as they related to the protection of human life and property from flood events. Additionally, the Comprehensive plan addresses the need for natural resource protection and the identification of known hazards within the County.
- Hazard Analysis developed for the Mitigation Plan is used to inform the Threat Hazard Inventory and Risk Assessment (THIRA). The THIRA includes gap analysis that ties response, mitigation and recovery capabilities together to help create a comprehensive approach to the hazards of concern.
- Hazard Analysis developed for the Mitigation Plan is used to inform the Hazard Specific Response Plans (Flood, Wildfire) within the County.

### 1.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Future planning efforts will incorporate the data and analysis contained in the Mitigation Plan and the THIRA.

## 1.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-7 lists all past occurrences of natural hazards within the jurisdiction.

## 1.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Critical infrastructure located in or near floodplains require mitigation actions that address a variety of issues to make the facilities more resilient and capable of maintaining continuity of operations.
- Inadequate water supply for fire suppression operations in some areas of the Wildland Urban Interface .

## 1.7 HAZARD RISK RANKING

Table 1-8 presents the ranking of the hazards of concern.

**Table 1-7. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Hail, Wind, Thunder Storm	N/A	9/05/2013	No Data Available
Flood	N/A	5/08/2012	\$540,000.00 - Garden City + ACHD
High Winds/ Micro-burst	N/A	8/21/2010	\$36,100.00
Highway 16 Wildfire	N/A	7/28/2010	No Data Available
High Winds	N/A	3/29/2009	\$36,700.00
Oregon Trail Wildfire	N/A	8/25/2008	\$1,700,000.00
Flood	N/A	6/5/2006	No Data Available
Flood	N/A	5/26/2006	No Data Available
Flood	N/A	5/11/2006	No Data Available
Flood	N/A	4/5/2006	No Data Available
Wildfire	N/A	7/26/2005	No Data Available
Wildfire	N/A	7/12/2004	No Data Available
Flood	N/A	7/7/2004	No Data Available
Wildfire	N/A	7/6/2003	No Data Available
Severe Storm/Thunder Storm—Wind	N/A	7/25/2002	No Data Available
Wildfire	N/A	7/4/2002	No Data Available
Wildfire	DR-1341	9/1/2000	No Data Available
Wildfire	N/A	7/2/2000	No Data Available
Wildfire	N/A	7/26/1999	No Data Available
Wildfire	N/A	7/19/1999	No Data Available
Flood	N/A	3/7/1999	No Data Available
Severe Storm/Thunder Storm—Wind	N/A	1/16/1999	No Data Available
Severe Storm/Thunder Storm—Wind	N/A	9/6/1998	\$38,000.00
Flood	N/A	5/17/1998	No Data Available
Severe Hail, Wind, Thunder Storm	N/A	4/23/1998	\$20,000.00
High Wind	N/A	9/17/1997	\$62,000.00
Flood	DR-1177	9/11/1997	No Data Available
Flood	DR-1154	7/7/1997	No Data Available
Flood	N/A	1/1/1997	No Data Available
Wildfire	N/A	8/26/1996	No Data Available
Lightning/Wildfire	N/A	7/28/1995	No Data Available
Severe Storm/Thunder Storm—Wind	N/A	4/27/1995	\$50,500.00
Severe Winter Storm/Thunder Storm	N/A	12/1/1994	No Data Available
Flood	N/A	5/7/1993	No Data Available
Winter Weather—Snow	N/A	11/27/1992	No Data Available
Winter Weather –Blizzard	N/A	11/9/1992	No Data Available
Drought	N/A	10/1/1992	\$1,900,000.00 – crop damage
Heat—Wind	N/A	8/20/1992	\$1,900,000 .00– crop damage
Winter Weather—Unusually Cold	N/A	2/4/1989	\$12,800.00
Wildfire	N/A	8/2/1988	No Data Available
Severe Storm/Thunder Storm—Wind	N/A	6/15/1987	\$13,800.00
Flood	N/A	2/1/1986	No Data Available
Wind	N/A	4/15/1985	No Data Available

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood	N/A	6/1/1983	No Data Available
Hail—Wind	N/A	8/11/1982	\$250,000.00
Flood	N/A	2/1/1982	No Data Available
Wind	N/A	6/30/1981	\$50,000.00
High Winds	N/A	3/29/1981	\$35,700.00
Flood	N/A	1/5/1979	No Data Available
Winter Weather—Extreme Cold	N/A	1/1/1979	\$61,300.00
Wind	N/A	12/15/1977	\$25,000.00
Severe Storm/Thunder Storm—Wind	N/A	6/8/1976	No Data Available
Severe Thunder Storm—Wind, Lightning	N/A	7/29/1975	No Data Available
Wind	N/A	2/26/1974	No Data Available
Flood	N/A	5/26/1973	No Data Available
Winter Weather -Freeze	N/A	12/8/1972	\$125,000.00
Winter Weather -Wind, Snow	N/A	1/9/1972	\$113,600.00
Strong Winds	N/A	3/30/1971	No Data Available
Flood	N/A	1/17/1971	No Data Available
Severe Hail—Wind	N/A	6/26/1970	\$17,200.00

**Table 1-8. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	33	High
2	Wildfire	24	Medium
3	Flood	18	Medium
4	Earthquake	16	Medium
5	Landslide	12	Low
6	Drought	9	Low
7	Dam Inundation	6	Low
8	Volcano	6	Low

## 1.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 1-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 1.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-10 lists the actions that make up the Unincorporated Ada County hazard mitigation action plan. Table 1-11 identifies the priority for each action. Table 1-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 1-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #AC001 – Flood walls at Courthouse		X	
Action #AC002—Transfer switch for generator power <i>Comment:</i> Brief cost analysis conducted. Current budgetary restrictions prohibit action in the near future.		X	
Action #AC003—Backup power at Courthouse <i>Comment:</i> No funding source identified.		X	
Action #AC004—Locate/protect first responders facilities from flood <i>Comment:</i> This will be an ongoing effort as the area grows.		X	
Action #AC005—Harden irrigation canals <i>Comment:</i> New York canal examining a new cost effective membrane.		X	
Action #AC006—NFIP <i>Comment:</i> Ongoing compliance in program.		X	
Action #AC007—Seismic retrofit of County facilities <i>Comment:</i> No funding source identified.		X	
Action #AC008—Outreach to Irrigation Districts <i>Comment:</i> Ongoing outreach		X	
Action #AC009—New soils data <i>Comment:</i> New data provided by Idaho Geological Survey.	X	X	
Action #AC010—Multi-flow inter-active map of Boise River <i>Comment:</i> Entire reach of the river completed and online in March 2016.	X	X	
Action #AC011—Enhanced Wildfire Risk Map <i>Comment:</i> Map project completed June, 2016	X		
Action #AC012—Regulatory Standards for building <i>Comment:</i> Ongoing practice, Ada County has adopted the most recent International Building Codes		X	
Action #AC013—Community Outreach <i>Comment:</i> Ongoing – have expanded program to include social media.		X	
Action #AC014—Foothills Sirens <i>Comment:</i> Sirens removed, equipment reached end of life, not compatible with current technology.			X
Action #AC015—Community Mass Notification System <i>Comment:</i> New system purchased, maintenance will be ongoing.		X	
Action #AC016—Open Space and Mitigation District <i>Comment:</i> Dialogue with the community partners continues.		X	
Action #AC017—U.S. Army Corps of Engineers Exercise participation <i>Comment:</i> This is an ongoing practice.		X	
Action #AC018—Dam release rates <i>Comment:</i> Continue open communication with all involved partners.		X	
Action #AC019—Wood Duck Island Bank Stabilization	X		
Action #AC020—CRS Participation <i>Comment:</i> This is an ongoing process.		X	
Action #AC021—Comprehensive Plan Integration <i>Comment:</i> This is in process for next Comp Plan Update.		X	

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #AC022—Building retro-fit, re-location <i>Comment:</i> Long-term initiative, no project currently underway.		X	
Action #AC023—Support community-wide initiatives <i>Comment:</i> This is an ongoing practice		X	
Action #AC024—Plan update and maintenance <i>Comment:</i> This is an ongoing practice		X	
Action #AC025—Re-locate or harden government facilities <i>Comment:</i> Long-term initiative, no project currently underway.		X	

**Table 1-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #AC001</b> —Evaluate the cost-effectiveness of raising the walls around the Courthouse basement entries to mitigate the threat of water coming into the basement and flooding the electrical room and generator. Include the Parking structures to the east of the courthouse in the study.						
Existing	Flood	1,3,10	Ada County Operations Dept.	Medium	Ada County, PDM, FMA	Long Term
<b>Action #AC002</b> —Install Bypass switches to 400 Benjamin—east electrical room to allow for tie-in of a back-up Generator. Maintain essential government services during loss of power. This building is also a backup location for other county offices that could lose functionality during a flood.						
Existing	Severe Weather, Seismic, Flood	1,3,10	Ada County Operations Dept.	Medium	Ada County, PDM, HSGP	Short Term
<b>Action #AC003</b> —Perform a study to determine the most cost effective method of enhancing the back-up power at the Courthouse so that the facility could maintain full services to the public. Look into the possibility of placing the current Gen-Set on the roof of the facility to remove it from flood issues. A structural study of the building will be required.						
Existing	Flood, Seismic, Severe Weather	1, 3, 10	Ada County Operations Dept.	Medium	Ada County, PDM, FMA, HSGP	Long Term
<b>Action #AC004</b> —Keep First Responder Facilities out of Flood areas where ever possible. When not possible due to response time issues, design the facilities to keep water from entering, i.e. retaining walls, raise finish floor elevations.						
Existing and New	Flood, Severe Weather	1,10	Ada County Operations Dept.	Medium	Ada County, PDM, FMA	Long Term
<b>Action #AC005</b> —Examine and determine the most effective method to harden irrigation canals (i.e. tiling) in areas of high urban interface to prevent the flooding of residences and businesses without losing essential ground water recharge.						
Existing	Flood, Severe Weather, Seismic	1, 2, 9, 10	Ada County Irrigation Districts	High	Ada County Irrigation Districts	Long Term
<b>Action #AC006</b> —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to; enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
Existing	Flood	2, 3, 4, 6, 8, 9	Ada County Planning and Development Services	Low	Ada County	Short Term
<b>Action #AC007</b> —Assess and prioritize non-structural seismic retrofit needs of County-owned facilities. Once appropriate, cost-effective retrofit measures have been identified, implement the actions based on available funding and resources.						
Existing	Earthquake	1, 2, 3	Ada County Operations Dept.	Medium	Ada County, PDM, HSGP	Long Term
<b>Action #AC008</b> —Continue outreach to Irrigation Districts in an effort to encourage their participation in the Mitigation Plan as planning partners.						
Existing	Flood, Severe Weather	6, 9, 10	ACEM	Low	Ada County	Short Term
<b>Action #AC009</b> —Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.						
New and Existing	All Hazards	4, 5, 6	Ada County	Low	Ada County	Short Term
<b>Action #AC010</b> —Maintain an active Public Outreach strategy using the web, social media, emails and public presentations to inform the public how to personally prepare for and mitigate the hazards of concern.						
New and Existing	All Hazards	2, 8, 9	ACEM	Low	ACEM	Short Term
<b>Action #AC011</b> —Maintain emergency alert phone system to notify residents of evacuations orders and procedures during a natural hazard event.						
Existing	All Hazards	7, 8	Ada County Dispatch	Low	Ada County Dispatch	Short Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #AC012</b> —Consider the formation of an Open Space and Mitigation District. The district would manage acquired lands using practices that balanced the needs of community open space and recreation with appropriate mitigation activities that reduce or eliminate 3 known hazards of concern. Purposed activities include but are not limited to the maintenance of lands purchased in the floodplain, slope stabilization through low biomass native vegetation projects and the creation and maintenance of fire safe buffers in the WUI.						
New	Flood, Wildfire, Landslide	3, 4, 6, 9	Partnership of jurisdictions	High	Partnership of jurisdictions	Long Term
<b>Action #AC013</b> —Participate in Dam Failure and high water release exercises conducted by Army Corps of Engineers						
Existing	Flood, Dam Failure	2, 9	ACEM	Low	ACEM	Short Term
<b>Action #AC014</b> —Maintain an active dialogue with all the partners involved in the release rates of water from Lucky Peak Dam. Continue to seek a balance in the regulated flows that meets the needs of agricultural water users, flood control for urban areas and river recreationists.						
Existing and New	Dam Failure, Flood, Drought	2, 9	ACEM	Low	ACEM	Short Term
<b>Action #AC015</b> —Continue to maintain/enhance the County's classification under the Community Rating System.						
Existing and New	Flood	3, 4, 5, 6, 8	Ada County Planning and Development Services	Low	Ada County	Short Term
<b>Action #AC016</b> —Integrate Multi-Hazard Mitigation Plan into the 2016 update to the Ada County Comprehensive Plan.						
Existing and New	All Hazards	2, 5, 6	Ada County Planning and Development Services	Low	Ada County	Long term
<b>Action #AC017</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, prioritizing properties with a history of repetitive loss or very high exposure to risk.						
Existing	All Hazards	3, 8, 9	Ada County Planning and Development Services, ACEM	High	FEMA Hazard Mitigation Grant Programs, ICC	Long Term
<b>Action #AC018</b> —Support County-wide initiatives identified in Volume 1.						
Existing and New	All Hazards	All	ACEM	Low	Ada County	Short Term
<b>Action #AC019</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
Existing and New	All Hazards	All	ACEM	Low	Ada County, HSGP	Short Term
<b>Action #AC020</b> —Where appropriate, relocate or harden governmental records and service facilities currently located in hazard-prone areas. If the facilities cannot be relocated, determine and employ the most cost-effective methodologies to protect facilities from future potential damage caused by the known hazards of concern.						
Existing	All Hazards	1, 3, 10	Ada County Planning and Development Services, ACEM	High	FEMA Hazard Mitigation Grant Programs, ICC	Long Term
<b>Action #AC021</b> —Evaluate flood, Dam Failure and earthquake risk to all Paramedic Stations and identify cost-effective solutions to mitigate those risks.						
Existing	Flood, Dam Failure, Earthquake	1, 3, 10	Ada County Emergency Services District (ACEMSD)	Medium	ACEMSD, PDM, FMA	Short Term
<b>Action #AC022</b> —Identify and install appropriate resources to ensure Barber Dam operations are uninterrupted by a loss of power. Solutions include a SCADA (supervisory control and data acquisition) system upgrade and/or backup power (generator, battery etc.).						
Existing	Flood, Dam Failure, Severe Weather	1, 9, 10	Ada County Operations Dept.	Medium	Ada County, PDM, HSGP	Short Term
<b>Action #ACO23</b> —Whenever possible, coordinate with local experts and employ natural environmental processes in mitigation activities that increase ecosystem resilience and reduce the impacts of flooding on the built environment.						
New and Existing	Flood, Dam Failure	2, 5, 9	Ada County	Medium	Ada County, Grants	Long-term

**Table 1-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
AC001	3	Medium	Medium	Yes	Yes	No	Low	Medium
AC002	3	Medium	Medium	Yes	Yes	No	Medium	Medium
AC003	3	Medium	Medium	Yes	Yes	No	Low	Medium
AC004	2	Medium	Medium	Yes	Yes	No	Medium	Medium
AC005	4	High	High	Yes	No	No	Low	Low
AC006	6	Medium	Low	Yes	No	Yes	High	Low
AC007	3	Medium	Medium	Yes	Yes	No	Medium	Medium
AC008	3	Low	Low	Yes	No	Yes	Low	Low
AC009	3	Medium	Low	Yes	No	Yes	High	Low
AC010	3	Medium	Low	Yes	Yes	Yes	High	Low
AC011	2	Medium	Low	Yes	Yes	Yes	High	Low
AC012	4	High	High	Yes	No	No	Low	Low
AC013	2	Low	Low	Yes	No	Yes	High	Low
AC014	2	Medium	Low	Yes	No	Yes	High	Low
AC015	5	Medium	Low	Yes	No	Yes	High	Low
AC016	3	Medium	Low	Yes	No	Yes	High	Low
AC017	3	High	High	Yes	Yes	No	Low	Medium
AC018	10	Medium	Low	Yes	Yes	Yes	High	Low
AC019	10	Medium	Low	Yes	Yes	Yes	High	Low
AC020	3	High	High	Yes	Yes	No	Medium	Medium
AC021	3	Medium	Medium	Yes	Yes	No	Medium	Medium
AC022	3	High	Medium	Yes	Yes	No	Medium	High
ACO23	3	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

**Table 1-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	AC009, AC016, AC018, AC019	AC007, AC017, AC020	AC010	AC007, AC012, AC022	AC011, AC013, AC022	
Drought	AC09, AC014, AC016, AC018, AC019	AC017, AC020	AC010	AC022		
Earthquake	AC09, AC016, AC018, AC019	AC003, AC007, AC017, AC020, AC021	AC010	AC012	AC002, AC003, AC011	AC002, AC003
Flood	AC004, AC006, AC008, AC009, AC012, AC014, AC015, AC016, AC018, AC019, AC023	AC001, AC002, AC003, AC004, AC005, AC020, AC023	AC006, AC08, AC010	AC016, AC022, AC023	AC001, AC002, AC003, AC004, AC011, AC013, AC021	AC001, AC002, AC003, AC004
Landslide	AC009, AC016, AC018, AC019	AC017, AC020	AC010	AC012	AC011	
Severe Weather	AC004, AC009, AC016, AC018, AC019	AC002, AC003, AC004, AC005, AC017, AC020	AC08, AC010	AC022	AC001, AC002, AC003, AC004, AC011	AC002, AC003, AC004
Wildfire	AC009, AC012, AC016, AC018, AC019	AC017, AC020	AC010	AC012	AC011	
Volcano	AC016, AC018, AC019	AC020	AC010		AC011	

a. See the introduction to this volume for explanation of mitigation types.



## 2. CITY OF BOISE

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### 2.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

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#### Alternate Point of Contact

Rob Bousfield, Assistant City Engineer  
150 N. Capitol Blvd.  
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[Rbousfield@cityofboise.org](mailto:Rbousfield@cityofboise.org)

### 2.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—1864
- Current Population—211,655 (ACS Census 2014 Population Estimate)
- Population Growth—in 2000, the population of Boise was 185,787. By 2010, the population grew by 10.1% to 205,671.
- Location and Description—The City of Boise is located in southwestern Idaho and northeastern Ada County in a region coined as the Treasure Valley. It is situated within the Boise River Valley at the base of the foothills of the Salmon River Mountains to the north and east. The Boise River traverses the city and is an aesthetic and recreational focal point of the community. The City is also crossed from east to west by a series of geological benches that step up in elevation from the Boise River, each bench representing a previous location of the Boise River floodplain in historic geologic time. A series of major irrigation canals generally follow the contours of the benches, bringing water from the Boise River to outlying farm fields. The extensive irrigation canal system represents a major physical reminder of Boise's agricultural past and the continuing agricultural economy in the western portion of the Treasure Valley. The southernmost portions of Boise extend into the high desert of the Snake River Plain and are characterized by basaltic soils and formations.
- Brief History—When trappers and fur traders first began visiting the Boise area in the early 1800s, Indian villages already existed along the Boise River. Fur trading continued as the prominent activity in the area until about 1835. Fort Boise was constructed by the Hudson Bay Company as a stockade in 1834. The original Fort Boise was abandoned in 1855 due to the decline of fur trading in the area.

The discovery of gold in the Boise Basin in 1862 instigated an immediate influx of prospectors and other settlers into the area. As a result of renewed growth, Fort Boise was reestablished in 1863 as an American Military post to protect the settlers. In 1863, a group of early citizens laid out a town-site that included a main road running north of and parallel to the Boise River with several blocks on each side. At this time, Boise was first suggested as the name of the growing community.

The Idaho territory was created by the federal government in 1863. Though Lewiston was initially designated as the territorial capital; that function was relocated to Boise in 1864. This was also the year

Boise incorporated as a City. Idaho became the 43rd state in 1890, which further stimulated settlement in the Boise Valley. By 1900, Boise was a thriving community of 6,000 people. The completion of Arrowrock Dam in 1915 opened the valley irrigated farming and helped build the economic base of the community.

Boise continued to grow as a center for farming and mining activities in the region. In the early days, most employment was in retail trade, wholesaling and supply, services and agriculture. Employment in manufacturing and government increased slowly during the first few decades of the 20th century. The population of Boise grew from 6,000 in 1900 to over 205,000 in 2010, with high rates of growth occurring in the 1960s, 1970s, 1990s and the mid- 2000s. The expansion of manufacturing and government fueled much of the growth in the 1970s through early 1990s with Hewlett Packard Company and Micron constructing major electronics manufacturing facilities. Migration from other states, both for jobs and for lifestyle purposes, was a large part of the growth.

In the mid-1980s, downtown redevelopment projects, construction of the regional mall, and a booming housing industry were signs of strong and sustained growth leading into the 1990s. Boise continued to grow quickly throughout the 1990s with annual growth rates as high as 5%. The city experienced a decline in growth rate in the early 2000s with the technology market crash and 9/11, and then rebounded with extremely rapid growth at mid-decade. Growth within Boise has resumed and grown in the last five years.

- **Climate**—Boise is approximately 350 miles east of the Pacific Ocean, but local climate is shaped in part by maritime influences. In general, the Boise area has a relative mild climate for its northerly latitude. Summers are hot and winters cold, but below zero weather occurs infrequently. The growing season in Boise is 159 day, which again is substantial in relation to latitude. However, even the growing season can vary locally depending upon location within the valley, bench or foothills areas. On average, Boise receives approximately 13-inches of precipitation annually, mostly in the form of winter snow.
- **Governing Body Format**—Boise City has a strong Mayor and City Council form of government. The Mayor presides over City Council meetings, has the power to appoint, and serves as the City Manager. All legislative actions are adopted by the City Council. Other boards and commissions are appointed to decide non-legislative items and/or make recommendations to the City Council. The City Council is responsible for the adoption of this plan, City Staff is responsible for its implementation.
- **Development Trends**—Total building permit values have increased dramatically, with March 2016 permit values at \$61,692,637, more than double the March values over the last five years. Downtown Boise is seeing significant investment in a mix of product types. Total planning application numbers are slowly increasing, with less than 1% growth from March 2015 to March 2016, although this is still the highest number of applications in the past five years. The 2016 year-to-date and fiscal-year-to-date application numbers are also the highest they've been in the last five years, with 607 applications since January 1, and 1085 since October 1, 2015, a 9% growth from Fiscal Year 2015.

## 2.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 2-1. An assessment of fiscal capabilities is presented in Table 2-2. An assessment of administrative and technical capabilities is presented in Table 2-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-4. Classifications under various community mitigation programs are presented in Table 2-5. An assessment of education and outreach capabilities is presented in Table 2-6.

**Table 2-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> 2012 International Building Code (IBC)/Title 4, Building Regulations: adopted 12/16/2014	Yes	No	Yes
Zoning Code <i>Comment:</i> Title 11, Zoning	Yes	No	No
Subdivisions <i>Comment:</i> Title 11, Zoning	Yes	No	No
Stormwater Management <i>Comment:</i> Title 8, Chapter 15, Boise City Storm Water Title 8, Chapter 17, Construction Site Erosion Boise shares responsibility with ACHD and others for the National Pollutant Discharge Elimination System (NPDES) program	Yes	No	Yes
Post-Disaster Recovery	No	No	No
Real Estate Disclosure	No	No	No
Growth Management <i>Comment:</i> Blueprint Boise, Adopted 11/2011	Yes	No	No
Site Plan Review <i>Comment:</i> Requirement of Title 11, Zoning	Yes	No	No
Environmental Protection <i>Comment:</i> Blueprint Boise, Adopted 11/2011, Boise River Resource Management and Master Plan, Adopted 8/21/2014, Boise River System Ordinance, Title 11, Zoning	Yes	No	No
Flood Damage Prevention <i>Comment:</i> 2012 International Building Code (IBC)/Title 4, Building Regulations: adopted 12/16/2014, Title 11, Zoning	Yes	No	No
Emergency Management <i>Comment:</i> Ada County Emergency Management	No	Yes	No
Climate Change	No	No	No
Other	N/A	N/A	N/A
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i> <i>Comment:</i> Blueprint Boise, Adopted 11/2011	Yes	No	No
Capital Improvement Plan <i>What types of capital facilities does the plan address? All city facilities</i> <i>How often is the plan updated? Annual budget, with an addition 4 years of planning</i>	Yes	No	No
Floodplain or Watershed Plan <i>Comment:</i> Ada County Multi-Hazard Mitigation Plan serves as the Flood Management Plan of record for all communities within the planning area that participate in CRS.	No	Yes	No
Stormwater Plan <i>Comment:</i> Stormwater Management Program	Yes	No	No
Habitat Conservation Plan <i>Comment:</i> Foothills and Open Space Management Plan, Boise River Resource Management and Master Plan, Adopted 8/21/2014	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
Economic Development Plan	No	No	No
Shoreline Management Plan	No	No	No
Community Wildfire Protection Plan <i>Comment: Ada County Wildfire Response Plan, 2014 also this plan is intended to provide documentation for CWPP. In addition, the 2016 update to the Ada County Multi-Hazard mitigation plan is being prepared to qualify as a CWPP for the Ada County Planning area.</i>	No	Yes	No
Forest Management Plan <i>Comment: 2015 Community Forestry Strategic Management Plan</i>	No	No	No
Climate Action Plan <i>Comment: Blueprint Boise, Adopted 11/2011, U.S. Mayors Climate Protection Agreement</i>	No	No	No
Other	No	No	No
Comprehensive Emergency Management Plan <i>Comment: City of Boise, Emergency Operations Plan</i>	Yes	Yes	No
Threat & Hazard Identification & Risk Assessment <i>Comment: Ada County THIRA, May 2015</i>	No	No	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan	No	No	No
Public Health Plan <i>Comment: Central District Health Department Emergency Operations Plan, 2013</i>	No	Yes	No

Table 2-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

**Table 2-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	City Planning Staff and Public Works Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	City Planning Staff and Public Works Engineers
Planners or engineers with an understanding of natural hazards	Yes	City Planning and Development Staff and Public Works Engineers
Staff with training in benefit/cost analysis	Yes	City Budget Staff
Surveyors	Yes	City Public Works Staff
Staff capable of making substantial damage estimates	Yes	City Planning and Development Staff
Personnel skilled or trained in GIS applications	Yes	City Planning and Development Staff, Public Works Staff and IT Staff
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Ada County Emergency management (ACEM)
Grant writers	Yes	City Police and Fire Staff, City Budget Staff

**Table 2-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	4/17/1984
When did the Flood Insurance Rate maps become effective?	2/19/2003
What local department is responsible for floodplain management?	Planning and Development Services
Who is your floodplain administrator? (department/position)	Planning Director
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	Updated 2016
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Meet N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	Yes
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	Boise City annexed property that had existing violations (undersize culverts) that preexisted Boise City jurisdiction.
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	Updated mapping in progress
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	FEMA training is currently in process
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> </ul>	No
How many Flood Insurance policies are in force in your jurisdiction?	718
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$201,454,200 \$522,153
How many total loss claims have been filed in your jurisdiction?	42
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	26 \$495,741.48

**Table 2-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes	6	2015
Building Code Effectiveness Grading Schedule	Yes	3	2011
Public Protection	Yes	3	N/A
Storm Ready	Yes	Blue	N/A
Firewise	Yes	N/A	N/A

**Table 2-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – City Community Engagement Department and some departments have designated public information officers
Do you have personnel skilled or trained in website development?	Yes – IT Staff, Community Engagement Department
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Wildfire and flood information on city website. Links to ACEM site.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes City has Facebook, Twitter, and other accounts. Accounts are used to provide information during times throughout the year.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes Planning and Zoning Commission, Parks and Recreation Commission, Public Works Commission, Building Code Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Various city public education events throughout the year.
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 2.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into local planning mechanisms.

### 2.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- *Blueprint Boise*—Provides guidance for development of areas impacted by hazards with similar but aligned goals.
- *Foothills and Open Space Management Plan*—Provides guidance for development of areas impacted by hazards with similar but aligned goals.
- *Boise River System Ordinance* - Provides guidance for development of areas impacted by hazards with similar but aligned goals.

## 2.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- As additional plans are created or updated we will consider inclusion of principals and goals of the Multi-Hazard Mitigation Plan. Future updates to the City of Boise Comprehensive Plan
- Future updates to the City of Boise Comprehensive Plan

## 2.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 2-7 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe wind	N/A	3/29/2009	\$33,000 (county wide)
Wildfire	N/A	1/28/2009	\$1.66 Million
Flooding	N/A	9/11/1997	\$57,000
Wildfire	N/A	8/26/1996	\$3.3 million
Severe Wind	N/A	4/27/1995	\$50,000 (county wide)
Flooding	N/A	02/1986	\$20,000
Flooding	N/A	06/1983	\$147,000 (county wide)
Earthquake	N/A	10/28/1983	Minimal local damage
Landslide	N/A	11/1980	Unknown
Flooding	N/A	1/12/1979	Unknown

## 2.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: N/A

## 2.7 HAZARD RISK RANKING

Table 2-8 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe weather	48	High
2	Wildfire	27	High
3	Flood	18	Medium
4	Drought	18	Medium
5	Dam Failure	18	Medium
6	Landslide	16	Low
7	Earthquake	16	Low
8	Volcano	16	Low

## 2.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 2-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 2-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #B-1</b> —City Hall Structural Seismic Retrofit; structural upgrade of the City Hall facility to bring it into compliance with current seismic building code standards.	Yes	No	Completed
<b>Action #B-2</b> —Esther Simplot Flood Channel (joint project with Boise City and Garden City); a flood study of the Boise River between Main St. and Veteran’s Memorial Park bridges is underway and expected to result in a project to construct side channels / channel modifications to greatly reduce flood potential in both Garden City and in Boise City	No	Yes	
<b>Action #B-3</b> —Identify the Wildland-Urban Interface (WUI) do a risk assessment (a GIS exercise looking at vegetation in the undeveloped area and age of homes) of this area. In addition conduct a multi-year effort to do Red Zone surveys of the homes in this area. This analysis would then lead into a pilot program (an anchor point) involving restoring native vegetation on public lands and incentivizing neighbors to alter vegetation on their property. Also see North Ada County Fire & Rescue (NACFR) Initiative #3.	Yes	Yes	
<b>Action #B-4</b> —Wildland Fire Prevention Programs/Education and Outreach (Implementation of the WUI Standards). Focus on fuel reduction on private property around new and existing homes via incentivizing homeowners, providing free debris pick-up and replacement fire wise vegetation at a discount.	Yes	Yes	
<b>Action #B-5</b> —Fire Station Seismic Upgrades: Boise Fire has already identified two buildings with major seismic problems (including the Logistics/Maintenance building) at a cost of two million dollars. This project will perform a vulnerability assessment on 16 other Fire facilities and initiate upgrades. Also see N. Ada County Fire & Rescue Initiative #2.	No	Yes	
<b>Action #B-6</b> —Flood Containment Facility Maintenance: Continue to maintain foothills flood containment facilities such as the Cottonwood flood ponds and flume, etc.	Yes	Yes	
<b>Action #B-7</b> —Update Floodplain Ordinance: Evaluate existing floodplain ordinance to look for opportunities to strengthen requirements, decrease risks and promote/support the city’s “no adverse impact” floodplain management policy. <i>Comment:</i> A code amendment to increase standards was tabled due to uncertainty about impact of pending new flood maps.	No	Yes	
<b>Action #B-8</b> —Maintain Boise’s compliance and good standing under the National Flood Insurance Program (NFIP).	Yes	Yes	
<b>Action #B-9</b> —Continue to maintain/enhance the City’s classification under the Community Rating System	Yes	Yes	
<b>Action #B-10</b> —Integrate Multi-Hazard Mitigation Plan into the City of Boise Comprehensive Plan.	Yes	No	
<b>Action #B-11</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.	Yes	Yes	
<b>Action #B-12</b> —Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern	Yes	Yes	
<b>Action #B-13</b> —Support County-wide initiatives identified in Volume 1.	Yes	Yes	
<b>Action #B-14</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.	Yes	Yes	

## 2.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 2-10 lists the actions that make up the City of Boise hazard mitigation action plan. Table 2-11 identifies the priority for each action. Table 2-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 2-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #B-1</b> —Esther Simplot Flood Channel (joint project with Boise City and Garden City); a flood study of the Boise River between Main St. and Veteran’s Memorial Park bridges is underway and expected to result in a project to construct side channels / channel modifications to greatly reduce flood potential in both Garden City and in Boise City						
Existing	Flood	1, 2, 3, 9, 10	Public Works	Medium	HMGP Grant, Local	Short term
<b>Action #B-2</b> —Complete a Wildland-Urban Interface (WUI) risk assessment (a GIS exercise looking at vegetation in the undeveloped area, age of homes and other relevant factors). Improve individual parcel data with wildfire assessments. Provide a public portal to share data and educate on risk and community wildfire adaptation. Also see North Ada County Fire & Rescue (NACFR) and Whitney Fire District Initiatives.						
New & Existing	Wildfire	2, 4, 6, 8, 9, 10	Boise Fire	Medium	Western States Grant, HMGP Grant, Local	Short term & Ongoing
<b>Action #B-3</b> —Conduct wildland fire prevention education and outreach to support and promote fire adapted communities. Focus on fuel reduction on private property around new and existing homes via incentivizing homeowners, providing free debris pick-up and replacement Firewise vegetation at a discount.						
Existing	Wildfire	1, 8, 9, 10	Boise Fire	Low	Western States Grant, Local	Short term
<b>Action #B-4</b> —Fire Station Seismic Upgrades: Boise Fire has already identified two buildings with major seismic problems (including the Logistics/Maintenance building) at a cost of two million dollars. This project will perform a vulnerability assessment on 16 other Fire facilities and initiate upgrades. Also see N. Ada County Fire & Rescue Initiative #2.						
Existing	Seismic	1, 3,4,9,10	Public Works	High	HMGP Grant, local, Bond	Long term
<b>Action #B-5</b> —Flood Containment Facility Maintenance: Continue to maintain foothills flood containment facilities such as the Cottonwood flood ponds and flume, etc.						
Existing	Flood	1, 2, 9, 10	Public Works	Low	Local	Short term
<b>Action #B-6</b> —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to; enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
New & Existing	Flood	1, 2, 9, 10	Planning and Development	Low	Local	Ongoing
<b>Action #B-7</b> —Continue to maintain/enhance the City’s classification under the Community Rating System						
New & Existing	Flood	1, 2, 9, 10	Planning and Development	Low	Local	Ongoing
<b>Action #B-8</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.						
Existing	All Hazards	1, 2, 3, 4, 9	Planning and Development, Public Works, ACEM	High	Hazard Mitigation Grant	Long term
<b>Action #B-9</b> —Update and adopt a new Wildland Urban Interface (WUI) Code to replace the existing code. Improve and update existing WUI hazard zones.						
New/ Existing	Wildfire	1, 2, 4, 5, 6, 9, 10	Boise Fire, Planning and Development	Low	Local	Short term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #B-10</b> —Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern						
New & Existing	All Hazards	1, 2, 4, 5, 6, 9, 10	Planning and Development	Low	Local	Ongoing
<b>Action #B-11</b> —Support County-wide initiatives identified in Volume 1.						
New & Existing	All Hazards	1, 2, 6, 7, 8, 9, 10	Planning and Development, Public Works, ACEM	Low	Local	Short term/ongoing
<b>Action #B-12</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New & Existing	All Hazards	1, 2, 6, 7, 8, 9, 10	Planning and Development, Public Works, ACEM	Low	Local	Short term/ongoing
<b>Action #B-13</b> —Offer NOAA SKYWARN Spotter Training for community members to encourage awareness and better ability to provide local information for weather predictions.						
New/ Existing	All Hazards	1, 2, 7,8,9	ACEM, Boise Fire	Low	Local	Short term
<b>Action #B-14</b> —For the Alto Via landslide, support evaluation of remediation, purchase or relocation of structures to prevent future damage and repetitive losses with the goal of pursuing mitigation.						
Existing	Landslide	2, 3, 4, 9	Public Works	High	HMGP Grant, Local	Short term
<b>Action #B-15</b> —Whenever possible, coordinate with local experts and employ natural environmental processes in mitigation activities that increase ecosystem resilience and reduce the impacts of flooding on the built environment.						
New and Existing	Flood, Dam Failure	2, 5, 9	City of Boise	Medium	Local, Grants, development Fees	Long term
<b>Action #B-16</b> - Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.						
New and Existing	Wildfire	1, 6, 9, 10	Boise Fire Department	Low	Local	On-going

**Table 2-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
B-1	5	High	Medium	Yes	Yes	Yes	Yes	No
B-2	6	High	Medium	Yes	Yes	Yes	Yes	Yes
B-3	4	Medium	Low	Yes	Yes	Yes	Maybe	Maybe
B-4	5	Medium	High	Maybe	Yes	No	No	No
B-5	4	Medium	Low	Yes	No	Yes	Yes	No
B-6	4	Medium	Low	Yes	NO	Yes	Yes	No
B-7	4	Medium	Low	Yes	No	Yes	Yes	No
B-8	5	Medium	High	Maybe	Yes	No	No	No
B-9	7	High	Low	Yes	No	Yes	Yes	No
B-10	7	Medium	Low	Yes	No	Yes	Maybe	No
B-11	7	Medium	Low	Yes	Maybe	Maybe	Maybe	Maybe
B-12	7	Medium	Low	Yes	Maybe	Maybe	Maybe	Maybe
B-13	5	Low	Low	Yes	No	Yes	Maybe	No
B-14	7	High	High	Maybe	Yes	No	Medium	High
B-15	3	High	Medium	Yes	Yes	No	Medium	High
B-16	4	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

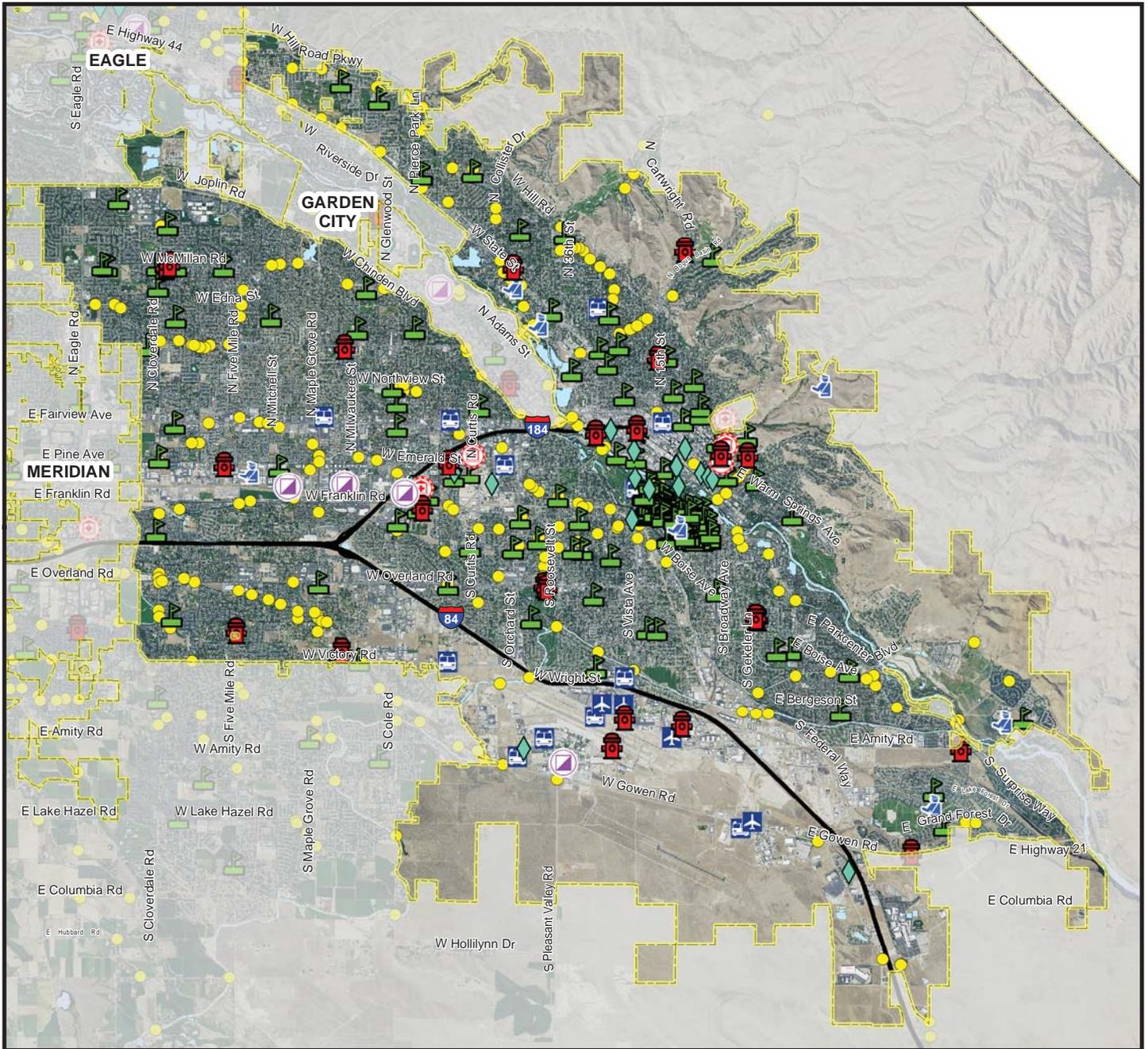
**Table 2-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	B-10, B-12	B-8	B-11, B-12, B-13	B-13	B-11, B-13	
Wildfire	B-2, B-3, B-9, B-10, B-12, B-16	B-2, B-3, B-8, B-9, B-16	B-2, B-3, B-9, B-11, B-12, B-16	B-2, B-3, B-9, B-16	B-2, B-3, B-9, B-11, B-16	
Flood	B-5, B-6, B-7, B-10, B-12, B-15	B-1, B-5, B-6, B-7, B-8, B-15	B-8, B-11, B-12, B-13	B-1, B-6, B-7, B-15	B-5, B-11, B-13	B-1
Drought	B-10, B-12	B-8	B-11, B-12, B-13		B-11, B-13	
Dam Failure	B-10, B-12	B-8	B-11, B-12, B-13		B-11, B-13	
Earthquake	B-10, B-12	B-4, B-8	B-11, B-12, B-13		B-4, B-11	B-4
Volcano	B-10, B-12	B-8	B-11, B-12		B-11	
Earthquake	B-10, B-12	B-8	B-11, B-12		B-11	
Landslide	B-8, B-10	B-14				B-14

a. See the introduction to this volume for explanation of mitigation types.

# City of Boise

## Essential Facilities & Transportation Systems



### Legend

- |  |                                |  |                                  |  |                 |
|--|--------------------------------|--|----------------------------------|--|-----------------|
|  | Emergency Operation Centers    |  | Other Essential Facilities       |  | Bus Facilities  |
|  | Fire Stations & EMS Facilities |  | Police Stations                  |  | Highway Bridges |
|  | Medical Care Facilities        |  | Schools & Educational Facilities |  |                 |
|  |                                |  | Airport Facilities               |  |                 |

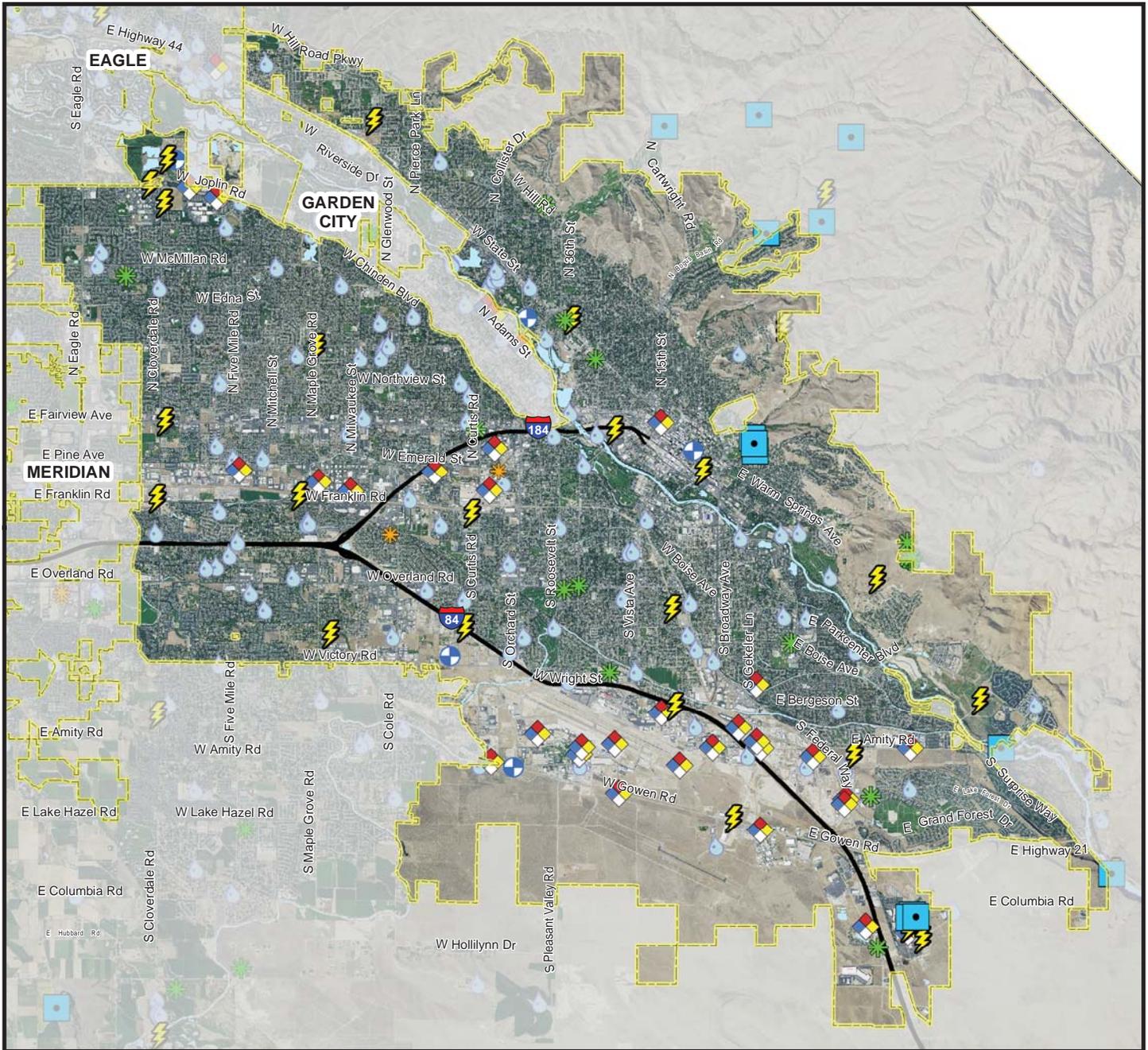


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Boise

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Dams
-  Electric Power Facilities
-  Hazardous Materials
-  Natural Gas Facilities
-  Potable Water Facilities
-  Wastewater Facilities

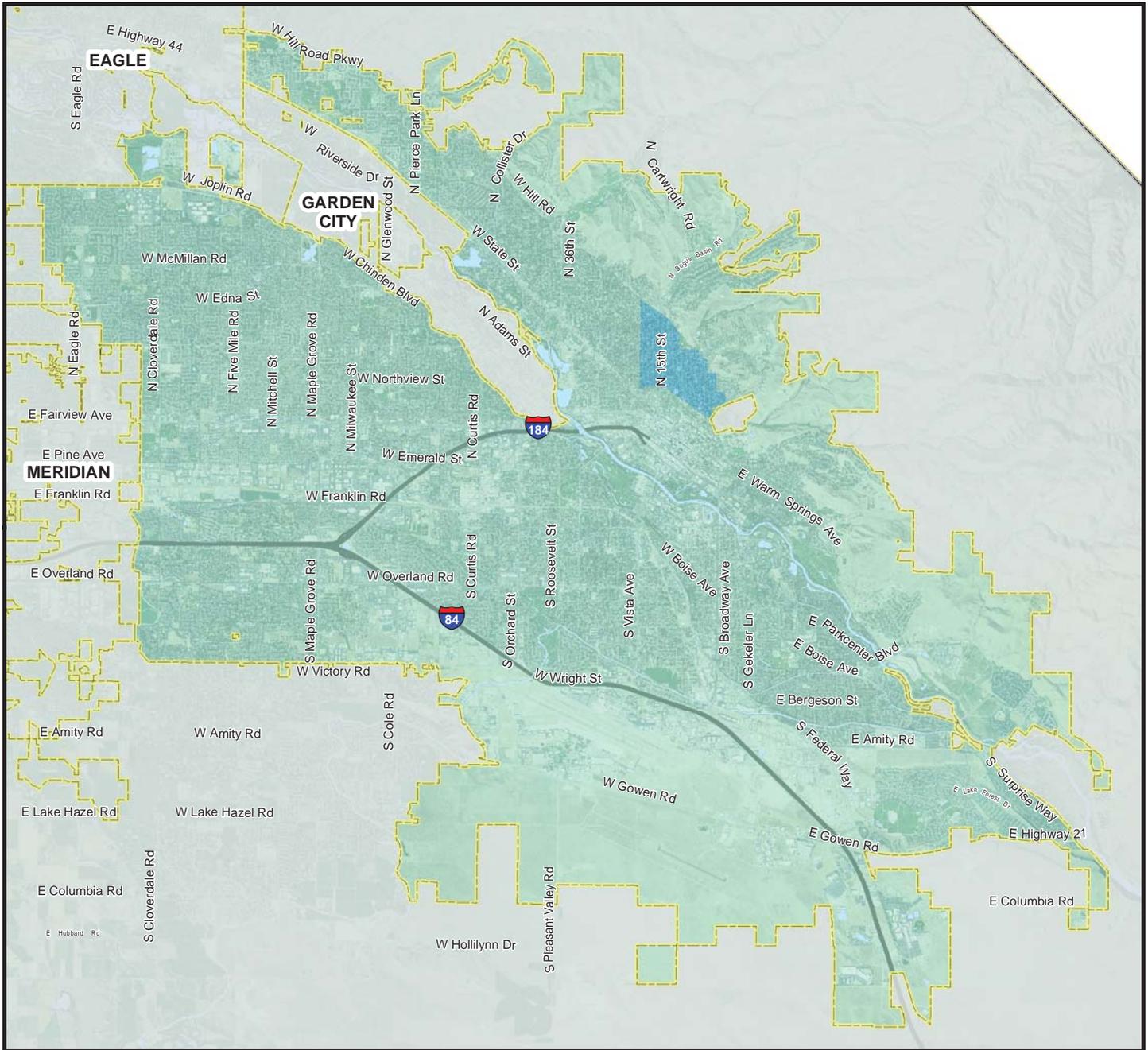


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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# City of Boise

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

 V (Moderate)

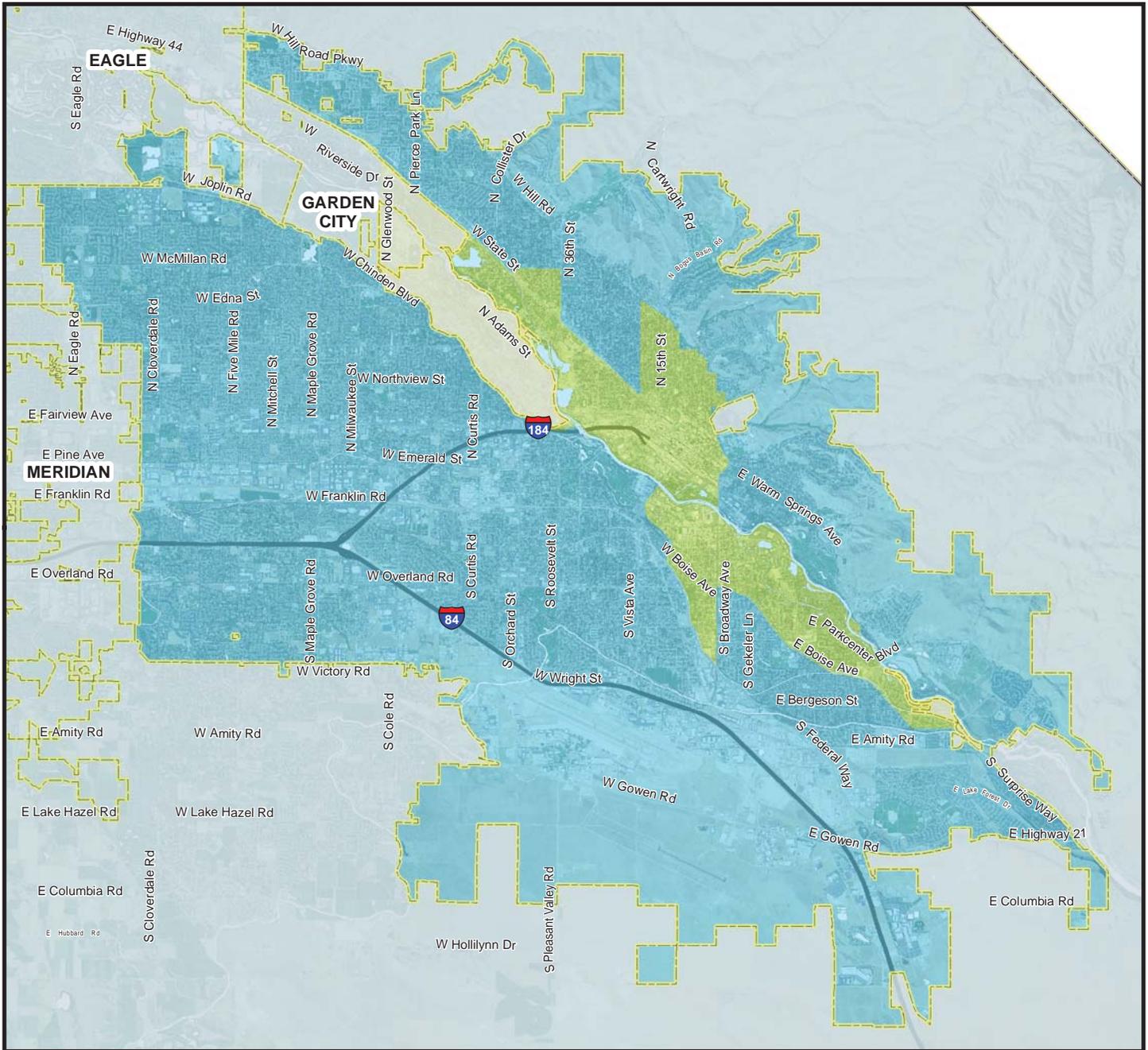


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Boise

## Peak Ground Acceleration for a 500-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

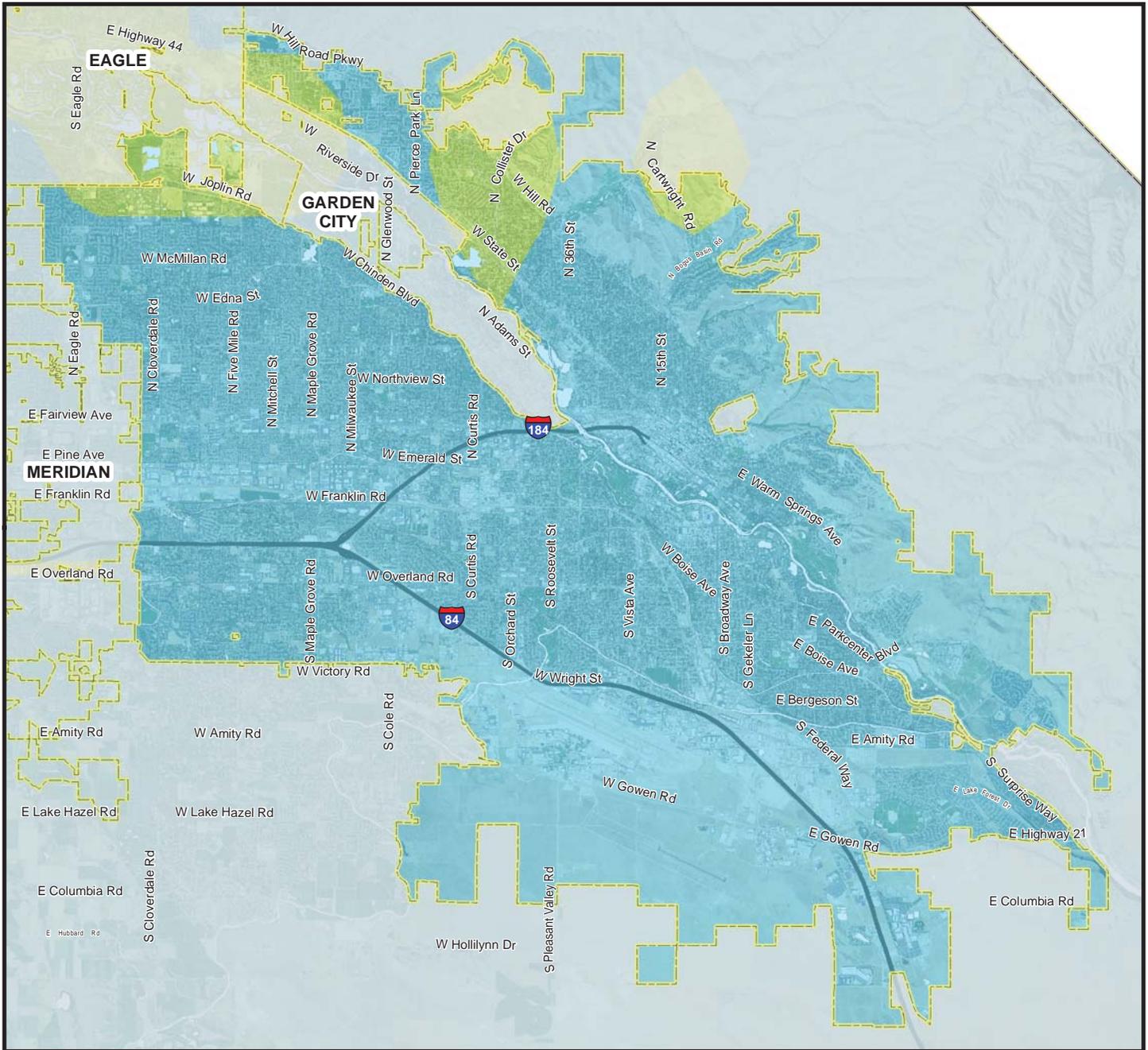


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Boise

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

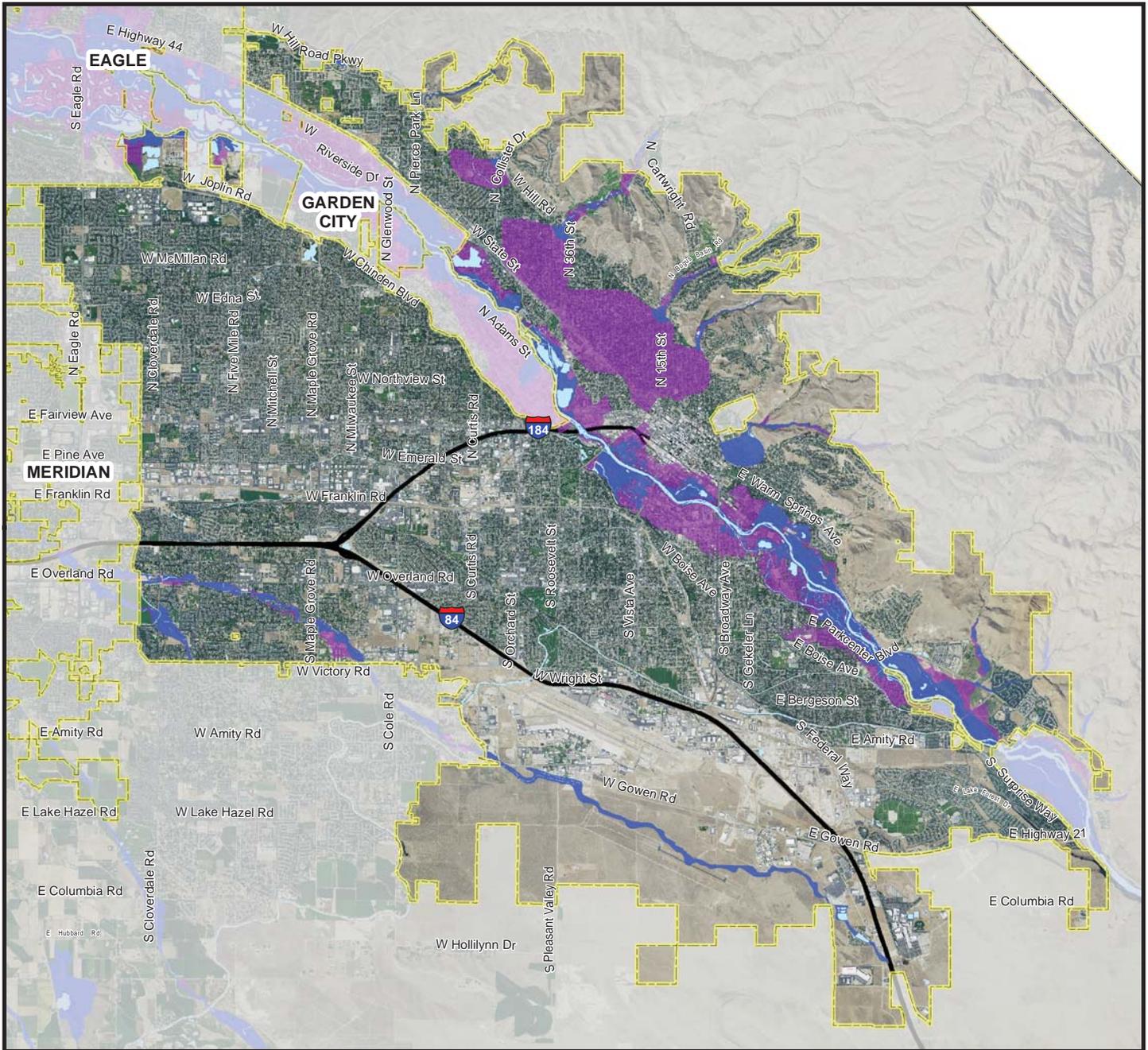


Data Sources: Ada County, U.S. Geological Survey

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# City of Boise

## FEMA DFIRM Flood Hazard Zones



### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

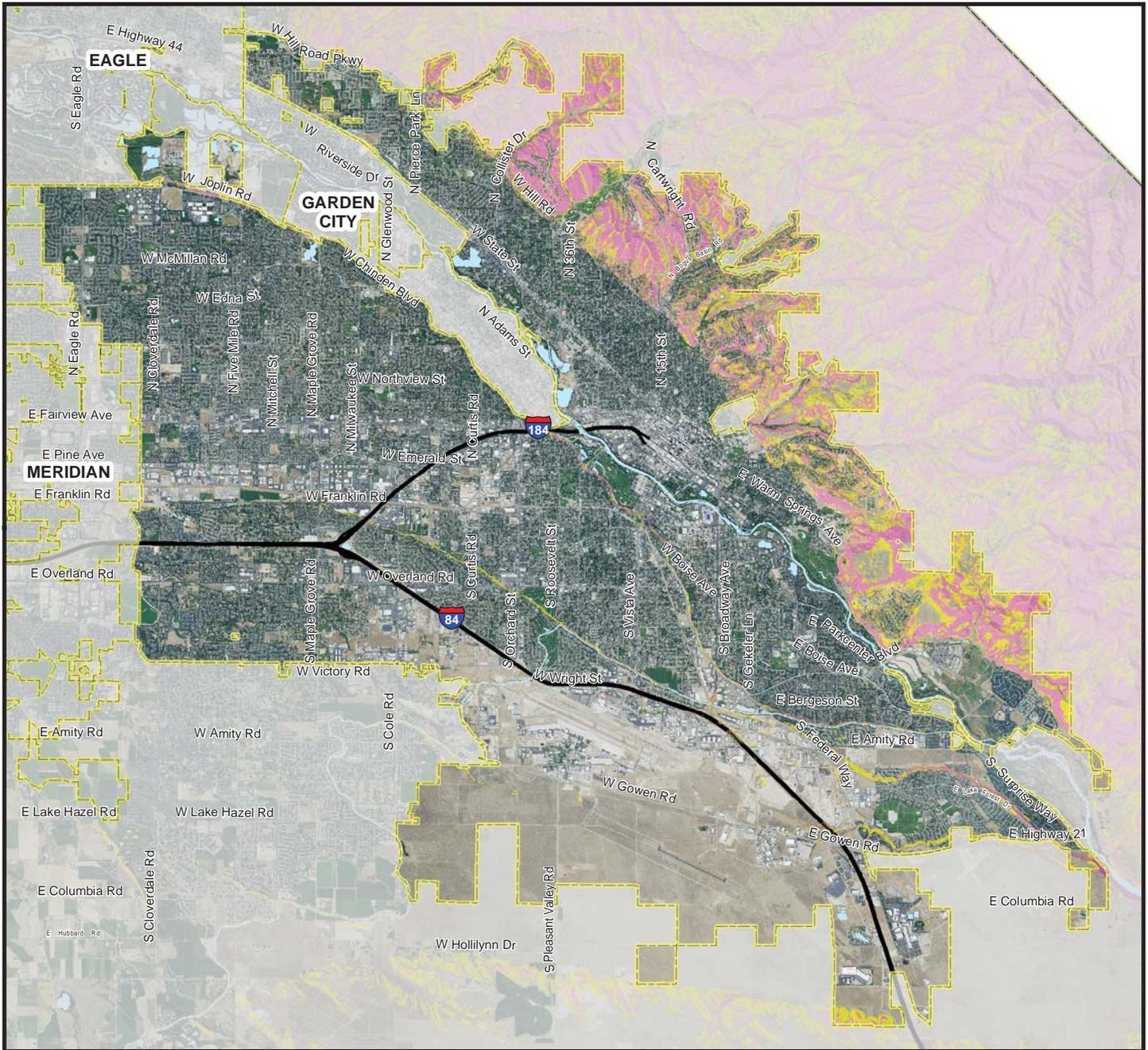
Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

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# City of Boise

## Potential Landslide Areas



### Legend

 Ada County Boundary

### Slope

 15 - 30%

 Greater than 30%

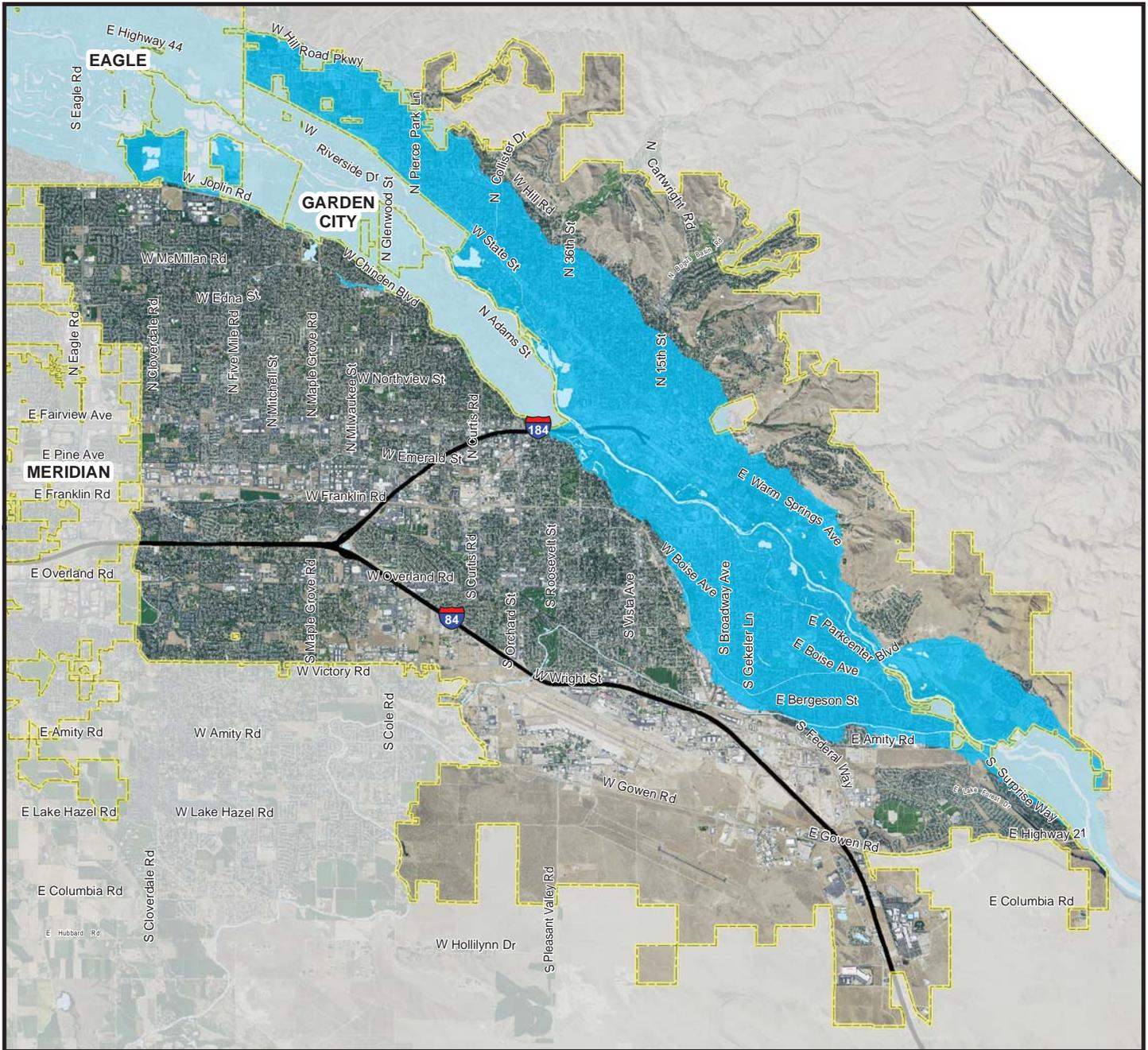


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Boise

## Lucky Peak Dam Failure



### Legend

 Maximum Pool Inundation Area

Area inundated by dam failure occurring when pool elevation is at the top of the impounding structure.

This map has been compiled using the best information available and is believed to be accurate, however, its preparation required many assumptions. Actual conditions during a failure may vary from those assumed, so the accuracy cannot be guaranteed. The limits of flooding shown and the temporal data should only be used as a guideline for emergency planning and response actions. Actual areas inundated and inundation timing will depend on specific flooding and failure conditions and may differ from the areas shown on the maps.

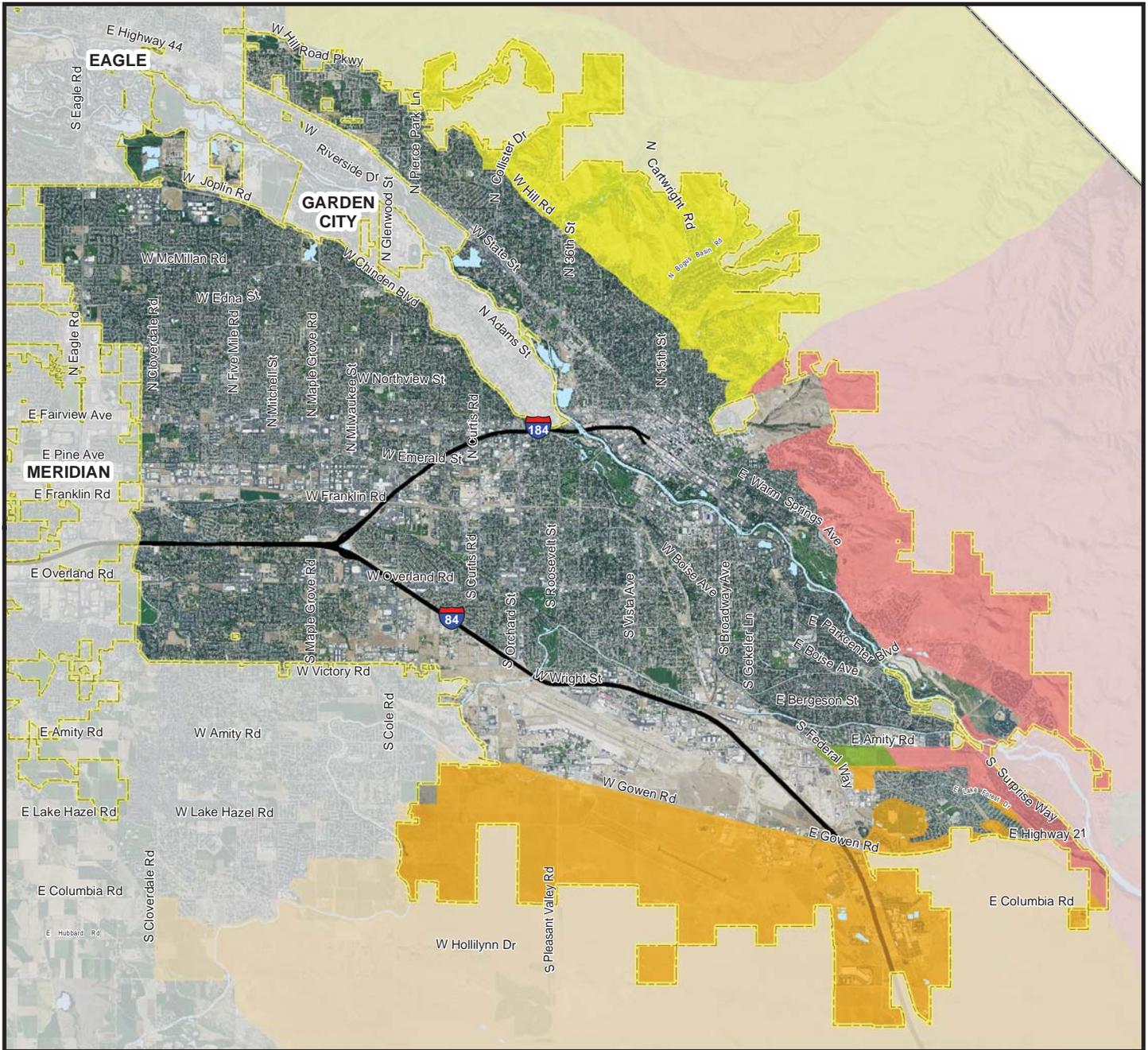
Data Sources: Ada County, U.S. Geological Survey, U.S. Army Corp of Engineers

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.



# City of Boise

## Wildfire Risk Areas



### Legend

#### Relative Risk to Wildfire

- Low
- Low-Moderate
- Moderate
- Moderate-High
- High



Data Sources: Ada County, U.S. Geological Survey, Idaho Bureau of Land Management

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

## 3. CITY OF EAGLE

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### 3.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Mike Williams, CFM, Planner III  
660 E. Civic Lane  
Eagle, ID 83616  
Telephone: 208-489-8799  
e-mail Address: mwilliams@cityofeagle.org

#### Alternate Point of Contact

Brian Parker, Planner I  
660 E. Civic Lane  
Eagle, ID 83616  
Telephone: 208-489-8799  
e-mail Address: bparker@cityofeagle.org

### 3.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—May 27, 1971
- Current Population—25,560 ( COMPASS)
- Population Growth—4%
- Location and Description—The City of Eagle covers approximately 30 square miles, with elevation range from 2,566 feet to 3,100 feet. Strategically placed between the Boise foothills and the Boise River, Eagle has much to offer in the way of walking, horse and bike riding, a state-of-the-art skateboard park, and ponds and other water amenities. With the intersection of the state’s primary north-south highway (Highway 55) and a major east-west route (Highway 44) located in Eagle, access to and from the community is efficient and diverse.
- Brief History—Eagle’s early history was set in motion when gold was discovered in the Boise Basin in 1862, as well as in other Idaho mountain locations farther north. Many chose to seek their fortune mining, but a select few came to understand that the mining towns desperately needed the agricultural products that were fast becoming the mainstay of Boise and its river valley to the west, and they centered their efforts on those needs.
- Climate—Eagle, ID climate is warm during summer when temperatures tend to be in the 70s and very cold during winter when temperatures tend to be in the 30s. The warmest month of the year is July with an average maximum temperature of 87.60 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 22.00 degrees Fahrenheit. Temperature variations between night and day tend to be relatively big during summer with a difference that can reach 31 degrees Fahrenheit, and fairly limited during winter with an average difference of 15 degrees Fahrenheit. The annual average precipitation at Eagle is 19.20 inches. Rainfall in is fairly evenly distributed throughout the year. The wettest month of the year is March with an average rainfall of 2.24 Inches.

- **Governing Body Format**—Eagle is governed by a mayor/council form of government, with four elected council members and an elected mayor. The City Council is responsible for the adoption of this plan, the mayor is responsible for its implementation.
- **Development Trends**—Single family housing still is still the most common development, but interest in multi-family and commercial development is increasing in Eagle.

### 3.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 3-1. An assessment of fiscal capabilities is presented in Table 3-2. An assessment of administrative and technical capabilities is presented in Table 3-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-4. Classifications under various community mitigation programs are presented in Table 3-5. An assessment of education and outreach capabilities is presented in Table 3-6.

**Table 3-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> Title 7, Chapter 1, Article A adopts the 2012 International Building Code (IBC). Effective January 1, 2015	Yes	No	Yes
Zoning Code <i>Comment:</i> Title 8, Chapters 1 thru 11. Adopted 4/11/2003	Yes	No	Yes
Subdivisions <i>Comment:</i> Title 9, Chapters 1 thru 6. Adopted: 11/15/1983	Yes	No	No
Stormwater Management <i>Comment:</i> Title 9, Chapter 4 (9-4-1-10) includes provisions for drainage. Adopted 1979. *Note-ACHD deploys stormwater standards as they pertain to roads.	Yes	No	No
Post-Disaster Recovery	No	No	No
<i>Comment:</i>			
Growth Management	Yes	No	No
Site Plan Review	No	No	No
Environmental Protection	No	No	No
Flood Damage Prevention <i>Comment:</i> Flood Damage Prevention Ordinance, Title 10. Last amended 7/24/2007	Yes	No	No
Emergency Management	No	No	No
Climate Change	No	No	No
Other	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i> <b>Comment:</b> City of Eagle Comprehensive Plan adopted 1/12/16.	Yes	No	Yes
Capital Improvement Plan <i>What types of capital facilities does the plan address?</i> <i>How often is the plan updated?</i>	No	No	No
Floodplain or Watershed Plan <b>Comment:</b> The 2016 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.	Yes	No	No
Stormwater Plan	No	No	No
Habitat Conservation Plan	No	No	No
Economic Development Plan <b>Comment:</b> Economic Development component added as part of the Comprehensive Plan	Yes	No	No
Shoreline Management Plan	No	No	No
Community Wildfire Protection Plan <i>The 2016 Ada County Multi-Hazard mitigation Plan is being prepared as a CWPP for the Ada County planning area.</i>	Yes	No	No
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other <b>Comment:</b> Ada County Flood Response Plan. Adopted: January, 2006 Ada County Mass Casualty Incident Plan. Adopted: 12/16/2010 Ada County HAZMAT Response Plan. Adopted: April 2011 Ada County Wildfire Response Plan. Adopted: May 2010	Yes	No	No
Comprehensive Emergency Management Plan	No	No	No
Threat & Hazard Identification & Risk Assessment <i>ACEM has prepared and maintains a THIRA for the Ada county operational area</i>	Yes	No	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan	No	No	No
Public Health Plan <b>Comment:</b> Central District Health Department Emergency Operations Plan, 2013	No	Yes	No

**Table 3-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

**Table 3-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Eagle Planning and Zoning
Engineers or professionals trained in building or infrastructure construction practices	Yes	Eagle Building Department
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	Yes	Eagle Planning & Zoning
Surveyors	No	
Staff capable of making substantial damage estimates	Yes	Can contract for service
Personnel skilled or trained in GIS applications	Yes	Can contract for service
Scientist familiar with natural hazards in local area	Yes	Can contract for service
Emergency manager	Yes	Ada County Emergency Management
Grant writers	Yes	Can contract for service

**Table 3-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	3/4/1980
When did the Flood Insurance Rate maps become effective?	2/19/2003
What local department is responsible for floodplain management?	Eagle Planning and Zoning
Who is your floodplain administrator? (department/position)	Mike Williams, Planning & Zoning, Planner III, Auxiliary
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	6/23/1977
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Exceed Higher Standards
When was the most recent Community Assistance Visit or Community Assistance Contact?	1/2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	Continuing Education
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> </ul>	Yes
How many Flood Insurance policies are in force in your jurisdiction?	301
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$99,930,100 \$169,578
How many total loss claims have been filed in your jurisdiction?	2
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	0 \$19,227

**Table 3-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes	6	5/1/2000
Building Code Effectiveness Grading Schedule	Yes	4/2	N/A
Public Protection	Yes	3/9	N/A
Storm Ready	Yes	Participant	N/A
Firewise	No	N/A	N/A

**Table 3-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Tammy Gordon)
Do you have personnel skilled or trained in website development?	Yes (Tammy Gordon)
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Floodplain Information
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Ada County & City Social Media
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes Planning & Zoning, Comprehensive Plan
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Website, email blast, PSA
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

### 3.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into local planning mechanisms.

#### 3.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Eagle Comprehensive Plan, Chapter 6
- Eagle Comprehensive Plan, Chapter 7
- Eagle Comprehensive Plan, Chapter 11

#### 3.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- All future updates to the City of Eagle Comprehensive Plan
- Future Emergency Operation Plan updates for the City of Eagle

### 3.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 3-7 lists all past occurrences of natural hazards within the jurisdiction.

**Table 3-7. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Rain on Snow Flood		2012	N/A
Wildfire		07/28/2010	\$7,000,000
Wildland Fire		07/11/2010	N/A
Wildland Fire		08/29/2009	N/A
Severe Storm		01/02/2009	N/A
Wildland Fire		09/18/2008	N/A
Wildland Fire		08/08/2006	N/A
Severe Storm		07/04/2006	N/A
Flood		6/2006	\$500,000.00
Flood		6/2006	\$100,000.00
Flood		1/1-5/1997	No estimates available
Flood		7/1983	\$50,000

### 3.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

### 3.7 HAZARD RISK RANKING

Table 3-8 presents the ranking of the hazards of concern.

**Table 3-8. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	33	High
2	Earthquake	32	High
3	Flood	24	Medium
4	Wildfire	18	Medium
5	Dam Inundation	18	Medium
6	Landslide	12	Low
7	Drought	9	Low
8	Volcano	6	Low

### 3.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 3-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 3-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #E-1</b> —Partner with Federal Agencies to install electronic flow monitoring stations on the North Channel of the Boise River Eagle Rd Bridge and Dry Creek Drainage at the Eagle Rd Bridge. Both monitoring stations shall be capable of feeding data to USGS stream flow web site, or other applicable collection sources.		X	
<b>Action #E-2</b> —Partner with ACHD on bridge replacement of Dry Creek Bridge @ Floating Feather, w/o Eagle Rd Replacement. Replace structure to increase freeboard reduce restriction on Dry Creek.		X	
<b>Action #E-3</b> —Maintain community's compliance and good standing under the National Flood Insurance program. <i>Comment: Continuing Program</i>		X	
<b>Action #E-4</b> —Continue to maintain/enhance the City's classification under the Community Rating System <i>Comment: Continuing Program</i>		X	
<b>Action #E-5</b> —Integrate Multi-Hazard Mitigation Plan into the City of Eagle Comprehensive Plan. <i>Comment: New Plan in Progress</i>		X	
<b>Action #E-6</b> —Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority. <i>Comment: Continuing Program</i>		X	
<b>Action #E-7</b> —Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern. <i>Comment: Higher standards are always considered</i>		X	
<b>Action #E-8</b> —Consider the formation of a Surface Water Utility district and/or a Capital Improvements program for drainage, as a method of funding the mitigation of stormwater impacts created by new development. <i>Comment: Under Consideration</i>		X	
<b>Action #E-9</b> —Partner with other appropriate agencies within the planning area, such as Ada County, in the development of a comprehensive stormwater management plan that will evaluate the projected impacts of future development in the watersheds that impact the City of Eagle and make regional recommendations to mitigate those impacts.		X	
<b>Action #E-10</b> —Support County-wide initiatives identified in Volume 1. <i>Comment: Continuing Program</i>		X	
<b>Action #E-11</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1. <i>Comment: Continuing Program</i>		X	

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<p><b>Action #E-12</b>—Partner with the County, Eagle Fire District, and West Valley Little League to develop a defensible open space use for the urban wildland interface area near Horseshoe Bend Road and Floating Feather Road (Eagle Cycle Park). This use shall strive to mitigate the impacts of wildfire and stormwater runoff in a multi-objective, multi-use manner.</p> <p><i>Comment: Not economically feasible</i></p>			X

### 3.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 3-10 lists the actions that make up the City of Eagle hazard mitigation action plan. Table 3-11 identifies the priority for each action. Table 3-12 summarizes the actions by hazard of concern and the six mitigation types.

**Table 3-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p><b>Action #E-1</b>—Partner with Federal Agencies to install electronic flow monitoring stations on the North Channel of the Boise River Eagle Rd Bridge and Dry Creek Drainage at the Eagle Rd Bridge. Both monitoring stations shall be capable of feeding data to USGS stream flow web site, or other applicable collection sources.</p>						
New /Existing	Flood	2, 7, 8, 9	City of Eagle, Eagle Fire, ACEM, Federal Partners	Medium	FMA, PDM, Local Funding	Short Term
<p><b>Action #E-2</b>—Partner with ACHD on bridge replacement of Dry Creek Bridge @ Floating Feather, w/o Eagle Rd Replacement. Replace structure to increase freeboard reduce restriction on Dry Creek.</p>						
Existing	Flood, Earthquake	1,2,3,9,10	ACHD, City of Eagle	Medium	ACHD General Fund, Eagle, HMGP	Short Term
<p><b>Action #E-3</b>—Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to; enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</p>						
New/ Existing	Flood	2, 3, 4, 6, 8, 9	City of Eagle	Low	General Fund	Short/ ongoing
<p><b>Action #E-4</b>—Continue to maintain/enhance the City's classification under the Community Rating System</p>						
New/ Existing	Flood	2, 3, 4, 6, 8, 9	City of Eagle	Low	General Fund	Short/ ongoing
<p><b>Action #E-5</b>—Integrate Multi-Hazard Mitigation Plan into future updates to the City of Eagle Comprehensive Plan.</p>						
New/ Existing	All	2, 5, 6	Eagle Planning & Zoning	Low	General Fund	Long Term
<p><b>Action #E-6</b>—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.</p>						
Existing	All	3, 8, 9	ACEM, Eagle Planning & Zoning	High	FEMA Hazard Mitigation Grant Programs, ICC	Long Term
<p><b>Action #E-7</b>—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.</p>						
New/ Existing	All	4, 6	Eagle Planning & Zoning	Low	City of Eagle	Short Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #E-8</b> —Consider the formation of a Surface Water Utility district and/or a Capital Improvements program for drainage, as a method of funding the mitigation of stormwater impacts created by new development.						
New/ Existing	Flood, Severe Weather	4, 6	Public Works	High	City of Eagle	Long Term
<b>Action #E-9</b> —Partner with other appropriate agencies within the planning area, such as Ada County, in the development of a comprehensive stormwater management plan that will evaluate the projected impacts of future development in the watersheds that impact the City of Eagle and make regional recommendations to mitigate those impacts.						
New/ Existing	Flood, Severe Weather	4, 6	Public Works	High	City of Eagle	Long Term
<b>Action #E-10</b> —Support County-wide initiatives identified in Volume 1.						
New/ Existing	All	All	Eagle, ACEM	Low	City of Eagle	Short/ongoing
<b>Action #E-11</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New/ Existing	All	All	ACEM, City of Eagle	Low	City of Eagle, FEMA Mitigation Grant Funding	Short/ongoing
<b>Action #E-12</b> —In partnership with Eagle Fire Protection district, continue to support wildfire mitigation projects such as those sponsored by the Healthy Hills initiative within the eagle City limits or urban growth area.						
New and existing	Wildfire	All	Eagle Fire, Healthy Hills Initiative, City of Eagle	Low	City of Eagle, FEMA Mitigation Grant Funding	Short/ongoing
<b>Action #E-13</b> —Whenever possible, coordinate with local experts and employ natural environmental processes in mitigation activities that increase ecosystem resilience and reduce the impacts of flooding on the built environment.						
New/Existing	Flood, Dam Failure	2, 5, 9	City of Eagle	Medium	Local, Grants, development Fees	Long term

**Table 3-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
E-1	2, 7, 8, 9	High	High	Yes	Yes	No	Medium	High
E-2	1,2,3,9,10	High	Medium	Yes	Yes	No	High	High
E-3	2, 3, 4, 6, 8, 9	Medium	Low	Yes	No	Yes	High	Low
E-4	2, 3, 4, 6, 8, 9	Medium	Low	Yes	No	Yes	High	Low
E-5	2, 5, 6	High	Low	Yes	No	Yes	High	Low
E-6	3, 8, 9	High	High	Yes	Yes	No	Medium	High
E-7	4, 6	High	Low	Yes	No	Yes	High	Low
E-8	4, 6	High	High	Yes	No	No	Medium	Low
E-9	4, 6	High	High	Yes	No	No	Medium	Low
E-10	All	High	Low	Yes	No	Yes	High	Low
E-11	All	Low	Low	Yes	Yes	Yes	Yes	Low
E-12	All	High	Low	Yes	Yes	Yes	High	High
E-13	2, 5, 9	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

**Table 3-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	E-5, E-7, E-9, E-10, E-11	E-6	E-10		E-10	E-8
Earthquake	E-5, E-7, E-9, E-10, E-11	E-6	E-10		E-10	
Flood	E-1, E-3, E-4, E-5, E-7, E-9, E-10, E-11, E-13	E-2, E-3, E-4, E-6, E-13	E-3, E-4, E-10	E-4, E-13	E-1, E-3, E-4, E-10	E-2, E-4, E-8
Wildfire	E-5, E-7, E-9, E-10, E-11, E-12	E-6, E-12	E-10, E-12	E-12	E-10, E-12	
Dam Inundation	E-1, E-4, E-5, E-7, E-9, E-10, E-11, E-13	E-2, E-4, E-6, E-13	E-4, E-10	E-4, E-13	E-1, E-4, E-10	E-2, E-4, E-8
Landslide	E-5, E-7, E-9, E-10, E-11	E-6	E-10		E-10	
Drought	E-5, E-7, E-9, E-10, E-11		E-10		E-10	
Volcano	E-5, E-7, E-9, E-10, E-11	E-6	E-10		E-10	

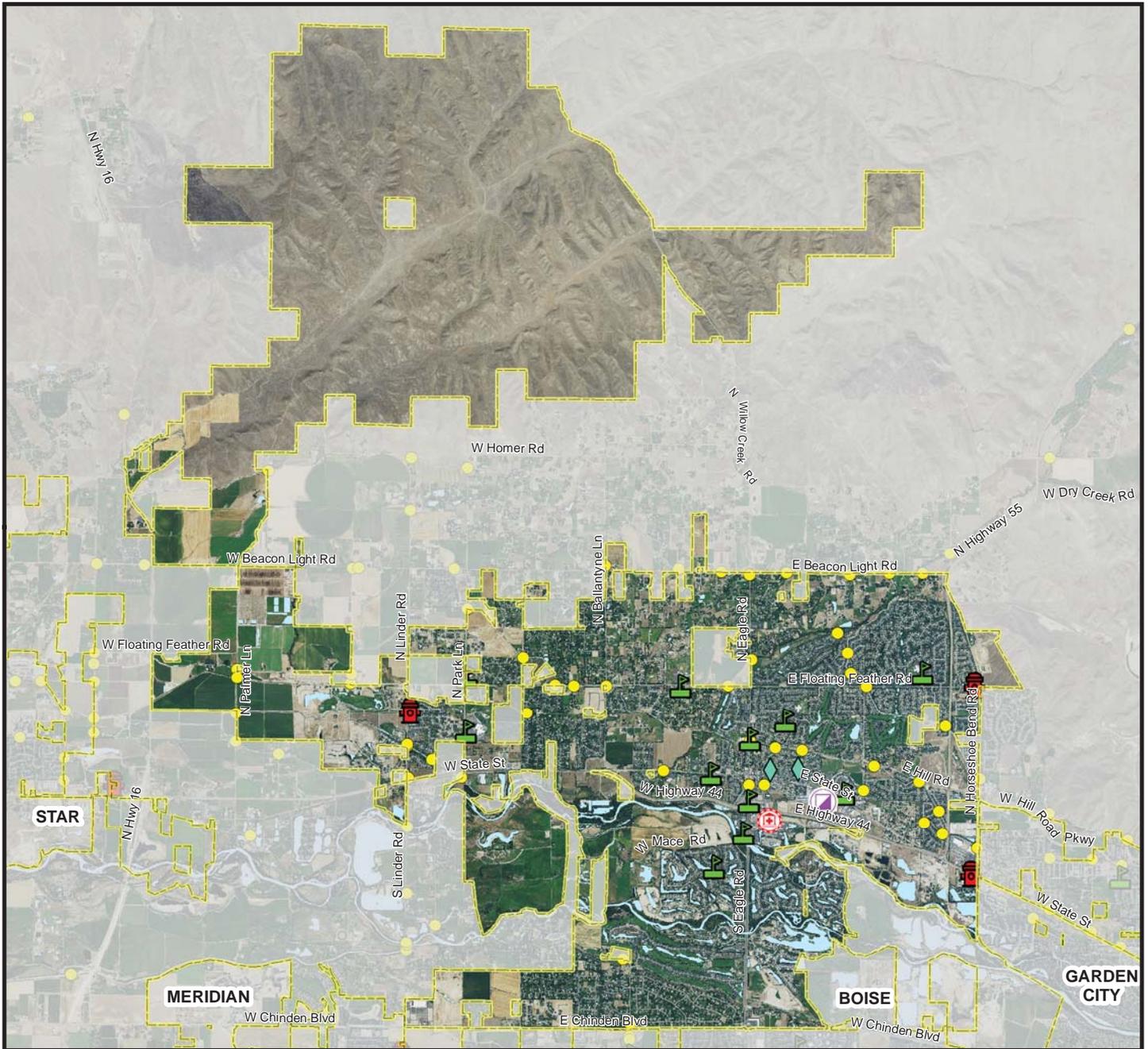
a. See the introduction to this volume for explanation of mitigation types.

### 3.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

- Develop a better understanding of landslide hazards in the Eagle Foothills
- Develop a mitigation strategy and building standards for the Eagle Foothills

# City of Eagle

## Essential Facilities & Transportation Systems



### Legend

- |   |                                |   |                                  |   |                 |
|---|--------------------------------|---|----------------------------------|---|-----------------|
|  | Emergency Operation Centers    |  | Other Essential Facilities       |  | Bus Facilities  |
|  | Fire Stations & EMS Facilities |  | Police Stations                  |  | Highway Bridges |
|  | Medical Care Facilities        |  | Schools & Educational Facilities |   |                 |
|   |                                |  | Airport Facilities               |   |                 |

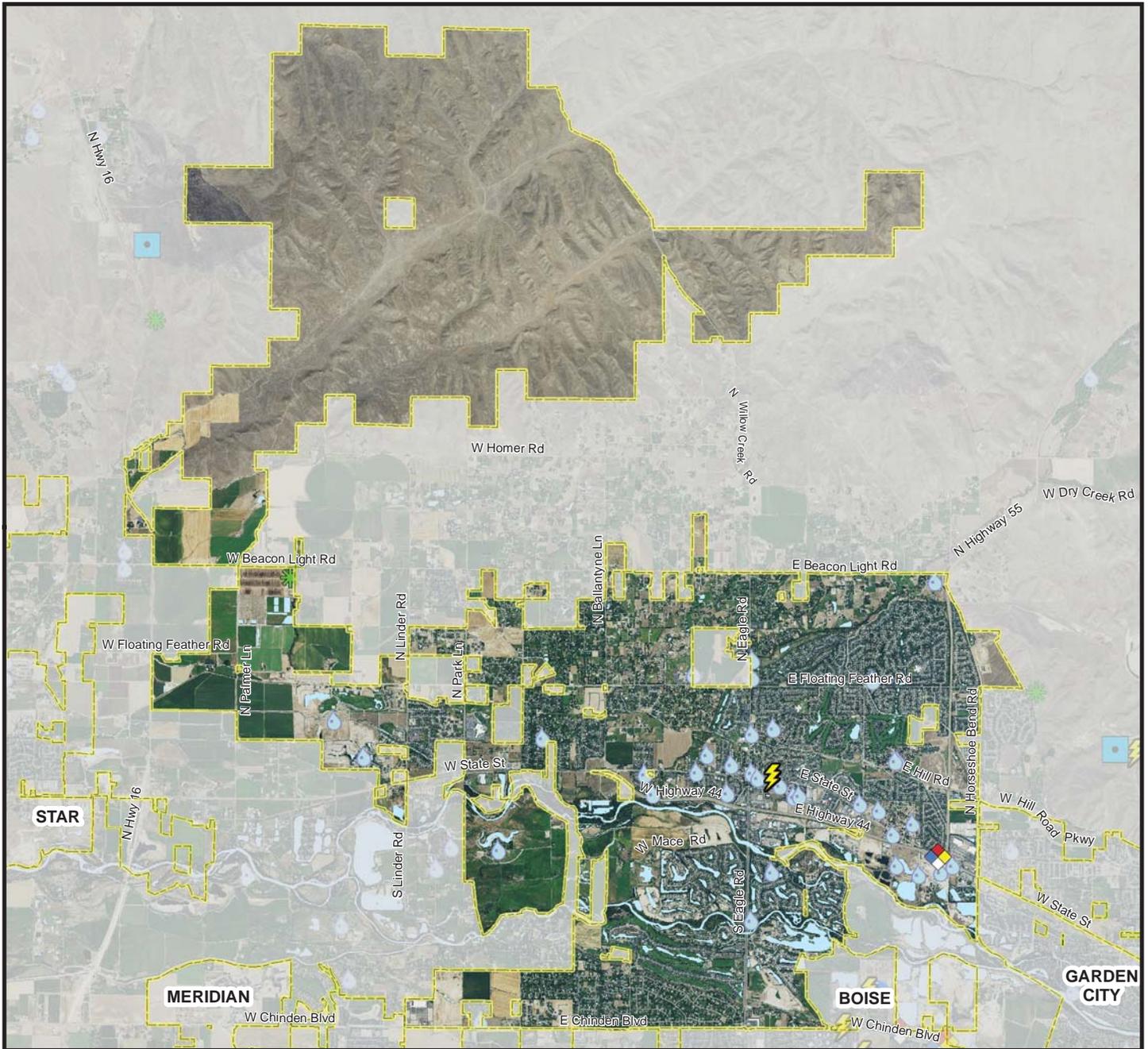


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Eagle

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Dams
-  Electric Power Facilities
-  Hazardous Materials
-  Natural Gas Facilities
-  Potable Water Facilities
-  Wastewater Facilities

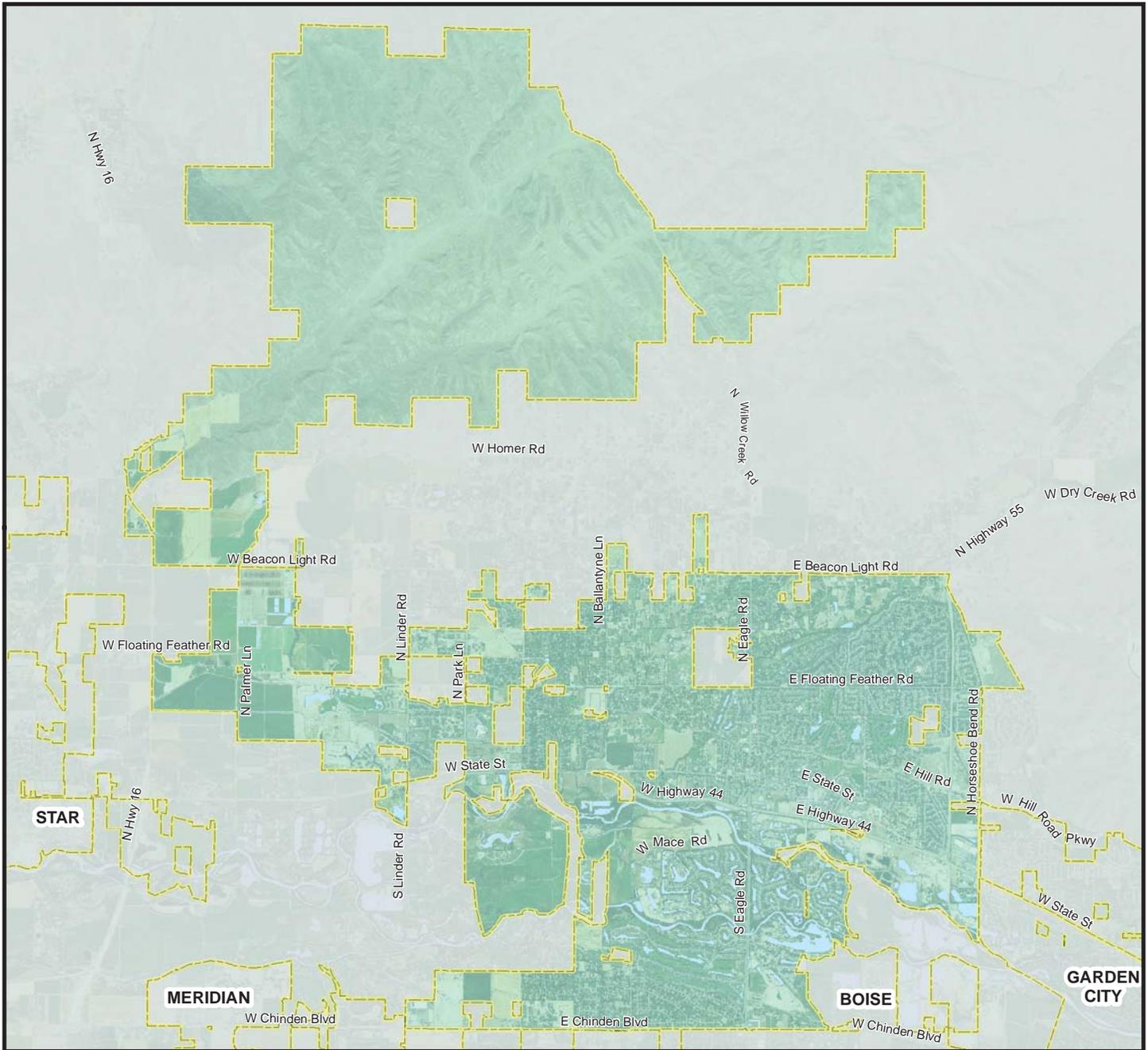


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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# City of Eagle

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

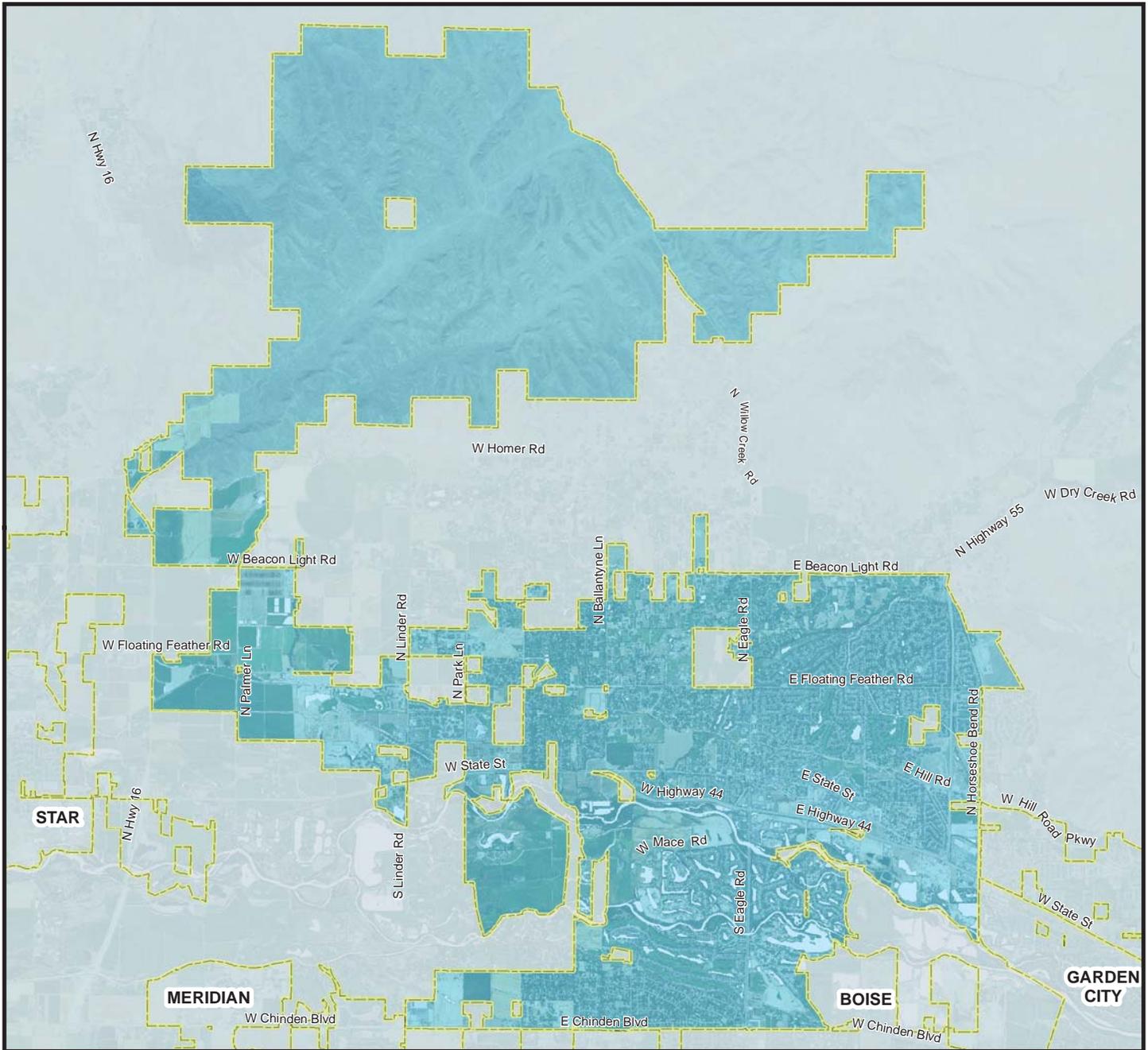


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Eagle

## Peak Ground Acceleration for a 500-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

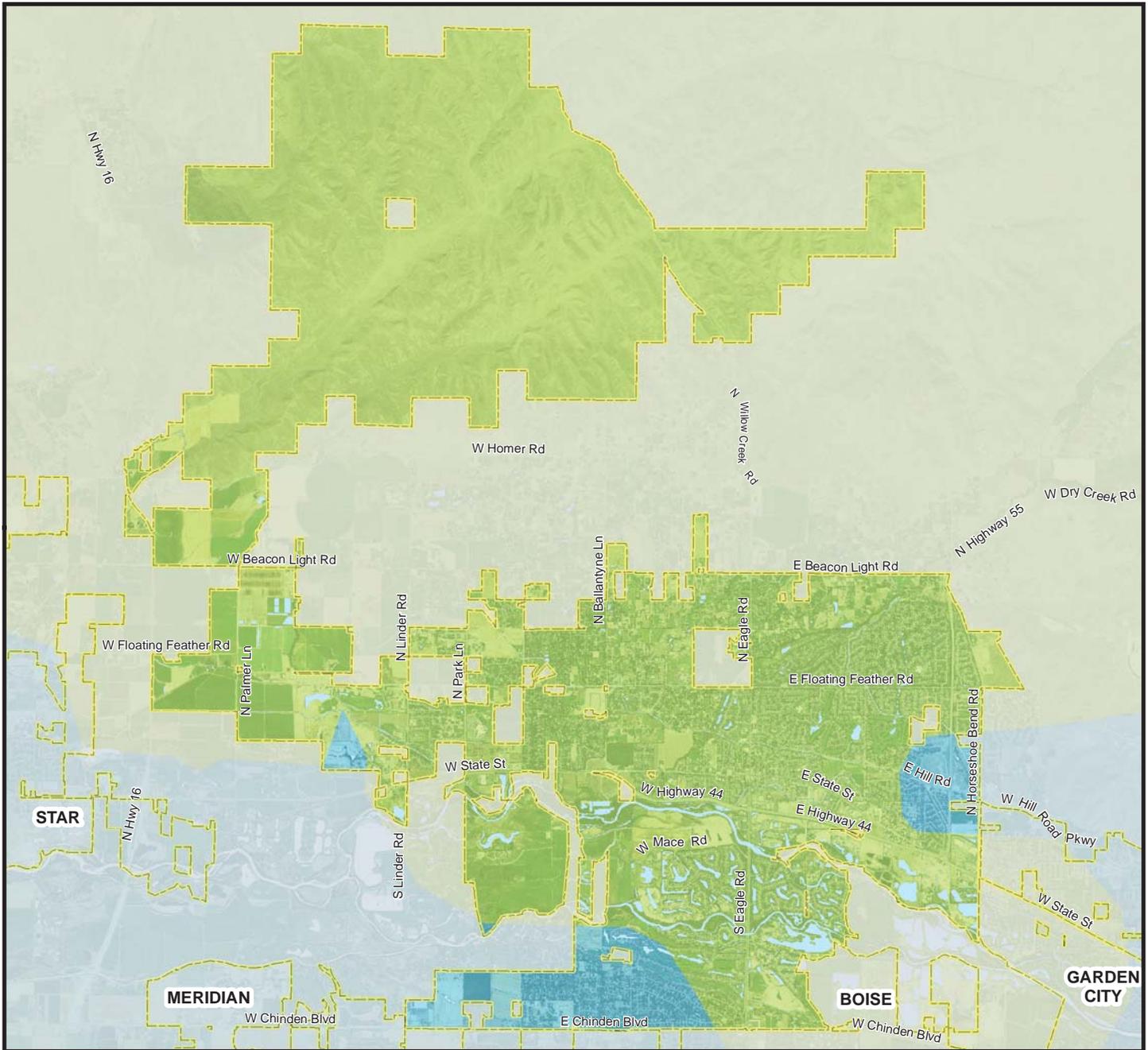


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Eagle

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



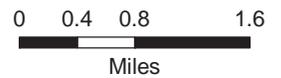
### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

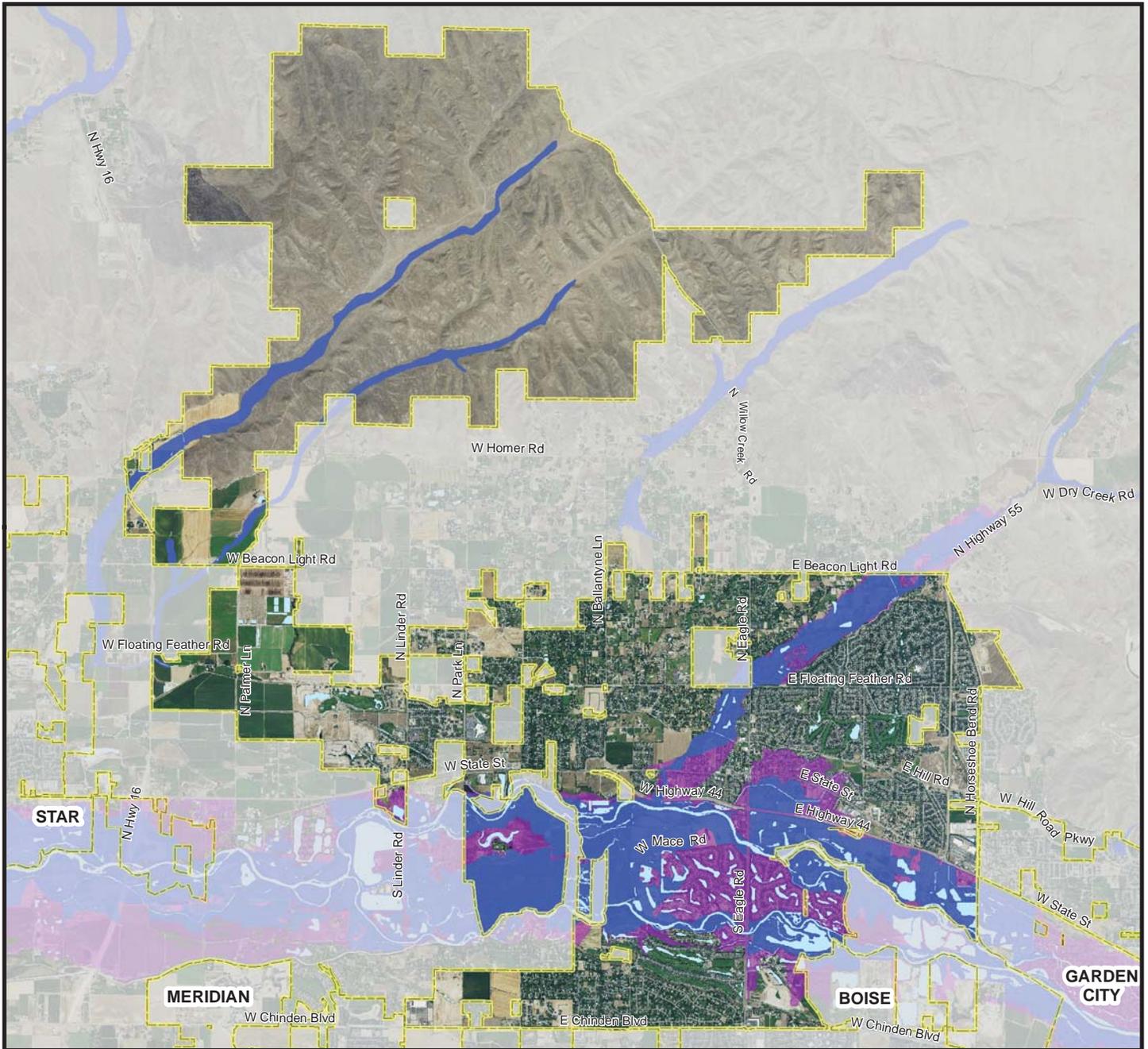


Data Sources: Ada County, U.S. Geological Survey

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# City of Eagle

## FEMA DFIRM Flood Hazard Zones



### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

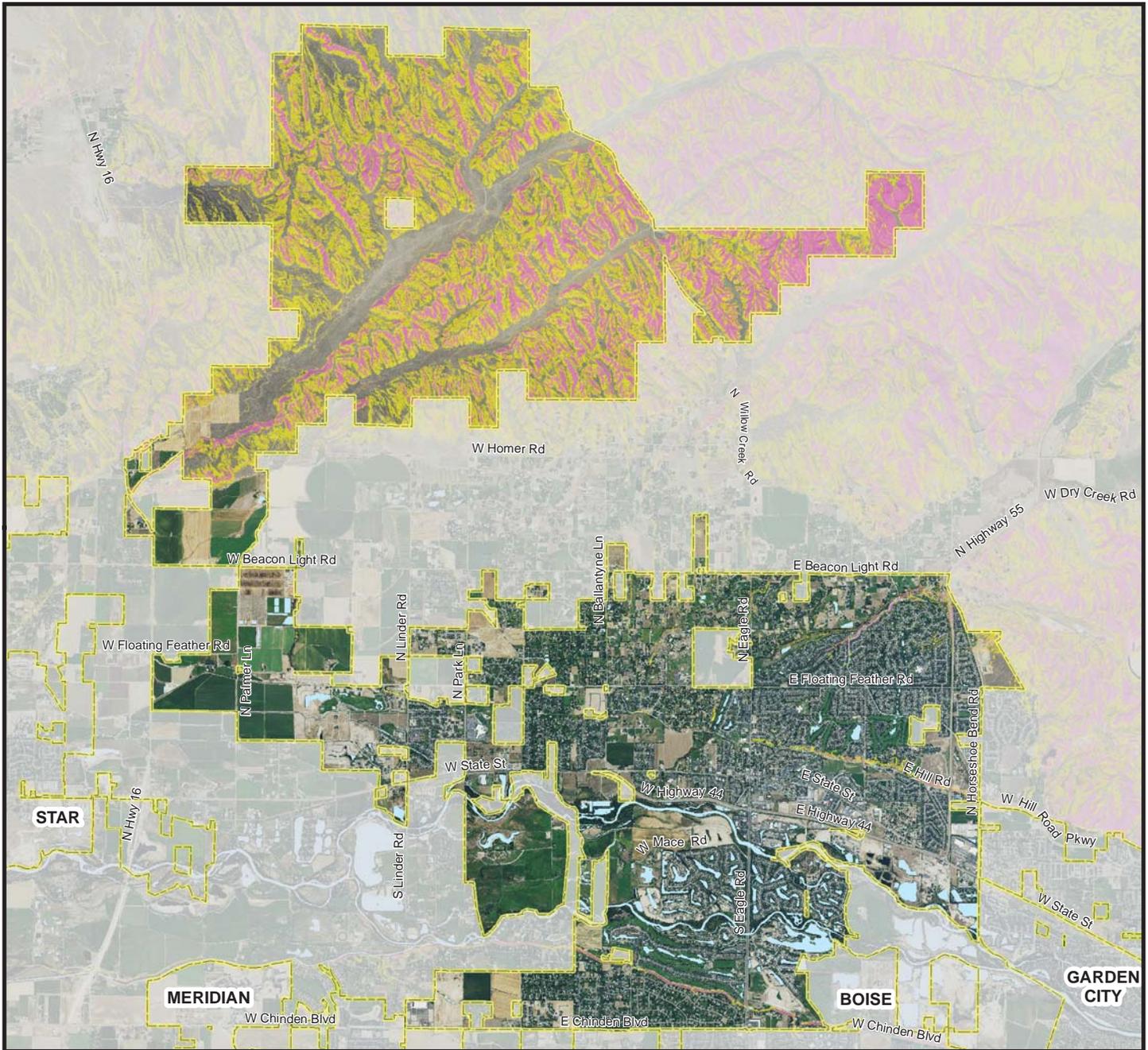
Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

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# City of Eagle

## Potential Landslide Areas



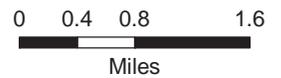
### Legend

 Ada County Boundary

### Slope

 15 - 30%

 Greater than 30%

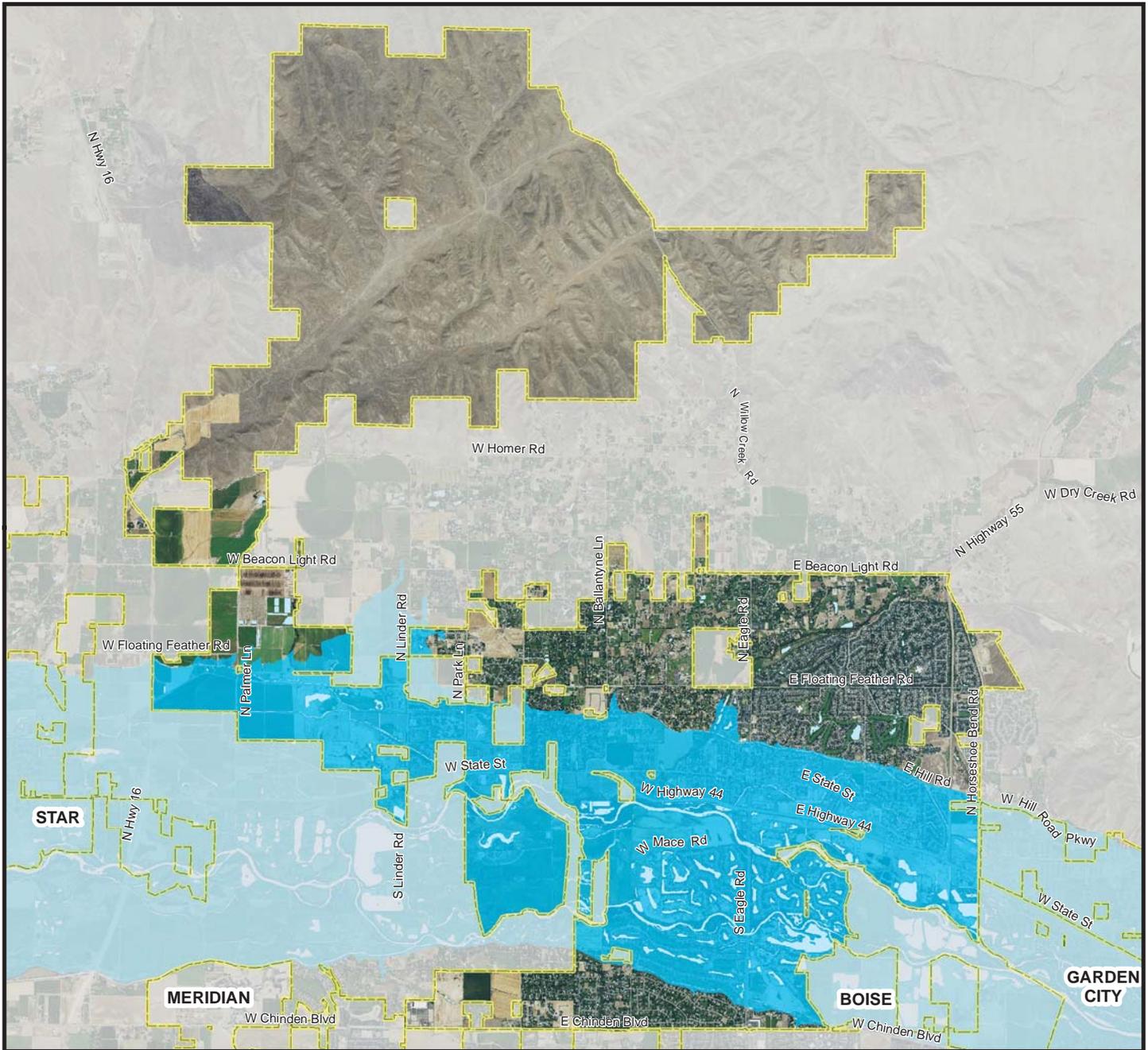


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Eagle

## Lucky Peak Dam Failure



### Legend

 Maximum Pool Inundation Area

Area inundated by dam failure occurring when pool elevation is at the top of the impounding structure.

This map has been compiled using the best information available and is believed to be accurate, however, its preparation required many assumptions. Actual conditions during a failure may vary from those assumed, so the accuracy cannot be guaranteed. The limits of flooding shown and the temporal data should only be used as a guideline for emergency planning and response actions. Actual areas inundated and inundation timing will depend on specific flooding and failure conditions and may differ from the areas shown on the maps.

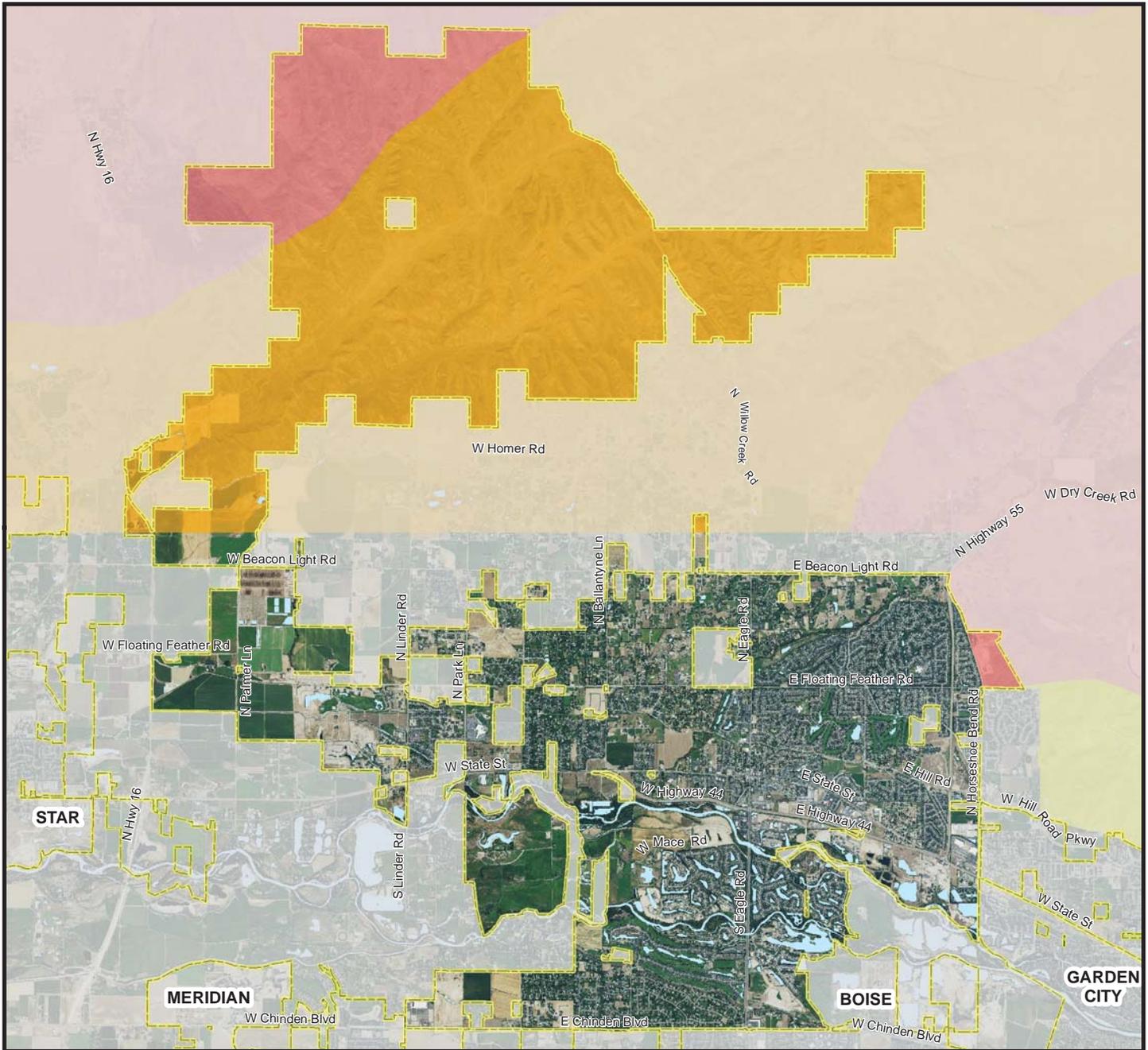
Data Sources: Ada County, U.S. Geological Survey, U.S. Army Corp of Engineers

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# City of Eagle

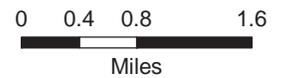
## Wildfire Risk Areas



### Legend

#### Relative Risk to Wildfire

- Low
- Low-Moderate
- Moderate
- Moderate-High
- High



Data Sources: Ada County, U.S. Geological Survey, Idaho Bureau of Land Management

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

## 4. CITY OF GARDEN CITY

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### 4.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

John Evans, Mayor  
6015 N Glenwood  
Garden City, ID 83714  
Telephone: (208) 472-2927  
e-mail Address: jevans@gardencityidaho.org

#### Alternate Point of Contact

Colin Schmidt, Public Works Director  
6015 N Glenwood  
Garden City, ID 83714  
Telephone: (208) 472-2949  
e-mail Address:  
cschmidt@gardencityidaho.org

### 4.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—May 22, 1949
- Current Population—11,223 (ACS 2014 Estimates – US Census)
- Population Growth—18,311 (COMPASS CIM 2040 projection)
- Location and Description—Garden City is nestled between Boise, Meridian and Eagle lining the north and south banks of the Boise River. City elevations range from 2,550 feet to 2,698 feet, with an average of 2,620.9 feet. Garden City spans over the townships, sections and ranges; 3N2E05 to 06, 4N1E14, 4N1E23 to 26, 4N1E36, 4N2E19, and 4N2E30 to 32.
- Brief History—The history of Garden City is tied to the Boise River that runs the length of the city. Native Americans camped on the riverbanks. The higher ground, known as “Government Island,” was first a temporary military camp and later used by the U.S. Cavalry for pastures. The river often flooded the entire city area to the bench and deposited silt that created the rich agricultural soil. During the 1920s, Thomas Jefferson Davis bought Government Island for agricultural use. Chinese farmed the area in small gardens, providing produce for local residents and miners. Over time, the Chinese were forced out and by the 1940s just two families remained in the area. However, the legacy of the Chinese remains in the name of the city, which is derived from their gardens, and Chinden Boulevard, which was named in a contest, is derived from “Chinese Garden.”

Prior to 1949, the area was unincorporated Ada County land. Developers had a vision for duplex housing and filed a subdivision with 50- by 150-foot lots along Chinden and 100- by 300-foot commercial lots. The streets were numbered in a different direction to distinguish the area from Boise.

The “Village of Garden City” was incorporated in 1949 for the sole purpose of maintaining gambling. The “original town site” encompassed 100 acres, including the area from 32nd to 37th streets. Gambling proceeds made Garden City a boomtown. The next year, annexations doubled the population of the village to approximately 800. Gambling provided funding for sewer, water, and street lighting. Gambling was outlawed by the state Legislature in 1953, and Garden City was expected to go away. Boise coveted Garden City’s liquor license revenues and there were several attempts at disincorporation. But in 1967,

the village was chartered as a city. Much of the development of Garden City was a result of few land use regulations.

The City has grown to incorporate roughly 4 square land miles from the Boise Bench on the south State Street on the north and Horseshoe Bend Road/ Bransteder Road on the west. The City is essentially built out, but is in the process of infill development. While at one time the City had a sordid reputation, the City is becoming increasingly popular with artisans, Baby Boomers, and Millennials.

- **Climate**—Garden City has an average temperature of 52.0°F and receives an average of 12.19 inches of annual precipitation since 1865. Summers are typically warm to hot and dry averaging 71.9°F for June, July and August since 1865. Winters are generally cold and dry with occasional snow showers averaging 32.5°F for December, January and February since 1865. Spring and Fall are both mild with light precipitation averaging 51.0°F for March, April and May and 52.3°F for September, October and November since 1865.
- **Governing Body Format**—Garden City is governed by a Mayor and four City Council members. There is a Planning and Zoning Commission, Library Board, and Design Review Committee with certain decision making abilities. Recommending bodies include the Parks and Waterways Committee and Arts Commission. The City Council is responsible for the adoption of this plan, the effected Departments are responsible for its implementation.
- **Development Trends**—Garden City sees a mix of commercial and residential uses. There is diversity in the residential stock of housing ranging from affordable to higher end homes. Traditionally due to lenient zoning standards much of the nonresidential uses were industrial in nature, and much of the housing in the eastern portion of the City was in Mobile Home parks. The developments north of the river and west of Glenwood are newer and mostly built with commercial uses that enjoy heavy automobile use along the arterials, with residential subdivisions on slightly larger lots that reflects a suburban character with curvilinear streets and cul-de-sacs.

Garden City has an enviable location. It is adjacent to the Boise River, is linked with major transportation arterials, and is close to downtown Boise, the commercial center of the Treasure Valley. While there is very little property available for green field development, many properties are under-utilized and ideal for infill development. As the valley continues to spread out and vehicle commuting becomes more difficult, and as trends continue to favor more compact development with a mix of uses, Garden City will continue to become even more desirable. Considering these factors, Garden City provides a market for redevelopment of under-utilized properties.

Garden City is seeing less industrial uses. Garden City continues to see an increase mixed use development, particularly artisans and small businesses, and increasing residential densities.

### 4.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 4-1. An assessment of fiscal capabilities is presented in Table 4-2. An assessment of administrative and technical capabilities is presented in Table 4-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-4. Classifications under various community mitigation programs are presented in Table 4-5. An assessment of education and outreach capabilities is presented in Table 4-6.

**Table 4-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> Title 7 of Garden City Code currently adopts the 2012 International Building Code and International Residential Code. This is updated on a three year cycle following the State of Idaho’s requirements .	Yes	No	Yes
Zoning Code <i>Comment:</i> Title 8 of Garden City Code. Title 8 is reviewed on a biannual basis.	Yes	No	Yes
Subdivisions <i>Comment:</i> Title 8-5 of Garden City Code. Title 8 is reviewed on a biannual basis.	Yes	No	Yes
Storm water Management <i>Comment:</i> Garden City complies with the requirements as per EPA requirements in NPDES, and Idaho Department of Water Resources (IDWR) requirements	Yes	No	No
Post-Disaster Recovery <i>Comment:</i> Garden City participates in regional planning for mitigation, preparation and recovery through Ada County City Emergency Management (ACEM)	Yes	No	No
Real Estate Disclosure <i>Comment:</i> This is part of the Floodplain management are required to remain in compliance with FEMA requirements	Yes	No	No
Growth Management <i>Comment:</i> Garden City creates and maintains a Comprehensive Plan to manage growth. Garden City has also adopted the COMPASS CIM 2040 projections.	Yes	No	No
Site Plan Review <i>Comment:</i> Garden City conducts a site inspections to ensure compliance with City regulations and codes at the time of redevelopment and through code enforcement actions.	Yes	No	No
Environmental Protection <i>Comment:</i> Title 6 of Garden City Code Last Update 2015	Yes	No	No
Flood Damage Prevention <i>Comment:</i> Titles 7 and 8 of Garden City Code	Yes	No	No
Emergency Management? <i>Comment:</i> Police Department	Yes	No	No
Climate Change	No	No	No
Other	No	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? No</i> <i>Comment:</i> Garden City creates and maintains a Comprehensive Plan. Adopted 2006	Yes	No	Yes
Capital Improvement Plan <i>What types of capital facilities does the plan address? Public Works</i> <i>How often is the plan updated? Annually</i> <i>Comment:</i> Garden City has a Capital Improvement Plan that ensures infrastructure is being maintained and replaced to maintain optimal performance. The Garden City Capital Improvements List covers water and sewer infrastructure as well as parks and pathways. This plan is updated on an annual basis.	Yes	No	No
Floodplain or Watershed Plan <i>Comment:</i> The Ada County All Hazards Mitigation Plan-update is the floodplain management plan of record for all communities within the planning area that participate in the CRS program.	Yes	No	No
Storm water Plan <i>Comment:</i> Garden City complies with the requirements as per EPA requirements in NPDES	Yes	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
Habitat Conservation Plan <i>Comment:</i> Under Title 36 of the Idaho State Statutes Garden City defers to Idaho Fish and Game to ensure wildlife preservations and wetland preservation areas- BREN, Boise River Enhancement Network has adopted the Boise River Enhancement Plan.	No	Yes	Yes
Economic Development Plan <i>Comment:</i> Garden City has established a Comprehensive Plan, Capital Improvement, and is also incorporated in the Boise Valley Economic Plan	Yes	Yes	No
Shoreline Management Plan	No	No	No
Community Wildfire Protection Plan <i>The 2016 Ada County Multi-hazard Mitigation Plan is being developed to be a qualifying CWPP for the Ada County planning area</i>	No	Yes	No
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other <i>Comment:</i> ACEM Ada County Flood Response Plan. Adopted: January, 2006 Ada County Mass Casualty Incident Plan. Adopted: 12/16/2010 Ada County HAZMAT Response Plan. Adopted: April 2011 Ada County Wildfire Response Plan. Adopted: May 2010	Yes	No	No
Comprehensive Emergency Management Plan <i>Comment:</i>	Yes	No	No
Threat & Hazard Identification & Risk Assessment <i>Comment:</i> ACEM Multi-Hazard Mitigation Plan, Ada County THIRA 2015	Yes	No	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan	No	No	No
Public Health Plan <i>Comment:</i> Central District Health Department Emergency Operations Plan, 2013	No	Yes	No

Table 4-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

**Table 4-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Development Services/Garden City/ Planning Staff
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works/Garden City/ Water, Sewer, and Engineering Staff
Planners or engineers with an understanding of natural hazards	Yes	Public Works and Development Services/Garden City/ Staff
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Public Works/Garden City/Engineer
Staff capable of making substantial damage estimates	No	
Personnel skilled or trained in GIS applications	Yes	Development Services/Garden City/GIS Administrator
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	ACEM/Ada County/Director of ACEM
Grant writers	No	

**Table 4-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	1978
When did the Flood Insurance Rate maps become effective?	2002
What local department is responsible for floodplain management?	Development Services
Who is your floodplain administrator? (department/position)	Development Services Director
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance? <ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	2008 Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	2012
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	No Flooding will not adhere to a model. There will be debris, etc.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	Yes Ongoing
Does your jurisdiction participate in the Community Rating System (CRS)? <ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> <li>If not, is your jurisdiction interested in joining the CRS program?</li> </ul>	Yes No
How many Flood Insurance policies are in force in your jurisdiction? <ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	471 \$127,408,500 <b>\$311,358</b>
How many total loss claims have been filed in your jurisdiction? <ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	12 6 \$25,661

**Table 4-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	2013
Building Code Effectiveness Grading Schedule	No	10 (not participating)	N/A
Public Protection	Yes	3/8/9 (NACFR)	N/A
Storm Ready	Yes	Blue	N/A
Firewise	No	N/A	N/A

**Table 4-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	City Administrator
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Gardencityidaho.org
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes ACEM website and floodplain page
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Social Media, emergency broadcasting, geo Notify
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 4.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

### 4.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Comprehensive Plan—Goal 5: Focus on the River, Goal 7: Connect the City; Goal 8: Maintain a Safe City; Goal 9: Develop a Sustainable City; Goal 10: Plan for the Future Goal 11: Serve the City and the future Land Use Map integrate the goals and recommendation of the Multi-Hazard Mitigation Plan.
- Master Parks and Pathways Plan—The Master Parks and Waterways Plan seeks to preserve floodplain as a high priority for park land acquisition. Utilizing parks for drainage is also addressed in the plan.

### 4.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Comprehensive Plan—Integrate the Parks and Waterway Plan and Multi-Hazard Mitigation Plan to be incorporated, better inform, and update the Garden City Comprehensive Plan.

## 4.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 4-7 lists all past occurrences of natural hazards within the jurisdiction.

**Table 4-7. Natural Hazard Events Damage County Wide**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood		1/1979	\$50,000
Wind		3/1981	\$36,000
Wind		6/1981	\$50,000
Flood		06/1983	\$147,000
Earthquake		10/1983	\$4,000,000
Flooding		02/1986	\$20,000
Wind		7/1987	\$10,000
Severe Storm		1/1988	\$8,700
Drought		1987-1992	\$500,000,000
Flood		8/1992	\$4,545
Wind		10/1992	\$6,250.00
Winter Weather		11/1992	\$9,800.00
Severe Storm		4/27/1995	\$50,000
Lightning		7/1995	\$5,000
Flood		1/1997	\$65,000,000
Flood		3-7/1997	\$50,000,000
Flood		9/1997	\$57,000
Severe Storm		4/1998	\$20,000
Severe Storm		9/1998	\$38,000
Severe wind		3/29/2009	\$33,000
Water Main Break at Remington Street		4/1/2012	500,000

## 4.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Isolation- All access in and out of the City are on State Highway facilities. These facilities may be severely constrained with the vehicular traffic that they may need to accommodate in an event. Moreover, Chinden is inadequate for non-vehicular mobility purposes. Chinden does not accommodate bike lanes, has few and unsafe crossings, has irregular sidewalks, and uncontrolled access points. Census track 11 is located between the Boise River and Chinden from Glenwood to the eastern borders of Garden City. Census Track 11 contains a concentration of vulnerable populations that cannot drive.
- ACHD and ITD Roadway drainage could cause flooding in Garden City if the drainage system is undersized or not adequately maintained.
- Settlers Canal is at a higher elevation than the City. If the canal is not adequately maintained it could pose as a flood threat.
- Aging and undersized water and sewer infrastructure.

## 4.7 HAZARD RISK RANKING

Table 4-8 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flooding	42	High
2	Severe Weather	33	High
3	Earthquake	32	High
4	Dam Inundation	18	Medium
5	Drought	9	Low
6	Volcano	6	Low
7	Landslide	3	Low
8	Wildfire	1	Low

## 4.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 4-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
GC1—Update and training on Emergency Action Plan	No	Yes	
GC2—Establish emergency preparedness inventory with inspection and replacement plan	No	Yes	
GC3—Develop/update a Capital Improvement Plan for capital facilities/infrastructure within the City.	Yes/On Going	Yes	
GC4—Installation of manhole locking mechanisms in the floodway	Yes	No	
GC5—Fresh water supply well house security camera installation	Yes	No	
GC6—Garden City Parks security camera installation	Yes/Ongoing	Yes	
<i>Comment:</i>			
GC8—Acquisition of vulnerable property within the floodplain for use as parks to mitigate flood waters	No	Yes	
GC9—Purchase of equipment to aid in recovery from a flood event for the Library	No	No	
GC10-- Maintain community's compliance and good standing under the National Flood Insurance program	Yes/On Going	Yes	
GC11-- Obtain portable generators for use in Ada County during power outages and other emergency situations	Yes	No	
GC12—Continue to maintain/enhance the City's classification under the Community Rating System	Yes/On Going	Yes	
GC13—Integrate Multi-Hazard Mitigation Plan into the Garden City Comprehensive Plan	No	Yes	
GC14—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.	No	Yes	

## 4.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 4-10 lists the actions that make up the City of Garden City hazard mitigation action plan. Table 4-11 identifies the priority for each action. Table 4-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 4-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p><b>GC 1—Green Infrastructure Flood Mitigation—</b>Garden City needs a plan that identify strategic locations for alternate flood mitigation efforts, with an emphasis on green infrastructure to reduce floodplain and anticipated Base Flood Elevations. An example of such an effort may be identifying a location for an engineered parkland that is utilized to provide additional floodplain capacity and groundwater recharge.</p>						
New and Existing	Flooding, Drought	1, 2, 3, 6, 8, 9, 10	ACEM, Planning, Public Works, BHS, FEMA	High	Grants	Short term
<p><b>GC 2—Levees Analysis Levee Analysis—</b>There are a number of unaccredited levees in Garden City. Garden City needs an inventory of levees to determine condition and viability of the levees in Garden City and their hydraulic significance. If any of the levees could be hydrologically significant; include a cost estimate and a cost benefit analysis of accrediting or provisionally accrediting each levee, and the sustainability of required maintenance.</p>						
New and Existing	Flooding	1,2, 9,10	ACEM, Planning, Public Works, Corps of Engineers, FEMA	High	Corps of Engineers	Short term
<p><b>GC3 Water and Sewer Pipe replacement</b></p>						
New and Existing	Flooding, Severe Weather, Earthquake	1, 9, 10	Garden City	Medium	Local	Ongoing
<p><b>GC4 Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to: enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</b></p>						
New and existing	Flooding	2, 5, 6, 8, 9, 10	Garden City	Low	Local	Ongoing
<p><b>GC5 Continue to maintain/enhance the City’s classification under the Community Rating System</b></p>						
New and existing	Flooding	6,8,9, 10	Garden City	Low	Local	Ongoing
<p><b>GC6 Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.</b></p>						
Existing	All Hazards	2, 3, 8, 9, 10	ACEM, Planning, Public Works	High	FEMA Hazard Mitigation Grant Programs, ICC	Long Term
<p><b>GC7 Integrate Multi-Hazard Mitigation Plan into the Garden City Comprehensive Plan.</b></p>						
New and Existing	All Hazards	2, 6, 4, 8, 9, 10	Garden City	Medium	Grant/ Local	Short term
<p><b>GC8 Establish emergency preparedness inventory with inspection and replacement plan</b></p>						
New and Existing	All Hazards	1, 2, 7, 10	Garden City	Low	Local	Short term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>GC9—Maintain Capital Improvement Plan for capital facilities/infrastructure within the City.</b>						
New and Existing	All Hazards	1, 2, 10	Garden City	Low	Local	Short term
<b>GC10 Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern</b>						
New and Existing	All hazards	1, 3, 4, 5, 8, 10	Garden City Planning	Low	Local	Short Term
<b>GC11 Support County-wide initiatives</b>						
New and Existing	All Hazards	All	Garden City Public Works/ Planning ACEM	Low	Local	Short term Ongoing
<b>GC12 Continuing of Operations Plan</b>						
New and Existing	All Hazards	1, 10	Garden City Public Works/Police Department/ Planning ACEM	Medium	Local	Short
<b>GC13 EOP Emergency Operations Plan</b>						
New and Existing	All Hazards	1, 7, 8, 10	Garden City Public Works/Police Department/ Planning ACEM	Medium	Grants	Medium
<b>GC14 Recovery Plan</b>						
New and Existing	All Hazards	1, 10	Garden City Public Works/Police Department/ Planning ACEM	Medium	Grants	Medium
<b>GC15 Garden City Parks security camera installation</b>						
New and Existing	All Hazards	10	Garden City Public Works/Police Department/	Low	Local/ Grants	Short
<b>GC16 Streetlight replacement/conversion to alternative energy streetlights</b>						
New	All Hazards	10	Garden City Public Works/Urban Renewal	Medium	Local/ Grants/ Redevelopment	Medium
<b>GC17 Acquisition of vulnerable property for use as parks</b>						
Existing	All Hazards	2, 9, 10	ACEM, Planning, Public Works	High	Grants	Long Term
<b>GC18 Purchase of stand by generator for City Hall and Operations Center</b>						
New and Existing	All Hazards	1, 7, 10	Garden City Public Works	Medium	Local/ Grants	Medium
<b>GC19 Obtain portable generators for use in Ada County during power outages and other emergency situations</b>						
New and Existing	All Hazards	1,7, 10	Garden City Public Works/Police Department/	Low	Local/ Grants	Short

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
GC20-Whenever possible, coordinate with local experts and employ natural environmental processes in mitigation activities that increase ecosystem resilience and reduce the impacts of flooding on the built environment.						
New and Existing	Flood, Dam Failure	2, 5, 9	Garden City	Medium	Local, Grants, development Fees	Long term

**Table 4-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
GC1	7	High	High	Yes	Yes	No	Very High	Very High
GC2	4	High	High	TBD	Yes	No	High	High
GC3	3	High	High	Yes	No	Yes	High	Low
GC4	6	Medium	Low	Yes	No	Yes	High	Low
GC5	4	Low	Low	Yes	No	Yes	Medium	Low
GC6	5	Medium	High	No	Yes	No	Low	Medium
GC7	6	Low	Low	Yes	No	No	High	Medium
GC8	4	High	Low	Yes	No	Yes	High	Medium
GC9	3	High	Low	Yes	No	Yes	High	Low
GC10	6	High	Low	Yes	No	Yes	Medium	Low
GC11	10	Medium	Low	Yes	No	Yes	Medium	Low
GC12	2	High	Medium	Yes	Yes	Yes	Medium	Low
GC13	4	High	Medium	Yes	Yes	Yes	Medium	Medium
GC14	2	High	Low	Yes	Yes	No	Medium	Medium
GC15	1	Low	Low	Yes	No	No	High	Low
GC16	1	Medium	High	No	No	No	Medium	Medium
GC17	3	Medium	High	No	Yes	No	Medium	High
GC18	5	High	Medium	Yes	No	No	Medium	Medium
GC19	3	High	Low	Yes	Yes	No	Medium	Medium
GC20	3	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

**Table 4-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flooding	GC 1, GC 2, GC 4, GC 6, GC 7, GC 9, GC 11, GC 17, GC 20	GC 1, GC 2, GC 3, GC 5, GC 6, GC 10, GC 11, GC 14, GC 20	GC 5, GC 7, GC 11, GC 13, GC 14	GC 1, GC 3, GC 6, GC 11, GC 14, GC 20	GC 3, GC 4, GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 16, GC 18, GC 19	GC 1, GC 2, GC 3, GC 11
Severe Weather	GC 6, GC 7, GC 9, GC 11, GC 17	GC 3, GC 6, GC 10, GC 1, GC 14	GC 7, GC 11, GC 13, GC 14	GC 3, GC 11, GC 14	GC 3, GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 16, GC 18, GC 19	GC 3, GC 11
Earthquake	GC 6, GC 7, GC 9, GC 11, GC 17	GC 3, GC 6, GC 10, GC 11, GC 14	GC 7, GC 11, GC 13, GC 14	GC 3, GC 11, GC 14	GC 3, GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 16, GC 18, GC 19	GC 3, GC 11
Dam Inundation	GC 6, GC 7, GC 11, GC 17, GC 20	GC 6, GC 10, GC 11, GC 14, GC 20	GC 7, GC 11, GC 13, GC 14	GC 11, GC 14, GC 20	GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 18, GC 19	GC 11
Drought	GC 1, GC 6, GC 7, GC 9, GC 11, GC 17	GC 6, GC 10, GC 11, GC 14	GC 7, GC 11, GC 13, GC 14	GC 1, GC 11, GC 14	GC 8, GC 11, GC 12, GC 13, GC 14, GC 18, GC 19	GC 1, GC 11
Volcano	GC 6, GC 7, GC 11, GC 17	GC 6, GC 10, GC 11, GC 14	GC 7, GC 11, GC 13, GC 14	GC 11, GC 14	GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 18, GC 19	GC 11
Landslide	GC 6, GC 7, GC 11, GC 17	GC 6, GC 10, GC 11, GC 14	GC 7, GC 11, GC 13, GC 14	GC 6, GC 11, GC 14	GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 18, GC 19	GC 11
Wildfire	GC 6, GC 7, GC 11, GC 15, GC 17	GC 6, GC 10, GC 11, GC 14	GC 7, GC 11, GC 13, GC 14	GC 6, GC 1, GC 141	GC 8, GC 11, GC 12, GC 13, GC 14, GC 15, GC 18, GC 19	GC 11

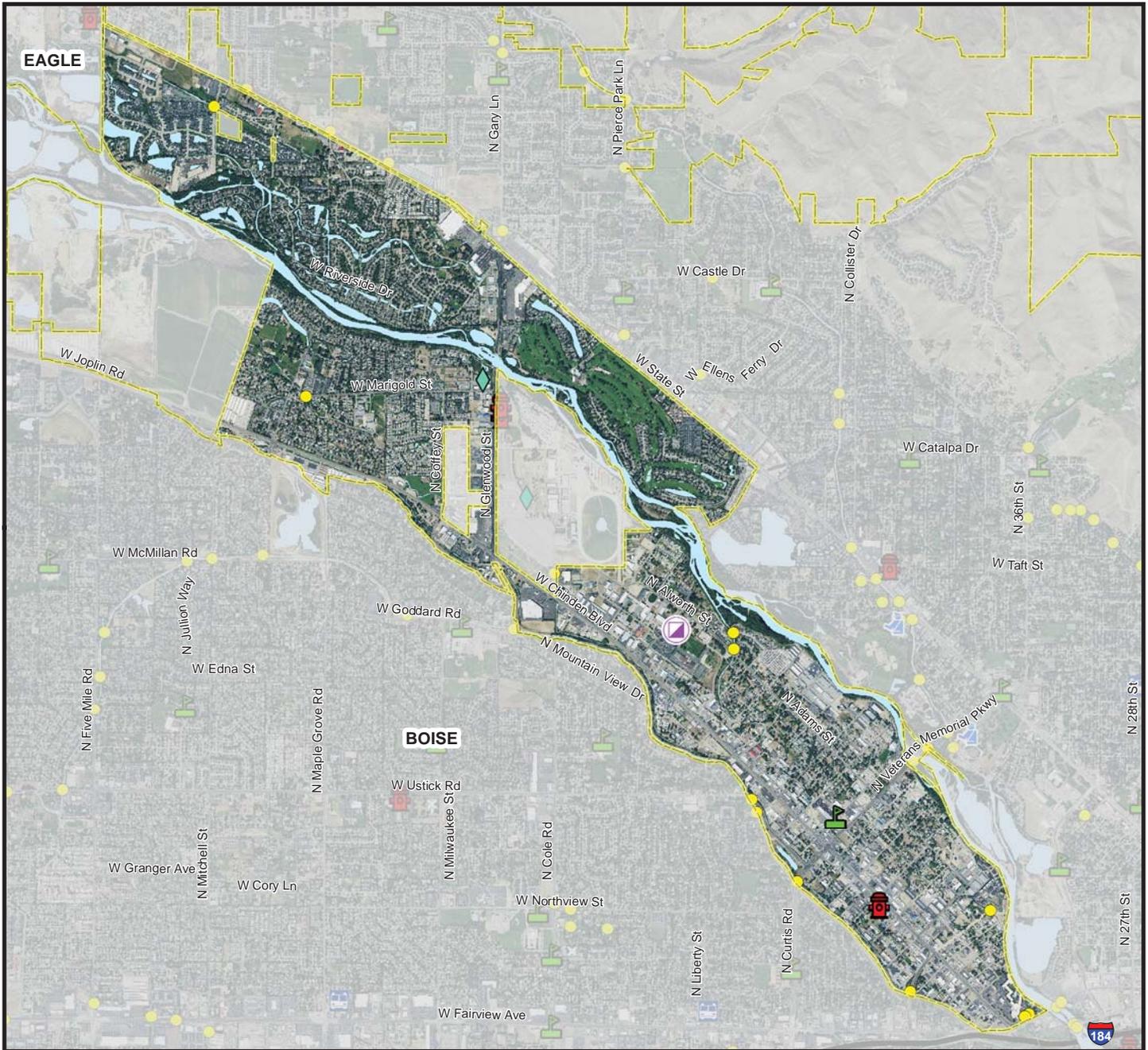
a. See the introduction to this volume for explanation of mitigation types.

## 4.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Ground-truthed topography

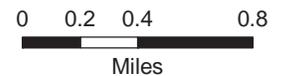
# Garden City

## Essential Facilities & Transportation Systems



### Legend

-  Emergency Operation Centers
-  Fire Stations & EMS Facilities
-  Medical Care Facilities
-  Other Essential Facilities
-  Police Stations
-  Schools & Educational Facilities
-  Airport Facilities
-  Bus Facilities
-  Highway Bridges

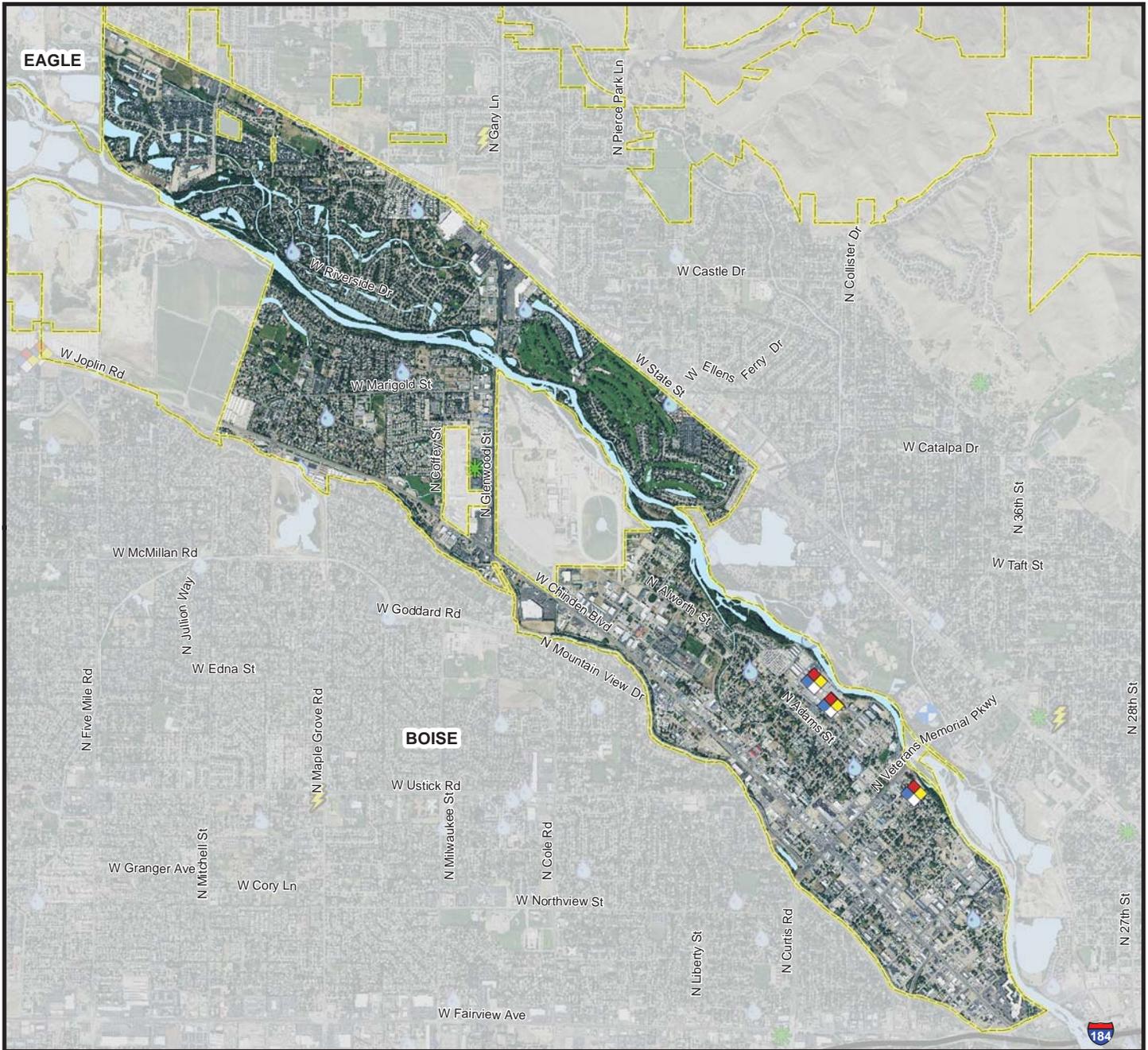


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

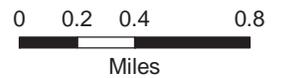
# Garden City

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Natural Gas Facilities
-  Dams
-  Potable Water Facilities
-  Electric Power Facilities
-  Wastewater Facilities
-  Hazardous Materials

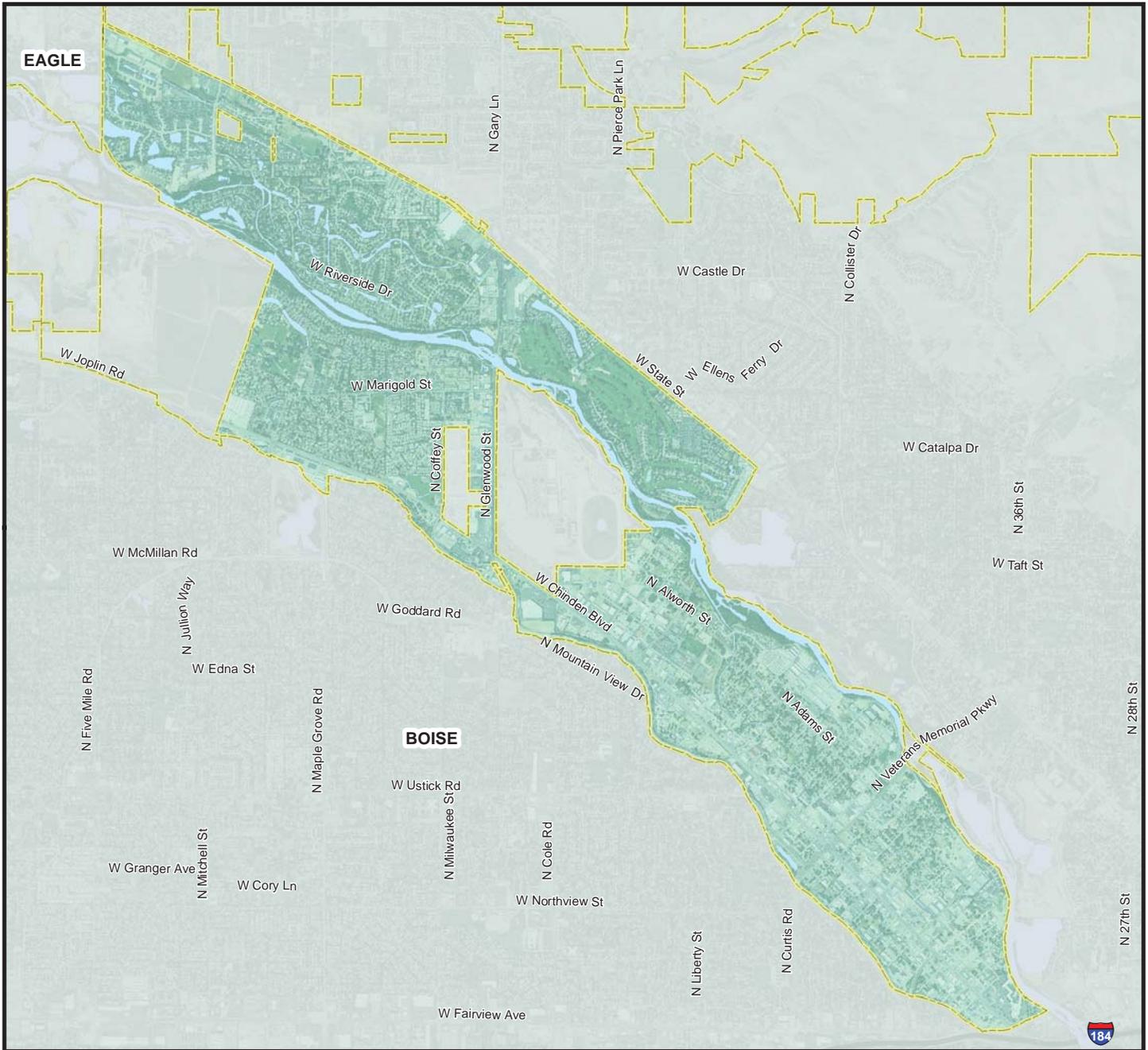


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# Garden City

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

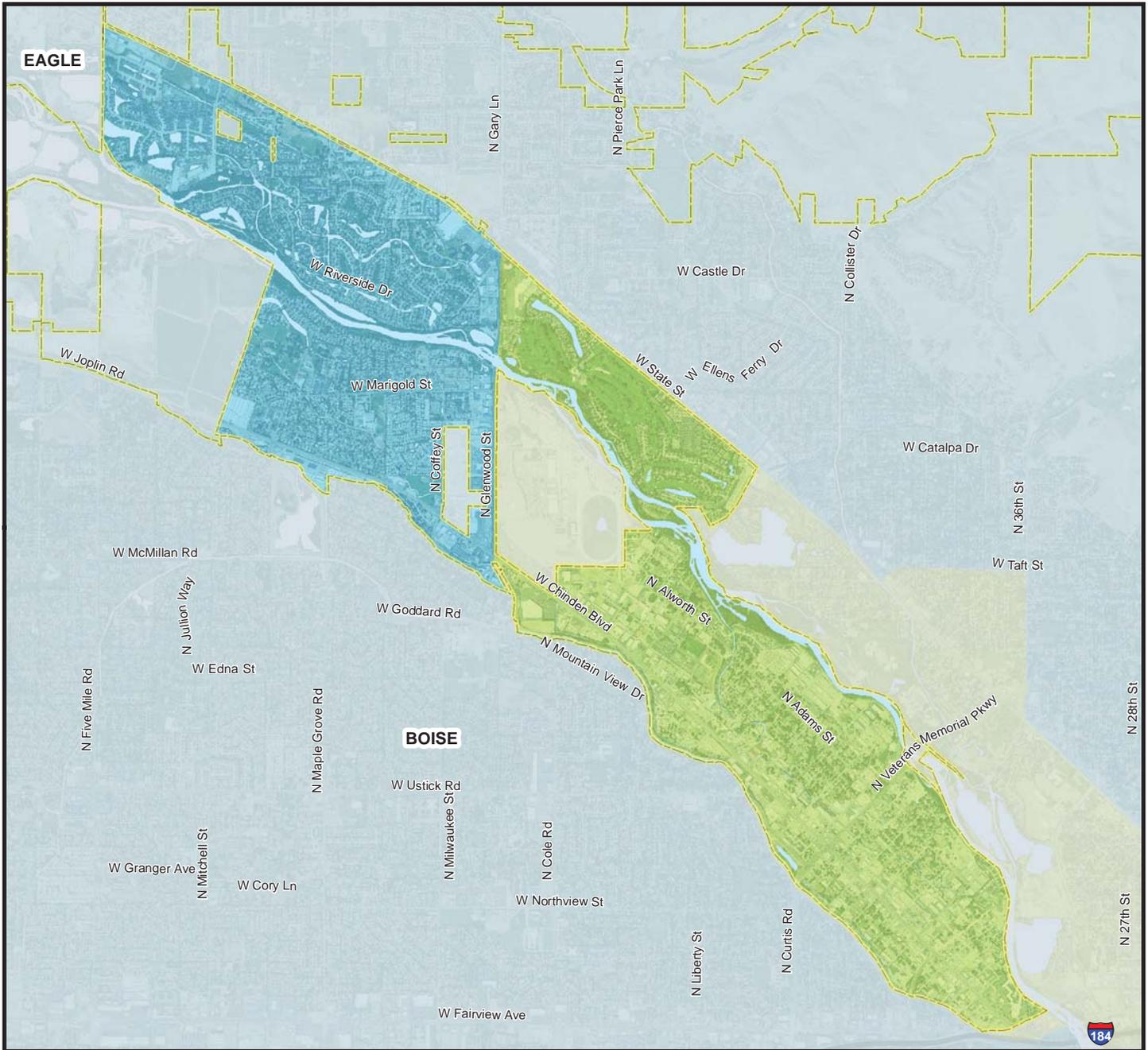


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# Garden City

## Peak Ground Acceleration for a 500-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

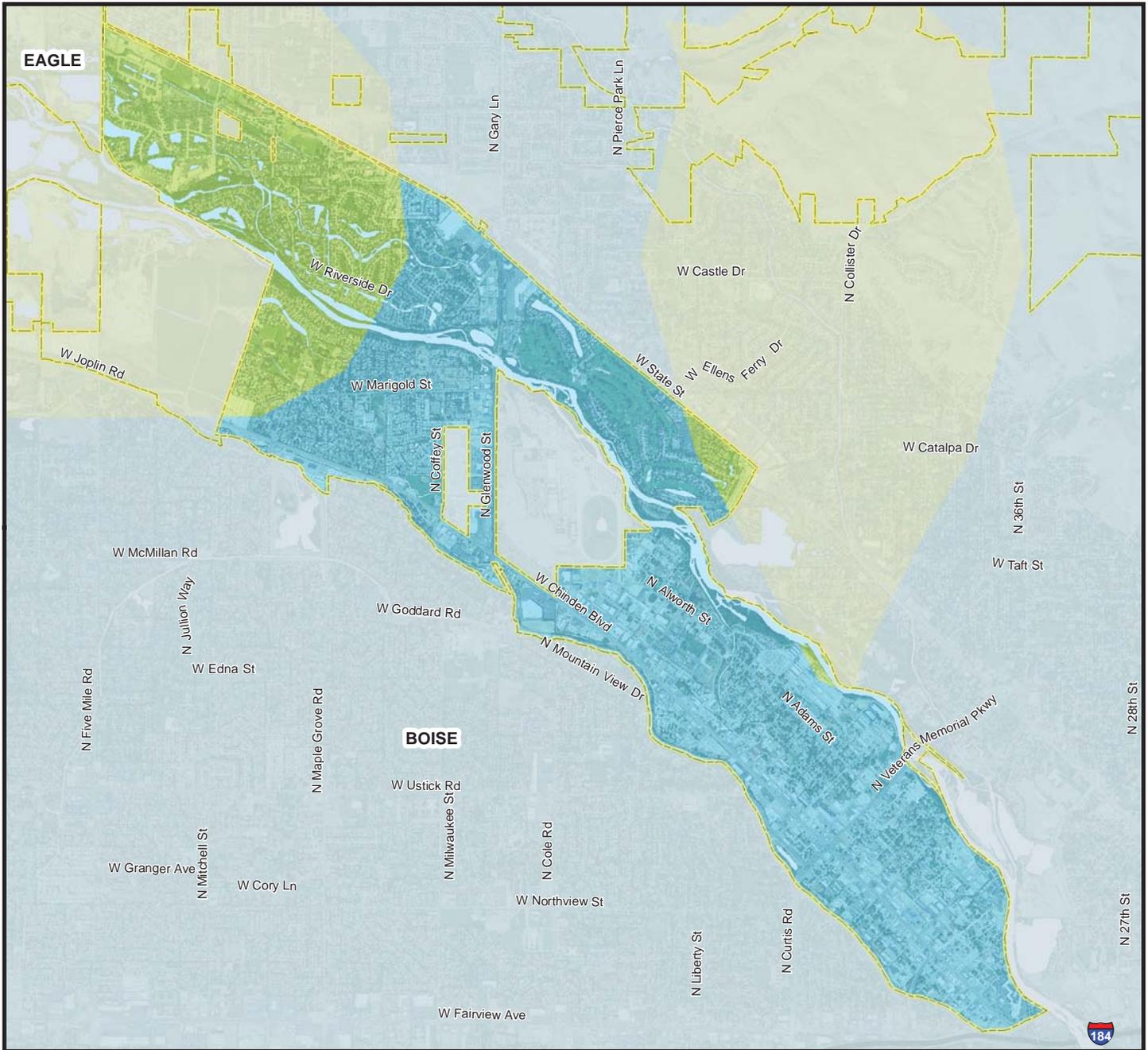


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# Garden City

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



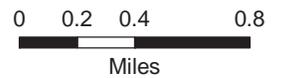
### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

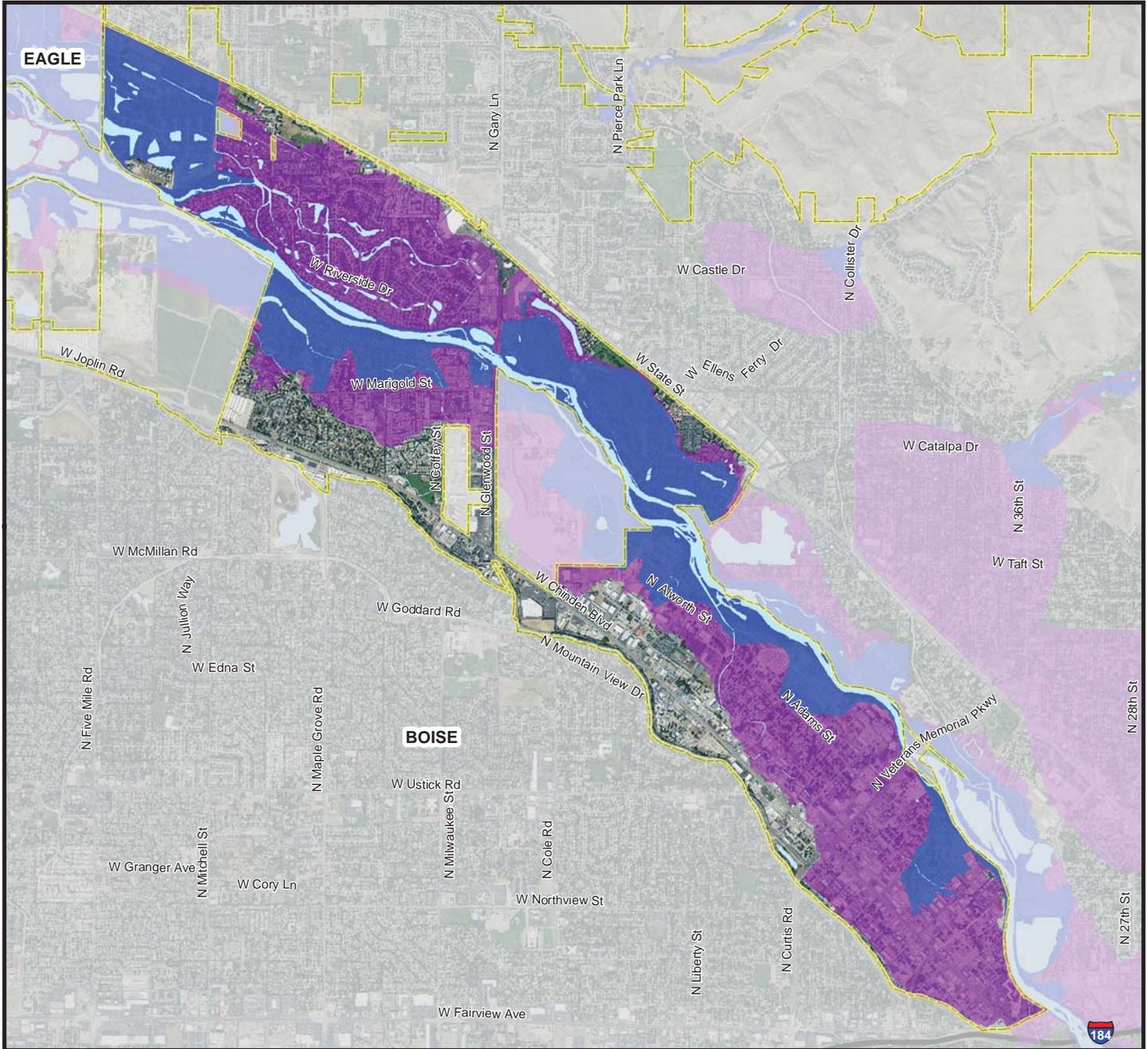


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# Garden City

## FEMA DFIRM Flood Hazard Zones



### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

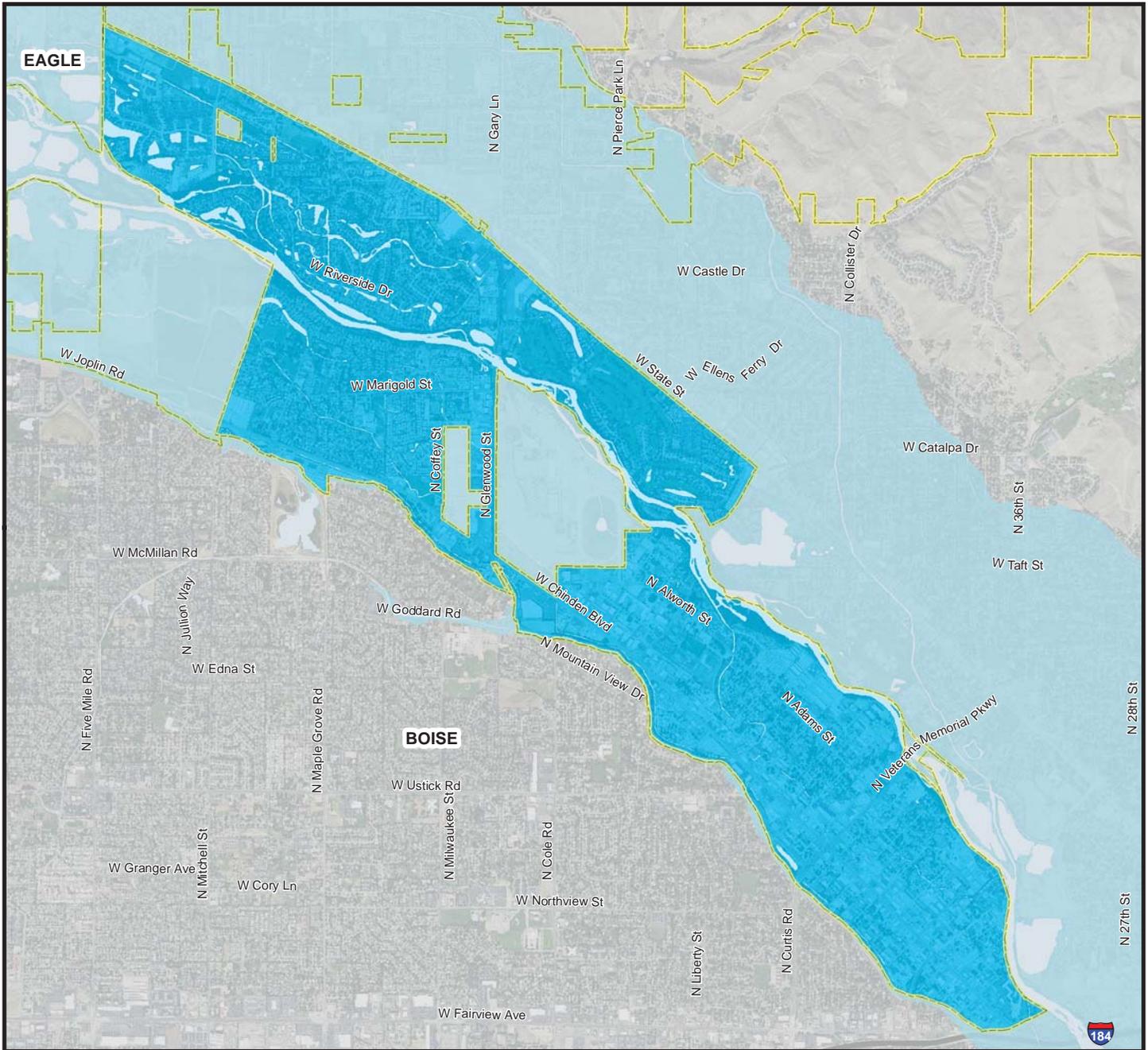
Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.



# Garden City

## Lucky Peak Dam Failure



### Legend

 Maximum Pool Inundation Area

Area inundated by dam failure occurring when pool elevation is at the top of the impounding structure.

This map has been compiled using the best information available and is believed to be accurate, however, its preparation required many assumptions. Actual conditions during a failure may vary from those assumed, so the accuracy cannot be guaranteed. The limits of flooding shown and the temporal data should only be used as a guideline for emergency planning and response actions. Actual areas inundated and inundation timing will depend on specific flooding and failure conditions and may differ from the areas shown on the maps.

Data Sources: Ada County, U.S. Geological Survey, U.S. Army Corp of Engineers

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.





## 5. CITY OF KUNA

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### 5.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Mike Borzick, GIS Manager  
763 W Avalon/ PO Box 13  
Kuna ID 83634  
Telephone: 208-287-1726  
e-mail Address: mborzick@kunaID.gov

#### Alternate Point of Contact

Justin Walker, Keller Associates  
131 SW 5<sup>th</sup> Ave, Suite A  
Telephone: 208-288-1992  
e-mail Address:  
jwalker@kellerassociates.com

### 5.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—September 15, 1915
- Current Population—18,430 (COMPASS 2016 Estimates)
- Population Growth—15,210 (2010) to 18,430 (2016) – 21.2% increase in 6 years.
- Location and Description—The City of Kuna’s business district is located approximately 18 miles southwest of Boise and about 8 miles south of Meridian’s business districts and is part of the Boise City-Nampa, Idaho Metropolitan Statistical Area. Kuna is located about 8 miles south of U.S. Interstate 84 and intersects with State Highway 69.  
Kuna is the gateway to the Birds of Prey, the Morley Nelson Snake River Birds of Prey National Conservation Area, which holds North America’s densest population of nesting raptors. The Western Heritage Historic Byway, designated as a national as well as a state scenic byway, travels around a number of historic sites in the area.
- Brief History—Kuna is located in the Ada County, which was established on December 22, 1864 by the Idaho Territorial Legislature. Kuna originated as a railroad stop with coach transport to Boise but after the branch line was complete, there was no need for a depot at Kuna and the settlement closed down. With the prospects of irrigation water, settlers were attracted to the area again.  
The principle industry was agricultural and in the early 1900s, over 700 acres were planted with vineyards, apples and prune orchards. Agricultural is still a major local industry today.
- Climate—Kuna’s climate is characterized as a semi-arid climate, with four distinct seasons. Kuna experiences hot and dry summers with highs exceeding 100 °F (38 °C) 5.6 days in a typical year and 90 °F (32 °C) on 46 days. Yet due to the aridity, even summer nights often offer significant and crisp cool-downs. Winters are cold, with a January average of 30.2 °F (–1.0 °C), and lows falling to 0 °F (–18 °C) or below on around 4 nights per year. Snowfall averages 19 inches (48 cm), but typically falls in bouts of 3 inches (8 cm) or less. Spring and fall are generally mild, with autumn being a quick transition period whereas spring is quite gradual. Precipitation is usually infrequent and light, and especially more lacking during the summer months.

- **Governing Body Format**—The City of Kuna is governed by a mayor-city council form of government; with four-elected City Council members and the Mayor. The City consists of six departments: Finance; Engineering; Public Works; Planning & Zoning, Police and City Clerk. The city government structure also includes a planning & zoning commission and design review committee. The City Council is responsible for the adoption of this plan, Planning and Zoning Department is responsible for its implementation.
- **Development Trends**—Based on data from Compass (Community Planning Association) and Kuna’s Comprehensive Plan, Kuna remains one of the fastest growing cities in the Treasure Valley. Kuna’s population increased from 14,830 in 2007 to 15,900 in 2008. This represents a 7.2-percent increase in population growth from the prior year. This increase over the past year is nearly the same population increase that the City of Boise experienced during the same period and noting it is the 99th largest city in America. This provides some perspective of just how strong Kuna’s growth is even during times of economic conflict. Additionally, Kuna was a contender for CNN/Money’s “Best Place to Live 2005” list. Kuna is transitioning from a rural community to a more complex suburban city, and residential development in Kuna has outpaced commercial development. Kuna has identified additional commercial areas as a component of the Comprehensive Land Use Plan and the next step is implementation of the plan through establishment of new zoning districts, rezoning property and the possible creation of an Urban Renewal District. The City of Kuna is currently updating the Comprehensive Plan and are hopeful to have it approved in Fiscal Year 2016. The plan focuses on the concerns of the Community. City actions, relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment and capital improvements must be consistent with such a plan. Future growth and development will be managed according to the Comprehensive Land Use Plan and it will be reviewed and amended as necessary.

## 5.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 5-1. An assessment of fiscal capabilities is presented in Table 5-2. An assessment of administrative and technical capabilities is presented in Table 5-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-4. Classifications under various community mitigation programs are presented in Table 5-5. An assessment of education and outreach capabilities is presented in Table 5-6.

**Table 5-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> Title 4, Chapter 1 Kuna Municipal Code (KMC), adopts the 2012 IBC per state mandate. (12/2013)	Yes	No	No
Zoning Code <i>Comment:</i> Title 5, KMC, Adopted 1996	Yes	No	No
Subdivisions <i>Comment:</i> Title 65, KMC, Adopted 1977	Yes	No	No
Stormwater Management <i>Comment:</i> Ada County Highway Department (ACHD) – 11/11/2015	No	Yes	Yes
Post-Disaster Recovery	No	No	No
Real Estate Disclosure	No	No	No
Growth Management <i>Comment:</i> Kuna Comprehensive Plan, adopted 2009	Yes	No	No
Site Plan Review <i>Comment:</i> Title 5, Chapter 4, KMC adopted 8/21/2007	Yes	No	No
Environmental Protection	No	No	No
Flood Damage Prevention <i>Comment:</i> Flood Damage Prevention-Title 4, Chapter 5 KMC. Adopted 8/11/2003	Yes	No	No
Emergency Management	No	No	No
Climate Change	No	No	No
Other	No	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i> <i>Comment:</i> Policy was adopted under objective # 5.1 of Goal 5 or the Natural Resources and Hazardous Areas element of the 2015 Comprehensive Plan for the City of Kuna, adopted by City Council 8/2015	Yes	No	Yes
Capital Improvement Plan <i>What types of capital facilities does the plan address?</i> <i>How often is the plan updated?</i>	No	No	No
Floodplain or Watershed Plan <i>Comment:</i> The 2016 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.	No	No	No
Stormwater Plan <i>Comment:</i> Kuna City complies with the requirements as per EPA requirements in NPDES, and IDWR requirements. ACHD holds NPDES Permit. City is responsible for Stormwater Pollution Prevention associated with City Projects.	Yes	No	Yes
Habitat Conservation Plan	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
Economic Development Plan	No	No	No
Shoreline Management Plan	No	No	No
Community Wildfire Protection Plan <i>The 2016 Ada County Multi-hazard Mitigation plan is being developed as a CWPP for the Ada County planning area.</i>	Yes	No	No
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other	No	No	No
Comprehensive Emergency Management Plan	No	No	No
Threat & Hazard Identification & Risk Assessment <i>ACEM has developed and maintains a THIRA for the Ada County planning area.</i>	No	Yes	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan <i>City of Kuna Continuity of Operations (COOP), April 10, 2012</i>	Yes	No	No
Public Health Plan <i>Comment: Central District Health Department Emergency Operations Plan, 2013</i>	No	Yes	No

**Table 5-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

**Table 5-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	On staff Planner and City Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	On staff Building Official/ City Engineer
Planners or engineers with an understanding of natural hazards	Yes	On staff City Engineer/ Planning Director
Staff with training in benefit/cost analysis	Yes	On Staff Planning Director/ Treasurer
Surveyors	Yes	GIS manager / Contract as needed
Staff capable of making substantial damage estimates	Yes	On staff Building Inspector(s)
Personnel skilled or trained in GIS applications	Yes	On staff GIS manager
Scientist familiar with natural hazards in local area	Yes	Contract as needed
Emergency manager	Yes	Ada County
Grant writers	Yes	City Clerk / Contract as needed

**Table 5-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	2/24/1975; Regular entry 2/11/1976
When did the Flood Insurance Rate maps become effective?	10/02/2003
What local department is responsible for floodplain management?	GIS Department / Planning & Zoning
Who is your floodplain administrator? (department/position)	Public Works / GIS Manager
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2/11/1976, 10/02/2003
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	CAV 11/18/2002 CAC 9/12/1989
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	Insert appropriate information
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	No
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	Mapping is grossly inaccurate
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	CFM training
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> <li>If not, is your jurisdiction interested in joining the CRS program?</li> </ul>	Yes
How many Flood Insurance policies are in force in your jurisdiction?	One (1)
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$170,300 \$962
How many total loss claims have been filed in your jurisdiction?	Zero (0)
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	Zero (0) N/A

**Table 5-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	10/10	N/A
Public Protection	Yes	3/9	N/A
Storm Ready	Yes	Participant	N/A
Firewise	No	N/A	N/A

**Table 5-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Attorney
Do you have personnel skilled or trained in website development?	Yes, GIS manager
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes  Approved COOP
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 5.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into local planning mechanisms.

### 5.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- City of Kuna Continuity of Operations (COOP), April 10, 2012
- Policy was adopted under objective # 5.1 of Goal 5 or the Natural Resources and Hazardous Areas element of the 2015 Comprehensive Plan for the City of Kuna

### 5.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Future updates to the City’s Comprehensive Plan
- Continued CWPP integration with the Hazard Mitigation

## 5.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 5-7 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Canal Breach	N/A	6/5/2006	Unknown (40 Homes)
Severe wind	N/A	03/29/2009	\$33,000 (county wide)
Severe wind	N/A	04/27/1995	\$50,000 (county wide)
Flooding	N/A	06/1983	\$147,000 (county wide)

## 5.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Manmade Canal failures

## 5.7 HAZARD RISK RANKING

Table 5-8 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	33	High
2	Earthquake	30	Medium
3	Flood	18	Medium
4	Wildfire	18	Medium
5	Drought	9	Low
6	Volcano	6	Low
7	Dam Inundation	6	Low

## 5.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 5-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 5.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 5-10 lists the actions that make up the City of Kuna hazard mitigation action plan. Table 5-11 identifies the priority for each action. Table 5-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 5-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #K1 – Standardized Regulation of HVAC and Life Safety Code	N	Y	
Action #K2 – Develop and maintain an inventory of City Critical Facilities <i>Comment: Done both in the COOP and in the GIS daily work load</i>	N	Y	
Action #K3 – Open Space Preservation in identified high risk hazard area <i>Comment: Mentioned and mapped in the current Comp Plan &amp; City Code</i>	N	Y	
Action #K4 – Maintain community compliance and good standing NFIP <i>Comment: Join CRP program, have a CFM on staff</i>	N	Y	
Action #K5 – Integrate Local Hazard Mitigation into Kuna Comprehensive Plan <i>Comment: To be carried over as ongoing action</i>	Y	Y	
Action #K6 – Move or retrofit structures in Hazard Prone areas <i>Comment: Waiting on proper mapping of floodplain via purchased LiDAR</i>	N	Y	
Action #K7 – Consider higher regulatory standards to reduce risk in building <i>Comment: Kuna abides by State Building Code</i>	Y	N	
Action #K8 – Support County-wide initiatives identified in Volume 1	N	Y	
Action #K9 – Continue to support the updating of this plan as stated in Vol 1	N	Y	

**Table 5-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #K1—Standardized Regulation of HVAC and Life Safety Code</b>						
Both	All	All	Kuna City Council, Building Department	Low	General	Short-term
<b>Action #K2—Develop and maintain an inventory of City Critical Facilities</b>						
Existing	All	All	Public Works/ City of Kuna, GIS Department	Medium	Public Works	Ongoing
<b>Action #K3—Open Space Preservation in identified high risk hazard area</b>						
Both	All	All	Planning & Zoning, GIS	Medium	General Fund	Ongoing
<b>Action #K4—Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to: enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</b>						
Both	Flood	2,4,5,6,9	Planning & Zoning	Low	General Fund	Ongoing
<b>Action #K5—Continue to integrate Multi-Hazard Mitigation Plan into future updates of the Kuna Comprehensive Plan</b>						
Both	All	2, 5, 6	Planning & Zoning	Low	General Fund	Ongoing
<b>Action #K6—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.</b>						
Existing	All Hazards	3, 8, 9	City of Kuna, ACEM	High	FEMA Hazard Mitigation Grant Programs, ICC	Long-term
<b>Action #K7—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.</b>						
New and Existing	All Hazards	4,6	Planning and Zoning	Low	General Fund	Long-term
<b>Action #K8—Support County-wide initiatives identified in Volume 1.</b>						
New and Existing	All Hazards	All	Kuna, ACEM	Low	General Fund	Short term Ongoing
<b>Action #K9—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.</b>						
New & Existing	All Hazards	All	ACEM, Kuna	Low	Garden City, FEMA Mitigation Grant Funding for 5-year update	Short-Term, Ongoing
<b>Action #K10—Update SCADA links to all critical facilities via Cell service. Many of our sites use radio repeaters to the water tower, if we lose the water tower we lose ALL communication</b>						
Both	Weather, Fire, Earthquake, Volcano	All	Kuna Public Works, GIS	High	Public Works	Short Term
<b>Action #K11—Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.</b>						
New and Existing	Wildfire	8,9	City, Kuna Rural Fire, ACEM	Low	General Fund	Ongoing

**Table 5-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
K1	All	High	Low	Yes	No	Yes	High	N/A
K2	All	High	Medium	Yes	Yes	Yes	High	Medium
K3	All	High	Medium	Yes	Yes	Yes	High	High
K4	5	High	Low	Yes	No	Yes	High	N/A
K5	3	High	Low	Yes	No	Yes	High	N/A
K6	3	High	High	Yes	Yes	Yes	Medium	Medium
K7	2	High	Low	Yes	No	Yes	Medium	N/A
K8	10	Medium	Low	Yes	No	Yes	High	N/A
K9	10	Low	Low	Yes	Yes	Yes	High	High
K10	All	High	High	Yes	Yes	Yes	High	High
K11	2	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

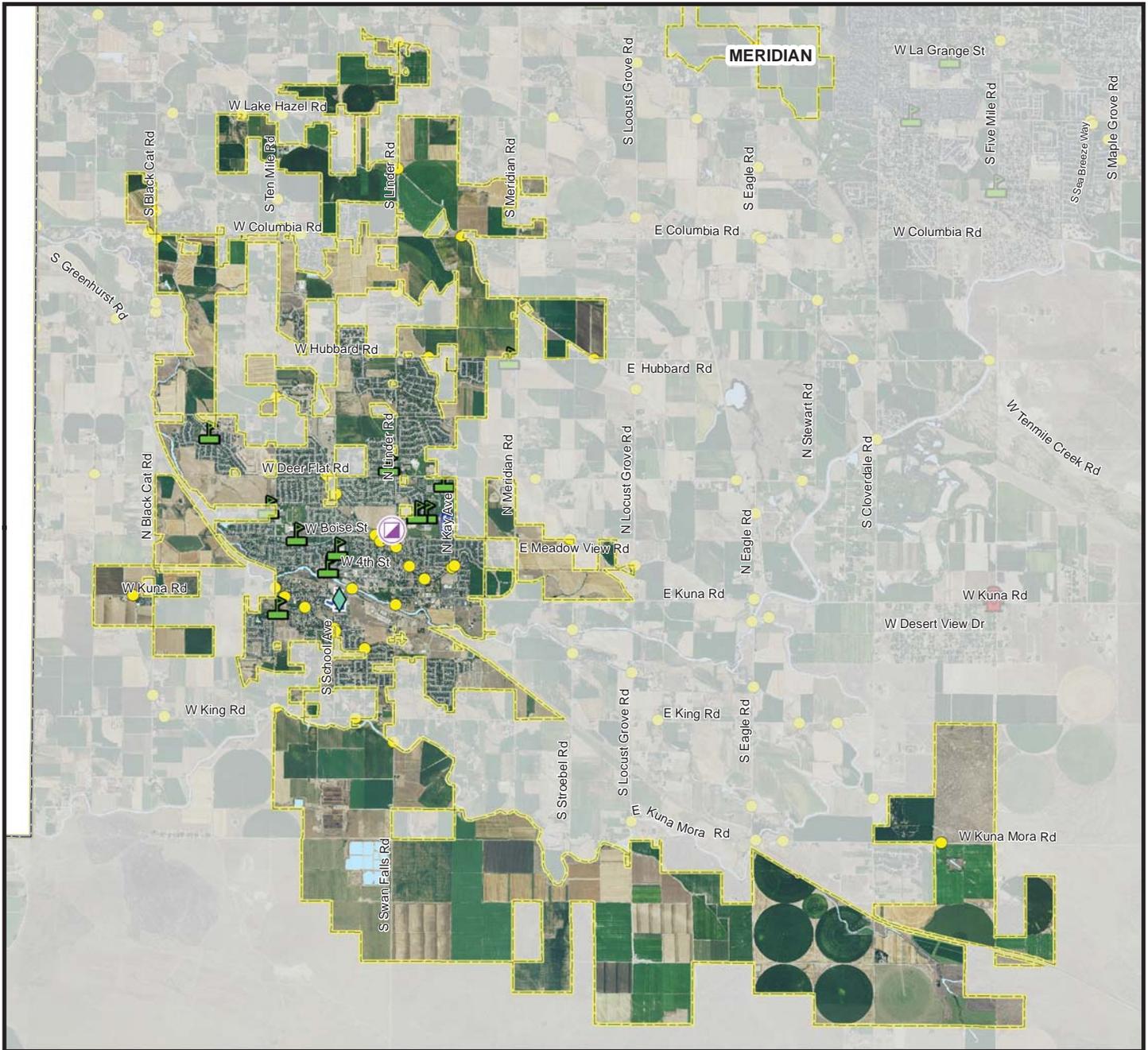
**Table 5-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	K1, K7, K9	K3, K6	K8	K3	K2, K8	
Wildfire	K1, K7, K9, K11	K3, K6, K11	K8, K11	K3, K11	K2, K8	
Severe Storms	K1, K7, K9, K11	K3, K6, K11	K8	K3	K2, K8, K11	K11
Earthquake	K1, K7, K9, K11	K3, K6, K11	K8	K3	K2, K8, K11	K11
Landslide	K1, K7, K9	K3, K6	K8	K3	K2, K8	
Volcano	K1, K7, K9, K11	K3, K6, K11	K8	K3	K2, K8, K11	K11
Flood	K1, K7, K9, K11	K3, K4, K6	K4, K8	K3, K4, K11	K2, K4, K8	K4
Dam Inundation					K11	K11

a. See the introduction to this volume for explanation of mitigation types.

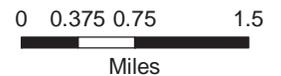
# City of Kuna

## Essential Facilities & Transportation Systems



### Legend

-  Emergency Operation Centers
-  Fire Stations & EMS Facilities
-  Medical Care Facilities
-  Other Essential Facilities
-  Police Stations
-  Schools & Educational Facilities
-  Airport Facilities
-  Bus Facilities
-  Highway Bridges

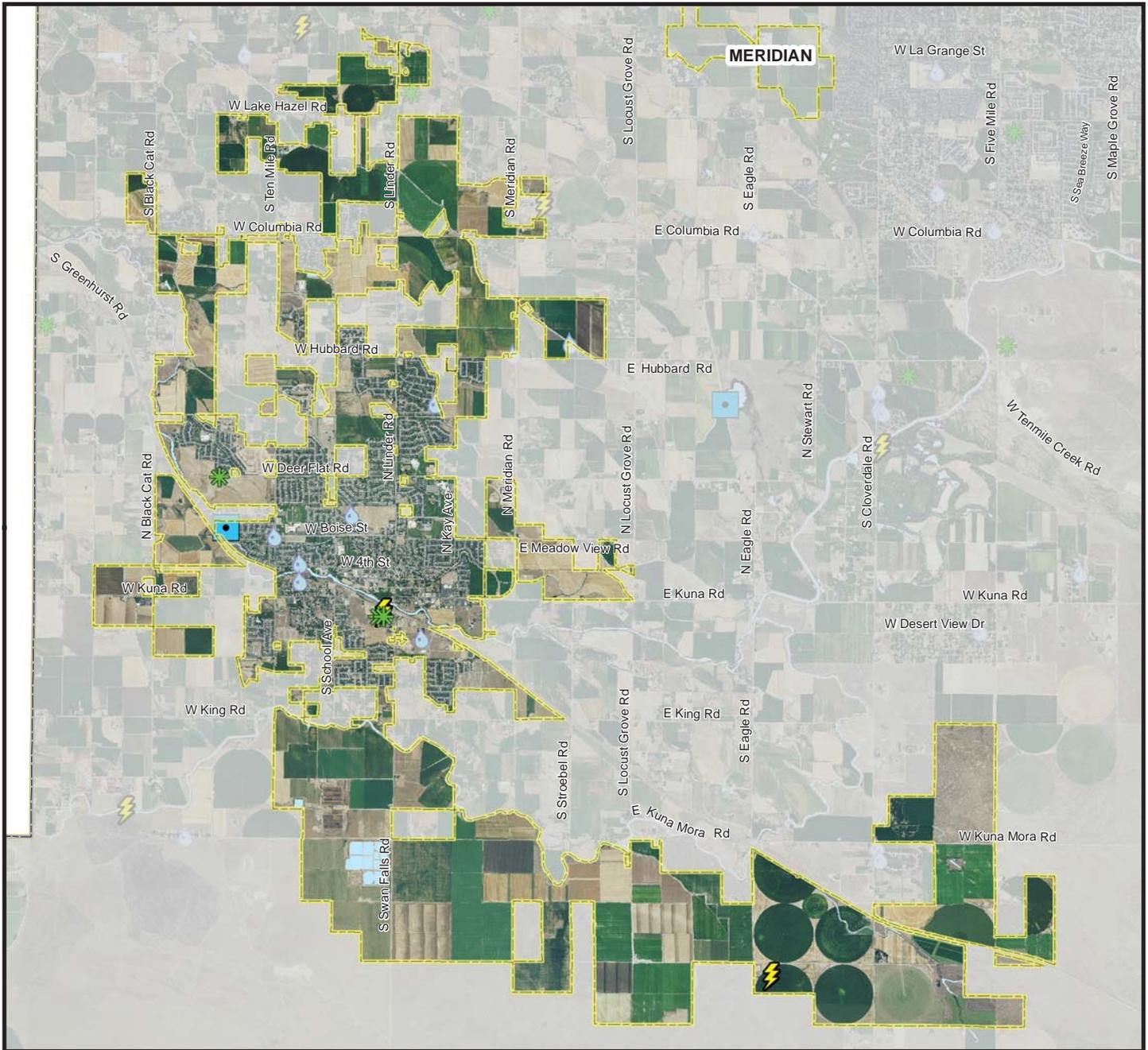


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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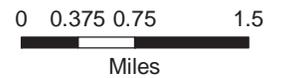
# City of Kuna

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Dams
-  Electric Power Facilities
-  Hazardous Materials
-  Natural Gas Facilities
-  Potable Water Facilities
-  Wastewater Facilities

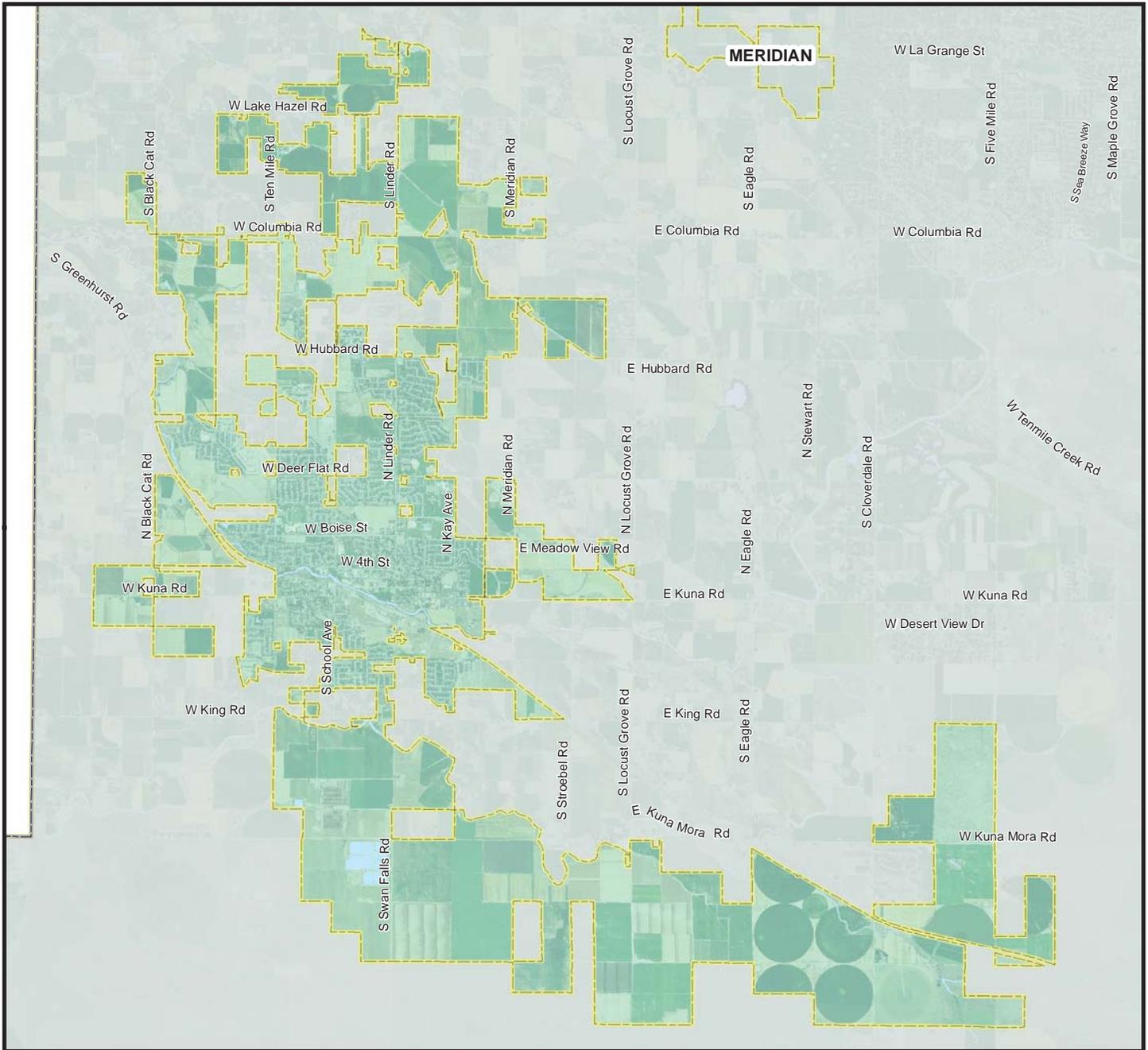


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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# City of Kuna

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

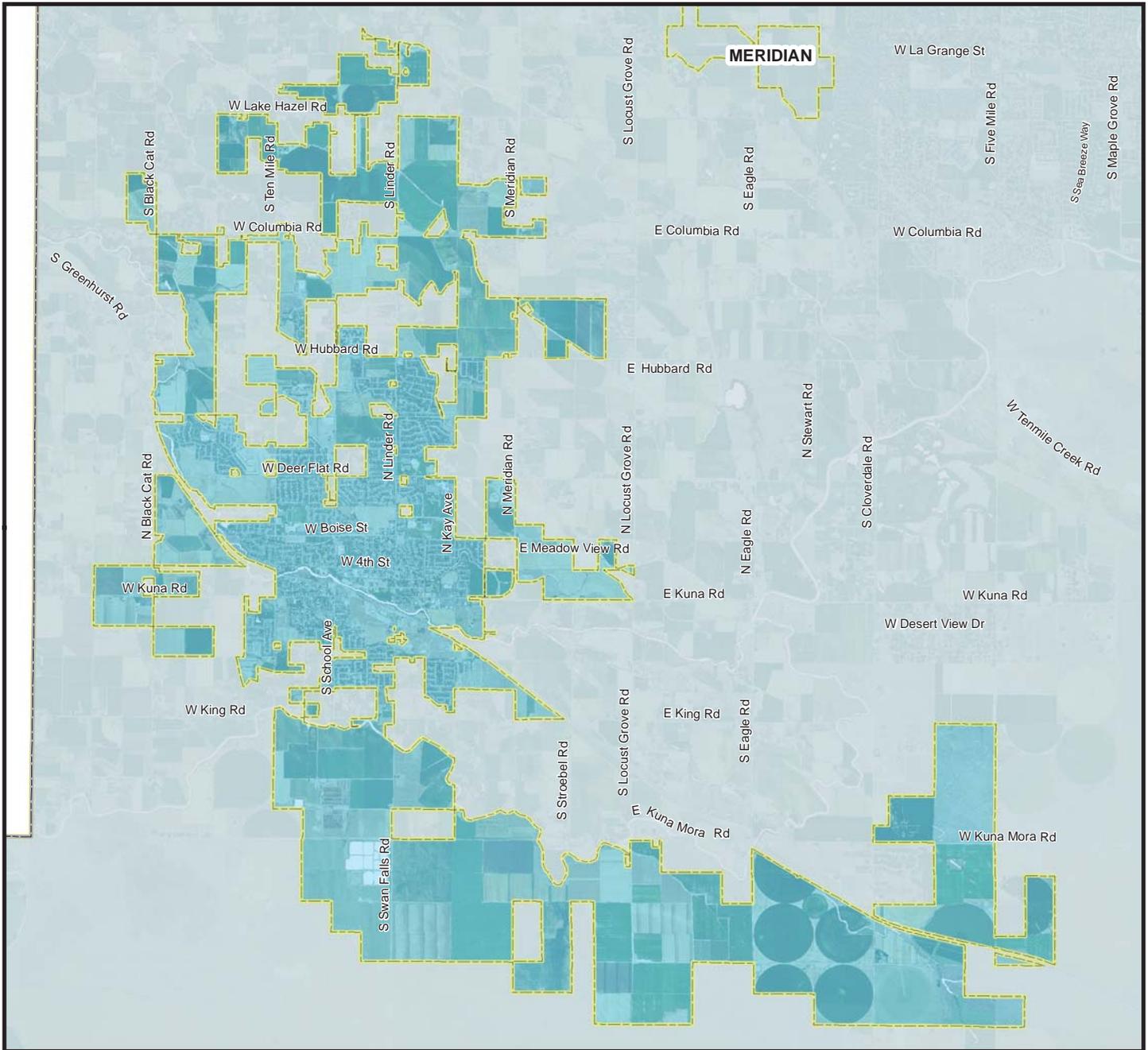


Data Sources: Ada County, U.S. Geological Survey, Hazus

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Kuna

## Peak Ground Acceleration for a 500-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

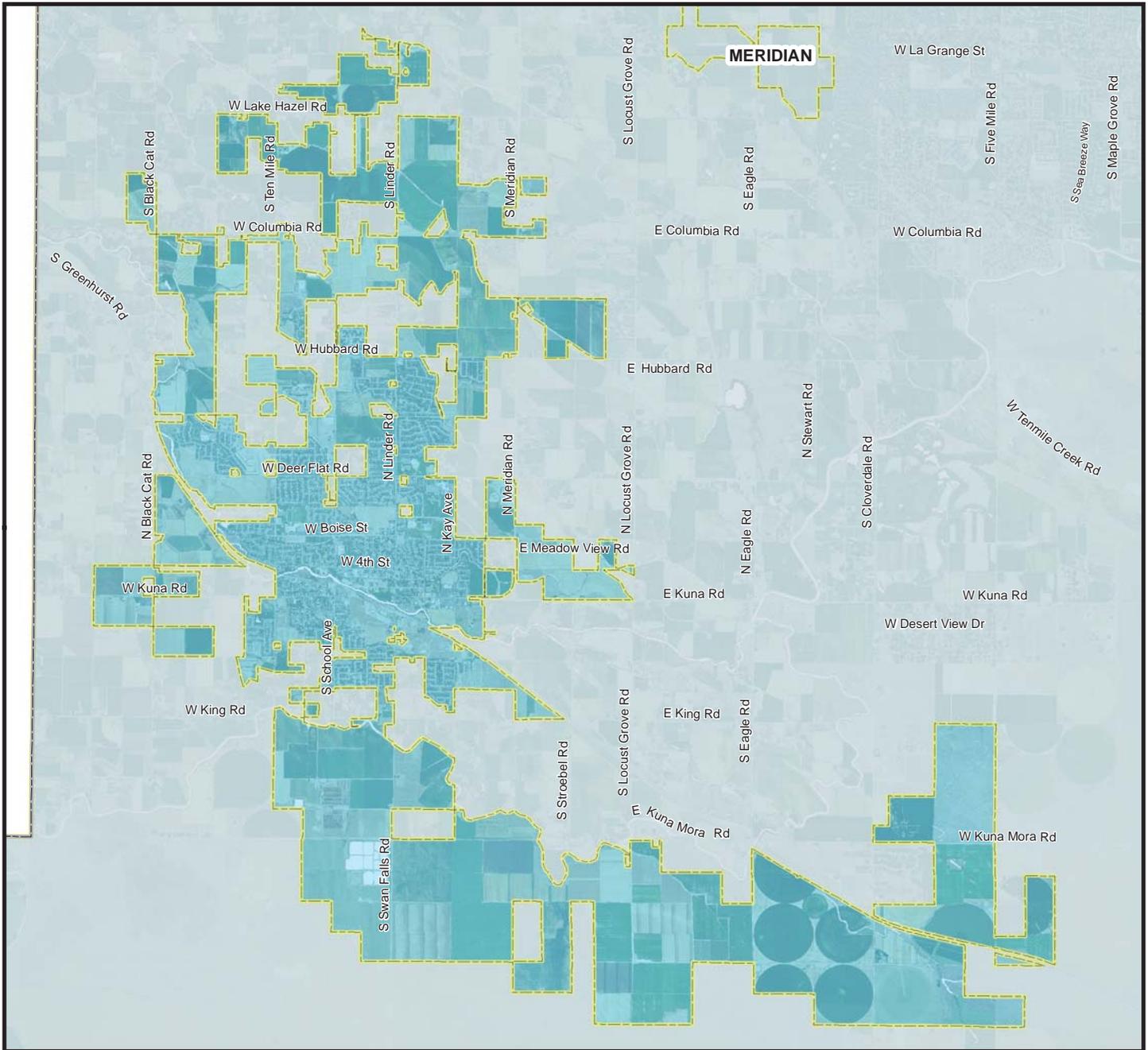


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Kuna

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

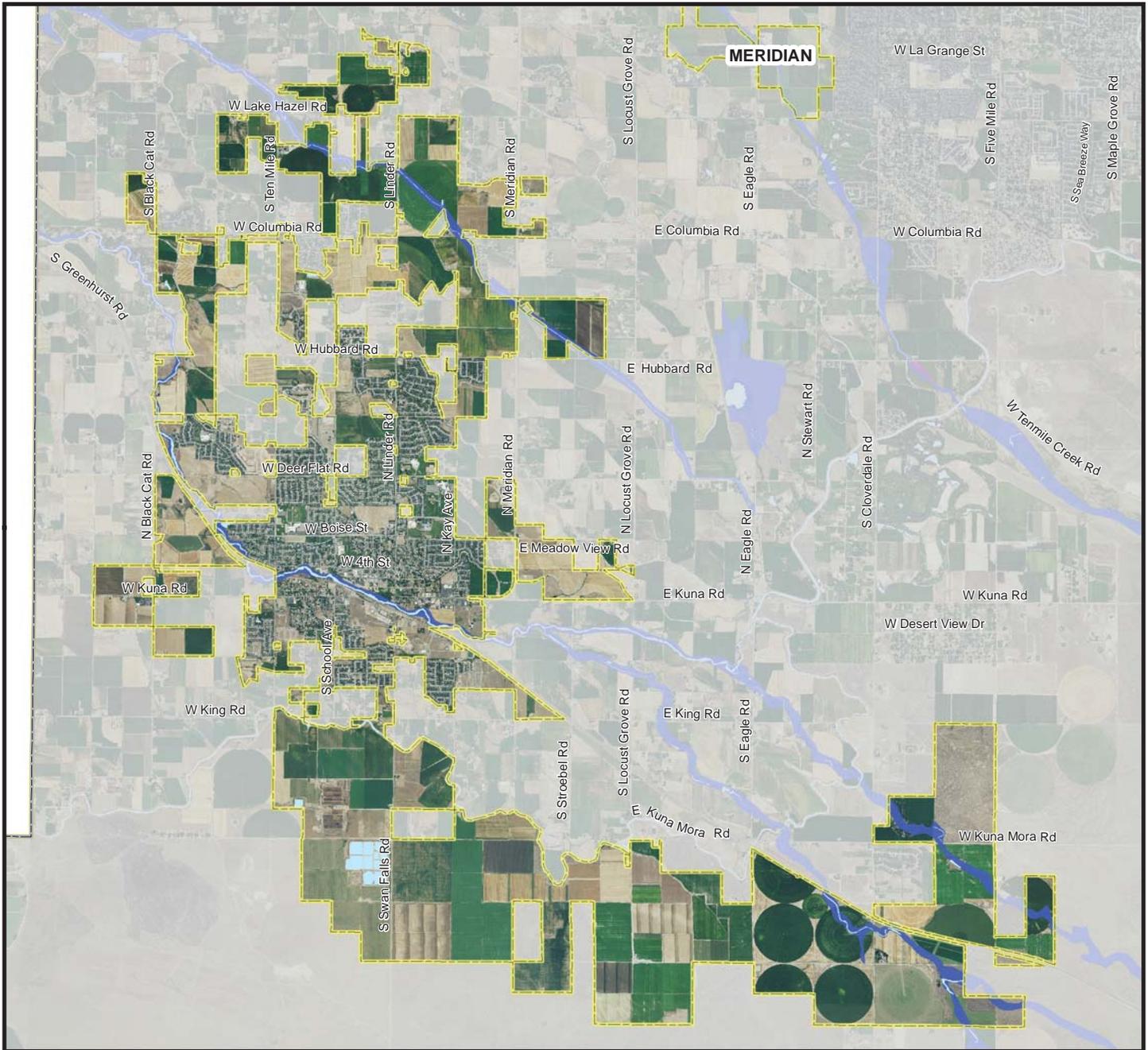


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Kuna

## FEMA DFIRM Flood Hazard Zones



### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.







## 6. CITY OF MERIDIAN

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### 6.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Kyle Radek, Assistant City Engineer  
33 E. Broadway Ave  
Meridian, ID 83642  
Telephone: 208.898.5500  
e-mail Address: [kradek@meridiancity.org](mailto:kradek@meridiancity.org)

#### Alternate Point of Contact

David Miles, Environmental Programs  
Coordinator, Acting Surface Water  
Administrator  
33 E. Broadway Ave  
Meridian, ID 83642  
Telephone: (208)898-5500  
e-mail Address: [dmiles@meridiancity.org](mailto:dmiles@meridiancity.org)

### 6.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—Established August 1903
- Current Population—Estimated 91,420 as of April 2016 (COMPASS 1990-2016 Population Estimates by City Limit Boundaries)
- Population Growth—Meridian has seen significant growth in the last 10 years, with an increase of 12.8% since 2009. Community Planning Association of Southwest Idaho (COMPASS) estimates that the population of Meridian will increase to 138,564 by 2035, an increase of over 70%.
- Location and Description—Meridian is not only geographically located in the center of the Treasure Valley, but it also is the population center of the Treasure Valley; people are evenly distributed in all directions from Meridian. Downtown Meridian is approximately 10 miles from the heart of Boise.
- Brief History—Meridian has transformed from a sagebrush-filled mail drop located on the Oregon Trail in the 1880s, to a small fruit orchard center after the turn of the century through the 1930s, to a dairy-based farming community in the 1940s. Meridian is named for Idaho's principle meridian used for the initial survey of the state which coincides with Meridian Road at the center of the City. Its character as a small farming community continued until approximately 1990, when its population was still about 10,000.
- Climate—Meridian is favored by a mild, arid climate. July is the hottest month, with the average high temperature of 90° F. January is the coldest month with an average low temperature of 22° F. The normal precipitation pattern in the Meridian area shows a winter high of 1.2 inches of precipitation per month and a very pronounced summer low of about 0.1 inches. Typically there are 12 inches of annual precipitation.
- Governing Body Format—Meridian uses the Mayor-Council form of local government. In Meridian, the Council, which includes the Mayor, possesses both legislative and executive authority. Departments include: City Clerk, Community Development, Finance, Fire, Human Resources, Legal, Mayor's Office, Parks & Recreation, Police, and Public Works. The City Council is responsible for the adoption of this plan, City Departments are responsible for its implementation.

- **Development Trends**—As of April 2016, single family housing is the predominant development in Meridian, accounting for 87% of all dwelling units. Additionally at the end of 2015, Meridian provided 17% of available jobs in Ada County, or 37,108. Meridian seeks to improve and diversify its housing inventory, create strong and sustainable jobs, improve infrastructure, and support diversified modes of transportation.

### 6.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 6-1. An assessment of fiscal capabilities is presented in Table 6-2. An assessment of administrative and technical capabilities is presented in Table 6-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-4. Classifications under various community mitigation programs are presented in Table 6-5. An assessment of education and outreach capabilities is presented in Table 6-6.

**Table 6-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Meridian City Code Title 10, Chapter 1; Adopted 12/2 2014; Ord. #14-1633</i>	Yes	No	Yes
Zoning Code <i>Comment: Meridian City Code Title 11, Chapter 2; Adopted 7/8/2008; Ord. #08-1372</i>	Yes	No	No
Subdivisions <i>Comment: Meridian City Code Title 11, Chapter 6; Adopted 7/8/2008; Ord. #08-1372</i>	Yes	No	No
Stormwater Management <i>Comment: ACHD owns and operates storm drain system. ACHD holds EPA NPDES MS4 Phase I and Phase II permits. City complies with the EPA's Construction General Permit for City-owned projects.</i>	No	Yes	No
Post-Disaster Recovery	No	No	No
Real Estate Disclosure	No	No	No
Growth Management <i>Comment: City of Meridian Comprehensive Plan; Adopted 9/9/2014; Resolution #14-1011</i>	Yes	No	No
Site Plan Review <i>Comment: Multiple City Ordinances and Departments; and 3<sup>d</sup> party agencies.</i>	Yes	No	No
Environmental Protection <i>Comment: Multiple City Ordinances and Departments; and 3<sup>d</sup> party agencies</i>	Yes	No	No
Flood Damage Prevention <i>Comment: Meridian City Code Title 10, Chapter 6; Adopted 1/1/2014; Ord. #13-1584</i>	Yes	No	No
Emergency Management <i>Comment: Emergency Management for the City of Meridian is done in partnership with ACEM. Meridian participates through the ACEM Board as well as representation on TAG (Technical Advisory Group). In addition, the City has an Emergency Management committee focused on Meridian specific preparedness.</i>	Yes	No	No
Climate Change	No	No	No
Other	Yes	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
General or Comprehensive Plan <i>Comment: City of Meridian Comprehensive Plan; Adopted 9/9/2014; Resolution #14-1011</i>	Yes	No	No
Capital Improvement Plan <i>Comment: City of Meridian Engineering Capital &amp; Enhancement Plan (5-Year CIP for water, sewer and reclaimed utilities. Updated annually. Last Updated to cover 2016-2020.</i>	Yes	No	No
Floodplain or Watershed Plan <i>Comment: The 2016 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.</i>	Yes	No	No
Stormwater Plan <i>Comment: ACHD owns and operates storm drain system. ACHD holds EPA NPDES MS4 Phase I and Phase II permits. City complies with the EPA's Construction General Permit for City-owned projects.</i>	No	Yes	No
Habitat Conservation Plan	No	No	No
Economic Development Plan <i>Comment: City of Meridian Strategic Plan presented to Council and adopted 5/5/2015</i>	Yes	No	No
Shoreline Management Plan	No	No	No
Community Wildfire Protection Plan <i>Comment: The City of Meridian has no wildland-urban interface areas, but does participate in the County-wide wildland fire planning group. This plan is currently being updated.</i>	Yes	No	No
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other		No	No
Comprehensive Emergency Management Plan <i>Comment: The City has adopted a Comprehensive Emergency Management Plan utilizing Emergency Support Functions.</i>	Yes	No	No
Threat & Hazard Identification & Risk Assessment <i>Comment: Ada County THIRA – DRAFT; May 2015</i>	No	Yes	No
Post-Disaster Recovery Plan <i>Comment: Currently no adopted Post-Disaster Recovery Plan.</i>	No	No	No
Continuity of Operations Plan <i>Comment:</i>	Yes	No	No
Public Health Plan <i>Comment: Central District Health Department Emergency Operations Plan, 2013. Fire Department does have input on Public Health planning via the ACCESS EMS system.</i>	No	Yes	No

**Table 6-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	None

**Table 6-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development, Public Works; several positions
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development, Public Works; several positions
Planners or engineers with an understanding of natural hazards	Yes	Community Development, Public Works, several positions
Staff with training in benefit/cost analysis	Yes	Community Development, Public Works; various positions
Surveyors	No	
Staff capable of making substantial damage estimates	Yes	Community Development, Public Works; several positions
Personnel skilled or trained in GIS applications	Yes	Information Technology, Community Development, Public Works, several positions
Scientist familiar with natural hazards in local area	No	Planning partners available through universities and Idaho Department of Homeland Security
Emergency manager	Yes	No dedicated Emergency Manager for the City of Meridian.
Grant writers	Yes	Ability to contract for service

**Table 6-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	3/20/92
When did the Flood Insurance Rate maps become effective (current)?	10/02/03
What local department is responsible for floodplain management?	Community Development, Public Works
Who is your floodplain administrator? (department/position)	Public Works; City Engineer or Appointee
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Primary
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance (current)?	1/1/2014
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Exceed Several (Low Floor 2' freeboard, Crawlspace 1' freeboard, added buffer of mapped boundaries, etc.)
When was the most recent Community Assistance Visit or Community Assistance Contact?	12/31/2013 (CAV); 2/18/2015 (CAC)
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> </ul>	
How many Flood Insurance policies are in force in your jurisdiction?	Approx. 107 (as of Oct. 2014)
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$21,664,200 (as of Oct. 2014) \$73,617 (as of Oct. 2014)
How many total loss claims have been filed in your jurisdiction?	1 (as of Oct. 2014)
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	0 (as of Oct. 2014) \$23,747 (as of Oct. 2014)

**Table 6-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	5/6/2015 (draft)
Building Code Effectiveness Grading Schedule	Yes	99	N/A
Public Protection	Yes	ISO Class 3	2009
Storm Ready	Yes	Blue	N/A
Firewise	No	N/A	N/A

**Table 6-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – Mayor’s Office Communications Manager
Do you have personnel skilled or trained in website development?	Yes – Information Technology
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Links to Ada County Mitigation websites
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Social media could be accessed to provide information
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	No Code Red – residents may sign up to receive emergency notifications and critical community alerts. Ada County Emergency Management developed a Joint Information System Plan that delineates the processes with developing a regional joint information system and center for coordinating public information messaging.

## 6.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

This section describes the City’s process for integrating the Multi-Hazard Mitigation Plan into local planning.

### 6.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- City of Meridian Comprehensive Plan—The Comprehensive Plan for Meridian currently includes mitigation related policies as they related to the protection of human life and property from flood events. Additionally, the Comprehensive plan addresses the need for natural resource protection and the identification of known hazards within the County.
- Meridian Flood Damage Prevention Ordinance—Ordinance integrates with Ada County Multi-Hazard Mitigation Plan goals and objectives.
- COOP – The COOP plan for the City of Meridian was completed in 2012 and adopted by City Council.

### 6.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Meridian Comprehensive Plan—Plan can integrate goals and objectives of the Multi-Hazard Mitigation Plan
- Engineering Capital & Enhancement Plan (CIP)—Mitigation may be funded, in part, through the City CIP plan.
- Name of plan or program—Brief description of how the plan/program can be integrated with the Multi-Hazard Mitigation Plan

## 6.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 6-7 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Cloudburst Rain Event	N/A	Sept 2013	Unknown
Cloudburst Rain Events	N/A	Aug 2010	Unknown
Wildfires	N/A	Sept 2000	Unknown
Rain & Flooding	N/A	Dec 1964	Unknown

## 6.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Canal failure is a potential vulnerability. Refer to local irrigation districts for vulnerability assessments. .

## 6.7 HAZARD RISK RANKING

Table 6-8 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	51	High
2	Earthquake	32	High
3	Flood	18	Medium
4	Wildfire	12	Medium
5	Drought	12	Medium
6	Volcano	11	Low
7	Landslide	5	Low
8	Dam Failure	0	Low

## 6.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 6-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 6-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<p><b>M-1</b>—Conduct a survey of water, sewer, fire, and police infrastructure including power generation equipment, wastewater treatment plant facilities, communications, and Supervisory Control and Data Acquisition (SCADA) equipment to analyze vulnerability to severe weather and earthquake, then design and execute improvements to mitigate.</p> <p><i>Comment: Vulnerability assessment is being conducted. Will include weather and flood elements.</i></p>		X	
<p><b>#M-2</b> – Become a “Firewise Community”</p> <p><i>Comment: Long term endeavor. No significant WUI areas in City.</i></p>		X	
<p><b>M-3</b>—Maintain compliance and good standing in the National Flood Insurance Program</p> <p><i>Comment: Good standing in NFIP is maintained</i></p>		X	
<p><b>M-4</b>—Apply for participation in the Community Rating System (CRS) and Maintain Standing in CRS</p> <p><i>Comment: Action Item should change to maintain CRS standing and improve rating as beneficial</i></p>	X		
<p><b>M-5</b>—Consider the creation of a surface water utility including fee collection</p> <p><i>Comment: Initiative to be revised per findings. ACHD owns and operates storm drain system and is MS4 permittee in Meridian area.</i></p>			X
<p><b>M-6</b>—Develop a comprehensive surface water protection program, including a stormwater management plan that includes the creation of a capital improvements program for stormwater in support of a stormwater utility.</p> <p><i>Comment: Initiative to be revised. Stormwater elements of City projects are funded as part of CIP. ACHD owns and operates storm drain system and is MS4 permittee in Meridian area.</i></p>		X	
<p><b>M-7</b>—Partner with ACHD to implement a culvert replacement program for approximately 15 crossings of Fivemile, Ninemile, and Tenmile Creeks including design and construction.</p> <p><i>Comment: Culvert replacements occur as road funding becomes available. Consider additional Action Item for specific Old Town Meridian undersized system of culverts. Partners to be RR, ID, ACHD, City, Urban Renewal District, Meridian Development Corporation</i></p>		X	
<p><b>M-8</b>—Partner with Idaho Transportation Department (ITD) to design and construct culvert improvements on Fivemile Creek at the I-84 / Eagle Road Interchange according to recommendations of “Fivemile Creek at Interstate 84—Eagle Road to Wells Street” Hydraulic Report, November 2008.</p> <p><i>Comment: Partial – Construction ongoing at I-84. Eagle Rd culvert pending design.</i></p>		X	
<p><b>M-9</b>—Perform a vulnerability assessment on the Ridenbaugh and New York Canal system in the Meridian Area of Impact.</p> <p><i>Comment: Action item should change to partner with and assist local ID with future vulnerability assessments.</i></p>		X	
<p><b>M-10</b>—Perform an assessment to determine housing areas that would benefit from foundation elevation projects. Work with homeowners to apply for grant funding for projects.</p> <p><i>Comment: Assessment still to be completed.</i></p>		X	
<p><b>M-11</b>—Integrate Ada County Multi-Hazard Mitigation Plan into the City of Meridian’s Comprehensive Plan.</p> <p><i>Comment: To be done in 2016 Comp Plan update</i></p>		X	
<p><b>M-12</b>—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.</p> <p><i>Comment:</i></p>	X	X	

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
M-13—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority. <i>Comment: Suggest combining with M-9 above. Assessment is needed first.</i>			X
M-14—Support County-wide initiatives identified in Volume 1. <i>Comment:</i>		X	
M-15—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume <i>Comment:</i>		X	

## 6.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 6-10 lists the actions that make up the City of Meridian’s hazard mitigation action plan. Table 6-11 identifies the priority for each action. Table 6-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 6-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>M-1—Conduct a survey of water, sewer, fire, and police infrastructure including power generation equipment, wastewater treatment plant facilities, communications, and Supervisory Control and Data Acquisition (SCADA) equipment to analyze vulnerability to severe weather and earthquake, then design and execute improvements to mitigate.</b>						
Existing	Severe Storm, Earthquake	1,2,3,10	City (PW)	Medium	Enterprise, General Funds	Short Term
<b>M-2—Become a “Firewise Community”</b>						
New & Existing	Wildland Fire	2,4,5,6,8	City (Fire)	Low	General Fund	Long term
<b>M-3—Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to: enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</b>						
New & Existing	Flood	1,2,4,5,6,8	City (PW)	Low	General, Enterprise Funds	Ongoing
<b>M-4—Maintain, and improve where beneficial, participation rating in the Community Rating System (CRS)</b>						
New & Existing	Flood	1,2,4,5,6,7,8	City (PW)	Low	General, Enterprise Funds	Ongoing
<b>M-5—Evaluate surface water protection program, including surface water restoration, stormwater management, capital improvement program integration, and potential regulatory and fee impacts.</b>						
New & Existing	Flood, Severe Weather	1,2,3,10	City (PW)	High	Enterprise Fund	Short, Long Term
<b>M-6—Partner with ACHD to implement a culvert replacement program for approximately 15 crossings of Fivemile, Ninemile, and Tenmile Creeks including design and construction.</b>						
New & Existing	Flood, Severe Weather	1,2	City (PW, CD)	High	Multiple	Short, Long Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>M-7</b> —Partner with Idaho Transportation Department (ITD) to design and construct culvert improvements on Fivemile Creek at Eagle Rd and the I-84 / Eagle Road Interchange according to recommendations of “Fivemile Creek at Interstate 84—Eagle Road to Wells Street” Hydraulic Report, November 2008.						
Existing	Flood, Severe Weather	1,2	ITD*, City (PW, CD)	High	Multiple	Short, Long Term
<b>M-8</b> —Assist local irrigation districts with vulnerability assessments on the Ridenbaugh and New York Canal systems in the Meridian Area of Impact.						
New & Existing	Flood, Earthquake	1,2,4,7,9,10	Local Irrigation	Medium	Multiple	Long Term
<b>M-9</b> —Perform an assessment to determine housing areas that would benefit from foundation elevation projects; and where appropriate, support and assist in grant funding opportunities for retrofitting, purchase or relocation projects..						
Existing	Flood, Earthquake, Wildland Fire	3,8,9	City (PW)	High	Multiple	Long Term
<b>M-10</b> —Integrate Multi-Hazard Mitigation Plan into the City of Meridian’s Comprehensive Plan.						
New & Existing	All Hazards	2, 5, 6	City (All)	Low	General Fund	Short Term
<b>M-11</b> —Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.						
New & Existing	All Hazards	4,6	City (All)	Low	General Fund	Long Term
<b>M-12</b> —Support County-wide initiatives identified in Volume 1.						
New & Existing	All Hazards	All	City (All)	Low	General Fund	Ongoing
<b>M-13</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New & Existing	All Hazards	All	Ada County, City (All)	Low	Multiple	Ongoing
<b>M-14</b> —Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.						
New and Existing	Wildfire	8,9	City, Meridian Fire, ACEM	Low	General Fund	Ongoing
<b>M-15</b> -Whenever possible, coordinate with local experts and employ natural environmental processes in mitigation activities that increase ecosystem resilience and reduce the impacts of flooding on the built environment.						
New and Existing	Flood	2, 5, 9	City of Meridian	Medium	Local, Grants, Development Fees	Long term

**Table 6-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
M-1	4	High	Medium	Yes	Yes	Yes	High	Medium
M-2	5	High	Low	Yes	No	No	Medium	Low
M-3	6	High	Low	Yes	No	Yes	High	Low
M-4	7	High	Low	Yes	No	Yes	High	Low
M-5	4	High	High	Yes	No	No	Medium	Medium
M-6	2	High	High	Yes	Yes	No	Medium	Low
M-7	2	High	High	Yes	Yes	No	Medium	Low
M-8	6	High	Medium	Yes	Yes	No	Low	Low
M-9	3	High	High	Yes	Yes	Yes	Medium	Low
M-10	3	High	Low	Yes	No	Yes	High	Low
M-11	3	High	Low	Yes	No	No	High	Low
M-12	2	High	Low	Yes	No	Yes	High	Low
M-13	10	High	Low	Yes	Yes	Yes	High	Low
M-14	2	Medium	Low	Yes	No	Yes	High	Low
M-15	3	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

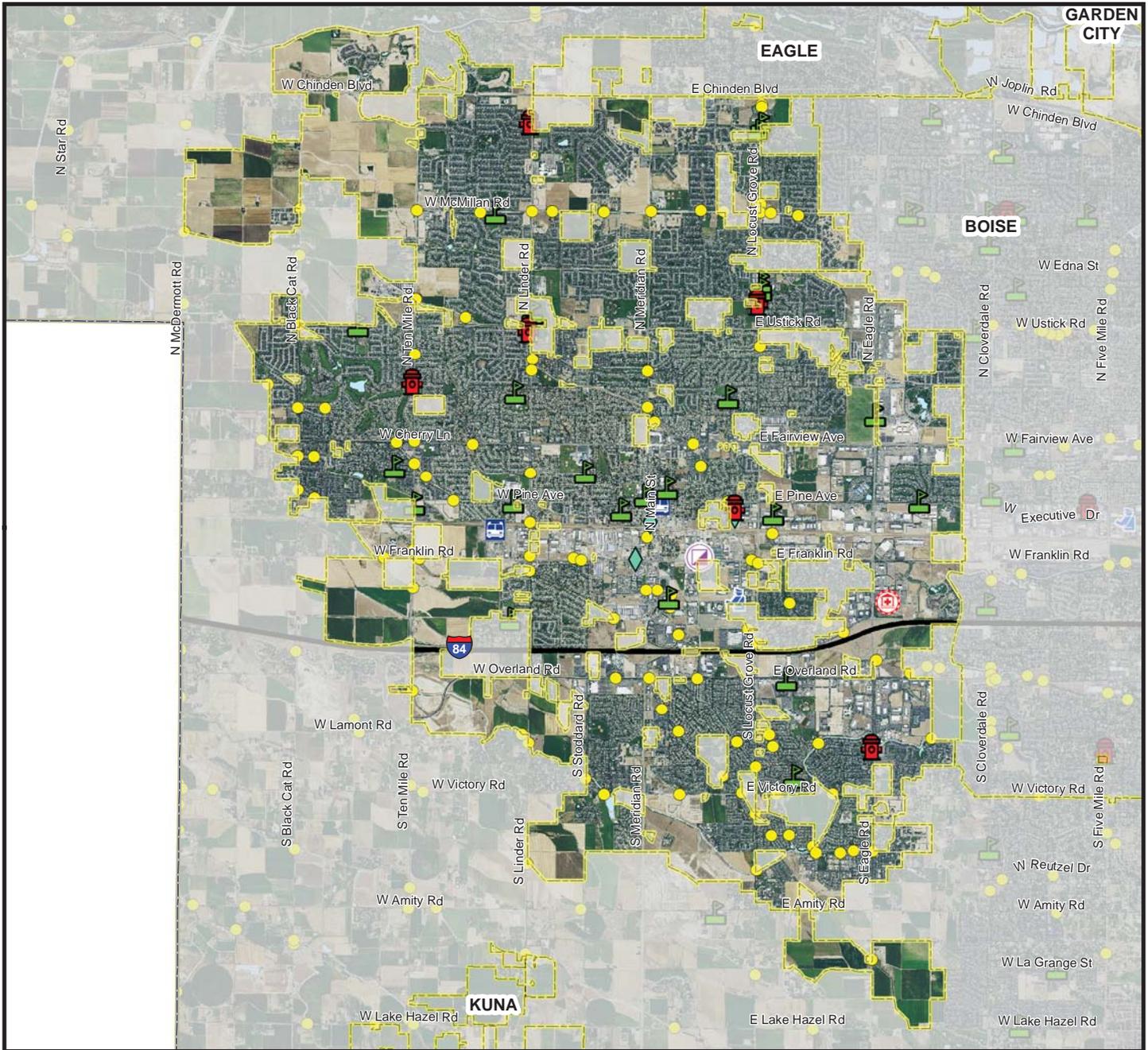
**Table 6-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	N/A	N/A	N/A	N/A	N/A	N/A
Drought	M-10, M-11, M-13	M-9	M-12	M-10	M-12	
Earthquake	M-1, M-8, M-10, M-11, M-13	M-1, M-9	M-12	M-10	M-12	M-1
Flood	M-3, M-4, M-5, M-6, M-7, M-8, M-9, M-10, M-11, M-13, M-15	M-3, M-4, M-5, M-6, M-7, M-8, M-9, M-15	M-3, M-4, M-12	M-10, M-15	M-12	M-5, M-6, M-7, M-9
Landslide	M-10, M-11, M-13	M-9	M-12	M-10	M-12	
Severe Weather	M-1, M-5, M-10, M-11, M-13	M-1, M-9	M-12	M-10	M-12	M-1, M-5, M-6, M-7
Wildfire	M-2, M-10, M-11, M-13, M-14	M-2, M-9, M-14	M-2, M-12, M-14	M-10, M-14	M-12	

a. See the introduction to this volume for explanation of mitigation types.

# City of Meridian

## Essential Facilities & Transportation Systems



### Legend

-  Emergency Operation Centers
-  Fire Stations & EMS Facilities
-  Medical Care Facilities
-  Other Essential Facilities
-  Police Stations
-  Schools & Educational Facilities
-  Airport Facilities
-  Bus Facilities
-  Highway Bridges

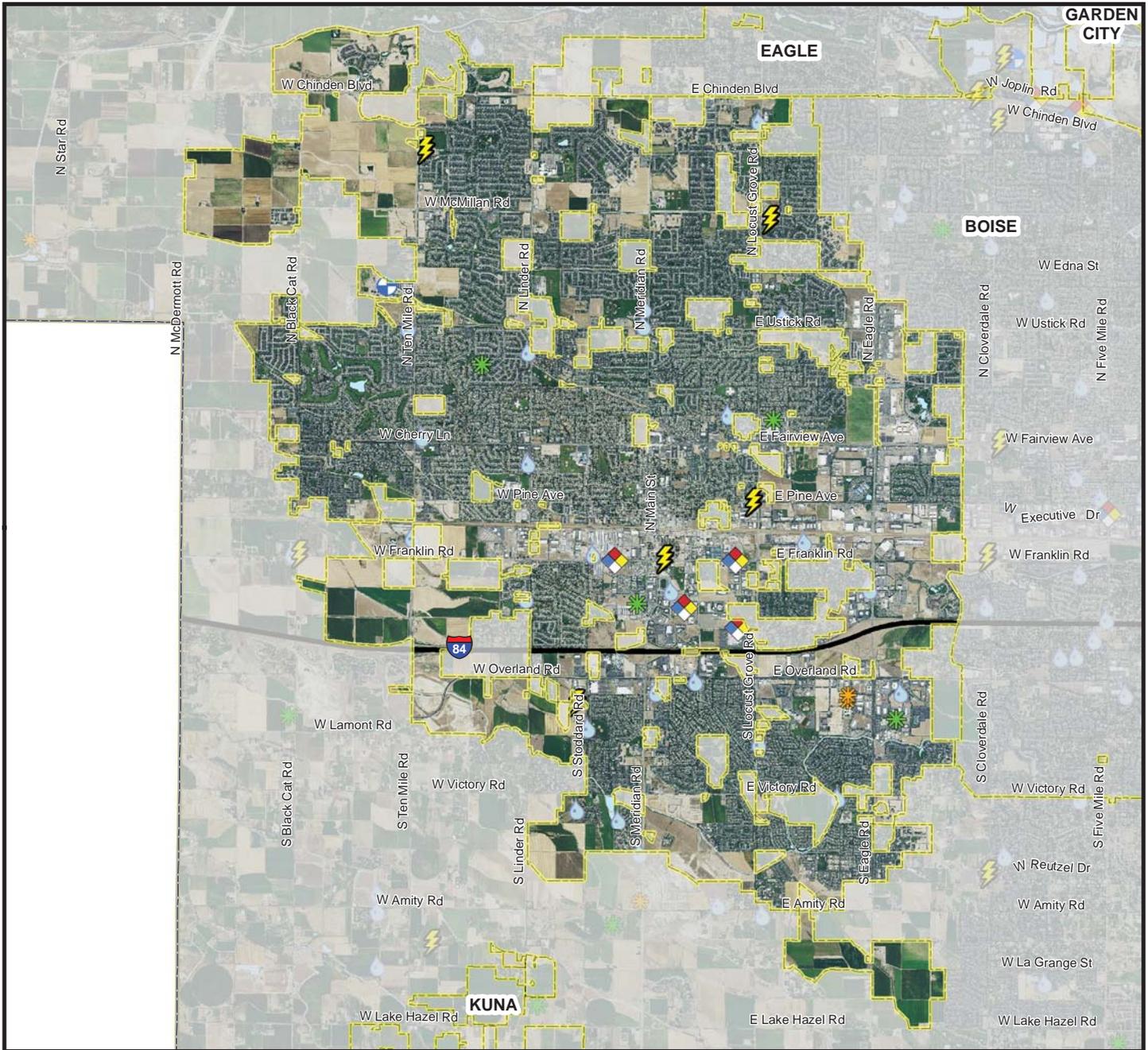


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

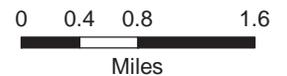
# City of Meridian

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Natural Gas Facilities
-  Dams
-  Potable Water Facilities
-  Electric Power Facilities
-  Wastewater Facilities
-  Hazardous Materials

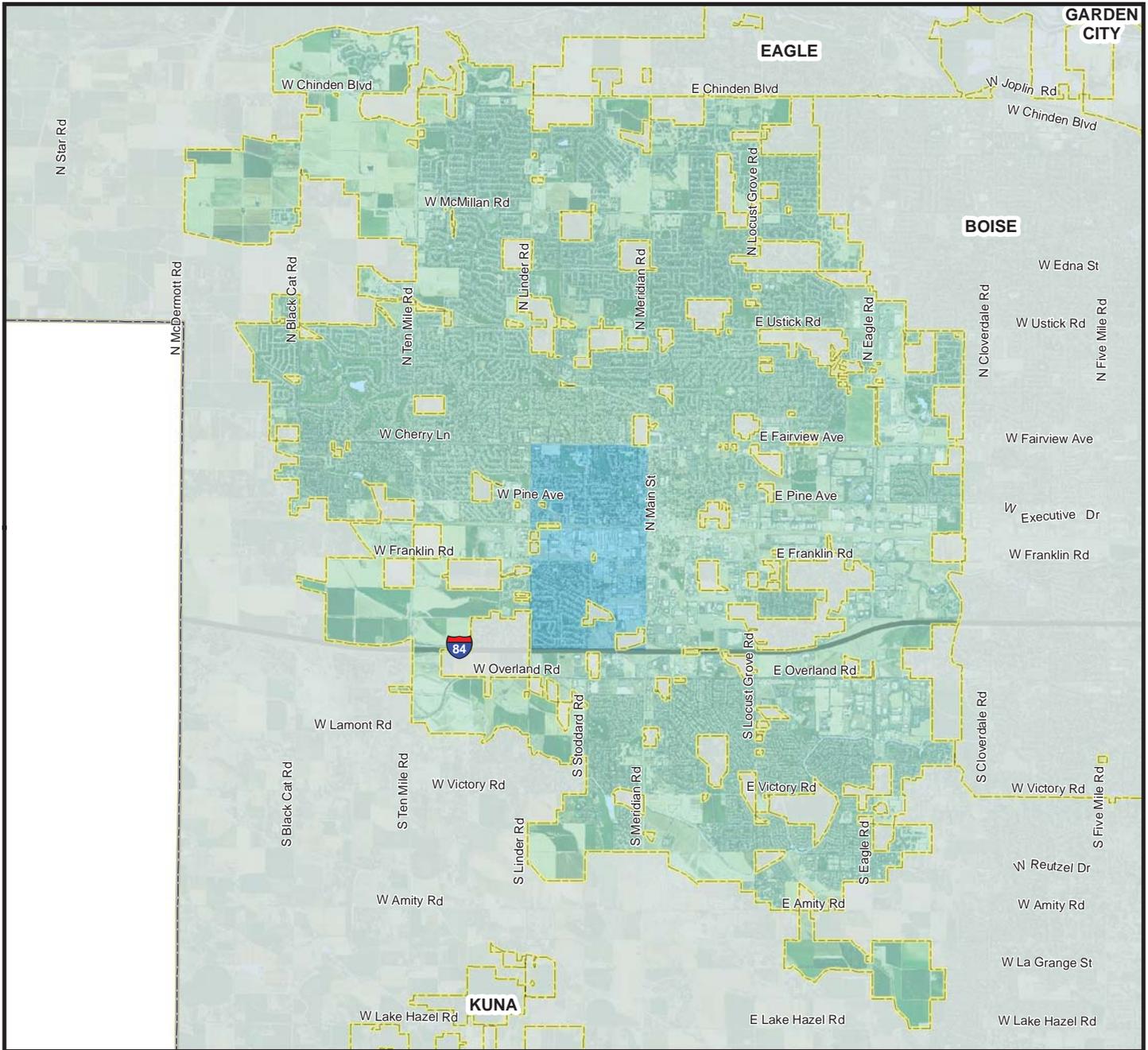


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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# City of Meridian

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

 V (Moderate)

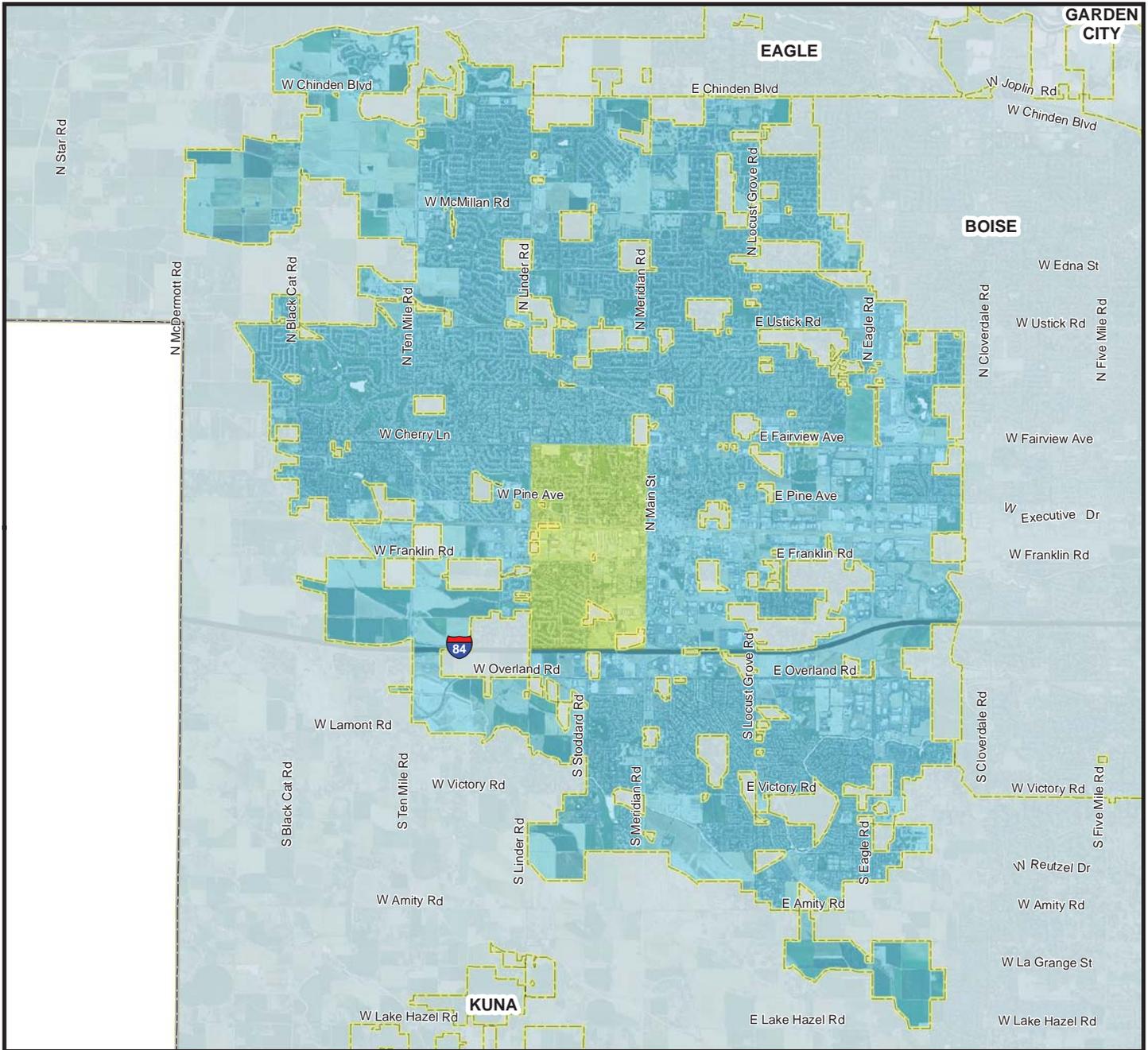


Data Sources: Ada County, U.S. Geological Survey, Hazus

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Meridian

## Peak Ground Acceleration for a 500-Year Probabilistic Event



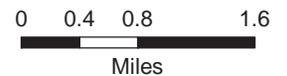
### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

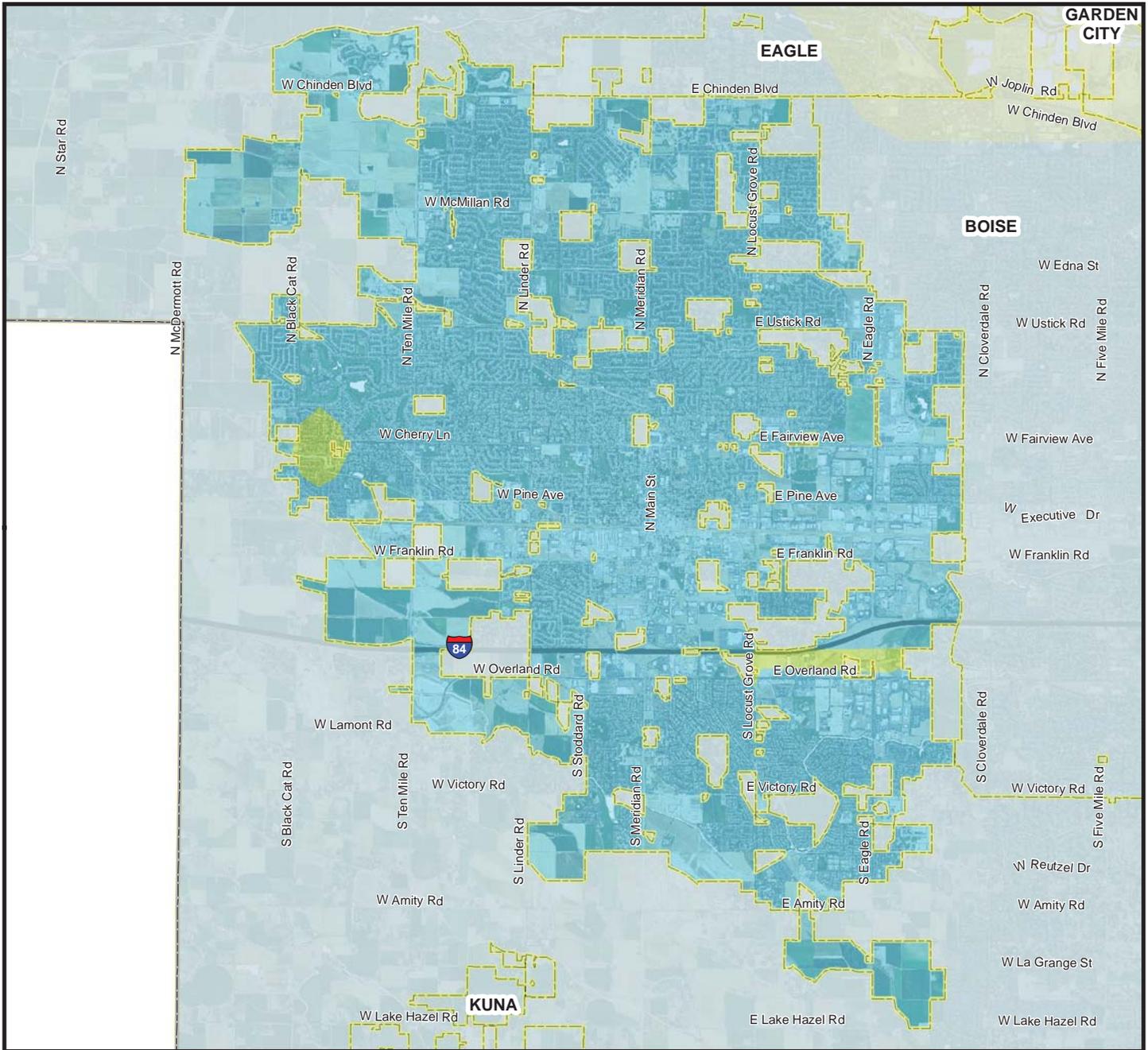


Data Sources: Ada County, U.S. Geological Survey, Hazus

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Meridian

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



### Legend

Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

V (Moderate)

VI (Strong)

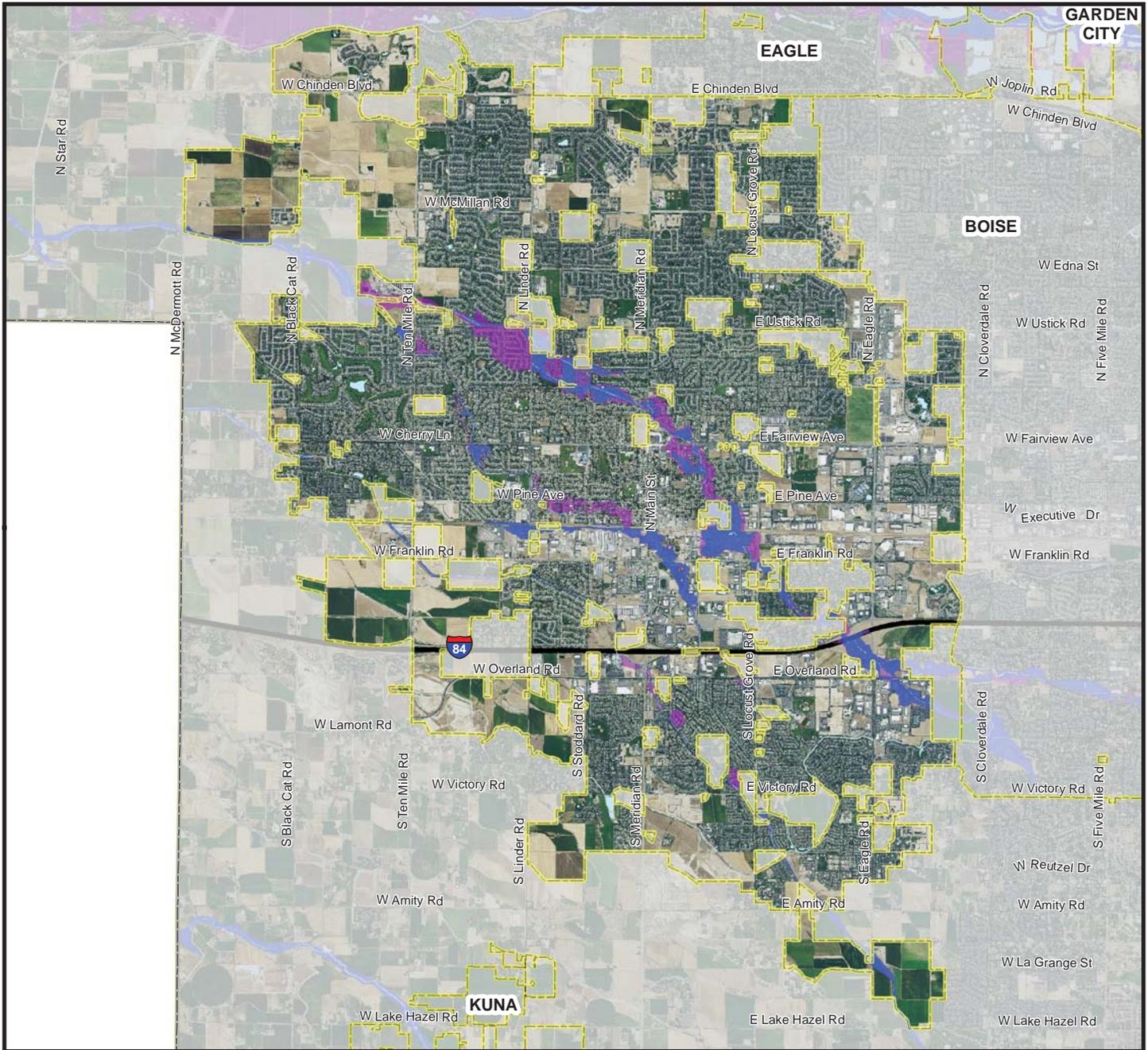


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Meridian

## FEMA DFIRM Flood Hazard Zones



### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.





## 7. CITY OF STAR

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### 7.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

Chad Bell, Mayor  
10769 W. State Street  
Star, ID 83669  
Telephone: 208-908-5451  
E-mail Address: cbell@staridaho.org

#### Alternate Point of Contact

Cathy Ward, City Clerk  
10769 W. State Street  
Star, ID 83669  
Telephone: 208-908-5452  
E-mail Address: cward@staridaho.org

### 7.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—Established December 22, 1864
- Current Population—Estimated 6,379 as of 2014 (U.S. Census American Community Survey 5-year estimates)
- Population Growth—Star has grown by 250% in the past 10 years.
- Location and Description—Located on Boise River 10 miles west of Boise
- Brief History - The first location of the village of Star is approximately one mile to the east of the present City of Star; approximately halfway between the present town of Star and Star Emmett junction. The first schoolhouse was built there in the 1870s on land donated by B.F. Swalley. When the settlers finished building the schoolhouse, they could not decide on a name for the building. One of the men carved out a star and nailed it to the front door; pounding nails all around the edge of the star. This became an important landmark for miles around and was a guide for travelers and miners. When the visitors came to the schoolhouse with the star on the door, they could travel west one mile and find board and lodging for the night. So in time, the town became known as Star. In 1905, Star incorporated and established City limits reaching four miles in all directions. During the early part of the 20th century the town flourished with places growing rapidly and merchants doing good business. The town had a mayor, marshal, constable, and justice of the peace. The jail was a frame building located just east of the Odd fellows Lodge Hall. By the time the new interurban arrived, at least twenty new buildings had been erected. Rapid growth came with the confidence of the Boise Interurban Railway. Growth continued in 1909 with at least 30 new buildings erected. In the early 1900s, Main Street periodically served as a race track. Horse races were a big event with most everyone and often followed by a baseball game. Impromptu races down Main Street were not limited to specific holidays but could arise from on-the-spot challenges. Other activities included a weekly debating society where issues of the day such as railroads, Sunday laws, and women’s rights were discussed. Also, there was a literary society, Star School sporting events, and skating rink. An evening outing for a party of young people included chartering a trolley excursion to Boise and back. Star Trading Days were stock sales held every third Saturday of each month.

- **Climate**—The City of Star is located approximately 2,467-feet above sea-level and enjoys a mild climate. Star has an annual average precipitation of 11.76-inches. Most of the precipitation occurs between the months of November to May. The average annual snowfall is 9.7-inches, with killing frosts as early as December and as late as February. There are approximately 212-frost free days in Star from December to March. This allows for a relatively long growing season. Winters in Star, though cold, are generally not severe. Summer days are hot, while nights are relatively cool. The average maximum temperature is 62.9-degrees Fahrenheit and the average minimum temperature is 39.5-degrees Fahrenheit. Northwesterly winds prevail with intermittent southeasterly winds in winter and spring. The climate is favorable for many agricultural pursuits in the area. The current crops in the area vary widely from wheat, oats, corn, beans, mint, hay, pasture, alfalfa and clover seed, to sugar beets, potatoes, and many specialty seed crops.
- **Governing Body Format**—Strong Mayor form of Municipal Government with four (4) council members. The Council assumes responsibility for the adoption of this plan, and is responsible for its implementation.
- **Development Trends—Current Land Use Patterns**
  - **Residential Land Uses—Rural-Urban Interface Issues**—Citizens of the Treasure Valley and beyond have been moving to the City of Star and surrounding area. Land, which was part of the Area of City Impact of Star, has been purchased and entitlements have been received for residential development. There are concerns of the farming and the former farming community that they are losing the quaint small rural City. It is recognized that the City of Star is going through a transition, where the rural community is interfacing the urban community.
  - **Existing Residential Development**—Residential land use patterns in the City limits include existing parcels of 1 to 5- acres, single family subdivisions, Planned Unit Development and Master Planned Communities. Housing types include, attached and detached single family dwelling units, patio homes and multi-family dwelling units.
  - **Civic Land Uses**—The Star City hall houses all City offices. The Star Library, which is managed by the Ada County Library District, the Star Water and Sewer District and the Star Fire District Station are located in the Central Business District on Highway 44. The Star Senior Center is located at 102 Main Street.
  - **Open Spaces**—The most important amenity is the Boise River which is located one mile south of Highway 44. It is available for fishing, hiking and viewing of wildlife. Currently, a greenbelt does not exist, but the City has approximately 20-acres along the river for recreation development. Blake Haven Park is located on Star Road across from Star Elementary School. Some of the new subdivisions have developed open space for their residents, but they are not public facilities.
  - **Commercial**—Commercial land uses are generally located along Highway 44 and Star Road. A range of professional offices, retail, restaurant and other services are located along these corridors. There are a number of home occupations in Star, but the actual numbers have not been identified.
  - **Industrial and High Technical Land Uses**—Industrial manufacturing or high-tech land uses are currently absent in Star.

## 7.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 7-1. An assessment of fiscal capabilities is presented in Table 7-2. An assessment of administrative and technical capabilities is presented in Table 7-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-4. Classifications under various community mitigation programs are presented in Table 7-5. An assessment of education and outreach capabilities is presented in Table 7-6.

**Table 7-1. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> Title 7.1, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	Yes
Zoning Code <i>Comment:</i> Title 8, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	No
Subdivisions <i>Comment:</i> Title 8.6, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	No
Stormwater Management <i>Comment:</i> Title 8.4, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	Yes
Post-Disaster Recovery	No	No	No
Real Estate Disclosure	No	No	No
Growth Management <i>Comment:</i> Ada County Comprehensive Plan, adopted 11/26/2007; Ada Co. Zoning ordinance-Title 8, ACC, adopted 12/8/2010	No	Yes	No
Site Plan Review <i>Comment:</i> Title 8, Chapter 4-ACC adopted: 12/8/2010	Yes	No	No
Environmental Protection <i>Comment:</i> Titles 3, 5, 7, 8, 10, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	No
Flood Damage Prevention <i>Comment:</i> Title 10, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508	Yes	No	No
Emergency Management <i>Comment:</i> Ada County Emergency Management Plan	No	Yes	No
Climate Change	No	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i> <i>Comment:</i> Comprehensive Plan, 2008	Yes	No	No
Capital Improvement Plan <i>What types of capital facilities does the plan address? N/A</i> <i>How often is the plan updated? N/A</i> <i>Comment:</i> The City does not have a Capital Improvement Plan	No	No	No
Floodplain or Watershed Plan <i>Comment:</i> Title 10, Star City Code, 2008 Comprehensive Plan, required under Local Land Use Planning Act, Idaho Code 67-6508. Note: once complete, the Ada County All Hazards Mitigation Plan-update will become the floodplain management plan of record for all communities within the planning area that participate in the CRS program.	Yes	No	No
Stormwater Plan <i>Comment:</i> Star City complies with the requirements as per EPA requirements in NPDES, and IDWR requirements. ACHD holds NPDES Permit. City is responsible for Stormwater Pollution Prevention associated with City Projects.	Yes	No	No
Habitat Conservation Plan	No	No	No
Economic Development Plan <i>Comment:</i> 2008 Comprehensive Plan	Yes	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated
Shoreline Management Plan	N/A	No	No
Community Wildfire Protection Plan <i>Comment: Wildfire Response Plan, updated May 2014</i>	Yes	No	No
Forest Management Plan	No	No	No
Climate Action Plan	No	No	No
Other <i>Comment:</i> ACEM Ada County Flood Response Plan. Adopted: January, 2006 Ada County Mass Casualty Incident Plan. Adopted: 12/16/2010 Ada County HAZMAT Response Plan. Adopted: April 2011 Ada County Wildfire Response Plan. Adopted: May 2010	Yes	No	No
Comprehensive Emergency Management Plan	No	No	No
Threat & Hazard Identification & Risk Assessment	No	No	No
Post-Disaster Recovery Plan	No	No	No
Continuity of Operations Plan	No	No	No
Public Health Plan <i>Comment: Central District Health Department Emergency Operations Plan, 2013</i>	No	Yes	No

Table 7-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	None

**Table 7-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works, Economic Development, Planning
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works, Planning
Planners or engineers with an understanding of natural hazards	Yes	Planning, Public Works
Staff with training in benefit/cost analysis	Yes	Can contract with County
Surveyors	Yes	Public Works, Planning
Staff capable of making substantial damage estimates	Yes	Can contract with County
Personnel skilled or trained in GIS applications	Yes	Can contract with County
Scientist familiar with natural hazards in local area	Yes	Can contract with County
Emergency manager	Yes	Ada County Emergency Management
Grant writers	Yes	Can contract with County

**Table 7-4. National Flood Insurance Program Compliance**

Criteria	Response
When did the community enter the NFIP?	12/18/84
When did the Flood Insurance Rate maps become effective (current)?	5/5/11
What local department is responsible for floodplain management?	Planning
Who is your floodplain administrator? (department/position)	Planning / City Clerk
<ul style="list-style-type: none"> <li>Is this a primary or auxiliary role?</li> </ul>	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	5/19/11
<ul style="list-style-type: none"> <li>Does your floodplain management program meet or exceed minimum requirements?</li> <li>If so, in what ways?</li> </ul>	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	CAV 1/24/2007, CAC 4/10/2008
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	General floodplain management training.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> </ul>	
How many Flood Insurance policies are in force in your jurisdiction?	31
<ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>	\$6,353,200.00 \$29,871.00
How many total loss claims have been filed in your jurisdiction?	None
<ul style="list-style-type: none"> <li>How many claims were closed without payment/are still open?</li> <li>What were the total payments for losses?</li> </ul>	N/A N/A

**Table 7-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	10/10	N/A
Public Protection	Yes	4/9	N/A
Storm Ready	Yes	Blue	N/A
Firewise	No	N/A	N/A

**Table 7-6. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 7.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into local planning mechanisms.

### 7.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- City of Star Comprehensive Plan—The 2008 Comprehensive Plan includes mitigation related policies as they relate to the protection of human life and property from natural hazard events.
- Star City Code—The city code defines construction regulations for areas of the City within a floodplain.
- Ada County Comprehensive Plan—The Comprehensive Plan for Ada County currently includes mitigation related policies as they relate to the protection of human life and property from flood events. Additionally, the Comprehensive plan addresses the need for natural resource protection and the identification of known hazards within the County.
- Ada County Wildfire Response Plan—The Wildfire Response Plan for Ada County includes procedures that will mitigate risk to human life and property from a wildfire.

## 7.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Star City, Star Sewer & Water District, and Star Joint Fire Protection District Joint Emergency Operation Plan (EOP)—This joint plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when an EOP is developed.
- City of Star Continuity of Operation Plan (COOP)—This plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when a COOP is developed.

## 7.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 7-7 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster #	Date	Preliminary Damage Assessment
Severe wind	N/A	3/29/2009	\$33,000 (county wide)
Severe wind	N/A	4/27/1995	\$50,000 (county wide)
Borah Peak M7.3 Earthquake	N/A	1988	-
Flooding	N/A	6/1983	\$147,000 (county wide)
Hebgen Lake M7.5 earthquake	N/A	1959	-
Flooding	N/A	1943	Unknown

## 7.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other noted vulnerabilities include:

- County levee along Boise River in Star area is not functional or maintained.

## 7.7 HAZARD RISK RANKING

Table 7-8 presents the ranking of the hazards of concern.

**Table 7-8. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	33	High
2	Severe Weather	33	High
3	Earthquake	32	High
4	Dam Inundation	18	Medium
5	Wildfire	18	Medium
6	Landslide	12	Low
7	Drought	9	Low
8	Volcano	6	Low

## 7.8 STATUS OF PREVIOUS PLAN INITIATIVES

Table 7-9 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 7-9. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
S-1—Consider participation in the Community Rating System <i>Comment:</i> Currently participating, but will continue to participate.		X	
S-2—Integrate Multi-Hazard Mitigation Plan into the City of Star Comprehensive Plan <i>Comment:</i>		X	
S-3—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern. <i>Comment:</i>		X	
S-4—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority. <i>Comment:</i> Star will coordinate with Ada County in its upcoming property identification mapping efforts.		X	
S-5—Support County-wide initiatives identified in Volume 1. <i>Comment:</i>		X	
S-6—Continue to support the implementation, monitoring, maintenance, and updating of this plan, as defined in Volume 1. <i>Comment:</i>		X	
S-7—Evaluate riverbank integrity of the Boise River in the areas of interface with buildings and infrastructure. Determine and employ the best methodology to either repair damaged areas or harden other areas that may directly threaten buildings or infrastructure during high flow events. <i>Comment:</i> Bank repairs were made in May of 2012 in Ada County to stop flooding from a river breach into an irrigation canal that was forced beyond capacity which then threatened properties in Star.		X	

## 7.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 7-10 lists the actions that make up the City of Star hazard mitigation action plan. Table 7-11 identifies the priority for each action. Table 7-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 7-10. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>S-1—Consider participation in the Community Rating System</b>						
New and Existing	Flood	1, 2, 4, 5, 6, 7, 8, 9	City	Low	General Fund, Surface Water Utility Fund	Short-term
<b>S-2—Integrate Multi-Hazard Mitigation Plan into City of Star Comprehensive Plan</b>						
New and Existing	All Hazards	2, 5, 6	Star Planning Department	Low	General Fund	Short-term
<b>S-3—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.</b>						
New and Existing	All Hazards	4, 6	Star Planning and Zoning	Low	General Fund	Long-term
<b>S-4—Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with properties with exposure to repetitive losses as a priority.</b>						
Existing	All Hazards	3, 8, 9	Star Building Department	High	HMGP, property owners, City funds	Long-term
<b>S-5—Evaluate riverbank integrity of the Boise River in the areas of interface with buildings and infrastructure. Determine and employ the best methodology to either repair damaged areas or harden other areas that may directly threaten buildings or infrastructure during high flow events.</b>						
New and Existing	Flood, Severe Weather, Dam Failure	1, 2, 9, 10	City	Medium	HMGP, CIP funding	Long-term
<b>S-6—Develop a Joint Emergency Operation Plan with Star City and Star Joint Fire Protection District: This plan is necessary to establish a single, comprehensive framework for the management of domestic incidents. The City of Star will lead this all-discipline action, but Star Sewer &amp; Water District will aid in planning for all hazards.</b>						
New and Existing	All Hazards	All	Star City	Medium	City Funds, District Funds, HMGP	Short-term
<b>S-7—Develop a Continuity of Operation Plan: This plan will provide specific policies and procedures that will be carried out in the event of an emergency, including localized acts of nature, accidents, and technological or attack-related emergencies. The plan will address how the District will continue to perform essential functions in the event of compromised facilities or leadership, and how the District will return to normal operations.</b>						
New and Existing	All Hazards	All	District	Medium	District Funds, HMGP	Short-term
<b>S-8—Support County-wide Initiatives Identified in Volume 1 of the Multi-Hazard Mitigation Plan</b>						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term
<b>S-9—Actively Participate in the Plan Maintenance Protocols Outlines in Volume 1 of the Multi-Hazard Mitigation Plan</b>						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term
<b>S-10—Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include but are not limited to; enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</b>						
New & Existing	Flood	1,2,4,5,6,8	Planning	Low	General Fung	Ongoing
<b>S11—Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.</b>						
New and Existing	Wildfire	8, 9	City, Star Fire, ACEM	Low	General Fund	Ongoing

**Table 7-11. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
S-1	8	High	Low	Yes	No	Yes	High	Low
S-2	3	High	Low	Yes	No	Yes	High	Low
S-3	3	High	Low	Yes	No	Yes	Medium	Low
S-4	3	High	High	Yes	Yes	No	Medium	High
S-5	4	High	High	Yes	Yes	No	Medium	High
S-6	10	Medium	Medium	Yes	Yes	No	Medium	Medium
S-7	10	Medium	Medium	Yes	Yes	No	Medium	Medium
S-8	10	Low	Low	Yes	No	Yes	High	Low
S-9	10	Low	Low	Yes	No	Yes	High	Low
S-10	6	Medium	Low	Yes	No	Yes	High	Low
S-11	2	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

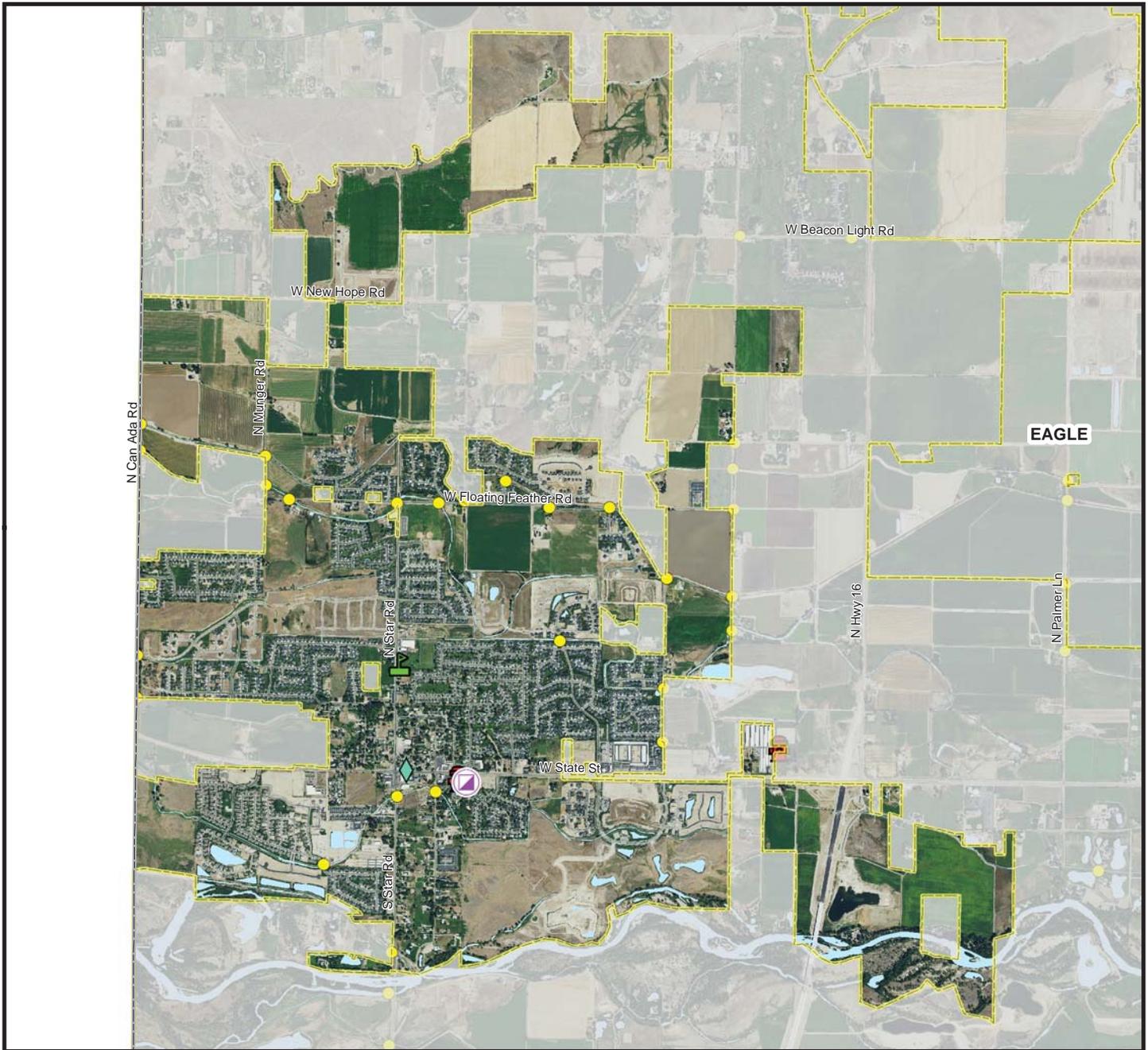
**Table 7-12. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	S-2, S-3, S-4, S-5, S-8, S-9, S-10	S-2, S-3, S-4, S-5, S-10	S-1, S-2, S-3, S-6, S-7, S-8, S-9, S-10	S-2, S-3, S-4, S-5, S-10	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Wildfire	S-2, S-3, S-8, S-9, S-11	S-2, S-3, S-4, S-11	S-1, S-2, S-3, S-6, S-7, S-8, S-9, S-11	S-2, S-3, S-11	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Severe Weather	S-2, S-3, S-4, S-5, S-8, S-9	S-2, S-3, S-4, S-5	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4, S-5	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Earthquake	S-2, S-3, S-4, S-8, S-9	S-2, S-3, S-4	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Dam Inundation	S-2, S-3, S-4, S-5, S-8, S-9	S-2, S-3, S-4, S-5	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4, S-5	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Landslide	S-2, S-3, S-4, S-5, S-8, S-9	S-2, S-3, S-4	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Drought	S-2, S-3, S-8, S-9	S-2, S-3, S-4	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5
Volcano	S-2, S-3, S-8, S-5, S-9	S-2, S-3, S-4	S-1, S-2, S-3, S-6, S-7, S-8, S-9	S-2, S-3, S-4	S-2, S-3, S-4, S-5, S-6, S-7	S-4, S-5

a. See the introduction to this volume for explanation of mitigation types.

# City of Star

## Essential Facilities & Transportation Systems



### Legend

-  Emergency Operation Centers
-  Fire Stations & EMS Facilities
-  Medical Care Facilities
-  Other Essential Facilities
-  Police Stations
-  Schools & Educational Facilities
-  Airport Facilities
-  Bus Facilities
-  Highway Bridges

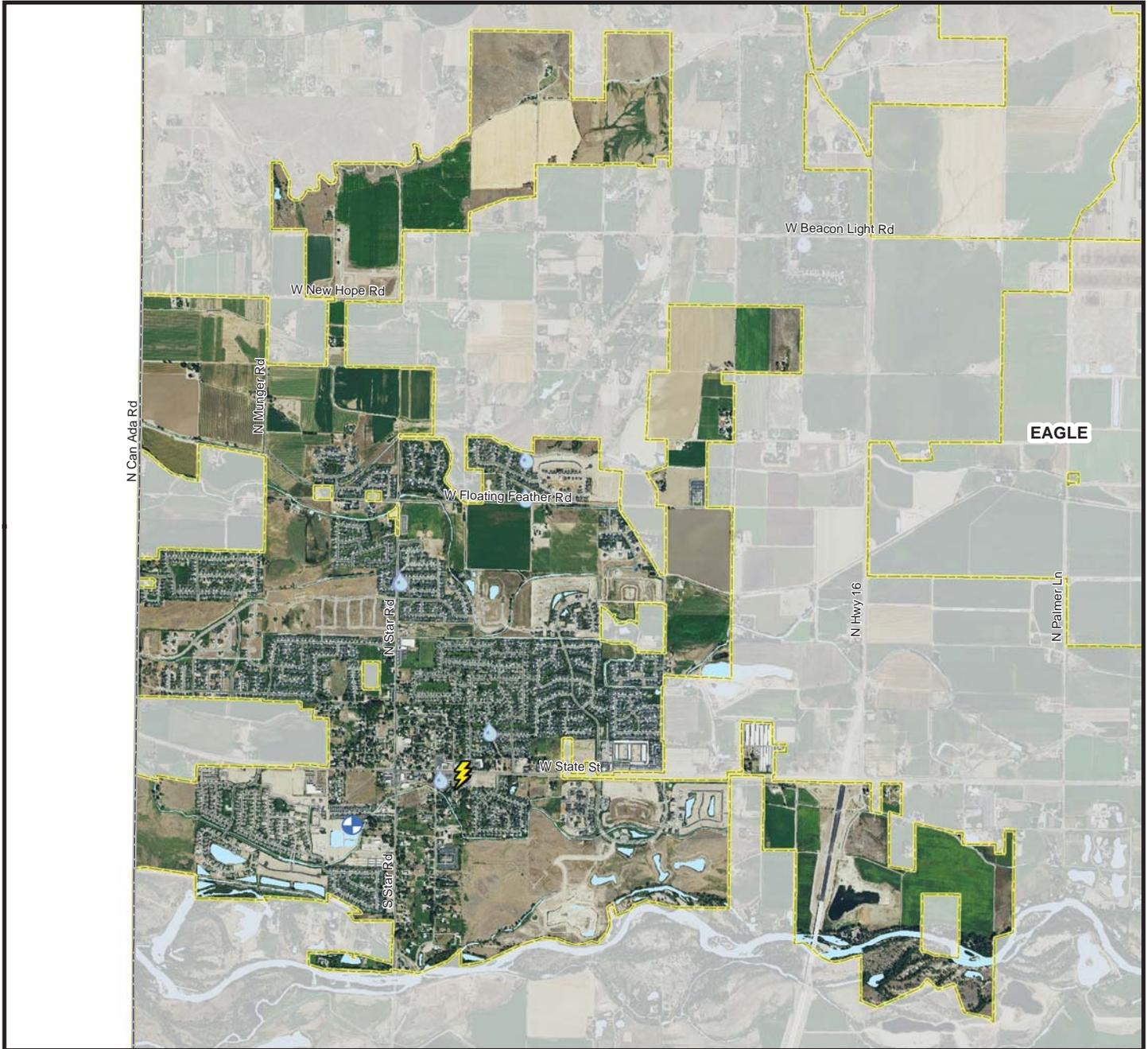


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Star

## Utilities & Infrastructure



### Legend

-  Communication Facilities
-  Natural Gas Facilities
-  Dams
-  Potable Water Facilities
-  Electric Power Facilities
-  Wastewater Facilities
-  Hazardous Materials

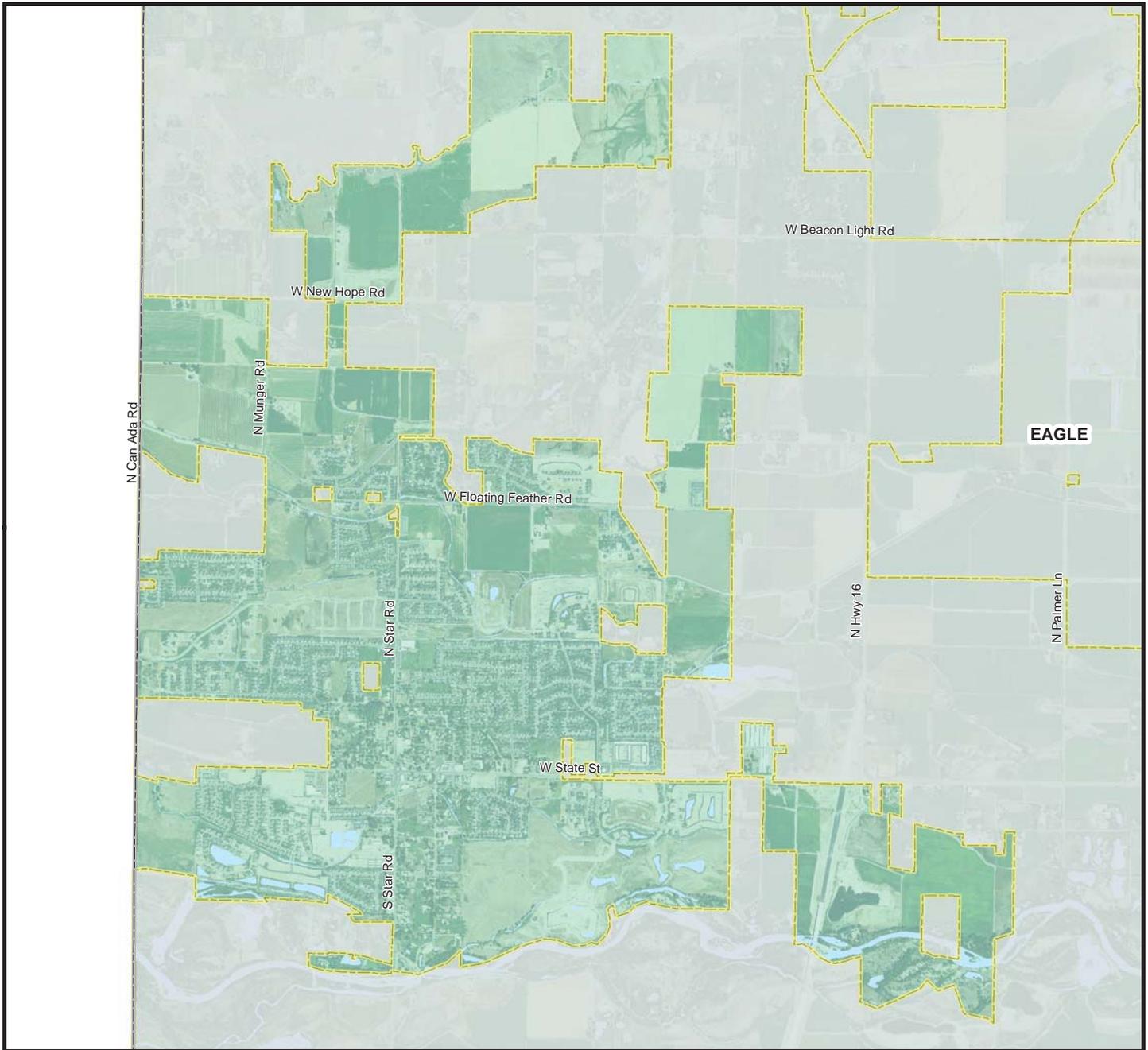


Data Sources: Ada County, U.S. Geological Survey, COMPASS, Idaho DHS

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# City of Star

## Peak Ground Acceleration for a 100-Year Probabilistic Event



### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 IV (Light)

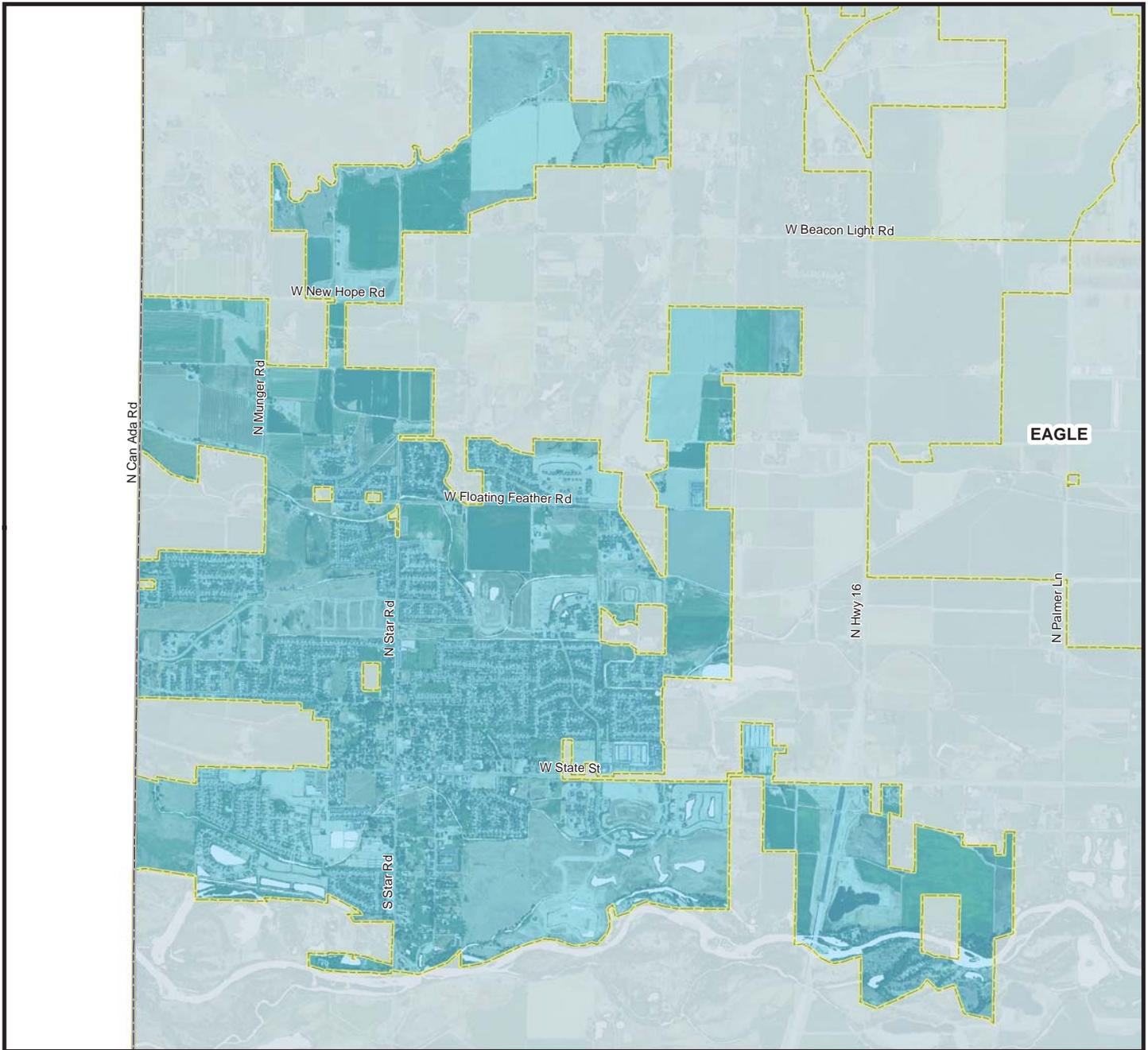


Data Sources: Ada County, U.S. Geological Survey, Hazus

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# City of Star

## Peak Ground Acceleration for a 500-Year Probabilistic Event

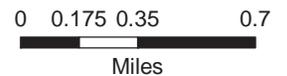


### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

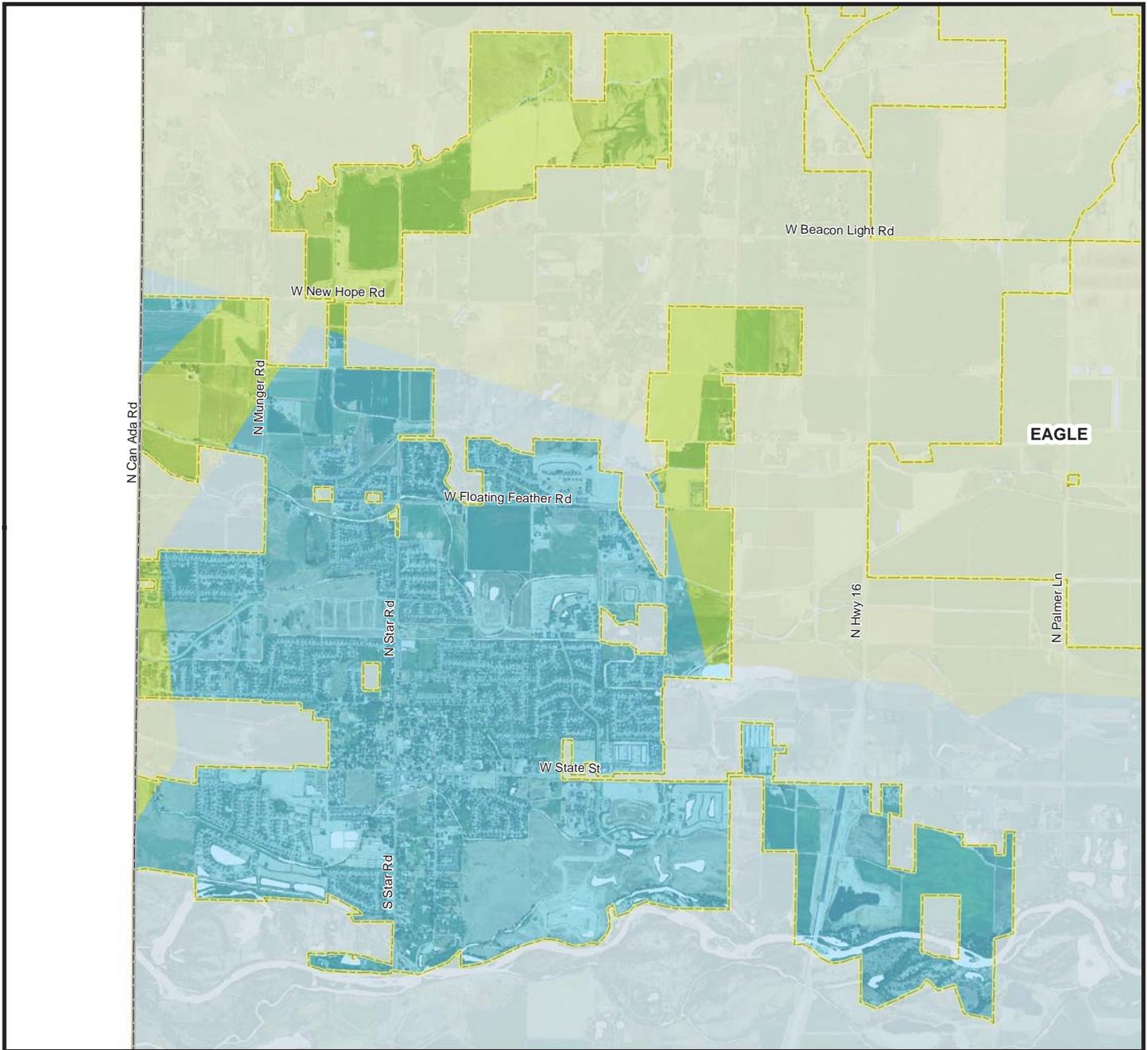


Data Sources: Ada County, U.S. Geological Survey, Hazus

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Star

## Squaw Creek M7.0 Scenario Peak Ground Acceleration



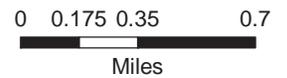
### Legend

 Ada County Boundary

### Modified Mercalli Scale, Potential Shaking

 V (Moderate)

 VI (Strong)

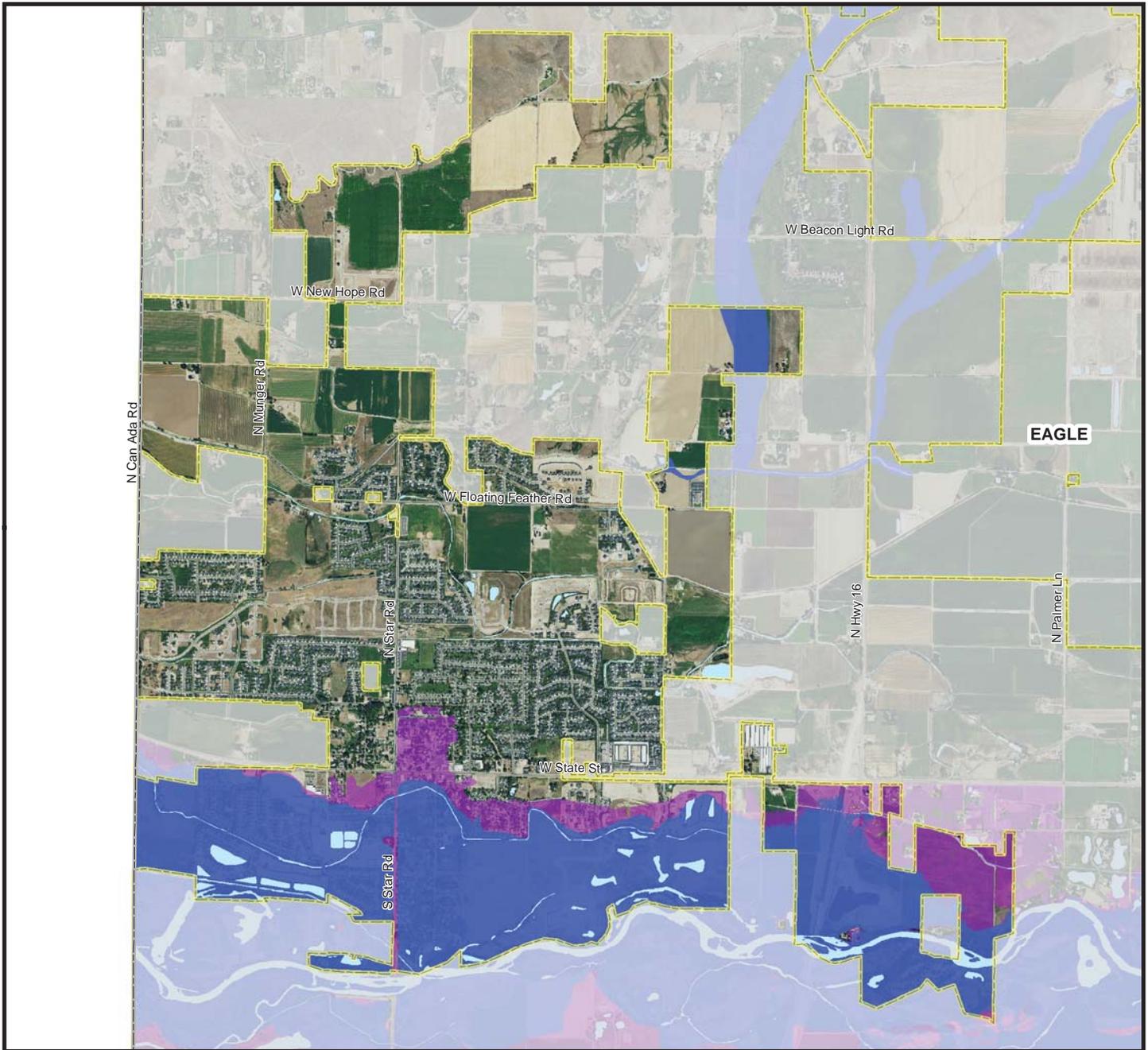


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Star

## FEMA DFIRM Flood Hazard Zones



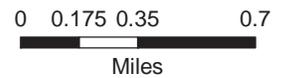
### Legend

-  Ada County Boundary
-  Water Bodies
-  1% Annual Chance Flood Boundary (100 Year)
-  0.2% Annual Chance Flood Boundary (500 Year)

Flood Hazard Areas as depicted on FEMA Digital Insurance Rate Maps (DFIRM). This map is a combination of effective and preliminary DFIRM boundaries.

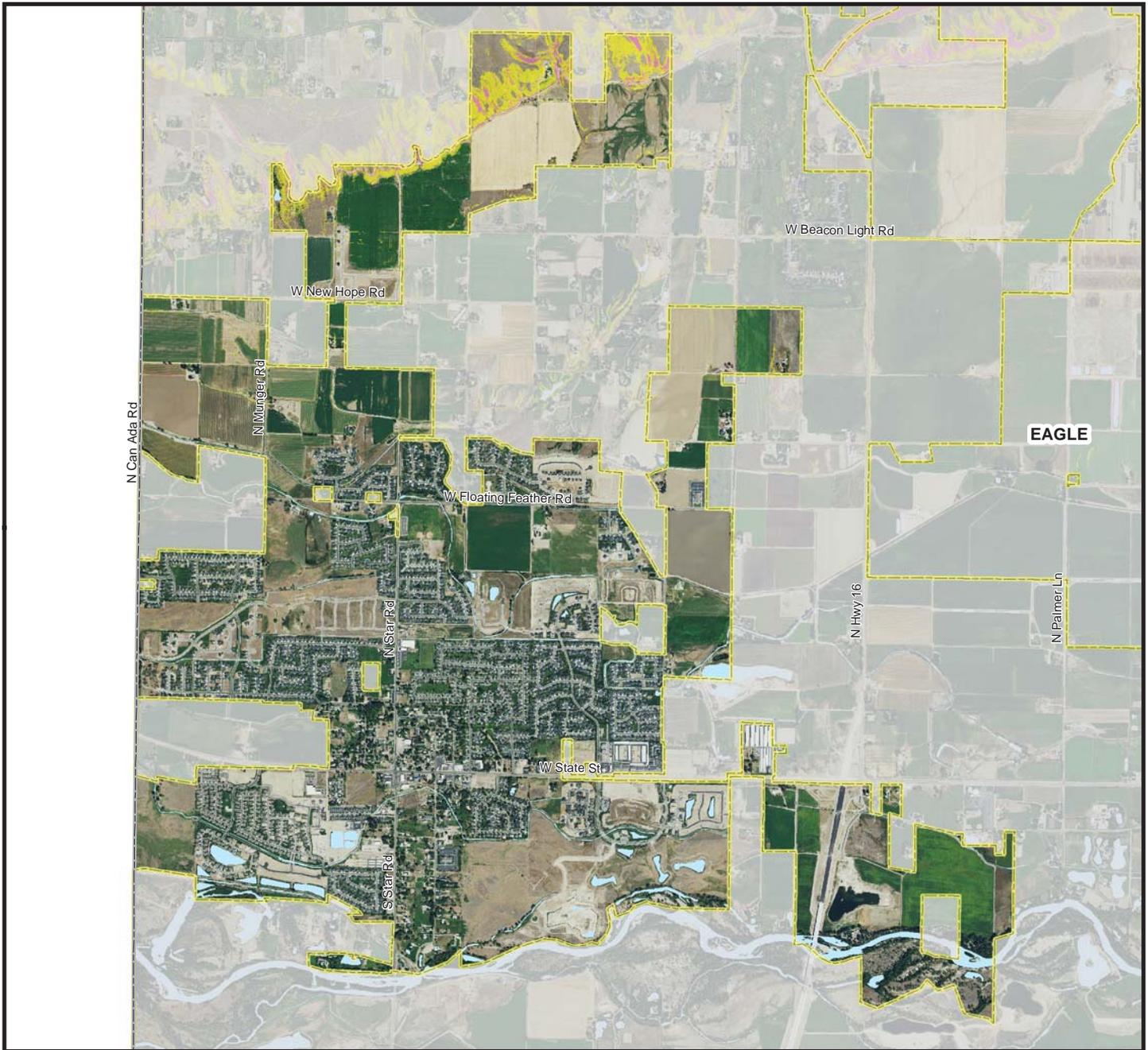
Data Sources: Ada County, U.S. Geological Survey, FEMA, USACE

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.



# City of Star

## Potential Landslide Areas



### Legend

 Ada County Boundary

### Slope

 15 - 30%

 Greater than 30%

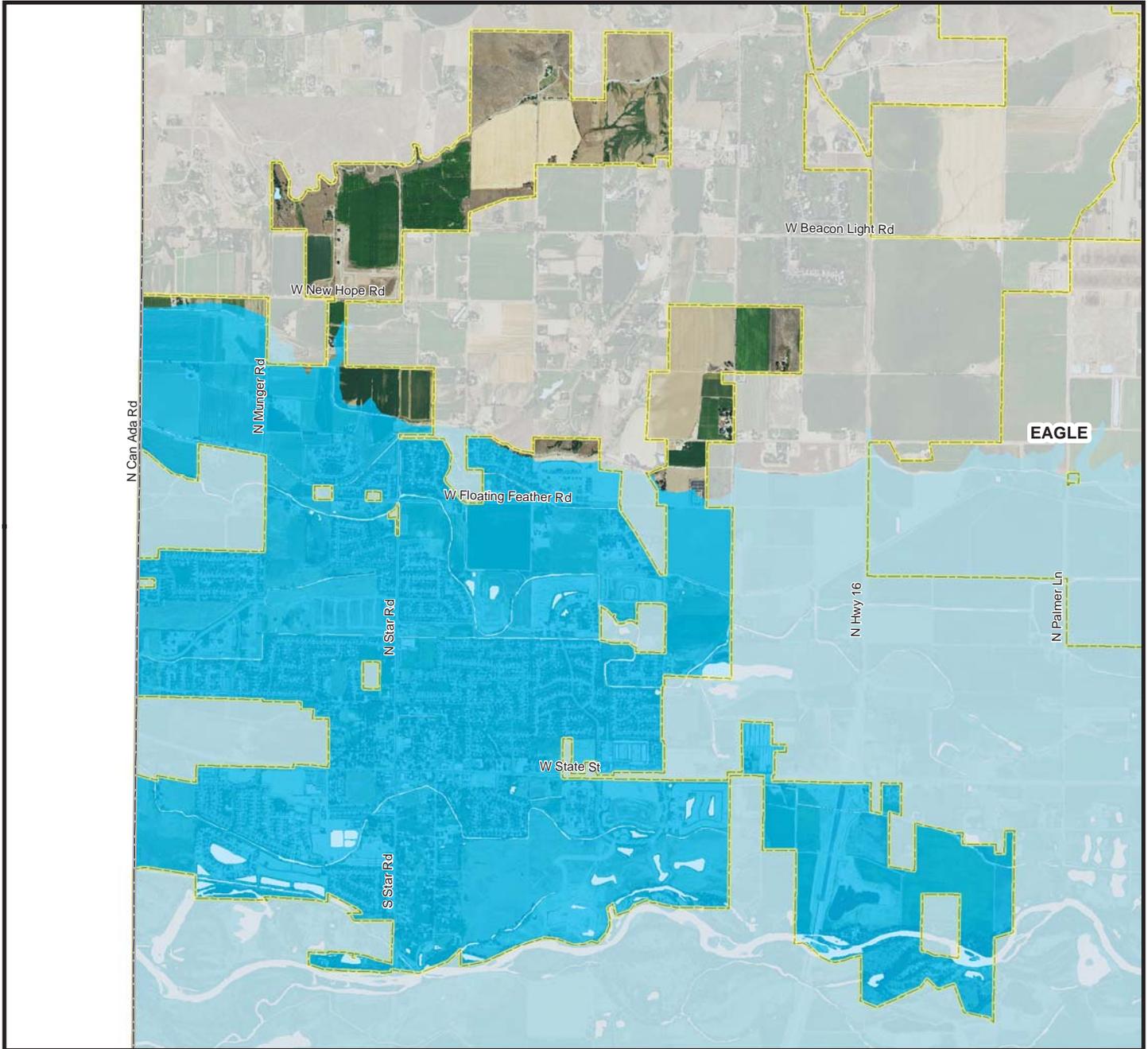


Data Sources: Ada County, U.S. Geological Survey

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

# City of Star

## Lucky Peak Dam Failure



### Legend

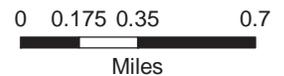
 Maximum Pool Inundation Area

Area inundated by dam failure occurring when pool elevation is at the top of the impounding structure.

This map has been compiled using the best information available and is believed to be accurate, however, its preparation required many assumptions. Actual conditions during a failure may vary from those assumed, so the accuracy cannot be guaranteed. The limits of flooding shown and the temporal data should only be used as a guideline for emergency planning and response actions. Actual areas inundated and inundation timing will depend on specific flooding and failure conditions and may differ from the areas shown on the maps.

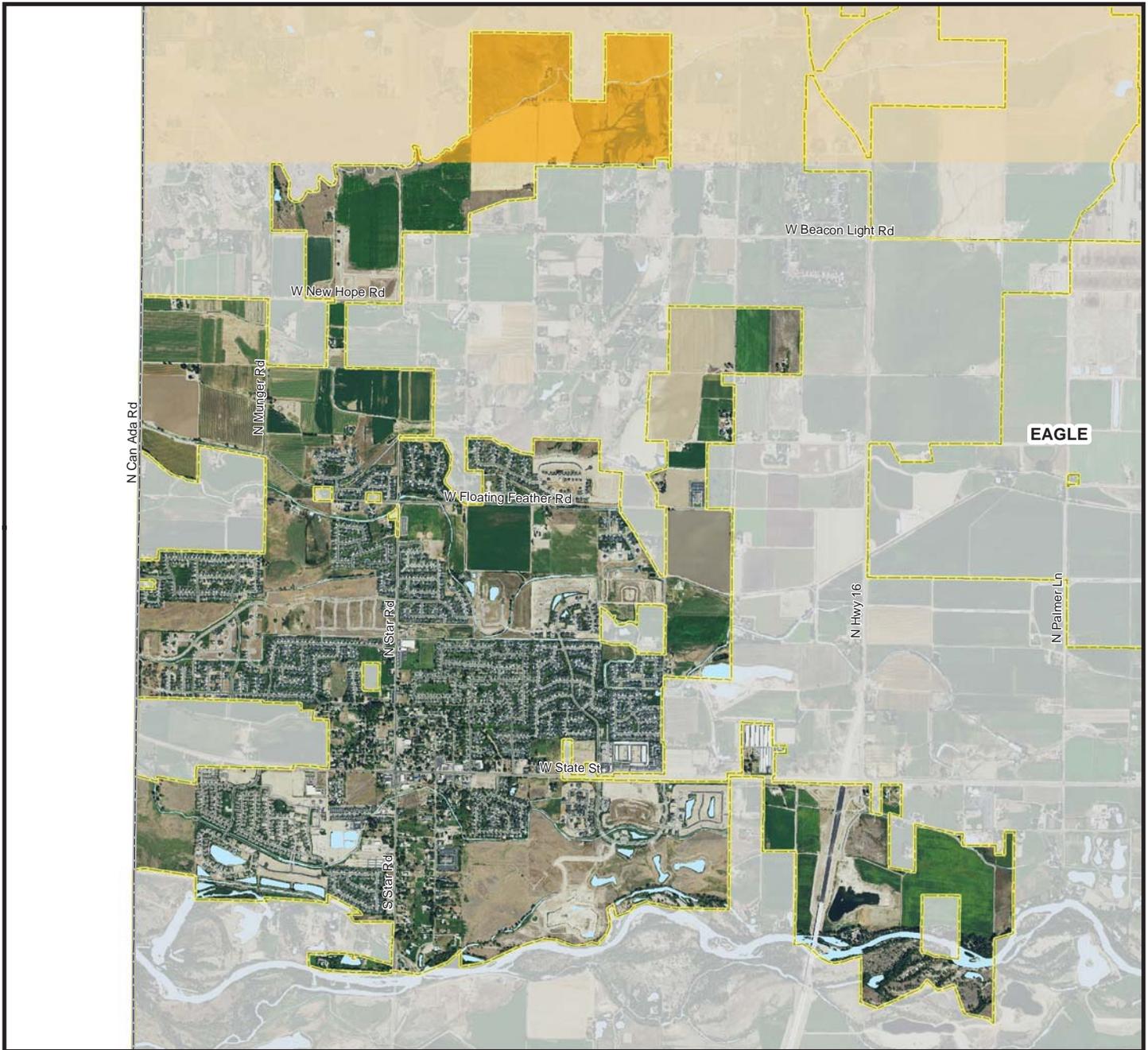
Data Sources: Ada County, U.S. Geological Survey, U.S. Army Corp of Engineers

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# City of Star

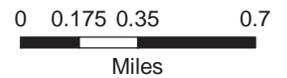
## Wildfire Risk Areas



### Legend

#### Relative Risk to Wildfire

-  Low
-  Low-Moderate
-  Moderate
-  Moderate-High
-  High



Data Sources: Ada County, U.S. Geological Survey, Idaho Bureau of Land Management

Ada County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.



## 8. ADA COUNTY HIGHWAY DISTRICT

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### 8.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### **Primary Point of Contact**

Tim Nicholson, Maintenance Manager  
3775 Adams Street  
Garden City, ID 83714  
Telephone: 387-6322  
e-mail Address: [tnicholson@achdidaho.org](mailto:tnicholson@achdidaho.org)

#### **Alternate Point of Contact**

Dale Kuperus, Engineering Manager  
3775 Adams Street  
Garden City, ID 83714  
Telephone: 387-6222  
e-mail Address: [dkuperus@achdidaho.org](mailto:dkuperus@achdidaho.org)

### 8.2 JURISDICTION PROFILE

#### 8.2.1 Overview

The Ada County Highway District (ACHD) owns and maintains 4,825 lane miles of roads and streets and approximately 765 bridges in Ada County with an estimated non-depreciated value of \$4.235 billion. ACHD was established by referendum on May 25, 1971 and commenced operations on January 1, 1972. It is a separate unit of local government responsible for all roads, bridges, streets, alleys and public rights-of-way in Ada County, except for those designated as part of the state or federal Highway system. ACHD has approximately 325 employees. Funding comes from various sources including property taxes, State Highway Users Funds, Development Impact Fees, cost sharing payments, Ada County Registration Fees, State Sales Tax and other miscellaneous sources. ACHD is governed by a five member Commission.

#### 8.2.2 Service Area and Trends

The district serves a population of 426,236 as of 2014. Its service area covers an area of—1,060 square miles, which has a total value of \$83,832,012,498.

Ada County experienced a population increase of 8.6% between 2010 and 2014 (source Wikipedia). That trend is expected to increase as economic growth continues.

#### 8.2.3 Assets

Table 8-1 summarizes the critical assets of the district and their non-depreciated value as of September 30, 2015.

**Table 8-1. Special Purpose District Assets**

Asset	Value
<b>Property</b>	
16,085 acres of land	\$2,015,000,000
<b>Critical Infrastructure and Equipment</b>	
4,825 lane miles of street	\$2,120,000,000
765 bridges	\$100,000,000
<b>Total:</b>	<b>\$4.235 billion</b>
<b>Critical Facilities</b>	
ACHD Adams Admin Building 3775 Adams St, 5.85 Acres	\$3,052,576
ACHD Urban Operations, 318 E. 37th St., 13.45 Acres	\$3,488,658
ACHD Cloverdale, 440 N. Cloverdale, 14.98 Acres	\$2,180,411
Building contents	\$6,129,653
Equipment	\$38,326,281
Material/Inventory	\$3,029,598
<b>Total:</b>	<b>\$56.2 million</b>

### 8.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- ACHD Capital Improvement Plan
- Resolution 812 – ACHD Standard Operating Plan for Right-of-Way Spill, Container, and Debris Response
- Sections 7000, 7100, and 7200 of the ACHD Policy Manual pertaining to Land Development Requirements
- Sections 8000, 8200, and 8300 of the ACHD Policy Manual pertaining to Stormwater Management and Discharge Requirements

### 8.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 8-2. An assessment of administrative and technical capabilities is presented in Table 8-3.

**Table 8-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes – Vehicle Registration Fees, Special Impact Fees, Gas Tax, Sales Tax, Highway User Fund Fees

**Table 8-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Development Services, Capital Projects, and Planning Departments
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering, Maintenance, and Capital Projects Divisions
Planners or engineers with an understanding of natural hazards	Yes	Engineering and Maintenance Divisions
Staff with training in benefit/cost analysis	Yes	Accounting and Capital Projects
Surveyors	Yes	Engineering Division
Personnel skilled or trained in GIS applications	Yes	GIS Department
Scientist familiar with natural hazards in local area	No	None
Emergency manager	No	None
Grant writers	Yes	Tom Ferch
Other	No	None

## 8.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 8-4.

**Table 8-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – Craig Quintana
Do you have personnel skilled or trained in website development?	Yes – Diane Rausch and Craig Quintana
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Facebook, Twitter, ACHD Website, Media Releases
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 8.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 8.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- ACHD Integrated Five Year Work Plan (IFYWP) - Sets forth the strategies, projects (roads, intersections, and bridges), and priorities which ACHD will pursue over the next five years.
- ACHD Capital Improvement Plan (CIP) - A long-range transportation plan (20 years) identifying existing transportation facilities and any existing deficiencies, identifying future network deficiencies, and identifying capacity expansion projects on arterial roads and intersections of arterial roads that are eligible for impact fees.

## 8.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- ACHD Strategic Plan - The first focus area (Looking Ahead) establishes a planning framework for ACHD. This framework includes a discussion of common values that ACHD shares with its partner agencies, a description of context and demographics for Ada County, and goals and objectives. The second focus area (Moving Forward) concentrates on asset management and resource allocation. The Plan also contains action items and policy guidance that will help ACHD staff implement Commission directives.

## 8.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 8-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 8-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood		January 1979	Flooding and erosion of Crane Creek, Polecat Gulch, Stewart Gulch, Cottonwood Creek, and Three Mile, Five Mile, Eight Mile, and Ten Mile Creeks
Flood		June 1983	Flooding in Boise, Garden City, and Eagle Island
Flood		February 1986	Flooding of Cottonwood Creek
Flood		May 1993	Flooding of Boise River in Eagle
Flood		September 1997	Flooding of Crane Creek and Hulls Gulch
Flood		April 2006	Flooding of Dry Creek
Wildfire		August 2008	Oregon Trail Fire in SE Boise
Flood		December 2009	Flooding of Boise River in Boise
Flood		May 2012	\$40,145 Flooding of Little Pioneer Irrigation Ditch
Flood		April 2014	Flooding of Dry Creek
Landslide		February 2016	Alto Via Court Closed by Commission

## 8.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities of the jurisdiction include:

- The ACHD Adams Yard and Headquarters are both in close proximity, although out of the floodplain, to the Boise River. A significant flood event (greater than the 100 year event) or a dam inundation event could compromise these facilities.
- Both of ACHD's maintenance facilities are south of the Boise River. Without substantial prior notice, ACHD would not be able to stage equipment and vehicles accordingly.

## 8.9 HAZARD RISK RANKING

Table 8-6 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	45	High
2	Earthquake	36	High
3	Severe Weather	33	High
4	Landslide	16	Medium
5	Dam Inundation	15	Medium
6	Drought	9	Low
7	Volcano	6	Low
8	Wildfire	0	Low

## 8.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 8-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 8.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 8-8 lists the actions that make up the Ada County Highway District hazard mitigation action plan. Table 8-9 identifies the priority for each action. Table 8-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

## 8.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The Action ACHD 8 incorporates one of the necessary pieces of information ACHD is seeking to help evaluate our bridge structure elevations relative to the 100 year flood water surface elevation. This data, combined with more current LIDAR mapping of the river and the new FEMA flood maps, should help ACHD determine needs and priorities to assess the river crossing structures.

**Table 8-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<p><b>ACHD 1—Pintail/Drake/Widgeon Flooding.</b> Partner with DD4. Ongoing flooding problem for 10+ years. Vactor truck must pump during routine storms. Storm drain under capacity, two 18" pipes converge and leave as one 18". ACHD is initiating topographic surveys to look at solutions.</p> <p><i>Comment:</i> ACHD needs to obtain permanent easements for further repairs. HOA fixed some issues and flooding is improved.</p>		X	
<p><b>ACHD 2—Dry Creek Bridge @ Floating Feather, w/o Eagle Road Replacement.</b> Replace structure to increase freeboard and reduce restriction on Dry Creek.</p> <p><i>Comment:</i> Bridge is only 24 years old with a sufficiency rating of 82 (out of 100). Replacing Bridge #35 (north of Old Barn) at Eagle Road in Fiscal Year 2017.</p>			X
<p><b>ACHD 3—Meridian Culvert Replacements.</b> Partner with City of Meridian. Nine Mile Creek at: E. Watertower Lane, E. Franklin Road, N. Meridian Road, N. Ten Mile Road, W. Ustick Road. Ten Mile Creek at: Locust Grove Road. Eight Mile Creek at: Overland Road. Five Mile Creek at: S. Topaz Avenue, S. Rackham Way, S. Eagle Road, S. Wells Street, E. Pine Street, E. Badley Avenue.</p> <p><i>Comment:</i> Nine Mile at Watertower – This will be done when future development happens in the area. No current work planned. Nine Mile at Franklin – No current work planned. Installed storm drain in 2nd Street to Bower in 2004 to relieve capacity problems. Nine Mile at Meridian – Bridge #124X was replaced and upsized with an aluminum CMP with the Meridian Split Corridor 2 Project in 2013. The pipe also has a concrete slab over it. Nine Mile at Ten Mile – Bridge #113P was replaced in 2015 and upsized to a 95" x 67" elliptical aluminum pipe. Nine Mile at Ustick – This will be done with a future ACHD project within the next 10 years. Ten Mile at Locust Grove – Bridge #229 was built in 1985 and has a rating of 72 (out of 100). It is part of the IFYWP and will be reconstructed in 2019-2020. Eight Mile at Overland – No current work planned. Five Mile at Topaz – It is part of the IFYWP and will be reconstructed in 2019-2020. Five Mile at Jade – It is part of the IFYWP and will be reconstructed in 2019-2020. Five Mile at Rackham – This will require a partnership with ITD. No current work planned. Five Mile at Wells – Bridge #261 was built in 1965 and has a rating of 81.8 (out of 100). It will be replaced in the next 10-15 years. Five Mile at Pine – this is getting replaced with the Pine – Locust Grove to Main Project in 2018-2019. Five Mile at Badley – Bridge #133 is a 10' CMP built in 1998 with the Sterling Subdivision. It has a rating of 91.8 (out of 100). No current work planned.</p>		X	
<p><b>ACHD 4—Snowflake and Crocus (Lakewood Sub, SE Boise) Realign storm drain</b> from the back yards to the street and increase the pipe size to reduce restrictions. Ongoing problem for ACHD Drainage Crew. Vactor truck must pump during routine storms.</p> <p><i>Comment:</i> ACHD worked with HOA to explain and execute how over-watering has negatively affected this issue. HOA is getting better at reducing over-watering.</p>		X	
<p><b>ACHD 5—Pave Dry Creek Road from SH 55 to Seaman's Gulch Road.</b></p> <p><i>Comment:</i> Completed in August 2011.</p>	X		
<p><b>ACHD 6—Create a Storm Water Utility.</b></p> <p><i>Comment:</i> The internal planning process is underway.</p>		X	
<p><b>ACHD 7—Remove sediment from all public street storm water ponds (approx. 642).</b></p> <p><i>Comment:</i> Added one new Vactor truck and five new full time employees to staff in October 2015. Adding another Vactor truck in Fiscal Year 2017. Ongoing cleaning of ACHD storm water ponds.</p>		X	
<p><b>ACHD 8—Support county-wide initiatives identified in Volume 1.</b></p> <p><i>Comment:</i> Ongoing.</p>		X	
<p><b>ACHD 9—Continue to support the implementation, monitoring, maintenance, and updating of the Plan as defined in Volume 1.</b></p> <p><i>Comment:</i> Ongoing.</p>		X	

**Table 8-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>ACHD 1—Pintail/Drake/Widgeon Flooding</b>						
Existing	Flood, Severe Weather	2,3,9	ACHD and DD4	Low	ACHD Funds	Short Term
<b>ACHD 2—Meridian Culvert Replacements</b>						
Existing	Flood, Severe Weather	1,2,3,4,9,10	ACHD and City of Meridian	High	ACHD Funds, City of Meridian Funds, Federal Grants	Long Term
<b>ACHD 3—Snowflake and Crocus Pipe Realignment</b>						
Existing	Flood, Severe Weather	2,3,9	ACHD	Low	ACHD Funds	Short Term
<b>ACHD 4—Create a Storm Water Utility</b>						
Existing and New	Flood, Severe Weather, Drought	1,2,3,4,5,6,9,10	ACHD, Boise, Meridian, Star, Eagle, Kuna, Ada County, and Drainage Districts	High	ACHD Funds, City and County Funds, Federal Grants	Long Term
<b>ACHD 5—Remove sediment from all public street storm water ponds</b>						
Existing and New	Flood, Severe Weather	1,2,3,9,10	ACHD	Medium	ACHD Funds	Short Term
<b>ACHD 6—Support county-wide initiatives identified in Volume 1.</b>						
Existing and New	All Hazards	1,2,3,4,5,6,7,8,9,10	ACHD	Low	ACHD Funds, Staff Time	Short Term
<b>ACHD 7—Continue to support the implementation, monitoring, maintenance, and updating of the Plan as defined in Volume 1.</b>						
Existing and New	All Hazards	1,2,3,4,5,6,7,8,9,10	ACHD	Low	ACHD Funds, Staff Time	Short Term
<b>ACHD 8—Survey Boise River bridge structures and compare to 100 year flood water surface elevation.</b>						
Existing	Flood, Severe Weather, Dam Inundation	2,3,10	ACHD	Low	ACHD Funds	Short Term
<b>ACHD 9—Eckert Road Bridges #2147 and #2148 replacement over the Boise River.</b>						
Existing	Existing	Existing	Existing	Existing	Existing	
<b>ACHD 10—Fairview Avenue Bridges #2196 and #2197 replacement over the Boise River.</b>						
Existing	Existing	Existing	Existing	Existing	Existing	
<b>ACHD 11—Linder Road Bridges #1078, #2035, and #2036 replacement over the Boise River.</b>						
Existing	Existing	Existing	Existing	Existing	Existing	
<b>ACHD 12—Relocate ACHD Traffic Management Center to a new location (to be decided) outside of floodplain.</b>						
Existing and New	Existing and New	Existing and New	Existing and New	Existing and New	Existing and New	
<b>ACHD 13—Gowen Road Bridge #2173 over the New York Canal.</b>						
Existing	Existing	Existing	Existing	Existing	Existing	
<b>ACHD 14—Develop and implement more Green Stormwater Infrastructure standards to stabilize slopes and drainage facilities and prevent erosion.</b>						
Existing and New	Existing and New	Existing and New	Existing and New	Existing and New	Existing and New	

**Table 8-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
1	3	Medium	Low	Yes	Yes	Yes	Medium	Medium
2	6	High	High	Yes	Yes	No	Low	High
3	3	Medium	Low	Yes	Yes	Yes	Medium	Medium
4	8	Low	High	No	Yes	No	Low	Medium
5	5	High	Medium	Yes	No	No	High	Low
6	10	High	Low	Yes	Yes	Yes	High	High
7	10	High	Low	Yes	Yes	Yes	High	High
8	3	Medium	Low	Yes	Yes	Yes	Medium	Medium
9	5	High	Medium	Yes	Yes	No	Low	High
10	5	High	Medium	Yes	Yes	No	Low	High
11	5	High	High	Yes	Yes	No	Low	High
12	5	High	Low	Yes	Yes	Yes	Medium	High
13	5	High	Low	Yes	Yes	Yes	High	Low
14	4	Low	Low	Yes	No	Yes	High	Medium

a. See the introduction to this volume for explanation of priorities.

**Table 8-10. Analysis of Mitigation Actions**

Action Addressing Hazard, by Mitigation Type <sup>a</sup>						
Hazard Type	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 6, ACHD 7, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13, ACHD 14	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13, ACHD 14	ACHD 4, ACHD 5, ACHD 6, ACHD 12, ACHD 14	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 13, ACHD 14	ACHD 2, ACHD 12	ACHD 2, ACHD 4, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13
Earthquake	ACHD 6, ACHD 7		ACHD 6			
Severe Weather	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 6, ACHD 7, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 14	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 14	ACHD 4, ACHD 6, ACHD 12, ACHD 14	ACHD 1, ACHD 2, ACHD 3, ACHD 4, ACHD 5, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 14	ACHD 2, ACHD 12	ACHD 2, ACHD 4, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12
Landslide	ACHD 6, ACHD 7, ACHD 14	ACHD 14	ACHD 6, ACHD 14	ACHD 14		
Dam Inundation	ACHD 6, ACHD 7, ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13	ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13	ACHD 6, ACHD 12	ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 13	ACHD 12	ACHD 8, ACHD 9, ACHD 10, ACHD 11, ACHD 12, ACHD 13
Drought	ACHD 4, ACHD 6, ACHD 7, ACHD 14	ACHD 4, ACHD 14	ACHD 4, ACHD 6, ACHD 14	ACHD 4, ACHD 14		ACHD 4
Volcano	ACHD 6, ACHD 7		ACHD 6			
Wildfire	ACHD 6, ACHD 7, ACHD 14	ACHD 14	ACHD 6, ACHD 14	ACHD 14		

a. See the introduction to this volume for explanation of mitigation types.



## 9. DRAINAGE DISTRICT #4

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### 9.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### **Primary Point of Contact**

Mike Dimmick, Board Chair  
455 S. Third St., P.O. Box 2773  
Boise, Idaho 83701  
Telephone: 208-342-4591  
Fax: 208-342-4657  
e-mail Address: arls@ringertlaw.com

#### **Alternate Point of Contact**

Bryce Farris, Attorney at Law  
455 S. Third St., P.O. Box 2773  
Boise, Idaho 83701  
Telephone: 208-342-4591  
Fax: 208-342-4657  
e-mail Address: arls@ringertlaw.com

### 9.2 JURISDICTION PROFILE

#### 9.2.1 Overview

Drainage District #4 (District) is a Drainage District formed in 1924. It is considered a quasigovernmental entity under Idaho law and assesses its landowners pursuant to the provisions in Chapter 29, Title 42 of the Idaho Code. The District is governed by a 3 member Board, (Board) with a Chair, and each Board member is appointed to a 3 year term.

The District oversees the maintenance of a drainage, detention and /determent infrastructure to control waste (ground/surface runoff) water and reduce flooding risk. The District's jurisdiction encompasses approximately 2,600 acres, located within Ada County, Idaho. The District boundary includes a portion of Garden City south of the Boise River, extending approximately 4.5 miles west of Garden City limits to include an area of Ada County south of city of Eagle to Eagle Island State Park.

District funding comes from assessments paid by landowners within the boundaries of the District. The District has no permanent employees and relies on the Board or independent contractors to perform duties as required. The Board is paid per diem, consisting of mileage and a daily rate when actually performing duties for the District. The District has no equipment and hires contractors to perform construction/maintenance work as needed.

#### 9.2.2 Service Area and Trends

The district serves a population of approximately 16,525 (estimated 13% increase from last Plan Update) Its service area covers an area of 2,600 acres, which has a total value of \$5,648,155 (up estimated 13% from last Plan Update).

Land use designations allow for an increase in light commercial, medium residential and Special Opportunity land uses within the service area. Much of this increase will replace existing large open undeveloped land and farm tracts. The increase in land use density will increase impermeable surfaces within our service area and reduce rain water absorption. This increase in water flow will, in turn, increase demand on waste water/flood control structures. The rate of development activity in the near long term will likely be driven by the impact of the national economic downturn.

### 9.2.3 Assets

Table 9-1 summarizes the critical assets of the district and their value.

Table 9-1. Special Purpose District Assets	
Asset	Value
<b>Property</b>	
The District does not own any land outright, but does own water rights, ditch rights and easements for the ditches existing to drain water within the District boundary. (750 Minor inches of water rights X \$1,000/inch)	\$_750,000
<b>Critical Infrastructure and Equipment</b>	
The District does not own any Equipment. Bridges and pipes placed in/over the ditch are owned by and are the responsibility of the entity constructing/installing the structure.	
<b>Critical Facilities</b>	
None	

## 9.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Idaho Department of Public Health
- Environmental Protection Agency
- Idaho Code of Regulations
- Regulatory permits
- Ada County Multi-Hazard Mitigation Plan
- Garden City Code
- Ada County Code
- Ada County Flood Plan
- Idaho State Hazard Mitigation Plan

## 9.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 9-2. An assessment of administrative and technical capabilities is presented in Table 9-3.

Table 9-2. Fiscal Capability	
Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Other	N/A

Tax assessment for property owners within the District boundaries to pay District management costs.

**Table 9-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	None on staff. Can contract for Service
Engineers or professionals trained in building or infrastructure construction practices	No	None on staff. Can contract for Service
Planners or engineers with an understanding of natural hazards	No	None on staff. Can contract for Service
Staff with training in benefit/cost analysis	No	None on staff. Can contract for Service
Surveyors	No	None on staff. Can contract for Service
Personnel skilled or trained in GIS applications	Yes	COMPASS
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	ACEM
Grant writers	No	None on staff. Can contract for Service
Other	N/A	

## 9.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 9-4.

**Table 9-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes  3 member board
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes  Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 9.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 9.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- DD4 plans to continue participation in the Ada County Multi-Hazard Mitigation Plan process in order to monitor risk and develop actions to reduce risk as outlined in the Multi-Hazard Mitigation Plan.

## 9.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Plan to combine DD4 and Drainage District #2, which will cover a much larger area in Ada County. This larger District will have a significant impact on hazard mitigation for a higher volume of the population in Ada County.

## 9.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 9-5 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood	N/A	5/15-24/1998	Homes evacuated. 1' water
Flood	N/A	9/11/1997	\$57,000 rain on old 1996 fire area
Severe Weather	N/A	3-7/1997	\$50,000,000 river levee breach
Severe Weather	N/A	1/1-5/1997	\$65,000,000 mud/landslides
Flood	N/A	5/17/1996	\$5,000
Severe Weather	N/A	12/1/1994	\$1,136.36 heavy rain/snow
Flood	N/A	6/25/1992	\$50,000 flash flood
Flood	N/A	1/12/1991	\$7,142.86 urban flooding
Severe Weather	N/A	6/1983	\$146,900 snowmelt "50 yr. flood"
Severe Weather	N/A	2/1982	Ice flow flooding
Flood	N/A	1/11/1979	\$50,000 mudslides
Severe Weather	N/A	6/8/1976	\$5,000 heavy rain/flooding
Severe Weather	N/A	9/11/1976	\$125 heavy rain
Severe Weather	N/A	7/1975	\$2,363 wind/heavy rain
Severe Weather	N/A	1/7/1995	\$1,136.36 heavy rain/snow
Severe Weather	N/A	5/1965	\$1500 300 ac. Farmland flooded
Challis Earthquake	N/A	1983	N/A

## 9.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Localized minor flooding due to debris clogging pipes/ditches following major rain events.

## 9.9 HAZARD RISK RANKING

Table 9-6 presents the ranking of the hazards of concern.

**Table 9-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	54	High
2	Flood	42	High
3	Earthquake	28	Medium
4	Dam failure	18	Medium
5	Wildfire	12	Low
6	Volcano	6	Low
7	Drought	0	Low
8	Landslide	0	Low

## 9.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 9-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 9-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #—1</b> Initiate a community meeting with representatives from DD4, ACHD, HOA etc. to discuss flooding issues at Willowdale/Pintail streets. In Garden City <i>Comment: HOA is building a fund to help pay for moving the drain under the streets in the future..</i>	X		
<b>Action #—2</b> Assist ACHD and HOAs in identifying options for reducing repeated flooding of Willowdale and Pintail streets. <i>Comment: Engineering is completed. Grant was unsuccessfully applied for. Significant blockages were removed.</i>	X		
<b>Action #3</b> HOA and ACHD select an engineering option to mitigate recurring flooding in the Willowdale/Pintail streets. Area. <i>Comment: Stakeholders selected the option to move the drain under existing streets in order for ACHD to have access in order to monitor and clean the drains when needed.</i>	X		
<b>Action #4</b> Provide coordination with ACHD and HOAs to ensure compliance with Ch. 29, Title 42 of the Idaho Code while performing any modifications that may impact DD4's area of responsibility		X	
<b>Action #5</b> Retrofit drain structure/system in the area of Willowdale/Pintail streets. In Garden City, Idaho in order to provide flooding relief for homeowners and ACHD. <i>Comment: With the removal of some blockages, this item has a lower priority until shared funds have been secured to pay for moving the structure/system.</i>		X	
<b>Action #6</b> Complete a study of DD4 to identify ditch capacity, restriction points, hazard areas and update boundary. <i>Comment: Partial completion of a master map to identify license agreements and responsible parties has been completed. Still need to complete a study of the capacity, restriction points and hazard areas.</i>		X	
<b>Action #—7</b> Support County-wide initiatives identified in Volume 1.		X	
<b>Action #8</b> Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.		x	

## 9.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 9-8 lists the actions that make up the Drainage District #4 hazard mitigation action plan. Table 9-9 identifies the priority for each action. Table 9-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 9-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #</b> —Provide coordination between DD4, ACHD and HOAs to ensure compliance with Ch. 29, Title 42 of the Idaho Code while performing any modifications that may impact DD4’s area of responsibility.						
EX-1	Flooding	1,3,9	DD4/ACHD	Low	In-house budgets	Long term
<b>Action #</b> —Retrofit drain structure/system in the areas of Willowdale/Pintail streets in Garden City, Idaho in order to provide flooding relief for homeowners and ACHD.						
EX-2	Flooding	1,3,9	DD4/ACHD	Medium	Combined DD4/ACHD/HOA	Long term
<b>Action #</b> —Complete a study of the Drainage District to identify ditch capacity, restriction points, hazard areas, and District boundary.						
EX-3	Flooding	2,4,8,10	DD4	Low	In house budget	Short term
<b>Action #</b> —Support County-wide initiatives identified in Volume 1.						
EX-4	Flooding	All Hazards	DD4	Low	In house budget	Ongoing
<b>Action #</b> —Continue to support the implementation, monitoring, maintenance and updating of this Plan, as defined in Volume 1.						
EX-5	Flooding	All Hazards	DD4	Low	In house budget	Ongoing

**Table 9-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
EX-3	4	Medium	Low	Yes	No	Yes	Medium	Low
EX-1	3	High	Medium	Yes	No	No	Medium	Low
EX-2	3	Medium	Low	Yes	No	Yes	Medium	Low
EX-4	10	Low	Low	Yes	No	Yes	Low	Low
EX-5	10	Medium	Low	Yes	No	Yes	Medium	Low

a. See the introduction to this volume for explanation of priorities.

**Table 9-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	EX-3, EX-4, EX-5	EX-2, EX-3	EX-1, EX-4, EX-5	EX-3	EX-3, EX-4, EX-5	EX-3
Drought	EX-4, EX-5	EX-3	EX-4, EX-5		EX-4, EX-5	EX-3
Earthquake	EX-3, EX-4, EX-5	EX-3	EX-4, EX-5		EX-3	EX-3
Flood	EX-1, EX-2, EX-3, EX-4, EX-5	EX-1, EX-2, EX-3, EX-4, EX-5	EX-1, EX-3	EX-3	EX-3, EX-4, EX-5	EX-3
Landslide	EX-3	EX-3	EX-3, EX-4, EX-5	EX-3	EX-3	EX-3
Severe Weather	EX-1, EX-2, EX-3, EX-4, EX-5	EX-2, EX-3, EX-4, EX-5	EX-1, EX-4, EX-5	EX-3	EX-3	EX-3
Volcano	EX-5	EX-3	EX-4, EX-5		EX-3, EX-4, EX-5	EX-3
Wildfire	EX-4, EX-5	EX-3, EX-4, EX-5	EX-3		EX-3, EX-4, EX-5	EX-3

a. See the introduction to this volume for explanation of mitigation types.



# 10. EAGLE FIRE PROTECTION DISTRICT

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## 10.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Mike Winkle, Fire Chief  
1119 E. State St. Suite 240  
Eagle, ID 83616  
Telephone: 208-939-6463  
e-mail Address: mwinkle@eaglefire.org

### Alternate Point of Contact

Jamie Vincent, Deputy Chief  
1119 E. State St. Suite 240  
Eagle, ID 83616  
Telephone: 208-939-6463  
e-mail Address: jvincent@eaglefire.org

## 10.2 JURISDICTION PROFILE

### 10.2.1 Overview

Eagle Fire Protection District (EFD) provides fire suppression, EMS, hazardous materials mitigation, and rescue services. The District is a mix of urban, rural, interface and wildland areas. The department employs 44 Career personnel and 44 volunteer firefighters who respond to approximately 1600 calls for service per year. The Eagle Fire Protection District is located in the North East corner of Ada County. The District provides service to the City of Eagle and unincorporated areas of Ada, Boise, and Gem Counties. The District is bordered by Boise to the south, Garden City to the east, and the Star Joint Fire Protection District to the west. A three-member Board of Commissioners governs this District and will assume the responsibility for the adoption and implementation of this plan.

### 10.2.2 Service Area and Trends

The district serves a population of 25,000 as of 2010. Its service area covers an area of approximately 92 square miles which has a total value of \$3,607,176,806.

The Eagle Fire Protection District has experienced an average 4% annual growth over the last five years. The District's call volume has averaged 1,669 calls per year during this same time period. The District anticipates an increase in new home construction starts in the future. However, we predict calls for service will increase reaching approximately 2,358 per year by 2020

### 10.2.3 Assets

Table 10-1 summarizes the critical assets of the district and their value.

**Table 10-1. Special Purpose District Assets**

<b>Asset</b>	<b>Value</b>
<b>Critical Infrastructure and Equipment</b>	
Four Type 1 Engines	\$1,200,000
One 85' Quint Platform	\$1,000,000
One Heavy Rescue	\$850,000
One Water Tender	\$175,000
Four Type 6 Engines	\$210,000
Six Command Vehicles	\$100,000
One Water Rescue Unit	\$150,000
<b>Total:</b>	<b>\$3,685,000</b>
<b>Critical Facilities</b>	
EFD Station #1—966 E. Iron Eagle Dr.	\$2,500,000
EFD Station #2—3180 E. Floating Feather Rd	\$1,000,000
EFD Station #3—825 N. Cactus Creek	\$1,500,000
<b>Total:</b>	<b>\$5,000,000</b>

### 10.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Ada County Flood Response Plan, 2014
- Ada County Wildfire Response Plan, 2014
- The District must adhere to all applicable codes and regulations enforced by federal, state and local authorities with a sphere of influence within the District service area. This would include the 2012 edition of the International Fire Code as adopted by the State of Idaho.

### 10.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 3/8. This rating was achieved in July, 2009. An assessment of fiscal capabilities is presented in Table 10-2. An assessment of administrative and technical capabilities is presented in Table 10-3.

**Table 10-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Other	Yes Mitigation Fees collected from developers

**Table 10-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/ Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	N/A
Engineers or professionals trained in building or infrastructure construction practices	No	N/A
Planners or engineers with an understanding of natural hazards	No	N/A
Staff with training in benefit/cost analysis	No	N/A
Surveyors	No	N/A
Personnel skilled or trained in GIS applications	No	N/A
Scientist familiar with natural hazards in local area	No	N/A
Emergency manager	No	N/A
Grant writers	No	N/A
Other	N/A	

## 10.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 10-4.

**Table 10-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Links on website to Firewise, NFPA
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Links on website to Facebook and twitter
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No N/A
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 10.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 10.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Ada County Wildfire Response Plan

- Ada County Flood Response Plan

## 10.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- All future updates to plans and programs identified in 10.6.1.

## 10.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 10-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 10-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildland Fire	N/A	5/2/2015	Fire southeast of Avimor above the WWTP
Flood	N/A	2/14/2014	Flooded areas around homes and threatened Beacon Light Road
Wildland Fire	N/A	7/20/2014	North of Spring Valley Ranch threatened wildlife habitat, multiple agency responded
Severe Weather	N/A	9/5/2013	Severe weather storm hit the area. Cause a tree to blow down on an occupied vehicle and two homes being struck by lightning depleting resources
Wildland Fire	N/A	9/5/2013	Wild fire threatening the Jasmine Mine.
Wildland Fire	N/A	8/15/2013	Fire on Spring Creek Road threatened numerous home and power transmission lines, multiple agencies responded
Wildland Fire	N/A	7/16/2013	Numerous homes threatened by wind driven fire, was resource intensive, depleted resources. Multiple agencies responded
Wildland Fire	N/A	7/4/2013	Foothills North of Eagle threatened numerous homes, multiple agencies responded.
Wildland Fire	N/A	8/24/2012	Fire West of Willow Creek road threatening several homes.
Wildland Fire	N/A	7/22/2012	Fire East of Willow Creek road threatening power lines.
Flood	N/A	5/4/2012	Flood threatened numerous home Eagle Island and west of Linder Rd. multiple agency response or several days

## 10.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Not applicable

## 10.9 HAZARD RISK RANKING

Table 10-6 presents the ranking of the hazards of concern.

## 10.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 10-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 10-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	54	High
2	Wildland Fire	36	High
3	Earthquake	32	High
4	Severe Weather	27	Medium
5	Dam Inundation	18	Medium
6	Landslide	12	Low
7	Drought	6	Low
8	Volcano	6	Low

**Table 10-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #-EFD01 <i>Comment: Continue to provide Public Education to neighborhoods, schools and community via webpages and outreach</i>		X	
Action #—EFD02 <i>Comment: Partner with healthy Hills Coalition develop demonstration areas using low bio-mass native vegetation that will decrease fire spread and damage from wildland fire.</i>	X		
Action #—EFD03 <i>Comment: To reduce the determined vegetation which can fuel a rapid spreading wildland fire through the means of mechanical mowing of invasive grass and brush in the wildland urban interface.</i>		X	
Action #—EFD04 <i>Comment: Partnering with adjoining jurisdictions in purchasing specialized equipment to reduce and eliminate invasive grasses through the means of applying herbicides and replanting of fire resistant native plant species in the wildland urban interface</i>		X	
Action #—EFD05 <i>Comment: Partnering with adjoining jurisdiction rehabilitate areas impacted by wildfire for wildlife while sustaining access to recreational trails and to prevent erosion.</i>		X	
Action #—EFD06 <i>Comment: Partner with Federal agencies to install electronic flow monitoring stations on the North Channel of the Boise River Eagle Rd Bridge and Dry Creek Drainage at the Eagle Rd. Bridge. Both monitoring stations shall be capable of feeding data to USGS stream flow web site, or other applicable collection sources.</i>		X	
Action #—EFD07 <i>Comment: Host a Community wide open house to increase public awareness of all hazards within the Eagle Fire Protection District and response capabilities of the jurisdiction.</i>		X	
Action #—EFD08 <i>Comment: Partner with appropriate local authorities to establish right-of-way and construct a roadway that will allow access on to State Highway 44 from Plaza Dr. to enhance response capabilities for the Eagle Fire Department and Ada County Sheriff's Department.</i>		X	
Action #—EFD09 <i>Comment: Support County wide initiatives identified in Volume 1</i>		X	
Action #—EFD10 <i>Comment: Continue to support the implementation, monitoring, maintenance, and updating of the Plan as defined in Volume 1.</i>		X	

## 10.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 10-8 lists the actions that make up the Eagle Fire Protection District hazard mitigation action plan. Table 10-9 identifies the priority for each action. Table 10-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 10-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action#-EFD01-</b> Continue to provide fire safety, fire prevention and FireWise education to neighborhoods, schools and community via web pages, signage and outreach.						
Existing & New	Wildfire	8,9	Eagle Fire	Low	Firewise Grant Local Funding	Short
<b>Action #—EFD02-</b> Reduce the determined vegetation which can fuel a rapid spreading wildland fire through the means of mechanical mowing of invasive grass and brush in the wildland urban interface						
Existing & New	Wildfire	2,8,9	Eagle Fire	High	PDM, AFG, Local Funding	Long
<b>Action #—EFD03-</b> Partnering with adjoining jurisdictions in purchasing specialized equipment to reduce and eliminate invasive grasses through the means of applying herbicides and replanting of fire resistant native plant species in the wildland urban interface.						
Existing & New	Wildfire	2,8,9	Eagle Fire	Medium	PDM, local Funding	Long
<b>Action #—EFD04-</b> Partnering with adjoining jurisdictions to rehabilitate areas impacted by wildfire for wildlife while sustaining access to recreational trails and to prevent erosion						
Existing & New	Wildfire, Landslide	2,8,9	Eagle Fire	Medium	PDM, Local Funding	Long
<b>Action #—EFD05-</b> Partner with Federal agencies to install electronic flow monitoring stations on the North Channel of the Boise River Eagle Rd. Bridge and Dry Creek Dry Creek drainage at Eagle Rd. Bridge.						
Existing & New	Flood	1,2,7,10	Eagle Fire Federal Partners	High	PDM,	Long
<b>Action #—EFD06-</b> Host a community wide open house to increase public awareness of all hazards within the Eagle Fire Protection district and response capabilities of the jurisdiction.						
Existing & New	All Hazards	8	Eagle Fire	Low	Local Funding	Short
<b>Action #—EFD07-</b> Partner with appropriate local authorities to establish right-of-way and construct a roadway that will allow access on to State Hwy 44 from Plaza Dr. to enhance the response capabilities for the Eagle Fire Dept. and Ada County Sheriff’s Dept.						
Existing & New	All Hazards	1,9,10	Eagle Fire City of Eagle, ACHD, ITD	High	Local Funding	Short
<b>Action #—EFD08-</b> Support County wide initiatives identified in Volume 1						
Existing & New	All Hazards	All	Eagle Fire, ACEM	Low	District Funds	Short
<b>Action #—EFD9-</b> Continue to support the implementation, monitoring, maintenance, and updating of the plan, as defined in Volume 1						
New & Existing	All Hazards	All	Eagle Fire, ACEM	Low	District Funds, FEMA Mitigation Grant Funding	Short

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #-EFD10-</b> Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.						
New and Existing	Wildfire	1, 6, 9, 10	Eagle Fire, ACEM	Low	District Funds	On-going

**Table 10-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
EFD01	2	Medium	Low	Yes	Yes	Yes	High	Medium
EFD02	3	High	High	Yes	Yes	No	Medium	Medium
EFD03	3	Medium	Medium	Yes	Yes	No	Medium	Medium
EFD04	3	Medium	Medium	Yes	Yes	No	Low	Low
EFD05	4	High	Medium	Yes	Yes	No	High	High
EFD06	1	Medium	Low	Yes	Yes	Yes	High	Low
EFD07	3	High	Medium	Yes	Yes	Yes	High	Low
EFD08	All	High	Low	Yes	No	Yes	High	Low
EFD09	All	High	Low	Yes	No	Yes	High	Low
EFD10	4	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

**Table 10-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	EFD08, EFD9	EFD08	EFD06, EFD07EFD09	EFD06	EFD06, EFD08	
Wildland Fire	EFD08, EFD09, EFD10	EFD03, EFD08, EFD10	EFD01, EFD02, EFD03, EFD07, EFD09, EFD10	EFD03, EFD04, EFD05, EFD08, EFD10	EFD03, EFD04, EFD08, EFD10	
Earthquake	EFD08, EFD09	EFD08	EFD07, EFD09			
Severe Weather	EFD08, EFD09	EFD08	EFD07, EFD09		EFD08	
Dam Inundation	EFD08, EFD09	EFD08	EFD07, EFD09			
Landslide	EFD09		EFD07, EFD09	EFD05		
Drought	EFD09		EFD07, EFD09			
Volcano	EFD09		EFD07, EFD09			

a. See the introduction to this volume for explanation of mitigation types.



# 11. EAGLE SEWER DISTRICT

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## 11.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Lynn Moser, General Manager  
44 N Palmetto Ave  
Eagle, ID 83616-5149  
Telephone: (208) 939-0132  
e-mail Address: Lmoser@eaglesewer.com

### Alternate Point of Contact

R.J. Lake, Operations Manager  
44 N Palmetto Ave  
Eagle, ID 83616-5149  
Telephone: (208) 939-0781  
e-mail Address: rjleagle@yahoo.com

## 11.2 JURISDICTION PROFILE

### 11.2.1 Overview

The Eagle Sewer District (District) receives its operating authority from Idaho State Code, Title 42, Chapter 32, Sections 43-3201 to 42-3238. The District was created on December 30, 1963 in response to a need for central sewer service and currently provides service for an area that generally coincides with the City of Eagle's impact area. A five-member elected Board of Directors governs the District. The District's current service area is bounded by Highway 16 on the West, Homer Road on the North, Highway 26 on the South and Highway 55 and Old Horseshoe Bend Road on the East. This service area essentially mirrors the City of Eagle's impact area.

Eagle Sewer District currently treats wastewater in lagoons and then pumps the treated effluent to the City of Boise's West Boise Wastewater Treatment Facility for further treatment and discharge to the Boise River. For this treatment, the Eagle Sewer District now purchases capacity in the West Boise Wastewater Treatment Facility and pays monthly charges that are based on the amount of flow, organic load, solids load and ammonia load.

Sewer lift stations serve as a central point of collection for gravity sewer lines. The raw sewage is conveyed by gravity to these collection points and the lift stations pressurize and lift the sewage either into other gravity collection lines or push the flow directly to the wastewater treatment plant. The District currently owns seven lift stations located on Conover Street, Mace Road, Old Valley Road, North Meridian Road, Lakemoor Subdivision, Legacy Subdivision and Palmer Lane.

The Eagle Sewer District operates almost exclusively on user fees. A small amount is also levied on property taxes to pay for the District's operation and maintenance costs and the property and administrative liability insurance.

### 11.2.2 Service Area and Trends

The district serves a population of 18,500 as of 2015. Its service area covers an area of 35 square miles, which has a total market value (including occupancy rolls) of \$5,857,755,422.

Population trends used to estimate future population of the Eagle Sewer District service area can be approximated by utilizing existing population studies completed for the City of Eagle. From 1990 to 2007, the City of Eagle experienced a six-fold increase in population, but from 2008 to 2013 the local residential housing market experienced a significant downturn. In recent years, the housing market has increased significantly and the District has noted an increase in the number of new customers. For example, in fiscal year 2014, the Eagle Sewer District issued 460 new sewer connections, in 2015, that number jumped to 529. Through May 20, 2016 the District has issued 250 new sewer connections.

The Community Planning Association of South West Idaho (COMPASS) has projected the population of Eagle to increase by approximately 10,700 people by 2025 (2.9 percent increase) while the City of Eagle’s own Comprehensive Plan predicts a much larger population increase and anticipates an additional 25,000 people living in Eagle by 2025 (5.5 percent increase). If the City of Eagle Comprehensive Plan growth percentage is used, the estimated population served by the Eagle Sewer District will be approximately 45,000 by 2025.

### 11.2.3 Assets

Table 11-1 summarizes the critical assets of the district and their value.

Asset	Value
<b>Property</b>	
103.25 acres of land	\$7,744,000
<b>Critical Infrastructure and Equipment</b>	
Effluent Transmission Pipeline	\$2,101,000
Approximately 156 miles of pipe throughout District	\$82,368,000
Operations & Maintenance Vehicles	\$670,600
<b>Total:</b>	<b>\$85,141,600</b>
<b>Critical Facilities</b>	
District Office	\$500,000
Wastewater Treatment Facility	\$13,246,200
Operations Facility	\$252,000
Mace Road Lift Station	\$1,500,000
East Side Lift Station	\$243,700
Lakemoor Lift Station	\$681,800
Old Valley Lift Station	\$383,500
Legacy Lift Station	\$450,000
Palmer Lane Lift Station	\$4,549,500
North Meridian Lift Station	\$350,000
<b>Total:</b>	<b>\$22,156,700</b>

## 11.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Clean Water Act
- Endangered Species Act
- Idaho Department of Environmental Quality
- U.S. Environmental Protection Agency

- Idaho Administrative Code
- Idaho Administrative Procedure Act
- Wastewater Treatment and Facilities Plan (2016)
- Idaho Statewide Implementation Plan
- All other applicable laws, ordinances, codes and policies enforced by federal, state and local authorities with a sphere of influence over the District’s service area.

## 11.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 11-2. An assessment of administrative and technical capabilities is presented in Table 11-3.

**Table 11-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other: LID, CID	Yes

**Table 11-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Contract engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contract engineer
Planners or engineers with an understanding of natural hazards	Yes	Contract engineer
Staff with training in benefit/cost analysis	Yes	Contract engineer
Surveyors	Yes	Contract engineer
Personnel skilled or trained in GIS applications	Yes	Contract engineer
Scientist familiar with natural hazards in local area	Yes	Contract engineer
Emergency manager	Yes	Ada County Emergency Management (ACEM)
Grant writers	Yes	Ability to contract for service

## 11.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 11-4.

**Table 11-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 11.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 11.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- City of Eagle Comprehensive Plan—The 2015 Eagle Comprehensive Plan includes mitigation related policies as they relate to the protection of human life and property from flood events.
- Ada County Wildfire Response Plan—The Wildfire Response Plan for Ada County includes procedures that will mitigate risk to human life and property from a wildfire.

### 11.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Eagle City, Eagle Sewer District, and Eagle Fire District Joint Emergency Operation Plan (EOP)—This joint plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when an EOP is developed.
- Eagle Sewer District Continuity of Operation Plan (COOP)—This plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when a COOP is developed.

## 11.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 11-5 lists all past occurrences of natural hazards within the jurisdiction. No notable damage to District facilities has resulted from natural hazards.

**Table 11-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildfire (foothills)	n/a	7/28/2010	-
Flooding	n/a	6/2-4/1998	-
Flooding	n/a	5/15-28/1998	-
Flooding	n/a	9/11/1997	-
Flooding	DR-1154	1/11/1997	-
Severe Weather	n/a	12/1/1994	-
Flash Flooding	n/a	6/25/1992	-
Drought	n/a	3/1/1992	-
Flooding	n/a	1/12/1991	-
Severe Weather	n/a	2/4/1989	-
Severe Weather	n/a	12/19/1988	-
Drought	n/a	10/31/1988	-
Flooding	n/a	2/1986	-
Flooding	n/a	6/10/1983	-

## 11.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities to the jurisdiction include:

- Areas of WWTP access road below 100-year and 500-year flood elevations susceptible to possible flooding
- Lagoon berm integrity may be compromised in the event of a flood
- Some buildings at the WWTP may be susceptible to flooding
- Access to Mace Lift Station and Old Valley Lift Station may be limited in the event of a flood

## 11.9 HAZARD RISK RANKING

Table 11-6 presents the ranking of the hazards of concern.

**Table 11-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	45	High
2	Severe Weather	33	High
3	Earthquake	32	High
4	Dam Inundation	18	Medium
5	Landslide	12	Low
6	Drought	9	Low
7	Wildfire	6	Low
8	Volcano	6	Low

## 11.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 11-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 11-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
ESD-1—Mace Road Lift Station Assessment and Flood Protection	X		
ESD-2—Lagoon Berm Evaluation and Stabilization		X	
ESD-3—Headworks Facility Decommission	X		
ESD-4—Raise Portions of the Wastewater Treatment Plant Facility Access Road		X	
ESD-5—Control Building and Outbuilding Berm Option			X
ESD-6—Continue the implementation, monitoring, maintenance, and updating of this Plan		X	
ESD-7—Support County-wide initiatives		X	

### 11.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 11-8 lists the actions that make up the Eagle Sewer District hazard mitigation action plan. Table 11-9 identifies the priority for each action. Table 11-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 11-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p><b>ESD -1—Lagoon Berm Evaluation and Stabilization:</b> High flow velocities during flooding events could potentially cause erosion at the toe of the lagoon berms and, although unlikely, possibly cause structural failure. Perform hydraulic modeling of the river channel and estimate potential for erosion of the lagoon berm. If deemed necessary, the placement of rip-rap and/or other measures would be pursued to reduce lagoon dike erosion.</p>						
Existing	Flood, Severe Weather, Dam Failure	1,3,10	District	High	District Funds, HMGP, PDM, IDWR Flood Safe Initiative	Short-term
<p><b>ESD-2—Raise Portions of the Wastewater Treatment Plant, Mace Lift Station, and Old valley Lift Station access roads:</b> Portions of the road leading to these facilities are below the 100-year and 500-year flood elevations. To ensure that District staff can access wastewater treatment and operation facilities during a flooding event, low sections of access roads should be raised.</p>						
Existing	Flood, Severe Weather, Dam Failure	1,10	District	Low	District Funds, HMGP, PDM, IDWR Flood Safe Initiative	Short-term
<p><b>ESD-3—Control Building and Outbuilding Berm Option:</b> To protect the Operations and several outbuilding at the wastewater treatment site against possible flooding, a small berm might be constructed around the perimeter of this area.</p>						
New and Existing	Flood, Severe Weather, Dam Failure	All	District	Low	District Funds, FEMA Mitigation Grant Funding for 5-year update	Long-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>ESD-4</b> —Develop a Joint Emergency Operation Plan with Eagle City and Eagle Fire District: This plan is necessary to establish a single, comprehensive framework for the management of domestic incidents. The City of Eagle will lead this all-discipline action, but Eagle Sewer District will aid in planning for all hazards.						
New and Existing	All Hazards	All	Eagle City	Medium	City Funds, District Funds, HMGP	Short-term
<b>ESD-5</b> —Develop a Continuity of Operation Plan: This plan will provide specific policies and procedures that will be carried out in the event of an emergency, including localized acts of nature, accidents, and technological or attack-related emergencies. The plan will address how the District will continue to perform essential functions in the event of compromised facilities or leadership, and how the District will return to normal operations.						
New and Existing	All Hazards	All	District	Medium	District Funds, HMGP	Short-term
<b>ESD-6</b> —Support County-wide Initiatives Identified in Volume 1 of the Multi-Hazard Mitigation Plan						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term
<b>ESD-7</b> —Actively Participate in the Plan Maintenance Protocols Outlined in Volume 1 of the Multi-Hazard Mitigation Plan						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term

**Table 11-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
ESD-1	3	High	Medium	Yes	Yes	No	Medium	High
ESD-2	2	Medium	Medium	Yes	Yes	No	Medium	Medium
ESD-3	10	High	High	Yes	Yes	No	Low	Medium
ESD-4	10	High	Medium	Yes	Yes	No	Medium	High
ESD-5	10	High	Medium	Yes	Yes	No	Medium	High
ESD-6	10	Low	Low	Yes	No	Yes	High	Low
ESD-7	10	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

**Table 11-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	ESD-1, ESD-4, ESD-5, ESD-6, ESD-7	ESD-1, ESD-2, ESD-3	ESD-4, ESD-5, ESD-6, ESD-7	ESD-1	ESD-4, ESD-5	ESD-1, ESD-2, ESD-3
Drought	ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5	
Earthquake		ESD-6, ESD-7	ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5	
Flood	ESD-1, ESD-4, ESD-5, ESD-6, ESD-7	ESD-1, ESD-2, ESD-3	ESD-4, ESD-5, ESD-6, ESD-7	ESD-1	ESD-4, ESD-5	ESD-1, ESD-2, ESD-3
Landslide	ESD-4, ESD-5, ESD-6, ESD-7	ESD-6, ESD-7	ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5	
Severe weather	ESD-1, ESD-4, ESD-5, ESD-6, ESD-7	ESD-1, ESD-2, ESD-3	ESD-4, ESD-5, ESD-6, ESD-7	ESD-1	ESD-4, ESD-5	ESD-1, ESD-2, ESD-3
Volcano		ESD-6, ESD-7	ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5	
Wildfire	ESD-4, ESD-5, ESD-6, ESD-7	ESD-6, ESD-7	ESD-4, ESD-5, ESD-6, ESD-7		ESD-4, ESD-5	

a. See the introduction to this volume for explanation of mitigation types.

## 12. FLOOD CONTROL DISTRICT #10

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### 12.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### Primary Point of Contact

William C. Clayton, Chairman  
21622 Travis Rd.  
Wilder, ID 83676  
Telephone: (208) 482-6600  
e-mail Address: bill@claytonreefarm.com

#### Alternate Point of Contact

Mike Dimmick, District Manager  
8941 W. Duck Lake Dr.  
Garden City, ID 83714  
Telephone: (208) 861 2766  
e-mail Address: projectmgr@boiseriver.org

### 12.2 JURISDICTION PROFILE

#### 12.2.1 Overview

Boise River Flood Control District No. 10 is responsible for working to minimize flood damage and to protect and promote the health, safety and general welfare (Idaho Code Section 42-3102). The District was organized on October 13, 1970 through an Order by the Director of the State of Idaho, Department of Water Administration (Idaho Department of Water Resources). The District was formed to “provide control of the Boise River and its tributaries in the affected area to protect life and property, preserve the public health and welfare and conserve and develop natural resources of the State of Idaho” (Order Creating Flood Control District No. 10 of Idaho) as they relate to potential flooding in Ada and Canyon Counties within the District’s boundaries. State law provides the District with statutory authority and responsibility to operate and maintain structural works of improvement for the prevention of floodwater and sediment damages, and to exercise all other powers necessary, convenient or incidental to carry out the provisions of the Flood Control District Act (Idaho Code sections 42-3101—42-3128).

Flood Control District No. 10 has observed continued rapid development along the Boise River within the jurisdictional boundaries. The District believes that land use changes significantly affect flood plain conveyance and storage, affecting individual sites and reaches above and below these sites. Development in the flood plain, combined with lack of channel forming flow events, sediment erosion and deposition, and the growth of gravel bars and associated vegetation, reduces the conveyance capacity of the Boise River and increases flooding risks. The District is also concerned that gravel pits developed adjacent to the banks of the river may be captured by the river during high flows, threatening both public and private facilities. The most pressing issue facing the District in the future, minimizing flood impacts in the face of rapid growth requires river maintenance and protection of unimpeded access to the river, which will allow the District to continue normal maintenance activities, and effective planning for the Rivet corridor.

Historically, the District has had greater latitude to conduct responsibilities under the law and to maintain channel capacity. Flood Control District No. 10’s channel maintenance activities have become progressively more difficult to accomplish due to interpretations of regulations that vary over time and increasing concerns about environmental impacts. These factors combine to increase future flooding risks and damages for the residents within the boundaries of the District and impair the District’s ability to carry out responsibilities under the law.

The District is governed by a Board of three Commissioners, appointed by the Idaho Department of Water Resources. The District employs a staff of one, a Project Manager. Revenues are generated through taxation collected on assessments on real property within the District.

The geographical extents of the District generally are along the Boise River and a portion of Dry Creek. Along the Boise River, the District is bounded by Chinden Blvd (State Highway 20-26) on the South, State Street (State Highway -44) on the North. The downstream limit is River Mile 22 (approximately 1- mile upstream of I-84 river bridges in Caldwell, ID), while the upstream limit is River Mile 49 (approximately 1-½ miles upstream of the Glenwood Bridge). In addition to the Boise River, a three mile long reach of Dry Creek, from the confluence with the Boise River upstream to Beacon Light Road in Eagle is included in the District boundaries.

### 12.2.2 Service Area and Trends

The district serves a population of 41,000 (est. + 20% growth since Jan. 2010). Its service area covers an area of 25,000 acres, which has a total value of \$2,131,428,797. (est. + 15% growth since January 2010)

Flood Control District No. 10 has observed continued rapid development along the Boise River within the jurisdictional boundaries. The District believes that land use changes significantly affect flood plain conveyance and storage, affecting individual sites and reaches above and below these sites. Development in the flood plain, combined with lack of channel forming flow events, sediment erosion and deposition, and the growth of gravel bars and associated vegetation, has reduced the conveyance capacity of the Boise River and increases flooding risks. The District is also concerned that gravel pits developed adjacent to the banks of the river may be captured by the river during high flows, threatening both public and private facilities. The most pressing issue facing the District in the future, minimizing flood impacts in the face of rapid growth, requires river maintenance and protection of unimpeded District access to the river, which will allow the District to continue normal maintenance activities, and effective planning for the river corridor.

Home sites and businesses along both the Boise River and Dry Creek continue to command a premium in the marketplace. Prior to the current economic downturn, population within the District was growing at approximately 10-percent per year. As the economy recovers, population trends within the District are anticipated to return to an annualized growth rate of five to eight percent per year.

### 12.2.3 Assets

Table 12-1 summarizes the critical assets of the district and their value.

Asset	Value
Property	The Flood Control District owns no land.
Critical Infrastructure and Equipment	
Water Inflatable Dam	\$20,000
Total:	\$20,000
Critical Facilities	The Flood Control District owns no critical facilities

## 12.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- State of Idaho, Stream Channel Alteration Permit
- US EPA, Clean Water Act, Section 404, Administered by the U.S. Army Corps of Engineers

- US EPA, Clean Water Act, National Pollutant Discharge Elimination System (NPDES)
- Municipal and County Floodplain Ordinances –
  - Municipal: Boise, Garden City, Eagle, Meridian, Star, Middleton, Nampa, Caldwell
  - County: Ada and Canyon
- County Highway Districts—Policy Manuals –
  - Ada County Highway District
  - Canyon County Highway District #4
- County Hazard Mitigation Plans
  - Ada County
  - Canyon County
- The District Board of Commissioners have passed a number of resolutions dealing with floodplain development, including a no net adverse impact provision. These Resolutions remain in effect with this plan.

## 12.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 12-2. An assessment of administrative and technical capabilities is presented in Table 12-3.

**Table 12-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Other	N/A

**Table 12-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Contract Services
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	Yes	Contract Services
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Contract Services
Personnel skilled or trained in GIS applications	Yes	Contract Services
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	No	
Other	N/A	

## 12.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 12-4.

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	Yes, Contract Services
Do you have hazard mitigation information available on your website? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	No
Do you utilize social media for hazard mitigation education and outreach? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Newspaper ads during maintenance operations
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <ul style="list-style-type: none"> <li>If yes, please briefly specify.</li> </ul>	Yes  3 member Board
Do you have any other programs already in place that could be used to communicate hazard-related information? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	No
Do you have any established warning systems for hazard events? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 12.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 12.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- The District Board of Commissioners have passed a number of resolutions dealing with floodplain development, including a no net adverse impact provision. These Resolutions remain in effect with this plan.

### 12.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- FCD #10 5 Year Strategic Plan – Boise River Flood Control District #10 will integrate portions of the Ada County Multi-Hazard Mitigation Plan into their final 5 Year Strategic Plan to be completed in 2017.

## 12.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 12-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 12-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Laguna Point Pit Capture	N/A	2006	\$500,000
Brookwood Breach/Capture	N/A	2006	\$200,000
Mace Breach	N/A	2006	\$60,000
Eagle Isl. Levee Breach	N/A	1997	\$30,000
Linder Rd. Bridge Blockage	N/A	1996	\$2,000

## 12.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Development in the Floodplain, especially close to the river banks restricts access points for the District to perform routine maintenance and hazard tree removal.

## 12.9 HAZARD RISK RANKING

Table 12-6 presents the ranking of the hazards of concern.

**Table 12-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	54	High
2	Severe Weather	55	High
3	Dam Failure	18	Medium
4	Earthquake	9	Low
5	Volcano	6	Low
6	Landslide	3	Low
7	Wildfire	3	Low
8	Drought	0	Low

## 12.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 12-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 12-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #FCD10-1</b> —Repair bank erosion, various sites, District-wide <i>Comment: This item will continue indefinitely</i>		X	
<b>Action #FCD10-2</b> - Irrigation Diversion Headgate Flood Mitigation <i>Comment:</i>		X	
<b>Action #FCD10-3</b> —Remove accumulated sediment from Boise River and Dry Cr. <i>Comment: Some sediment has been removed, but sediment continues to be deposited.</i>		X	
<b>Action #FCD10-4</b> —Develop long-term plan to manage Boise River at Eagle Isl. Split. <i>Comment:</i>		X	
<b>Action #FCD10-5</b> —Develop short-term plan to manage Dry Cr.at Brookwood area <i>Comment: Plan is to perform maintenance annually to keep debris buildup at a minimum.</i>	X		
<b>Action #FCD10-6</b> —Update FEMA mapping within the District <i>Comment: New FEMA FIRM maps are out in draft. District will follow up after final maps approved.</i>		X	
<b>Action #FCD10-7</b> —Develop floodplain mitigation techniques to apply vegetative blockages in the stream channels. <i>Comment: District is working with experts to analyze new proven techniques from other areas.</i>		X	
<b>Action #FCD10-8</b> —Remove naturally occurring vegetation blockages in the stream channels <i>Comment: This will be a continuing activity</i>		X	
<b>Action #FCD10-9</b> —Support County-wide initiatives identified in Volume 1 <i>Comment:</i>		X	
<b>Action #FCD10-10</b> —Continue to support the implementation, monitoring, maintenance and updating of this Plan as defined in Volume 1. <i>Comment:</i>		X	

## 12.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 12-8 lists the actions that make up the Flood Control District #10 hazard mitigation action plan. Table 12-9 identifies the priority for each action. Table 12-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 12-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #FCD10-1</b> —Support CRS program participation of participating jurisdictions within Ada County that interface with the FCD #10 operational area.						
New	Flood	2,3,4,5,6,8,9,10	FCD #10	Low	FCD #10	Short term
<b>Action #FCD10-2</b> —Remove naturally occurring vegetative blockages in the river channels						
EX	Flood/Diversion Failure	3,8,9	FCD# 10	Medium	FCD #10	Short term
<b>Action #FCD10-3</b> —Modify FCD #10 website to include links to flood hazard mitigation and preparedness sites.						
New	All	2,3,7,8	FCD #10	Low	FCD #10	Short term
<b>Action #FCD10-4</b> —Develop partnership with local City/County Planning and Zoning staffs to mitigate flood risk						
New	Flood	1,2,4,5,6,8,9,10	FCD #10	Low	FCD #10/Staffs	Short term
<b>Action #FCD10-5</b> — Update FEMA mapping within the District						
EX	Flood	2,4,9	FCD #10	Medium	FCD #10/FEMA	Long term
<b>Action #FCD10-6</b> –Remove accumulated sediment from Boise River and Dry Cr.						
EX	Flood	1,2,3,8	FCD #10	High	FCD #10/ Grant/ Local landowners	Long term
<b>Action #FCD10-7</b> —Develop long term plan to manage Boise River at the Head of Eagle Island split.						
EX	Flood	2,3,6,8,9,10	FCD #10	Medium	FCD #10	Long term
<b>Action #FCD10-8</b> —Develop floodplain mitigation techniques to apply vegetative structures in the stream channels.						
EX	Flood	2,6,9	FCD #10	Medium	FCD #10/Grant	Long term
<b>Action #FCD10-9</b> —Irrigation Diversion Headgate Flood Mitigation						
EX	Flood	1,8,9	FCD #10	Low	FCD #10/Irrigators	Long term
<b>Action #FCD10-10</b> —Support County-wide initiatives identified in Volume 1						
EX	All Hazards	All	FCD #10/ACEM	Low	FCD #10/Grant	Long term
<b>Action #FCD10-11</b> —Continue to support the implementation, monitoring, maintenance and updating of this plan as defined in Volume 1.						
EX	All Hazards	All	FCD #10/ACEM		Low	Long term
<b>Action #FCD10-12</b> — Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.						
New and Existing	Wildfire	1,6,9,10	Boise Fire Department	Low	Local	On-going

**Table 12-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
FCD10-1	8	High	Low	Yes	No	Yes	High	Low
FCD10-2	3	High	Medium	Yes	No	Yes	High	Low
FCD10-3	10 (all)	High	Low	Yes	No	Yes	High	Low
FCD10-4	9	High	Low	Yes	No	Yes	Medium	Low
FCD10-5	4	High	high	Yes	Yes	No	Medium	Medium
FCD10-6	3	Medium	Medium	Yes	No	Yes	Medium	Low
FCD10-7	6	Medium	Medium	Yes	No	Yes	Medium	Low
FCD10-8	3	Medium	Medium	Yes	Yes	Yes	Low	Low
FCD10-9	3	Low	Low	Yes	No	Yes	Medium	Low
FCD10-10	10 (all)	Medium	Low	Yes	Yes	Yes	Medium	Medium
FCD10-11	10 (all)	Medium	Low	Yes	Yes	Yes	Medium	Low
FCD10-12	2, 5, 9	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

**Table 12-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	FCD10-4, FCD10-10, FCD10-11, FCD10-12	FCD10-2, FCD10-5, FCD10-7	FCD10-3, FCD10-4, FCD10-12	FCD10-2, FCD10-5, FCD10-12	FCD10-10	FCD10-4
Drought	FCD10-10, FCD10-11		FCD10-3	FCD10-2, FCD10-5	FCD10-3, FCD10-10	FCD10-8
Earthquake	FCD10-3, FCD10-6, FCD10-10	FCD10-3, FCD10-10	FCD10-1, FCD10-3, FCD10-4	FCD10-5, FCD10-8	FCD10-1, FCD10-3, FCD10-10	FCD10-8
Flood	FCD10-1, FCD10-2, FCD10-3, FCD10-4, FCD10-5, FCD10-6, FCD10-10, FCD10-11, FCD10-12	FCD10-2, FCD10-5, FCD10-8, FCD10-12	FCD10-3, FCD10-4, FCD10-6	FCD10-2, FCD10-5, FCD10-8, FCD10-12	FCD10-3, FCD10-4, FCD10-10, FCD10-11	FCD10-5, FCD10-8, FCD10-9
Landslide	FCD10-3, FCD10-10, FCD10-11	FCD10-3, FCD10-10, FCD10-11	FCD10-3, FCD10-4	FCD10-10, FCD10-11	FCD10-3, FCD10-10, FCD10-11	FCD10-2, FCD10-5
Severe Weather	FCD10-2, FCD10-3, FCD10-4, FCD10-5, FCD10-10, FCD10-11	FCD10-2, FCD10-3, FCD10-5	FCD10-3, FCD10-10	FCD10-2, FCD10-5	FCD10-3, FCD10-10, FCD10-11	FCD10-2, FCD10-5, FCD10-9
Volcano	FCD10-10, FCD10-11	FCD10-10	FCD10-3, FCD10-10, FCD10-11	FCD10-3	FCD10-3, FCD10-10, FCD10-11	
Wildfire	FCD10-1, FCD10-3, FCD10-10 11	FCD10-3, FCD10-4, FCD10-10 11	FCD10-3, FCD10-4	FCD10-3, FCD10-10	FCD10-3, FCD10-10, FCD10-11	FCD10-9, FCD10-10, FCD10-11

a. See the introduction to this volume for explanation of mitigation types.

# 13. GREATER BOISE AUDITORIUM DISTRICT

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## 13.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Patrick D Rice, Executive Director  
850 W Front Street  
Boise, Idaho 83702  
Telephone: 208-489-3650  
e-mail Address: pat\_rice@boisecentre.com

### Alternate Point of Contact

Cody Lund, Director of Operations  
850 W Front Street  
Boise, Idaho 83706  
Telephone: 208-489-3630  
e-mail Address: clund@boisecentre.com

## 13.2 JURISDICTION PROFILE

The Greater Boise Auditorium District was created by voters within the District's boundaries on June, 9 1959 to build, operate, maintain, market and manage public auditoriums, exhibit halls, convention centers, sports arenas, and other similar facilities. The District is represented by an elected, five member, Board of Directors. The District boundaries go beyond the City of Boise to include: all of Garden City, portions of the cities of Eagle and Meridian, and includes some unincorporated areas. The purpose of the District is to serve the public need and promote economic growth. In 1990, the Greater Boise Auditorium District completed construction of the Boise Centre on the Grove, (convention center) the District's first convention facility, known today as Boise Centre.

- **Population Served**—Estimates from the 2014 the District is 216,282.
- **Land Area Served**—Approximately 180 Square Miles.
- **Value of Area Served**—The estimated value of the area served by the jurisdiction is \$20,278,078,700
- **Land Area Owned**—Approximately 2.0 acres.
- List of Critical Infrastructure/Equipment Owned by the Jurisdiction:
  - Emergency Generator System \$75,000
  - Air Cooling Chiller & Plumbing \$750,000
  - Geothermal Heating & System \$100,000
  - Boiler Heating & System \$150,000
  - Kitchen & Food Prep \$1.9 Million
- **Total Value of Critical Infrastructure/Equipment**—The total value of critical infrastructure and equipment owned by the jurisdiction is \$32 Million.
- List of Critical Facilities Owned by the Jurisdiction:
  - Boise Centre \$35 Million
  - Boise Centre Sales Office and Warehouse \$1.5 Million
  - Boise Centre East (Expansion Project) \$14.5 Million
- **Total Value of Critical Facilities**—The total value of critical facilities owned by the jurisdiction is \$51 million.

### 13.2.1 Service Area and Trends

The district serves a population of 216,282. Its service area covers an area of 2.0 sq. miles, which has a total value of \$20,278,078,700.

The District foresees continued growth opportunity for the meetings and convention industry. To that end, the District has worked diligently over several years to establish an expansion plan. The District is currently in the process of building an additional 38,250 square feet of space that will include an additional ballroom, meeting rooms, lobbies, and commercial kitchen. The project is set to be finished in August of 2016. The addition of Boise Centre East will bring Boise Centre to a total of 88,250 square feet.

- The current plan is an expansion project of approximately 38,250 square feet with a cost of roughly \$14.5 million.
- The District has no taxing authority on the District population. The main funding source comes from the collection of a hotel room tax from hotels within the District, currently at 5%.
- Both impact and growth studies conducted have shown glowing results for the District.
- The expansion will allow Boise Centre to go after a larger market of convention, meeting, and association event business.

The District's boundaries are shown in Figure 13-1.

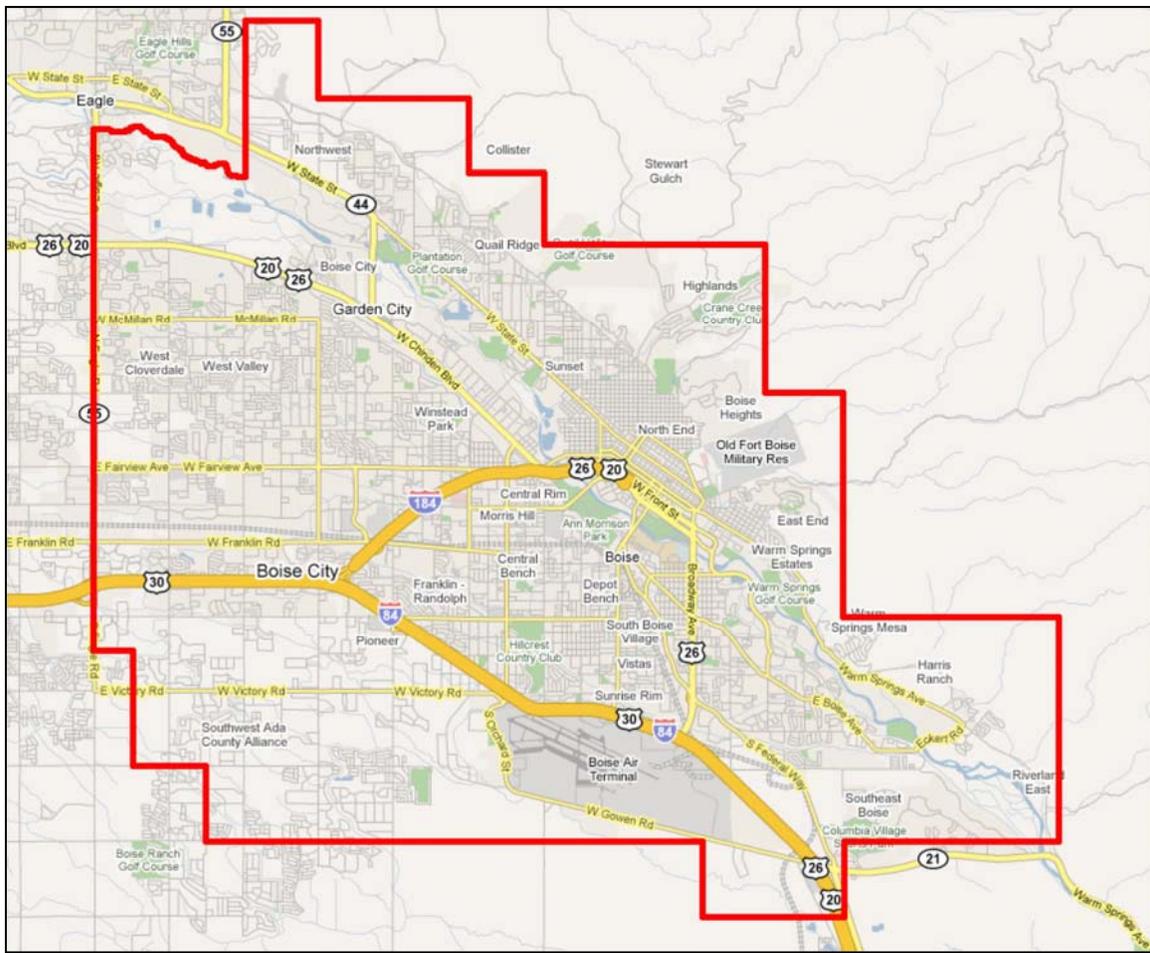


Figure 13-1. Greater Boise Auditorium District boundary

## 13.2.2 Assets

Table 13-1 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
2.0 Acres of Land	\$3,000,000
<b>Critical Infrastructure and Equipment</b>	
Emergency Generator System	\$75,000
Air Cooling Chiller & Plumbing	\$750,000
Geothermal Heating & System	\$100,000
Boiler Heating & System	\$150,000
Kitchen & Food Prep	\$1.8 Million
<b>Total:</b>	<b>\$5,875,000</b>
<b>Critical Facilities</b>	
Boise Centre	\$30,000,000
Boise Centre Sales Office and Warehouse	\$1,000,000
Boise Centre East	\$14,500,000
<b>Total:</b>	<b>\$45,500,000</b>

## 13.3 PLANNING AND REGULATORY CAPABILITIES

GBAD does develop plans and specifications for facilities within its jurisdiction as they come on line. The district does plan for facility improvement and expansion. As far as emergency response and recovery planning, GBAD will look to Ada County Emergency Management (ACEM) for guidance in response and recovery from hazard events that impact GBAD facilities.

## 13.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 13-2. An assessment of administrative and technical capabilities is presented in Table 13-3.

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Other	No

**Table 13-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	N/A
Engineers or professionals trained in building or infrastructure construction practices	No	N/A
Planners or engineers with an understanding of natural hazards	No	N/A
Staff with training in benefit/cost analysis	Yes	Admin/Boise Centre/Controller
Surveyors	No	N/A
Personnel skilled or trained in GIS applications	No	N/A
Scientist familiar with natural hazards in local area	No	N/A
Emergency manager	Yes	Operations/Boise Centre/Director of Ops
Grant writers	No	N/A
Other	No	N/A

### 13.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 13-4.

**Table 13-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – Communications Manager
Do you have personnel skilled or trained in website development?	Yes- Information Technology Manager
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No N/A
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No N/A
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No N/A
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Safety Committee
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

### 13.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

#### 13.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Capital Facilities Planning
- Emergency Management Planning by ACEM

### 13.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Future updates to GBAD capital facility planning
- Future updates to ACEM emergency management plans

## 13.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 13-5 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	N/A	12/92	\$1,000

## 13.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Back up electrical generator located below grade and is at risk for flooding failure.

## 13.9 HAZARD RISK RANKING

Table 13-6 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	24	Medium
2	Earthquake	16	Medium
3	Dam failure	9	Low
4	Severe Weather	9	Low
5	Drought	0	Low
6	Volcano	0	Low
7	Wildfire	0	Low

## 13.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 13-7 summarizes the initiatives that were recommended in the previous version of the Multi-Hazard Mitigation Plan and their implementation status at the time this update was prepared.

**Table 13-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action GBAD#1—Elevate Critical Equipment From Basement</b> <i>Comment: Not completed. Carry over to 2016 update.</i>		X	
<b>Action GBAD#2—Flood Proof Critical Equipment In Basement</b> <i>Comment: Not completed. Carry over to 2016 update.</i>		X	
<b>Action GBAD#3—Secure Drop Ceiling Light Fixtures To Standard</b> <i>Comment: Not completed. Carry over to 2016 update.</i>		X	
<b>Action GBAD#4—Water Storage Tank</b> <i>Comment: Not completed. Carry over to 2016 update.</i>		X	
<b>Action GBAD#5—Support, Monitor, and Continually Update This Plan</b> <i>Comment: Ongoing activity. Carry over to 2016 Update</i>		X	
<b>Action GBAD#6—Support and Be Actively Involved With Ada County Plan</b> <i>Comment: Ongoing activity. Carry over to 2016 Update</i>		X	

### 13.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 13-8 lists the actions that make up the Greater Boise Auditorium District hazard mitigation action plan. Table 13-9 identifies the priority for each action. Table 13-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 13-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Initiative #1—Elevate Critical Equipment From Basement</b>						
Existing	Flood	1, 3, 10	District	\$2 Million	District Funds, HMGP, PDM	Short Term
<b>Initiative #2—Flood Proof Critical Equipment In Basement</b>						
Existing	Flood	1, 3, 10	District	\$1 Million	District Funds, HMGP, PDM	Short Term
<b>Initiative #3—Secure Drop Ceiling Light Fixtures To Standard</b>						
Existing	Earthquake	1, 3, 10	District	\$10,000	District Funds	Short Term
<b>Initiative #4- Water Storage Tank- Clean water in case of contamination to city/public water.</b>						
Existing	Flood	1, 3, 10	District	\$100,000	District Fund, HMGP, PDM	Long Term
<b>Initiative #5- Support, Monitor, and Continually Update This Plan</b>						
New & Existing	All Hazards	All	District	Low	District	Short Term
<b>Initiative #6—Support and Be Actively Involved With Ada County Plan</b>						
New & Existing	All Hazards	All	District	Low	District	Short Term

**Table 13-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
1	3	High	Medium	Yes	Yes	No	High	High
2	3	High	Medium	Yes	Yes	Yes	High	High
3	3	High	Low	Yes	Yes	Yes	High	High
4	3	High	Medium	Yes	Yes	No	Low	Low
5	All	High	Low	Yes	No	Yes	High	High
6	All	High	Low	Yes	No	Yes	High	High

a. See the introduction to this volume for explanation of priorities.

**Table 13-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood		1, 2				1, 2, 4
Earthquake						3
Severe Weather	5,6	5,6	5,6		5,6	
Dam Failure	5,6	5,6	5,6		5,6	

a. See the introduction to this volume for explanation of mitigation types.



# 14. INDEPENDENT SCHOOL DISTRICT OF BOISE #1

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## 14.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Mike Munger  
8169 W. Victory Rd  
Boise, ID 83709  
Telephone: 208.854.4086  
e-mail Address: mike.munger@boiseschools.org

### Alternate Point of Contact

Coby Dennis  
8169 W. Victory Rd  
Boise, ID 83709  
Telephone: 208.854.4000  
e-mail Address: coby.dennis@boiseschools.org

## 14.2 JURISDICTION PROFILE

### 14.2.1 Overview

The Boise School District serves over 26,000 students in 48 schools and employs approximately 2,600 full-time staff. The District maintains a number of specialized programs including the Treasure Valley Math and Science Center, the Madison preschool program and a state of the art Professional Technical Education Center. In addition to these specialized programs, the District offers community education programs and extended day programs for non-traditional students.

### 14.2.2 Service Area and Trends

The district serves a population of 26,000 students. Its service area covers an area of 456 square miles, which has a value of \$19.3 billion taxable and a total value of 23.5 billion.

District population continues to increase as development progresses, particularly in the southern end of the district. A new high school, junior high and 2 elementary schools are to be needed to adequately service the increased development.

### 14.2.3 Assets

Table 14-1 summarizes the critical assets of the district and their value.

## 14.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Board Policy 9310- Facility Safety Program
- Board Policy 3313-Safe and Secure Learning/Work Environment

**Table 14-1. Special Purpose District Assets**

Asset	Value
<b>Property</b>	
77 acres of land	\$609 Million
<b>Critical Infrastructure and Equipment</b>	
Vehicles and Heavy Equipment ( see attached schedule)	1 Million
<b>Critical Facilities</b>	
Schools and Facilities (see attached schedule)	654,644,601
<b>Total:</b>	<b>\$_value_</b>

## 14.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 14-2. An assessment of administrative and technical capabilities is presented in Table 14-3.

**Table 14-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Other	No

**Table 14-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Boundaries and Transportation
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Safety and Security Specialist
Grant writers	No	
Other	No	

## 14.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 14-4.

**Table 14-4. Education and Outreach**

<b>Criteria</b>	<b>Response</b>
Do you have a Public Information Officer or Communications Office?	Yes- Dan Hollar: Public Affairs
Do you have personnel skilled or trained in website development?	Yes- David Roberts Technology Admin
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Periodic/seasonal updates on hazards
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Winter Storm Safety Notification
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes Safety and Security Advisory Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Parent/Community Newsletters/Communications
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 14.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 14.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Site Emergency Operations Plans- School EOPs are crafted and reviewed annually based on an individualized threat profile for each school. Threat profiles include elements of hazard mitigation plans as appropriate for the site.

### 14.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Facilities Master Plan

## 14.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 14-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 14-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Winter Weather Cancellation	N/A	11/14/2014	All School Cancelled
Winter Weather Cancellation	N/A	2/27/14	All School Cancelled
Winter Weather Cancellation	N/A	1/10/2013	All School Cancelled
Winter Weather Cancellation	N/A	12/1/2010	All School Cancelled

## 14.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Wild land fire- Interface schools
- Landslide- Foothills schools
- Extreme weather/Winter Storms- All schools
- Seismic- All schools

## 14.9 HAZARD RISK RANKING

Table 14-6 presents the ranking of the hazards of concern.

**Table 14-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Weather	48	High
2	Flood	36	Medium
3	Earthquake	32	Medium
4	Drought	27	Medium
5	Dam Failure	18	Low
6	Landslide	14	Low
7	Volcano	9	Low
8	Wildfire	4	Low

## 14.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 14-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

## 14.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 14-8 lists the actions that make up the Independent School District of Boise #1 hazard mitigation action plan. Table 14-9 identifies the priority for each action. Table 14-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 14-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action BSD#1</b> —Seismic Engineer Study of Over-Roofed/Unreinforced Structures <i>Comment: Not completed. Carry over action to 2016 update</i>		X	
<b>Action BSD#2</b> —Backup Power to Shelter Facilities (high school and junior high school sites) <i>Comment: Not completed. Carry over action to 2016 update</i>		X	
<b>Action BSD#3</b> —Partner with ACEM for disaster response and preparedness, including updates to the county emergency operations plan. <i>Comment: Ongoing action. Carry over to 2016 update</i>		X	
<b>Action BSD#4</b> —Continue internal (staff) and external (student/family) hazard education programs. <i>Comment: Ongoing action. Carry over to 2016 update</i>		X	
<b>Action BSD#5</b> —Integrate site and district emergency operations plan documents into County-wide emergency operations plan <i>Comment: Ongoing action. Carry over to 2016 update</i>		X	
<b>Action BSD#6</b> —Support County-wide initiatives identified in Volume 1. <i>Comment: Ongoing action. Carry over to 2016 update</i>		X	
<b>Action BSD#7</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1. <i>Comment: Ongoing action. Carry over to 2016 update</i>		X	

**Table 14-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action BSD#1</b> —Retrofit Unreinforced Masonry Structures	Earthquake	1-3, 10	BSD	High	District Funds/Bonds	Long
<b>Action BSD#2</b> —Mobile Generators for Shelter Facilities	1-4, 9	1, 3, 7, 10	BSD	Low	District Funds	Short
<b>Action BSD#3</b> —Partner with ACEM for disaster response and preparedness, including updates to the county EOP	All	1-10	ACEM	Low	District Funds	Long
<b>Action BSD#4</b> —Continue internal (staff) and external (student/family) hazard education programs.	All	1, 7, 9	BSD	Low	District Funds	Long
<b>Action BSD#5</b> —Coordinate building EOP documents into county-wide EOP parameters	All	1, 2, 7-10	BSD	Low	District Funds	Short
<b>Action BSD#6</b> —Support County-wide initiatives identified in Volume 1.	All Hazards	All	BSD, ACEM	Low	BSD	Short term Ongoing
<b>Action BSD#7</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.	All Hazards	All	ACEM, BSD	Low	BSD, FEMA Mitigation Grant Funding for 5-year update	Short-Term, Ongoing

**Table 14-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
1	5	Medium	Medium	Yes	No	Yes	High	low
2	4	Medium	Low	Yes	No	Yes	Medium	Low
3	10	High	Low	Yes	No	Yes	High	Low
4	3	Medium	Low	Yes	No	Yes	Medium	Low
5	6	High	Low	Yes	No	Yes	High	Low
6	10	High	Low	Yes	No	Yes	High	Low
7	10	Low	Low	Yes	Yes	Yes	High	High

a. See the introduction to this volume for explanation of priorities.

**Table 14-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	1,2,7	1,2	6		1,2, 6	1,2
Severe Storm	1,2, 7	1,2	6		1,2, 6	1,2
Flood	3,4,5,7		3,4,5, 6		1,2, 6	
Wildland Fire	3,4,5,7		1,2,3,4,5, 6		1,2,, 6	
Dam Failure	3,4,5,7		3,4,5, 6		1,2,6	
Drought	7		6		6	
Volcano	3,4,5,7		3,4,5, 6		1,2, 6	
Landslide	3,4,5,7		3,4,5, 6		1,2, 6	

a. See the introduction to this volume for explanation of mitigation types.

# 15. JOINT SCHOOL DISTRICT #2

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## 15.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Spencer McLean,  
Administrator of Building and Grounds  
2301 E. Lanark St.  
Meridian, Idaho 83642  
Telephone: (208) 350-5210  
e-mail address:  
mclean.spencer@westada.org

### Alternate Point of Contact

Joe Yochum  
Assistant Superintendent of Operations  
1303 E. Central Dr.  
Meridian, Idaho 83642  
Telephone: (208) 855-4500  
e-mail address:  
Yochum.joe@westada.org

## 15.2 DISTRICT PROFILE

The District was formed as a result of a reorganization plan that reduced 1,082 school districts in Idaho in 1945 to 301 districts by 1950. The District included all or part of thirty-three school districts surrounding the communities of Meridian, Boise, Eagle, Star, Garden City and surrounding rural areas located in Ada and Canyon Counties. The name of the District was changed three times since it was formed from 1950 through 1952. On July 1, 1963, the name was officially changed to Joint School District Number 2. The District has experienced rapid growth in recent years and has become the largest school district in the state of Idaho. A map is included showing the District boundaries along with the cities served.

Joint School District #2 consists of approximately 382 square miles, and serves an estimated population of 250,000. The District employs approximately 4050 certified and classified staff which educates over 3435,000 students.

The authority to govern, which resides in a five member board of trustees, has been extended to it by the state (Idaho Code 33-501). As provided by Idaho law, the board of trustees of each school district has the power to levy taxes for school purposes. Each Idaho school district is a political subdivision of the state of Idaho. The majority of the District's funding is supplied by the State of Idaho based on Student Average Daily Attendance. T

### 15.2.1 Current and Anticipated Service Trends

The district serves a population of over 35,000 students and a population of about 250,000. Its service area covers an area of West Ada County, which has a total value of \$11,189,000,000.

Enrollment for Joint School District No. 2 has grown by 1500 students in the last five years. Even though economic issues have slowed housing growth. The Joint School District No. 2 is expected to grow substantially into the future. Funding continues to be a vital issue. The Joint School District No. 2 has the second lowest revenue per pupil in the United States in districts over 10,000 students.

Joint School District #2 is adding three new middle schools, 1 new elementary school and 1 new academy over the next 12 months. With the rapid building of new homes we do not foresee the expansion / addition of new buildings slowing down within the next 5 years.

Joint School District No. 2 serves the cities of Meridian, Eagle, Star, parts of Boise and Garden City plus surrounding rural areas that make up 382 square miles with varying geographical areas. Some district facilities are in areas affected by flooding, while other areas could be more susceptible to wildfire and earthquakes. Severe weather, both winter and summer could affect most facilities.

## 15.2.2 Assets

Table 15-1 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
1293 acres of land	\$22,839,552.00
<b>Critical Infrastructure and Equipment</b>	
56 Maintenance and Operations Vehicles	\$840,000.00
9 Large Tractors	\$625,236.00
8 Large Trailers	\$58,500.00
189 School Buses	\$8,505,000.00
4 Food Services Vehicles	\$39,560.00
<b>Total:</b>	<b>\$32,907,848.00</b>
<b>Critical Facilities</b>	
Meridian Elementary	\$6,275,670
Mary McPherson Elementary	\$6,180,970
Star Elementary	\$4,364,013
Ustick Elementary	\$5,509,268
Eagle Elementary	\$6,827,358
McMillan Elementary	\$7,970,647
Chief Joseph Elementary	\$7,239,759
Lake Hazel Elementary	\$7,894,826
Pioneer Elementary	\$7,928,105
Summerwind Elementary	\$7,255,732
Christine Donnell School of the Arts	\$7,007,240
Joplin Elementary	\$5,438,956
Eagle Hills Elementary	\$5,891,319
Frontier Elementary	\$8,602,969
Linder Elementary	\$5,832,200
Silver Sage Elementary	\$4,896,942
Seven Oaks Elementary	\$7,492,279
Chaparral Elementary	\$7,538,969
Eliza Hart Spalding Elementary	\$7,938,547
Cecil D. Andrus Elementary	\$7,460,852

Asset	Value
River Valley Elementary	\$7,523,549
Ponderosa Elementary	\$7,560,918
Peregrine Elementary	\$7,607,705
Discovery Elementary	\$8,125,227
Pepper Ridge Elementary	\$8,145,831
Galileo Math and Science	\$14,725,824
Hunter Elementary	\$14,005,364
Prospect Elementary	\$10,960,037
Desert Sage Elementary	\$11,774,310
Paramount Elementary	\$11,774,351
Centennial High School	\$26,920,140
Meridian High School	\$33,811,300
Eagle High School	\$35,136,967
Mountain View High School	\$35,455,840
Rocky Mountain High School	\$58,130,742
Renaissance High School	\$1,800,000
Lowell Scott Middle School	\$17,487,857
Meridian Middle School	\$23,383,504
Lake Hazel Middle School	\$18,740,062
Eagle Middle School	\$17,959,832
Lewis and Clark Middle School	\$17,322,419
Sawtooth Middle School	\$18,643,661
Heritage Middle School	\$16,763,760
Crossroads Middle School	\$3,004,767
Pathways Middle School	\$1,008,719
Meridian Academy	\$3,219,956
Eagle Academy	\$4,790,969
Central Academy	\$3,401,475
Technology Charter School	\$2,131,937
Medical Arts Charter School	\$3,088,352
District Service Center	\$69,421,053
Maintenance Facility	\$2,205,650
Ground Facility	\$1,212,829
Transportation Facility	\$4,942,400
Gravel Pit Site	N/A
Ustick/Blackcat Site	N/A
Ustick/Meridian Site	N/A
Keego Springs Site	N/A
Victory Middle School	35,000,000.00
Hillsdale Elementary	\$20,000,000.00
Amity/Eagle Site	N/A
<b>Total:</b>	<b>\$707,680,000</b>

## 15.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Joint School District No. 2 Strategic Plan
- Joint School District No. 2 Emergency Operations Plan
- Ada County Multi-Hazard Mitigation Plan
- State of Idaho Hazard Mitigation Plan
- Idaho Department of Building Safety

## 15.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 15-2. An assessment of administrative and technical capabilities is presented in Table 15-3.

**Table 15-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	No

**Table 15-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	Yes	Facilities Department
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Assistant Superintendent Operations
Grant writers	Yes	Bernadette Sexton
Other	No	

## 15.6 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 15-4.

**Table 15-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes Eric Exline
Do you have personnel skilled or trained in website development?	Yes Devan Delashmutt
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Blackboard (allows us to text / email patrons)
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 15.7 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 15.7.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Joint School District No. 2 Emergency operations plan—The Emergency operations plan ties in with the Hazard Mitigation plan by cross referencing the notification processes between the two plans as well as evacuation procedures.
- Idaho Department of Building Safety—We are currently working with the State on implementing security procedures that will help the communication and access to real time video around our District.

### 15.7.2 Opportunities for Future Integration

The following plan and program do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Joint School District No. 2 Strategic Plan—We would like to coordinate the Multi-Hazard Mitigation Plan with our Strategic Plan as this will allow us to coordinate with all of the departments throughout the District on one plan.

## 15.8 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 15-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 15-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather – Cold	N/A	12/18/2008	\$26,621.00
Severe Weather – Wind	N/A	1/4/2008	\$1,807.00
Severe Weather – Hail	N/A	4/9/2007	\$33,075.00
Severe Weather – Cold	N/A	1/20/2007	\$5,700.00
Severe Weather – Hail	N/A	7/15/2005	\$80,015.00
Wildfire – Air Quality	N/A	9/1/2000	N/A
Drought – Dry Well	N/A	10/31/1992	N/A
Earthquake	N/A	1983	N/A
Volcanic Eruption – Ash	N/A	5/22/1980	N/A
Severe Weather – Cold	N/A	1/2015	\$25,230.00

## 15.9 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Sewer Lines
- Electrical Connections

## 15.10 HAZARD RISK RANKING

Table 15-6 presents the ranking of the hazards of concern.

**Table 15-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	45	High
2	Severe Weather	36	High
3	Earthquake	36	High
4	Wildfire	30	Medium
5	Drought	21	Medium
6	Dam Failure	16	Low
7	Volcano	6	Low
8	Landslide	0	Low

## 15.11 STATUS OF PREVIOUS PLAN INITIATIVES

Table 15-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 15-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
JSD2-1 : Conduct structural and nonstructural feasibility studies and retrofits of district facilities to minimize injuries and damage from flood, earthquake and severe weather. <i>Comment:</i> We have completed the study at 40% of our buildings	40%	60%	
JSD2-2 : Install hail guards over roof top HVAC units.	100%		
JSD2-3—Train Maintenance staff to perform visual screening for potential seismic hazards. <i>Comment:</i> We have a yearly training in place to train maintenance staff to notice issues.	100%		
JSD2-4—Install drainage collectors at district facilities experiencing flooding. <i>Comment:</i> We have installed additional drainage at about 50% of our facilities	50%	50%	
JSD2-5—Create and maintain a hazard mitigation web page on the District’s website. <i>Comment:</i> We are working with the new IT Director to start this process.		100%	
JSD2-6—Develop and maintain a Continuity of Operations Plan (COOP)		100%	
JSD2-7—Continue to support the implementation, maintenance, and updating of the Ada County Hazard Mitigation Plan.	25%	75%	
JSD2-8—Partner with cities and county to provide public education and awareness of potential natural disasters in Ada County.		100%	

## 15.12 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 15-8 lists the actions that make up the Joint School District #2 hazard mitigation action plan. Table 15-9 identifies the priority for each action. Table 15-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 15-8. Hazard Mitigation Action Plan Matrix**

	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
JSD2-1	Flood, Earthquake	40%	JSD2	\$50,000	Capital funds	12 months
JSD2-2	Severe Weather	100%	JSD2	\$86,000	Capital funds	3 years
JSD2-3	Earthquake	100%	JSD2	\$2,500	General funds	1 year
JSD2-4	Severe Weather, Flooding	50%	JSD2	\$250,000	Capital funds	10 years
JSD2-5	All Hazards	0%	JSD2	\$20,000	Capital funds	5 years
JSD2-6	All Hazards	0%	JSD2	\$20,000	General funds	5 years
JSD2-7	All Hazards	25%	Ada County	\$20,000	General funds	5 years
JSD2-8	All Hazards	0%	JSD2	\$20,000	General funds	5 years

**Table 15-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
JSD2-1	4	HIGH	HIGH	YES	YES	YES	HIGH	HIGH
JSD2-2	1	MED	MED	YES	YES	YES	MED	MED
JSD2-3	2	HIGH	LOW	YES	NO	YES	MED	HIGH
JSD2-4	2	MED	LOW	YES	YES	YES	HIGH	HIGH
JSD2-5	3	LOW	LOW	YES	NO	YES	MED	MED
JSD2-6	3	MED	LOW	YES	NO	YES	MED	MED
JSD2-7	4	HIGH	LOW	YES	NO	YES	HIGH	HIGH
JSD2-8	4	HIGH	HIGH	YES	NO	YES	HIGH	HIGH

a. See the introduction to this volume for explanation of priorities.

**Table 15-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	1,4,5,9,11	1,4,6,7	5,7,8,9,10	4,6,8	1,5,6,7,10	1,4
Severe Weather	1,2,4,5,9,11	1,2,4,6,7	5,7,8,9,10	4,6,8	1,5,6,7,10	1,2,4
Earthquake	1,3,5,9,11	1,3,6,7	5,7,8,9,10	6,8	5,6,7,10	
Wildfire	5,9,11	6,7	5,7,8,9,10	6,8	5,6,7,10	
Drought	5,9,11	6,7	5,7,8,9,10	6,8	5,6,7,10	
Dam Failure	5,9,11	1,6,7	5,7,8,9,10	6,8	5,6,7,10	1
Volcano	5,9,11	6,7	5,7,8,9,10	6,8	5,6,7,10	
Landslide	5,9,11	6,7	5,7,8,9,10	6,8	5,6,7,10	

a. See the introduction to this volume for explanation of mitigation types.

# 16. KUNA RURAL FIRE DISTRICT

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## 16.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Terry D. Gammel, Assistant Fire Chief  
PO Box 607 Kuna, ID 83634  
Telephone: 208-922-1144  
e-mail Address: tgammel@kunafire.com

### Alternate Point of Contact

Robin Ward, Officer of Administration  
PO Box 607 Kuna, ID 83634  
Telephone: 208-922-1144  
e-mail Address: robinward@cableone.net

## 16.2 JURISDICTION PROFILE

### 16.2.1 Overview

Kuna Rural Fire District (KRFD) was established in 1951 and provides fire protection, 911 ALS ambulance service, rescue services and wildland fire protection to 110 square miles with an assessed value of \$817,005,740 (\$771,209,306 in Ada County, and \$45,796,434 in Canyon County), and a population of 25,000. The District is a mix of urban, rural, agriculture and wildland areas. . The District provides protection services for the City of Kuna, the southern portion of Ada County, and a portion of south west Canyon County. Kuna Fire District also provides contract services to multiple entities in the southeast portion of Ada County as well as providing mutual aid to multiple agencies countywide and statewide. A large portion of Ada County borders the southern 20 mile boundary of the Kuna Fire District, that portion of the County is very remote and considered “no man’s land” as far as Fire and EMS Services. Kuna is typically dispatched to those areas for mutual aid due to our proximity to the area.

The District is governed by a board of five elected Commissioners with one Officer of Administration, and employs a Fire Chief, Assistant Fire Chief, 8 fulltime Firefighter/Paramedics, 1 full time Firefighters, and 25 paid call Volunteers who respond to approximately 1200 incidents per year. Approximately 90% of the District’s budget is generated from tax assessment and the remaining 10% from fee based services

### 16.2.2 Service Area and Trends

The district serves a population of 23,000 as of 2010 Its service area covers an area of 110 square miles, which has a total value of \$817,005,740.

The Kuna Fire District has experienced 186% population increase since 2000 as reported in the 2010 census. This has resulted in an increase of 28% in total call volume (fire and EMS) over the past five years and emergency ambulance transports have increased by 37% over the past five years. The increase in call volume is due to the continued growth throughout the District, the trend has stabilized with the downturn in the economy, however, we are expecting this trend to increase over the next five years due to the fact we are the second fastest growing area in the State of Idaho.

### 16.2.3 Assets

Table 16-1 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
4 acres of land	\$8000
<b>Critical Infrastructure and Equipment</b>	
Three Engine/Pumpers	\$1,200,000
One Tender	\$600,000
Three Ambulances	\$360,000
Three Brush Trucks	\$400,000
Two Command Vehicle	\$60,000
<b>Total:</b>	<b>\$3,330,000</b>
<b>Critical Facilities</b>	
Fire Station #1—150 W Boise, Kuna	\$1,500,000
Fire Station #2—10600 Kuna Rd, Kuna	\$350,000
<b>Total:</b>	<b>\$1,850,000</b>

## 16.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Idaho State Code—Title 31
- National Fire Protection Association Codes
- Kuna Rural Fire District Policy Code
- The District must adhere to all applicable codes and regulations enforced by Federal, State and Local authorities that influence the District service area.
- International Wildland Urban Interface Code
- Ada/Canyon Hazard Mitigation Plan
- City of Kuna Ordinance and Comprehensive Plan
- Williams Northwest Pipeline (Natural Gas) Public Safety Response Manual
- Intermountain Gas Safety Response Manual

## 16.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 4-9 dependent on location within the District. This rating was achieved in July 2014. An assessment of fiscal capabilities is presented in Table 16-2. An assessment of administrative and technical capabilities is presented in Table 16-3.

**Table 16-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

**Table 16-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department / Position</b>
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	Yes	Officer of Administration
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Chief/Assistant Chief
Grant writers	Yes	Chief/Assistant Chief
Other	No	

## 16.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 16-4.

## 16.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 16.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- None applicable

### 16.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- None applicable

**Table 16-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes Fire Chief/ Assistant Fire Chief
Do you have personnel skilled or trained in website development?	Yes Officer of Administration
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 16.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 16-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 16-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm/Thunder Storm—Wind		08/22/2010	\$15000
Wind		03/29/2009	\$6666
Flood		06/04/2006	\$750000
Severe Storm/Thunder Storm—Wind		07/25/2002	\$
Severe Storm/Thunder Storm—Wind		01/16/1999	\$1000
Severe Storm/Thunder Storm—Wind		09/07/1998	\$4000
Lightning		09/07/1998	\$2000
Severe Storm/Thunder Storm—Wind		09/06/1998	\$1600
Hail—Severe Storm/Thunder Storm—Wind		04/23/1998	\$4000
Hazardous Spill/Fire		1997	\$
Wind		09/17/1997	\$400
Lightning/Wild Fire		07/30/1996	\$
Lightning/Wild Fire		1996	\$
Lightning/Wild Fire		07/28/1995	\$800000
Lightning/Wild Fire		07/03/1995	\$

## 16.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Not applicable

## 16.9 HAZARD RISK RANKING

Table 16-6 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Severe Storm	33	High
2	Wildland Fire	32	High
3	Earthquake	30	Medium
4	Flood	18	Medium
5	Drought	9	Low
6	Volcano	6	Low
7	Dam Inundation	0	Low

## 16.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 16-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #—KFD1—</b> Support County-wide initiatives identified in Volume 1 <i>Comment: Ongoing</i>		X	
Join the CRS program <i>Comment:</i>			
<b>Action #—KFD2—</b> Continue to support the implementation, monitoring, maintenance, and updating of the Plan, as defined in Volume 1. <i>Comment: Ongoing</i>		X	
<b>Action #—KFD3—</b> Comply with all applicable building and fire codes, as well as other regulations when constructing or significantly remodeling infrastructure facilities <i>Comment: Ongoing</i>		X	
<b>Action #—KFD4—</b> Ensure a reliable source of water for fire suppression (meeting acceptable standards for minimum volume and duration of flow) for existing and new development. <i>Comment: Ongoing</i>		X	
<b>Action #—KFD5—</b> Develop and maintain a coordinated approach between fire jurisdictions and water supply agencies to identify needed improvements to the water distribution system, initially focusing on areas of highest wildfire hazard <i>Comment: Ongoing</i>		X	
<b>Action #—KFD6—</b> Ensure all dead-end segments of public roads in high hazard areas have at least a "T" intersection turn-around sufficient for typical wildland fire equipment <i>Comment: Ongoing</i>		X	
<b>Action #—KFD7—</b> Require that development in high fire hazard areas provide adequate access roads, onsite fire protection systems, evacuation signage and fire breaks <i>Comment: Ongoing</i>		X	

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<p><b>Action #—KFD8</b>—Ensure adequate fire equipment road or fire road access to developed and open space areas.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD9</b>—Construct a Railroad overpass to access south side of Kuna for emergency access and evacuation routes. Approx. 70 trains pass through and often block access to large portion of the District.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD10</b>—Evacuation routes, map and mark evacuation options from southern portion of District. Provide public education in regards to evacuations.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD11</b>—Increase communication capabilities between agencies, coordination of radio types and use of existing and new systems.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD12</b>—Establish a local weather station, current information provided is often inaccurate due to the location and geographical differences within the county and our District.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD13</b>—Identify &amp; obtain necessary emergency response training and equipment for water/flood related response and rescue.</p> <p><i>Comment: Ongoing</i></p>		X	
<p><b>Action #—KFD14</b>—Identify &amp; obtain necessary emergency response training and equipment for hazardous materials. Natural hazards present high risk with rail cargo involving hazardous material spills and fires.</p> <p><i>Comment: Ongoing</i></p>		X	

## 16.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 16-8 lists the actions that make up the Kuna Rural Fire District hazard mitigation action plan. Table 16-9 identifies the priority for each action. Table 16-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 16-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #—KFD1—Support County-wide initiatives identified in Volume 1</b>						
New/ Existing	All	All	KRFD	Low	Local	Short
<b>Action #—KFD2—Continue to support the implementation, monitoring, maintenance, and updating of the Plan, as defined in Volume 1.</b>						
New/ Existing	All	All	KRFD	Low	Local/Grant Funding	Short
<b>Action #—KFD3—Comply with all applicable building and fire codes, as well as other regulations when constructing or significantly remodeling infrastructure facilities.</b>						
New/ Existing	All		KRFD	Low	Local	Ongoing
<b>Action #—KFD4—Ensure a reliable source of water for fire suppression (meeting acceptable standards for minimum volume and duration of flow) for existing and new development.</b>						
New/ Existing	Wildfire		KRFD		Local/Grant Funding	Ongoing
<b>Action #—KFD5—Develop and maintain a coordinated approach between fire jurisdictions and water supply agencies to identify needed improvements to the water distribution system, initially focusing on areas of highest wildfire hazard.</b>						
New/ Existing	Wildfire		KRFD	Low	Local	Ongoing
<b>Action #—KFD6—Ensure all dead-end segments of public roads in high hazard areas have at least a "T" intersection turn-around sufficient for typical wildland fire equipment.</b>						
New/ Existing	Wildfire		County	Low	Local/County	Ongoing
<b>Action #—KFD7—Require that development in high fire hazard areas provide adequate access roads, onsite fire protection systems, evacuation signage and fire breaks</b>						
New	Wildfire		County	Low	Local/County	Ongoing
<b>Action #—KFD8—Ensure adequate fire equipment road or fire road access to developed and open space areas.</b>						
New	Wildfire		County	Medium	Local/County/Grant Funding	Ongoing
<b>Action #—KFD9—Construct a Railroad overpass to access south side of Kuna for emergency access and evacuation routes. Approx. 70 trains pass through and often block access to large portion of the District.</b>						
New	All		City/County	High	Local/County/Grant Funding	Long Term
<b>Action #—KFD10—Evacuation routes, map and mark evacuation options from southern portion of District. Provide public education in regards to evacuations.</b>						
New/ Existing	All		County	Medium	Local/County/Grant Funding	Ongoing
<b>Action #—KFD11—Increase communication capabilities between agencies, coordination of radio types and use of existing and new systems.</b>						
New/ Existing	All		County	Medium	Local/County/Grant Funding	Ongoing

**Table 16-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
KFD1	10	High	Low	Yes	Yes	Yes	High	Low
KFD2	10	Low	Low	Yes	Yes	Yes	High	Low
KFD3	4	Medium	Low	Yes	No	No	High	Low
KFD4	4	High	Medium	Yes	No	No	Low	Low
KFD5	3	Medium	Low	Yes	No	No	High	Low
KFD6	3	High	Low	Yes	No	No	High	Medium
KFD7	6	High	Low	Yes	No	No	High	Medium
KFD8	4	High	Low	Yes	Yes	No	Medium	Medium
KFD9	3	High	High	Yes	Yes	No	Medium	Medium
KFD10	4	High	Low	Yes	No	Yes	High	Low
KFD11	5	High	Medium	Yes	Yes	No	High	Medium

a. See the introduction to this volume for explanation of priorities.

**Table 16-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Storm	1, 2, 3	1, 2, 3, 4	1, 2, 3, 11, 13	1, 2,	1, 2, 3, 10, 11, 12, 13, 14, 15	1, 2, 3, 4
Wildland Fire	1, 2, 3, 8	1, 2, 3, 5, 6, 7, 8, 9	1, 2, 3, 8, 11, 13	1, 2, 3, 5	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13	1, 2, 3, 7, 8, 9
Drought		1, 2, 3,		1, 2, 3, 5		1, 2, 3
Flood	1, 2, 3	1, 2, 3,	1, 2, 3, 11, 13		1, 2, 3, 10, 11, 12, 13, 14	1, 2
Earthquake	1, 2, 3	1, 2, 3, 4	1, 2, 3		1, 2, 3, 12,	1, 2, 3, 4
Dam Failure	1, 2, 3	1, 2, 3	1, 2, 3	1, 2, 3	1, 2, 3, 12	1, 2, 3
Landslide						
Volcano						

a. See the introduction to this volume for explanation of mitigation types.

# 17. NORTH ADA COUNTY FIRE & RESCUE

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## 17.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Commissioner, Margaret Dimmick  
5800 Glenwood  
Garden City, Idaho 83714  
Telephone: 208-375-0906  
e-mail Address: [Dimmicks@earthlink.net](mailto:Dimmicks@earthlink.net)

### Alternate Point of Contact

Shelley Young  
5800 Glenwood  
Garden City, Idaho 83714  
Telephone: 208-375-0906  
e-mail Address: [shelley@nacfire.org](mailto:shelley@nacfire.org)

## 17.2 JURISDICTION PROFILE

### 17.2.1 Overview

The North Ada County Fire & Rescue (NACFR) District is the result of the 1960s-era merger of Cole Fire District and Collister Fire District. A three-member elected board of officials governs NACFR. The Board assumes responsibility for adoption of this plan.

NACFR is funded by a levy on property values within the District. NACFR covers 34 square miles, with a roughly equal mix of urban commercial and suburban and rural residential areas, and serves a population of 22,694 (2010 census). The largest percentage of the population is located in the City of Garden City. The hazard environment is notable for a substantial hazardous materials presence in the commercial area, a large swath of urban interface in the Boise foothills and along the Boise River, and the presence of the Boise River itself. Station 16 has one of the highest run volumes of any fire station in the State of Idaho.

NACFR owns three fire stations: two within the City limits of Garden City, and one in Hidden Springs, located in the foothills north of Boise. The Hidden Springs Station is staffed as needed during wildland fire season through an intergovernmental agreement with the U.S. Bureau of Land Management. This agreement allows the Bureau of Land Management to use the Station to house its wildland engine company, and covers wildland fire response only. To date, funding has not been available to allow NACFR to staff the Hidden Springs Station for structural fire and emergency medical response. As a result, response times to Hidden Springs are substantially longer than for the rest of the NACFR coverage area.

In 2009 NACFR signed a Joint Powers Agreement with Boise City Fire Department to provide manpower and oversee Operations for NACFR. In addition, Boise City Fire also provides Mutual Aid to NACFR to cover the Eastern most section of NACFR boundaries.

### 17.2.2 Service Area and Trends

The district serves a population of 22,694 as of January, 2010. Its service area covers an area of 34 square miles, which has a total potential taxable value of \$1.5 billion dollars.

In the near long term, service trends are driven by the financial impact of the national economic downturn. Due to reductions in revenue, in 2010, NACFR was forced to close one of its two Garden City Fire Stations. NACFR currently staffs a single Station in Garden City with a BLS Engine Company. At the same time that District budget shortfalls have reduced NACFR staffing levels, State response to the economic downturn has included a reduction in funding for Health and Welfare service recipients. This reduction in State services is resulting in an increase in medical responses including welfare checks and mental health calls. While the economy is beginning to recover, funding for Health and Welfare clients lags, and this trend is likely to continue.

In the longer term, local land use designations allow for an increase in light commercial and residential land uses within the service area. This increase may result in an increase in hazards and will expose a larger, more densely configured population to them. This will also result in a projected increase in call volume.

### 17.2.3 Assets

Table 17-1 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
1.42 acres of land	\$590,100
<b>Critical Infrastructure and Equipment</b>	
Engine E-16 2004 Pierce Enforcer and contents	\$400,000
Engine E-18 2004 Pierce Enforcer and contents	\$400,000
Tender WT-16 2002 Pierce International and contents	\$300,000
-Brush BR-16 2006 GMC 5500 4x4 and contents	\$130,000
Brush BR-18 2006 GMC 5500 4x4 and contents	\$130,000
<b>Total:</b>	<b>\$1,360,000</b>
<b>Critical Facilities</b>	
Station 16 - 5800 Glenwood, Garden City	\$710,000
Station 18 - 3895 Chinden, Garden City	\$1,105,266
Station 20 - 5871 W Hidden Springs Drive, Boise	\$529,000
<b>Total:</b>	<b>\$2,543,266</b>

## 17.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Idaho Code
- Idaho Emergency Operations Plan
- Idaho State Hazard Mitigation Plan
- Ada County Flood Plan
- Ada County Hazmat Plan
- Ada County Wildfire Response Plan
- Ada County Mass Casualty Incident Plan
- Ada County Multi-Hazard Mitigation Plan
- Ada County Wildland-Urban Interface Wildfire Mitigation Plan
- City of Garden City Evacuation Plan
- City of Garden City Code 4-13-1
- City of Garden City Code 8-3

- NACFR Resolutions
- NACFR Strategic Plan
- Boise City Fire Department Standard of Cover-2010
- National Fire Protection Association (NFPA) Standards and Recommended Practices (various)

## 17.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 3. This rating was achieved prior to the year 2000. An assessment of fiscal capabilities is presented in Table 17-2. An assessment of administrative and technical capabilities is presented in Table 17-3.

**Table 17-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

**Table 17-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Contract Support
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contract Support
Planners or engineers with an understanding of natural hazards	Yes	Contract Support
Staff with training in benefit/cost analysis	Yes	Administration
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Contract Support
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	Yes	Contract Support
Other	No	

## 17.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 17-4.

**Table 17-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes Contract Support
Do you have personnel skilled or trained in website development?	Yes Contract Support
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Contract Support Boise Fire has a robust social media outreach program
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	Yes Hidden Springs HOA
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Website-currently not utilized
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 17.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 17.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Firewise Communities—The Firewise program encourages homeowners (in this case the Hidden Springs HOA) to prepare for wildland/urban interface fires.

### 17.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Firewise Communities-The District will soon undertake a strategic planning effort to assess the impact of projected growth in the foothills on fire and ems services. The Firewise process may provide input to the strategic planning process.

## 17.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 17-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 17-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Highway 16 Fire		2010	Not available. 5 homes lost
McFarland Fire		2008	Not available
Oregon Trail Fire		2008	Not available. 18 homes lost, 1 human life lost
Wildfires	DR-1341	2000	Not available.
Foothills flooding		1959, 1969, 1979, 1982, 1986, 1997	Not available. In 1969 approximately 500 houses damaged by flash flooding and landslides.
Boise River floods		1936, 1938, 1943, (Boise River flood control dams built late 40s-50s) 1963, 1964, 1965, 1983, 1993, 1997, 1998	Not available.
Mt. St. Helens eruption		1980	Not available.
Challis Earthquake		1983	Not available.

## 17.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Fire Station located in the flood plain.
- Isolated development in the foothills exposed to urban interface wildfires, with limited access and extended response times.
- Fire Stations need retrofitting for earthquakes

## 17.9 HAZARD RISK RANKING

Table 17-6 presents the ranking of the hazards of concern.

**Table 17-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	48	High
2	Wildland fire	27	Medium
2	Severe Storm	27	Medium
2	Drought	27	Medium
3	Dam Failure	18	Medium
3	Earthquake	18	Medium
4	Landslide	12	Low
5	Volcano	9	Low

## 17.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 17-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 17-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #1—Consistent standards for development in high-risk/underserved areas		X	
Action #2—Conduct wildland-urban interface GIS-based hazard assessment		X	
Action #3—Earthquake Retrofitting of Fire Stations 18,20		X	
Action #4—Firewise Community program for residents in the foothills		X	
Action #5—Develop Community Emergency Response Team Pilot for Hidden Springs	X		
<i>Comment: The District has attempted several community-based response models, including CERT and an EMS Quick Response Units program in cooperation with Ada County EMS. To date, none have been successful.</i>			
Action #6—Location/Construction Study for new Flood/Earthquake resistant Fire Station to replace Station 16		X	
Action #7—Construct new flood/earthquake resistant fire station		X	
Action #8—Campaign to get neighborhoods to revise covenants and homeowners' association (HOA) rules to mitigate natural hazards.		X	
Action #9—Support County-wide initiatives identified in Volume 1		X	
Action #10—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1		X	

## 17.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 17-8 lists the actions that make up the NACFR hazard mitigation action plan. Table 17-9 identifies the priority for each action. Table 17-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

## 17.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Action #9-Establish Strategic Planning Process for the foothills, is being initiated in recognition of the rapid expansion of population into the foothills areas north of the metropolitan areas of Eagle and Boise. The planning effort, which will be spearheaded by North Ada County Fire & Rescue, is in the organizational stages, and is proposed to include Boise Fire Department, Eagle Fire District, Boise District Bureau of Land Management, Whitney Fire District, and Ada County Emergency Medical Services, as well as affected neighborhood associations and special interest groups. The initial objectives include:

1. Identify the best location for a fire station to serve the current and projected development in the Dry Creek drainage.
2. Develop a staffing pattern to serve this population. Include phased-in staffing options that expand and change as development builds out and revenues increase, and that reflect the hazard analysis and current and projected call volume.
3. Identify the interagency players in the area (Eagle, Boise, Ada County EMS), and what roles should they play in developing a broad-based emergency response capability to serve this rapidly expanding population center?

**Table 17-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #NACFR-1</b> —Develop consistent standards for development in high-risk/underserved areas						
New	Wildland fire	4, 6, 9	Boise Fire Department	Low	District	Short
<b>Action #NACFR-2</b> —Conduct wildland-urban interface GIS-based hazard assessment						
New/ Existing	Wildland fire, landslide, earthquake	2, 4, 5, 6, 9	Boise Fire Department	Low	NACFR, PDM	Short
<b>Action #NACFR-3</b> —Perform Earthquake Retrofitting of Fire Stations 16, 18, 20						
Existing	Earthquake	1, 2, 3, 10	NACFR	Medium	NACFR, PDM	Short
<b>Action #NACFR-4</b> —Continue Firewise Community program for residents in the foothills						
Existing	Wildland fire	8	Boise Fire Department	Low	NACFR, Rural Fire Assistance Grant, SRS Title III, National Fire Plan	Ongoing
<b>Action #NACFR-5</b> —Conduct Location/Construction Study for new Flood/Earthquake resistant Fire Station to replace Station 16						
New	Flood, earthquake	1, 2, 3, 10	NACFR	Medium	NACFR, Bond, PDM	Short
<b>Action #NACFR-6</b> —Construct new flood/earthquake resistant fire station						
New	Flood, earthquake	1, 2, 3, 10	NACFR	High	NACFR, Bond, PDM	Long-term
<b>Action #NACFR-7</b> —Campaign to get neighborhoods to revise covenants and homeowners' association (HOA) rules to mitigate natural hazards.						
New/ existing	Flood, earthquake, wildland fire	2, 5, 6, 8, 9	NACFR	Low	NACFR, SRS Title III, National Fire Plan	Short
<b>Action #NACFR-8</b> —Modify NACFR web-site to include links to hazard mitigation and preparedness sites.						
Existing	All	8	NACFR	Low	NACFR	Short
<b>Action #NACFR-9</b> —Establish Strategic Planning process for foothills						
Existing/ New	Wildland fire	9, 2, 3, 4, 5, 6	NACFR	Medium	NACFR, Rural Fire Assistance Grant, SRS Title III, National Fire Plan	Medium
<b>Action #NACFR-10</b> —Develop/enhance ability to capture perishable data , including dollar values, after significant events						
Existing	All	2	Boise Fire Department	Low	NACFR	Short
<b>Action #NACFR-11</b> —Actively participate in Plan maintenance protocols as defined in Volume 1 of the Multi-Hazard Mitigation Plan.						
New and Existing	All	All	ACEM, NACFR	Low	NACFR	Short term/ ongoing
<b>Action #NACFR-12</b> —Support the county-wide initiatives identified in Volume 1 of the Multi-Hazard Mitigation Plan.						
New/ existing	All	All	ACEM, NACFR	Low	NACFR, FEMA Mitigation Grant funding	Short term/ ongoing
<b>Action #NACFR-13</b> —Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.						
New and Existing	Wildfire	8,9	NACFR, ACEM	Low	General Fund	Ongoing
<b>Action #NACFR-14</b> —Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.						
New and Existing	Wildfire	1,6,9,10	NACFR, ACEM	Low	NACFR	Ongoing

**Table 17-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
1	3	Medium	Low	Yes	Yes	Yes	Medium	Medium
2	5	Medium	Medium	Yes	Yes	No	Medium	Medium
3	4	High	Medium	Yes	Yes	No	Medium	High
4	1	High	Low	Yes	Yes	Yes	High	High
5	4	Medium	Medium	Yes	Yes	No	Medium	Medium
6	4	High	High	Yes	Yes	No	Medium	High
7	5	High	Low	Yes	Yes	No	Medium	Medium
8	1	Medium	Low	Yes	Yes	Yes	High	Medium
9	6	Medium	Low	Yes	Yes	Yes	High	High
10	2	Low	Low	Yes	Yes	No	Medium	Medium
11	All	Medium	Low	Yes	Yes	Yes	Medium	Medium
12	All	Medium	Low	Yes	Yes	Yes	Medium	Medium
13	2	Medium	Low	Yes	No	Yes	High	Low
14	4	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

**Table 17-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	10, 11		8, 12			
Drought	7, 10, 11		7, 8, 12			
Earthquake	2, 7, 10, 11	3, 5, 6	2, 7, 8, 12		3	3
Flood	3, 7, 10, 11	5, 6	7, 8, 12		5, 6	5, 6
Landslide	1, 2, 10, 11		7, 8, 12			
Severe Storm	10, 11		8, 12			
Volcano	10, 11		8, 12			
Wildland Fire	1, 2, 7, 9, 10, 11, 13, 14	1, 4, 13, 14	1, 2, 4, 7, 8, 12, 13, 14	13, 14	9, 14	

a. See the introduction to this volume for explanation of mitigation types.

# 18. STAR JOINT FIRE PROTECTION DISTRICT

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## 18.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Greg Timinsky, Fire Chief  
10831 W. State Street  
Star, Idaho 83669  
Telephone: 208-286-7772  
e-mail Address: gtiminsky@starfirerescue.org

### Alternate Point of Contact

David Sparks, Fire Marshal  
10831 W. State Street  
Star, Idaho 83669  
Telephone: 208-286-7772  
e-mail Address: dsparks@starfirerescue.org

## 18.2 JURISDICTION PROFILE

### 18.2.1 Overview

The Star Joint Fire Protection District (SFD) was established in 1953 and is comprised of 55 square miles of protection area that falls within the counties of Ada & Canyon. The fire department was originally started because there was no fire protection for this area. Some local farmers and residence pulled together to organize an all-volunteer fire department and purchased an engine. As years went on the fire department had bake sales and other fundraising events to purchase other equipment as well as pay for fuel, power and maintenance of the station and equipment. In 1953 the residents decided that it was time to formalize the fire department and form a taxing fire district that evolved from an all-volunteer to a combination fire department. The fire district encompasses the City of Star, rural area, farming ground, and foothills, with a population of 11,500 district wide. The fire district evolved from just fire protection to fire and medical emergency responses as well as structural firefighting, wildland firefighting, and other tasks that we are called to do. The district is governed by a board consisting of three commissioners.

### 18.2.2 Service Area and Trends

The demand for the services we provide have been increasing for the last 10 years on an average rate of 7% as calculated by us using emergency responses per year. The City of Star population has increased by approximately 70% over the last 10 years and projections by the county were in the next 10 to 15 years we would be at 25,000 residence. We are partnering with Meridian, Nampa, Caldwell and Middleton Fire Department's to jointly buy, build and staff future stations as demand for services arises. Star currently has a non staffed station on Kingsbury Rd Middleton Idaho in Star Fire Districts area that could be jointly staffed when necessary.

### 18.2.3 Assets

Table 18-1 summarizes the critical assets of the district and their value.

**Table 18-1. Special Purpose District Assets**

<b>Asset</b>	<b>Value</b>
<b>Critical Infrastructure and Equipment</b>	
1992 Pierce Fire Engine	\$150,000
2011 Rosenbauer Tender	\$200,000
2010 Dodge Brush	\$50,000
2009 Ford Command Truck	\$15,000
2002 Ford Explorer	\$2,000
2011 Rosenbauer Engine	\$300,000
2008 Scott Mobile air unit	\$50,000
2002 Ford Service Truck	\$35,000
<b>Total:</b>	<b>\$802,000</b>
<b>Critical Facilities</b>	
Main Fire Station @ 10831 W State Street	\$400,000
Station #2 @ 22585 Kingbury Road	\$1,300,000
1 acres located on McMillian Rd	\$5,000
<b>Total:</b>	<b>\$1,705,000</b>

## 18.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- The Ada County Multi-Hazard Mitigation Plan

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 4/8/9. An assessment of fiscal capabilities is presented in Table 18-2. An assessment of administrative and technical capabilities is presented in Table 18-3.

**Table 18-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

**Table 18-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/ Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	No	
Other	No	

## 18.4 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 18-4.

**Table 18-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes (Fire Chief Greg Timinsky)
Do you have personnel skilled or trained in website development?	Yes (David Sparks)
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Safe burning practices
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 18.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 18.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Wild Fire Risk Plan—

- Wild Fire Risk Map—
- Threat Hazard Inventory Risk Analysis

### 18.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Not applicable

## 18.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 18-5 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildland Fire		2010	Several thousand Acers and Homes Burned
Dam Failure/Flooding		2010	Annual event
Dam Failure/Flooding		2010	Annual event
Wind Events		Ongoing	Yearly events that cause damage to homes and personal property
Earthquake		1986	Challis
Flood		2012	

## 18.7 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Not applicable

## 18.8 HAZARD RISK RANKING

Table 18-6 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	39	High
2	Wildfire	36	High
3	Earthquake	32	High
4	Dam Inundation	18	Medium
5	Drought	9	Low
6	Severe Weather	9	Low
7	Volcano	6	Low
8	Landslide	4	Low

## 18.9 STATUS OF PREVIOUS PLAN INITIATIVES

Table 18-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 18-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #—SFD1</b> —Construct a new Fire Station on the South of Boise River outside of the floodplain and dam failure inundation area. Join the CRS program			X
<b>Action #—SFD2</b> —Support County-wide initiatives identified in Volume 1 <i>Comment: Ongoing</i>		X	
<b>Action #—SFD3</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1. <i>Comment: Ongoing</i>		X	

## 18.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 18-8 lists the actions that make up the Star Joint Fire Protection District hazard mitigation action plan. Table 18-9 identifies the priority for each action. Table 18-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 18-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #SFD-1</b> Support County-wide initiatives identified in Volume 1						
New/ Existing	All	All	Star Fire District	Low	Local	Short
<b>Action #SFD-2</b> Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New/ Existing	All	All	Star Fire District	Low	Local	Short
<b>Action #SFD-3</b> Conduct outreach with property owners in the WUI to encourage Firewise landscape.						
Existing/ New	Wildfire	2,8,9	Star Fire District	Low	Local	Short

**Table 18-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
SFD-1	All	Medium	Low	Yes	Yes	Yes	High	Medium
SFD-2	All	Medium	Low	Yes	Yes	Yes	High	Medium
SFD-3	All	High	Low	Yes	Yes	Yes	High	Medium

a. See the introduction to this volume for explanation of priorities.

**Table 18-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	1, 2					
Wildfire	1, 2		3			
Earthquake	1, 2					
Dam Inundation	1, 2					
Drought	1, 2					
Severe Weather	1, 2					
Volcano	1, 2					
Landslide	1, 2					

a. See the introduction to this volume for explanation of mitigation types.

# 19. STAR SEWER AND WATER DISTRICT

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## 19.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Hank Day, General Manager  
100 S. Star Road  
Star, ID 83669  
Telephone: (208) 286-7388  
e-mail Address: hankdaysswd@cableone.net

### Alternate Point of Contact

Ken Vose, Operations Manager  
100 S. Star Road  
Star, ID 83669  
Telephone: (208) 286-7388  
e-mail Address: kvose@gmail.com

## 19.2 JURISDICTION PROFILE

### 19.2.1 Overview

The Star Sewer & Water District (District) receives its operating authority from Idaho State Code, Title 42, Chapter 32, Sections 43-3201 to 42-3238. The District was created 1966 in response to a need for central water and sewer service. A five-member elected Board of Directors governs the District. The District's current service area is bounded by Ada/Canyon County line and Kingsbury Road to the west, Highway 16 on the east, the Boise River to the south, and the foothills to the north. The District's impact area was established based on topographic and natural boundaries.

The District provides both sewer and water services to an area which includes the City of Star and unincorporated lands in Ada and Canyon County. The area's economic base consists of agriculture, commercial, and some light industrial districts. The District is committed to providing the service area with quality water and sewer service for residential, commercial, and most industrial/public needs.

Star Sewer & Water District operates a wastewater treatment plant consisting of a membrane bioreactor mechanical plant, and a partially aerated treatment and polishing lagoon treatment system. The combined effluent from the lagoon and mechanical plant discharges to the Lawrence-Kennedy Canal under an NPDES permit that has been in effect since September 1999.

Sewer lift stations serve as a central point of collection for gravity sewer lines. The raw sewage is conveyed by gravity to these collection points and the lift stations pressurize and lift the sewage either into other gravity collection lines or push the flow directly to the wastewater treatment plant. The District currently owns three lift stations located on Big Wood Way (River Ranch), WWTP property, and W State Street (Western Regional).

The District owns five operable wells and one water storage tank. Three wells are primary wells that are used to fill the tank with groundwater and or serve water to the public directly. Water flows by gravity out of the tank and provides pressurized domestic and fire flows to the service area. The District also maintains a distribution system including approximately 50 miles of pipeline and nearly 500 fire hydrants.

Star Sewer & Water District operates almost exclusively on revenue from new connections and current user fees. A small amount is also levied on property taxes to pay for the District’s operation and maintenance costs and the property and administrative liability insurance.

## 19.2.2 Service Area and Trends

The District serves a population of approximately 6,500 as of 2013. Its service area covers an area of 22 square miles, which has a total market value (including occupancy rolls) is \$1,182,833,889.

Population trends used to estimate future population of the Star Sewer & Water District service area can be approximated by utilizing existing population projections created for the District in the 2015 Wastewater Facility Planning Study. From 1990 to 2013, the City of Star experienced a ten-fold increase in population. Even during the recent downturn in the housing market, the City of Star maintained a fairly steady growth rate. For example, in fiscal year 2014, the Star Sewer & Water District issued 213 new sewer/water connections, in 2015 that number was 200 new sewer/water connections. Through May of 2016 the District had issued 80 new sewer/water connections.

If a growth percentage of 5% (as selected by District officials for the 2015 Wastewater Facility Planning Study) is used, the estimated population served by the Star Sewer & Water District will be approximately 10,200 by 2025.

## 19.2.3 Assets

Table 19-1 summarizes the critical assets of the district and their value.

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
10 acres of land	\$600,000
<b>Critical Infrastructure and Equipment</b>	
Approximately 51 miles of water pipe throughout District	\$26,928,000
Approximately 51 miles of sewer pipe throughout District	\$26,928,000
Operations & Maintenance Vehicles	\$250,000
<b>Total:</b>	<b>\$54,106,000</b>
<b>Critical Facilities</b>	
District Office	\$150,000
Wastewater Treatment Facility	\$25,000,000
River Ranch Lift Station	\$500,000
Western Regional Lift Station	\$1,000,000
Well 1	\$1,000,000
Well 2	\$50,000
Well 3	\$1,200,000
Trellis Wells	\$1,200,000
Water Tank	\$750,000
<b>Total:</b>	<b>\$30,850,000</b>

## 19.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Clean Water Act
- Endangered Species Act
- Idaho Department of Environmental Quality
- U.S. Environmental Protection Agency
- Idaho Administrative Code
- Idaho Administrative Procedure Act
- Wastewater Facility Planning Study (2015)
- Water System Master Plan Update (2014)
- Idaho Statewide Implementation Plan
- All other applicable laws, ordinances, codes and policies enforced by federal, state and local authorities with a sphere of influence over the District’s service area.

## 19.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 19-2. An assessment of administrative and technical capabilities is presented in Table 19-3.

**Table 19-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other: LID, CID	Yes

**Table 19-3. Administrative and Technical Capability**

<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Contract engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contract engineer
Planners or engineers with an understanding of natural hazards	Yes	Contract engineer
Staff with training in benefit/cost analysis	Yes	Contract engineer
Surveyors	Yes	Contract engineer
Personnel skilled or trained in GIS applications	Yes	Contract engineer
Scientist familiar with natural hazards in local area	Yes	Contract engineer
Emergency manager	Yes	Ada County Emergency Management (ACEM)
Grant writers	Yes	Contract engineer

## 19.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 19-4.

**Table 19-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 19.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 19.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- City of Star Comprehensive Plan—The 2008 Star Comprehensive Plan includes mitigation related policies as they relate to the protection of human life and property from flood events.
- Ada County Wildfire Response Plan—The Wildfire Response Plan for Ada County includes procedures that will mitigate risk to human life and property from a wildfire.

### 19.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Star City, Star Sewer & Water District, and Star Joint Fire Protection District Joint Emergency Operation Plan (EOP)—This joint plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when an EOP is developed.
- Star Sewer & Water District Continuity of Operation Plan (COOP)—This plan has not been developed, but the Multi-Hazard Mitigation Plan will be significantly affected when a COOP is developed.

## 19.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 19-5 lists all past occurrences of natural hazards within the jurisdiction.

**Table 19-5. Natural Hazard Events**

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flooding	n/a	May 30, 2011	\$4,500

## 19.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities to the jurisdiction include:

- Trellis wells have no backup power source
- Sewer manholes below the 100-year floodplain are not sealed
- WWTP, Regional lift station, and River Ranch lift station have not been evaluated for flood risk based on new FIRM maps

## 19.9 HAZARD RISK RANKING

Table 19-6 presents the ranking of the hazards of concern.

**Table 19-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Flood	45	High
2	Severe Weather	32	High
3	Earthquake	32	High
4	Dam Inundation	18	Medium
5	Wildfire	18	Medium
6	Drought	9	Low
7	Volcano	6	Low
8	Landslide	0	Low

## 19.10 STATUS OF PREVIOUS PLAN INITIATIVES

The Star Sewer & Water District did not participate in the previous version of the hazard mitigation plan, and has no previous plan initiatives status updates to report.

## 19.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 19-7 lists the actions that make up the Star Sewer & Water District hazard mitigation action plan. Table 19-8 identifies the priority for each action. Table 19-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 19-7. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>SSW -1—Add Backup Generators to Trellis Wells:</b> The groundwater wells in the Trellis Subdivision currently have no backup power source to continue operating in the case of a power outage. To continue to provide service during hazards, both wells will be equipped with backup generators.						
New and Existing	All Hazards	3, 7, 10	District	High	District Funds, HMGP	Short-term
<b>SSW-2—Add Backup Generator to River Ranch Lift Station:</b> The lift station currently has no backup power source to continue operating in the case of a power outage. To continue to provide service during hazards, the lift station will be equipped with a backup generator.						
New and Existing	All Hazards	3, 7, 10	District	High	District Funds, HMGP	Short-term
<b>SSW-3—Waterproof Manholes in 100-year Floodplain:</b> The sewer collection system has many pipes and manholes that are in the 100-year floodplain. The manhole lids and structures are not waterproof and could pose significant risk to other facilities if flood water were to enter through the manholes.						
Existing	Flood, Severe Weather, Dam Failure	1,10	District	High	District Funds, HMGP	Long-term
<b>SSW-4—Assess Flood Risk of WWTP, Western Regional Lift Station, and River Ranch Lift Station:</b> The risk to these facilities has not been evaluated since new FIRM maps were created. In order to prevent possible damage from flood events, a flood risk evaluation should be completed.						
Existing	Flood, Severe Weather, Dam Failure	1, 2, 10	District	Medium	District Funds, HMGP	Short-term
<b>SSW-5—Develop a Joint Emergency Operation Plan with Star City and Star Joint Fire Protection District:</b> This plan is necessary to establish a single, comprehensive framework for the management of domestic incidents. The City of Star will lead this all-discipline action, but Star Sewer & Water District will aid in planning for all hazards.						
New and Existing	All Hazards	All	Star City	Medium	City Funds, District Funds, HMGP	Short-term
<b>SSW-6—Develop a Continuity of Operation Plan:</b> This plan will provide specific policies and procedures that will be carried out in the event of an emergency, including localized acts of nature, accidents, and technological or attack-related emergencies. The plan will address how the District will continue to perform essential functions in the event of compromised facilities or leadership, and how the District will return to normal operations.						
New and Existing	All Hazards	All	District	Medium	District Funds, HMGP	Short-term
<b>SSW-7—Support County-wide Initiatives Identified in Volume 1 of the Multi-Hazard Mitigation Plan</b>						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term
<b>SSW-8—Actively Participate in the Plan Maintenance Protocols Outlined in Volume 1 of the Multi-Hazard Mitigation Plan</b>						
New and Existing	All Hazards	All	Ada County	Low	All county districts and municipalities, HMGP	Short-term
<b>SSW-9—SCADA System at Trellis Wells:</b> The wells in the Trellis subdivision currently don't have any emergency alert system or automatic operational controls in place. In order to receive emergency alerts from these wells, a SCADA system must be installed and this system must have cable or satellite communication with the District operations office.						
New and Existing	Severe Weather, Wildfire	1, 2, 3, 7, 10	District	Medium	District Funds, HMGP	Short-term
<b>SSW-10—Water Tank Power &amp; SCADA (Supervisory Control and Data Acquisition):</b> The water tank currently receives power from solar panels and batteries. In addition, there is no SCADA system. In case of an emergency, a backup primary power supply would provide more reliability in operations for the water tank; primary power supply will be extended to the tank as part of this project. In order to receive emergency alerts from the tank, a SCADA system must be installed and this system must have cable or satellite communication with the operations office.						
New and Existing	Severe Weather, Wildfire	1, 2, 3, 7, 10	District	Medium	District Funds, HMGP	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p><b>SSW-11—Add Backup Generator at the WWTP:</b> The WWTP currently has one backup power generator, but this generator is not capable of powering the entire plant. A second backup generator is recommended to improve redundancy and expand backup power to full plant operations.</p>						
New and Existing	All Hazards	3, 7, 10	District	High	District Funds, HMGP	Short-term

**Table 19-8. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
SSW-1	3	High	High	Yes	Yes	No	Medium	High
SSW-2	3	High	High	Yes	Yes	No	Medium	High
SSW-3	2	High	High	Yes	Yes	No	Medium	High
SSW-4	3	High	Medium	Yes	Yes	No	Medium	High
SSW-5	10	Medium	Medium	Yes	Yes	No	Medium	Medium
SSW-6	10	Medium	Medium	Yes	Yes	No	Medium	Medium
SSW-7	10	Low	Low	Yes	No	Yes	High	Low
SSW-8	10	Low	Low	Yes	No	Yes	High	Low
SSW-9	5	High	Medium	Yes	Yes	No	Medium	High
SSW-10	5	High	Medium	Yes	Yes	No	Medium	High
SSW-11	3	High	High	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

**Table 19-9. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	SSW-5, SSW-6, SSW-7, SSW-8	SSW-1, SSW-2, SSW-3, SSW-4, SSW-7, SSW-8, SSW-9, SSW-10, SSW-11	SSW-5, SSW-6, SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Drought	SSW-1, SSW-2, SSW-7, SSW-8, SSW-9, SSW-10	SSW-9, SSW-10	SSW-5, SSW-6, SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Earthquake	SSW-7, SSW-8		SSW-5, SSW-6, SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Flood	SSW-5, SSW-6, SSW-7, SSW-8	SSW-1, SSW-2, SSW-3, SSW-4, SSW-7, SSW-8, SSW-11	SSW-5, SSW-6, SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Landslide	SSW-7, SSW-8		SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Severe weather	SSW-5, SSW-6, SSW-7, SSW-8	SSW-1, SSW-2, SSW-3, SSW-4, SSW-7, SSW-8, SSW-9, SSW-10, SSW-11	SSW-5, SSW-6, SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Volcano	SSW-7, SSW-8		SSW-7, SSW-8		SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	
Wildfire	SSW-7, SSW-8	SSW-1, SSW-2, SSW-9, SSW-10	SSW-5, SSW-6, SSW-7, SSW-8	SSW-1, SSW-9, SSW-10	SSW-1, SSW-2, SSW-5, SSW-6, SSW-9, SSW-10, SSW-11	

a. See the introduction to this volume for explanation of mitigation types.

## 20. WHITNEY FIRE PROTECTION DISTRICT

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### 20.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### **Primary Point of Contact**

Renn Ross, Chief  
2515 S. Five Mile Rd.  
Boise, ID 83709  
Telephone: 208 375-6407  
e-mail address: ross@clearwire.net

#### **Alternate Point of Contact**

Romeo Gervais, Deputy Chief  
333 N. Mark Stall Place  
Boise, ID 83704  
Telephone: 208-570-6567  
e-mail Address: rgervais@cityofboise.org

### 20.2 JURISDICTION PROFILE

#### 20.2.1 Overview

The Whitney Fire Protection District (WFPD) is a tax district created pursuant to Idaho Code, Title 31 Counties and County Law, Chapter 14 Fire Protection District. The WFPD is responsible for the protection of property against fire and the preservation of life and for the enforcement of any of the fire codes and other rules adopted by the Idaho State Fire Marshal. The WFPD was established in 1947.

A three-member elected Board of Fire Commissioners, each serving a staggered four-year term, elected from a specific sub-district, governs the WFPD. The Fire Chief provides contract administration between the WFPD and the City of Boise Fire Department. The primary source of revenue for the WFPD is generated through the collection of property taxes, with some state sales tax revenues and interest income.

The WFPD contracts with the Boise City Fire Department for all operational services, some fire prevention services and logistical support services. The WFPD owns one fire station and maintains a fleet of two engines, one tender and two brush trucks. All WFPD stations and apparatus are staffed by the Boise City Fire Department per the contract agreement.

The WFPD service area encompasses approximately 18 square miles, primarily residential and rural areas within Ada County. The majority of the WFPD lies within the Area of Impact of the City of Boise and is subject to annexation at the discretion of the city.

#### 20.2.2 Service Area and Trends

The district serves a population of 19,000 as of 2010. Its service area covers an area of 18 square miles, which has a total value of \$1,112,751,246.00.

The district has seen growth in both population and valuation over the last several years. The district covers a significant inventory of residential homes south of the City of Boise but within the City's Impact Area.

#### 20.2.3 Assets

Table 20-1 summarizes the critical assets of the district and their value.

**Table 20-1. Special Purpose District Assets**

<b>Asset</b>	<b>Value</b>
<b>Critical Infrastructure and Equipment</b>	
Two Engines	\$1,225,000
Two Brush Truck	\$30,000
One Water Tender	\$425,000
<b>Total:</b>	<b>\$1,680,000</b>
<b>Critical Facilities</b>	
Fire Station #17 3801 S. Cole Rd. Boise, ID 83709	\$2,650,000
<b>Total:</b>	<b>\$4,330,000</b>

## 20.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- Ada County Ordinance Title 8, Chapter 3, Article B: Wildland-Urban Interface Overlay District.
- Ada County Ordinance Title 7, Chapter 3 Adoption of the ICC Urban-Wildfire Interface Code, 2006 Edition

## 20.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 3 for properties within 1000 feet of a hydrant and an 8 for properties beyond 1000 feet from a hydrant but within 5-miles of a fire station. An assessment of fiscal capabilities is presented in Table 20-2. An assessment of administrative and technical capabilities is presented in Table 20-3.

**Table 20-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	

**Table 20-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Contract with City of Boise
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contract with City of Boise
Planners or engineers with an understanding of natural hazards	Yes	Contract with City of Boise
Staff with training in benefit/cost analysis	Yes	Contract with City of Boise
Surveyors	Yes	Contract with City of Boise
Personnel skilled or trained in GIS applications	Yes	Contract with City of Boise
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	ACEM
Grant writers	Yes	Contract with City of Boise
Other	Yes	Contract with City of Boise

## 20.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 20-4.

**Table 20-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – Contract with City of Boise
Do you have personnel skilled or trained in website development?	Yes – Contract with City of Boise
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Contract with City of Boise
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Contract with City of Boise
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, please briefly specify.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Contract with City of Boise
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Code Red/ISAWS – residents may sign up to receive emergency notifications and critical community alerts. Both systems are IPAWS enabled and may additionally access that integrated system for public warnings.

## 20.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 20.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- County and City Plans

## 20.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- N/A

## 20.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 20-5 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Grass Fire	N/A	7/2/2011	N/A
Brush Fire	N/A	7/4/2011	N/A
Natural Vegetation Fire	N/A	9/11/2011	N/A
Brush Fire	N/A	9/28/2011	N/A
Brush Fire	N/A	3/28/2012	N/A
Grass Fire	N/A	6/12/2012	N/A
Grass Fire	N/A	7/5/2012	N/A
Grass Fire	N/A	8/12/2012	N/A
Brush Fire	N/A	10/29/2012	N/A
Natural Vegetation Fire	N/A	2/10/2013	N/A
Brush Fire	N/A	3/9/2013	N/A
Grass Fire	N/A	7/1/2013	N/A
Brush Fire	N/A	9/16/2013	N/A
Grass Fire	N/A	7/1/2014	N/A
Grass Fire	N/A	7/5/2014	N/A
Brush Fire	N/A	7/22/2014	N/A
Natural Vegetation Fire	N/A	10/15/2015	N/A

## 20.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- None noted.

## 20.9 HAZARD RISK RANKING

Table 20-6 presents the ranking of the hazards of concern.

**Table 20-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Wildfire	18	Medium
2	Severe Weather	32	High
3	Flood	18	Low
4	Drought	16	Low
5	Earthquake	16	Low
6	Volcano	12	Low
7	Dam Failure	0	Low
8	Landslide	0	Low

## 20.10 STATUS OF PREVIOUS PLAN INITIATIVES

Table 20-7 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 20-7. Status of Previous Action Plan**

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #WFD-1—Enforce existing wildland urban interface standards in Ada County.	Yes	Yes	
Action #WFD-2—Require Local Fire District Approval of Water and Access Requirements for all projects.	Yes	Yes	
Action #WFD-3—Promote adoption of Firewise for development within the wildland urban interface Overlay	Yes	Yes	
Action #WFD-4—Support County-wide initiatives identified in Volume 1.	Yes	Yes	
Action #WFD-5—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.	Yes	Yes	

## 20.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 20-8 lists the actions that make up the Whitney Fire Protection District hazard mitigation action plan. Table 20-9 identifies the priority for each action. Table 20-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 20-8. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action #WFD-1</b> —Enforce existing wildland urban interface standards in Ada County.						
New & Existing	Wildfire	1, 2, 4, 5, 6, 9, 10	Whitney Fire District, Boise Fire, Ada County	Low	Local	Short term & Ongoing
<b>Action #WFD-2</b> —Require Local Fire District Approval of Water and Access Requirements for all projects.						
New	Wildfire	1, 2, 4, 5, 9	Whitney Fire, Ada County	Low	Local	Short term & Ongoing
<b>Action #WFD-3</b> —Promote adoption of Firewise for development within the wildland urban interface Overlay						
New & Existing	Wildfire	1, 2, 5, 6, 8, 9	Whitney Fire, Boise Fire, Ada County	Low	Local	Short term & Ongoing
<b>Action #WFD-4</b> —Support County-wide initiatives identified in Volume 1.						
New & Existing	All Hazards	1, 2, 6, 7, 8, 9, 10	Whitney Fire, ACEM	Low	Local	Short term & Ongoing
<b>Action #WFD-5</b> —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New & Existing	All Hazards	1, 2, 6, 7, 8, 9, 10	Whitney Fire, ACEM	Low	Local	Short term & Ongoing
<b>Action #WFD-6</b> —Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.						
New and Existing	Wildfire	8,9	WFD, ACEM	Low	General Fund	Ongoing
<b>Action #WFD-7</b> —Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.						
New and Existing	Wildfire	1, 6, 9, 10	Whitney Fire, ACEM	Low	General Fund	Ongoing

**Table 20-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
WFD-1	7	Medium	Low	Yes	No	Yes	High	Low
WFD-2	5	Medium	Low	Yes	No	Yes	High	Low
WFD-3	6	Low	Low	Yes	Yes	Yes	High	High
WFD-4	7	Medium	Low	Yes	Yes	Yes	High	High
WFD-5	7	Medium	Low	Yes	Yes	Yes	High	High
WFD-6	2	Medium	Low	Yes	No	Yes	High	Low
WFD-7	4	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

**Table 20-10. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Wildfire	WFD-1, WFD-2, WFD-3, WFD-5, WFD-6, WFD-7	WFD-1, WFD-2, WFD-3, WFD-6, WFD-7	WFD-4, WFD-6, WFD-7	WFD-1, WFD-3, WFD-6, WFD-7	WFD-1, WFD-2, WFD-3, WFD-4, WFD-5, WFD-7	
Severe Weather	WFD-5		WFD-4		WFD-4, WFD-5	
Flood	WFD-5		WFD-4		WFD-4, WFD-5	
Drought	WFD-5		WFD-4		WFD-4, WFD-5	
Earthquake	WFD-5		WFD-4		WFD-4, WFD-5	
Volcano	WFD-5		WFD-4		WFD-4, WFD-5	
Dam Failure	WFD-5		WFD-4		WFD-4, WFD-5	
Landslide	WFD-5		WFD-4		WFD-4, WFD-5	

a. See the introduction to this volume for explanation of mitigation types.



## 21. BOISE STATE UNIVERSITY

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### 21.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

#### **Primary Point of Contact**

Robert Littrell: Emergency  
Management/Continuity Planner  
1910 University Drive  
Boise, ID 83725-1275  
Telephone: 208-426-3638  
e-mail Address: [roblittrell@boisestate.edu](mailto:roblittrell@boisestate.edu)

#### **Alternate Point of Contact**

Jo Ann Gilpin: Manager, Campus Safety  
1910 University Drive  
Boise, ID 83725-1291  
Telephone: 208-426-1461  
e-mail Address: [joanngilpin@boisestate.edu](mailto:joanngilpin@boisestate.edu)

### 21.2 JURISDICTION PROFILE

#### 21.2.1 Overview

Boise State University was established in 1932 as a junior college and gained university status in 1974. Located in downtown Boise, ID, the main campus includes over 140 buildings on a 140-acre site. The university employs 2,753 faculty and staff and has an enrollment around 22,000 students during the fall/spring semesters. In addition to conducting academics and research, the university hosts multiple, simultaneous events on campus with some events bringing up to 45,000 visitors on campus for sporting and performance events.

#### 21.2.2 Service Area and Trends

While Boise State University might be most famous for the iconic Blue Turf of the Albertsons Stadium and the conference winning Broncos, it is also becoming a metropolitan research university of distinction in the Pacific Northwest. Boise State confers more degrees annually than any other university in Idaho and its programs are growing each year, with over \$200 million being spent on academics and another \$70 million to expand the athletics department. We have over 2,500 residents living on campus with students from all over the United States and an increasing international student population.

#### 21.2.3 Assets

Table 21-1 summarizes the critical assets of the district and their value.

**Table 21-1. Special Purpose District Assets**

<b>Asset</b>	<b>Value</b>
<b>Property</b>	
<ul style="list-style-type: none"> <li>• Main Campus: <b>183 acres</b></li> <li>• Off Campus Properties (Dona Larsen Park, Boas Tennis Center, Yanke Research Park, Gage Warehouse, Warm Springs Property, Park &amp; Ride): <b>53 Acres</b></li> </ul> <p style="text-align: right;"><b>274.92 Total Acres</b></p>	\$83,804,288
<b>Critical Infrastructure, Facilities and Equipment</b>	
Total Property Value: 250+ Buildings; includes building replacement value, content replacement value, mobile equipment, stock/supply, rental loss, business interruption, and tuition fees)	\$1,104,377, 772.00
Insured Equipment (all items over \$2,000 value; 10,335 items)	\$11,335,670.67
Auto/Fleet (195+ vehicles)	\$767,487.08
<b>Total:</b>	<b>\$1,116, 480, 929.75</b>
<b>Grand Total</b>	<b>\$1,200,285,217,75</b>

## 21.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this Multi-Hazard Mitigation Plan:

- State of Idaho Statutes
- Boise City Code:
  - Title 4: Building Regulations
  - Title 7: Fire Regulations
  - Title 8: Health and Sanitation
  - Title 11: Zoning
- Ada County Emergency Management Emergency Plans
- Boise State University Emergency Operations Plan

## 21.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 21-2. An assessment of administrative and technical capabilities is presented in Table 21-3.

**Table 21-2. Fiscal Capability**

<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	No

**Table 21-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Campus Planning & Facilities, Idaho Department of Public Works
Engineers or professionals trained in building or infrastructure construction practices	Yes	Campus Planning & Facilities, Idaho Department of Public Works
Planners or engineers with an understanding of natural hazards	Yes	Campus Planning & Facilities, Idaho Department of Public Works
Staff with training in benefit/cost analysis	Yes	Boise State Risk Management
Surveyors	Yes	Campus Planning & Facilities, Idaho Department of Public Works
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	Yes	Boise State University Instructors
Emergency manager	Yes	Boise State Office of Emergency Management
Grant writers	Yes	Boise State Research
Other	No	

## 21.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 21-4.

**Table 21-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes/Kathleen Tuck
Do you have personnel skilled or trained in website development?	Yes/Various divisions on campus
Do you have hazard mitigation information available on your website? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Link to Ada County Emergency Management website
Do you utilize social media for hazard mitigation education and outreach? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Twitter and Facebook accounts
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <ul style="list-style-type: none"> <li>If yes, please briefly specify.</li> </ul>	Yes Emergency Policy and Operations Groups
Do you have any other programs already in place that could be used to communicate hazard-related information? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Emergency Operations Plan, Annex for Emergency Notification Protocols
Do you have any established warning systems for hazard events? <ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Yes Emergency Notification System: BroncoAlert. Provides Emergency Notification and Timely Warning

## 21.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the Multi-Hazard Mitigation Plan into existing plans and programs.

### 21.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan:

- Boise State University Emergency Operations Plan
- Boise State University Continuity of Operations Plan
- Boise State University Building Coordinator Emergency Action Plans (1 for each of the 40+ major buildings on campus)

### 21.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the Multi-Hazard Mitigation Plan, but provide an opportunity for future integration:

- Boise State University Building Design Guidelines. We are working on defining campus safety and mitigation standards for all new building construction and renovations with our Campus Planning & Facilities group.
- Expansion of the campus Emergency Management Committee to include more campus faculty with subject matter expertise on natural and human-caused disasters.
- Creation of campus Public Safety group to host quarterly sessions including our emergency responders from Ada County and the City of Boise to discuss Risk Assessment, Mitigation and Preparedness on campus.

## 21.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 21-5 lists all past occurrences of natural hazards within the jurisdiction.

Table 21-5. Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
All recorded incidents have been human-caused; no recorded natural hazard events for the last 6 years	N/A	N/A	N/A

## 21.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include (these are the vulnerabilities identified by Ada County Emergency Management as top vulnerabilities for Ada County):

- Dam Failure
- Drought
- Earthquake
- Flood
- Landslide
- Severe weather
- Volcano

## 21.9 WILDFIRE HAZARD RISK RANKING

Table 21-6 presents the ranking of the hazards of concern to Boise State University.

**Table 21-6. Hazard Risk Ranking**

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Cyber/IT Disruption	10	High
2	Flooding	9	High
3	Severe Weather	8	High
4	Pandemic	7	High
5	Targeted Violence	6	Medium
6	Structural Fires	5	Medium
7	Hazmat	4	Medium
8	Power Outage	3	Medium
9	Earthquake	2	Medium
10	Water Outage	1	Medium

## 21.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 21-7 lists the actions that make up the Boise State University hazard mitigation action plan.

**Table 21-7. Mitigation Action Matrix**

Action #	Mitigation Actions	Ranking	Responsible Department or Division	Proposed Funding Source	Desired Completion Date	Estimated Cost
<b>Goal 1: Educate, advise campus leadership, planners on criticality of integrating mitigation actions into all aspects of campus planning and operations.</b>						
<b>Goal 1: Protect life and property on campus by transitioning to integrated security systems. (X mitigation actions)</b>						
1	Replace end of life building access system with new system capable of integrating with monitoring station cameras and alarms.	High	Public Safety			
2	Fund and purchase camera surveillance system throughout campus to include key external areas critical to campus safety.	High	Public Safety			
3	Replace aging campus radio trunk system to ensure communications interoperability during disasters on campus.	Medium	Facilities Operations & Maintenance			
4	Continue to define/refine building design guidelines that provide the minimum safety standards for all new buildings and renovation projects.	Ongoing	Architectural Engineering and Services			
5	Build and identify safe rooms in buildings throughout the campus.	Medium	Facilities Operations & Maintenance			
6	Retrofit all campus classrooms and office spaces with inside locks or secure access (card readers) devices to provide secure shelter-in-place refuges.	High	Facilities Operations & Maintenance			

Action #	Mitigation Actions	Ranking	Responsible Department or Division	Proposed Funding Source	Desired Completion Date	Estimated Cost
<b>Goal 2: Educate, advise campus leadership, planners on criticality of integrating mitigation actions into all aspects of campus planning and operations. (X mitigation actions)</b>						
7	Develop/Design specific Mitigation Project Plans and determine proper funding sources for this Action Plan.	High	Emergency Management			
8	Continue to promote the development, refinement of Emergency Action Plans for all buildings on campus	Ongoing	Environmental Health & Safety			
9	Educate campus decision makers about natural hazard vulnerability and assure comprehensive understanding of hazard vulnerability and hazard mitigation among key decision makers (Emergency Policy/Operations Groups)and members of the campus community.	Ongoing	Emergency Management			
10	Continue to expand/refine continuity plans for all academic, research, and support operations on campus to minimize downtime following a disaster impacting campus.	Ongoing	Emergency Management			
11	Develop memorandums of agreement with all external agencies necessary for aid following a disaster.	Ongoing	Emergency Management			
12	Develop and maintain enterprise GIS system, including HAZUS, with the goal of providing a common operating picture to support planning and mitigation activities for all campus managers.	High	Architectural Engineering and Services/Emergency Management			
13	Update, maintain, and improve detailed information regarding hazardous chemicals, biological and radiological agents, animals, and critical works of art and cultural treasures.	Ongoing	Environmental Health & Safety			
<b>Goal 2: Educate and communicate to the campus community (faculty, students, staff, visitors) the hazards specific to the campus and prepare them for emergency incidents on campus. (X mitigation actions)</b>						
14	Continue efforts to inform campus personnel of risks and mitigation strategies constantly looking for opportunities to improve public information communication and distribution of information.	Ongoing	Emergency Management/Environmental Health & Safety			
15	Continue to provide targeted/workplace violence awareness/academics to all faculty, students, and staff to raise preparedness on campus.	Ongoing	Public Safety			
16	Develop student/faculty disaster kits for use during incidents on campus.	Medium	Emergency Management			
17	Provide community outreach and education regarding hazards on campus using handouts during orientation, move-in, safety fairs and additional displays.	Medium	Emergency Management/ Public Safety /Environmental Health & Safety			

Action #	Mitigation Actions	Ranking	Responsible Department or Division	Proposed Funding Source	Desired Completion Date	Estimated Cost
<b>Goal 3: Ensure systems are in place to communicate effectively during emergency incidents on campus. (X mitigation actions)</b>						
18	Continue to refine the emergency notification system to include redundancy and efficient distribution during emergencies on campus. Expand capability to include: Reader boards Building mass notification systems Computer alerts Classroom alert signs	Medium	Emergency Management			
19	Replace aging outdoor “Shelter-In-Place notification system with outdoor speaker arrays to cover entire campus footprint.	Medium	Emergency Management			
<b>Goal 4: Assess and improve campus infrastructure, landscaping, and capacity to effectively the impact of storm water drainage/flooding on campus. (X mitigation actions)</b>						
20	Develop and implement a vegetation management policy to assure maintenance of open space around all buildings on campus.	Medium	Facilities Operations & Maintenance			
21	Wet proof as many facilities on campus as possible to preclude flood damage.	Medium	Facilities Operations & Maintenance			
22	Improve drainage throughout the campus to avoid nuisance flooding in older campus buildings (10+)	Medium	Facilities Operations & Maintenance			
23	Need to conduct a comprehensive analysis of underground utility infrastructure (storm water, etc.) due to expansion of university, climate change, and increased frequency of severe weather events—and implement recommended changes.	Medium	Campus Planning & Facilities			
<b>Goal 5: Assess and improve campus infrastructure to mitigate and minimize the impact of power outages on campus.</b>						
24	Acquire a generator with the capability to fully power the Student Union Building during major incidents to allow the building to be used as a shelter, warming center, etc.	High	Facilities Operations & Maintenance			
25	Investigate current vulnerability of existing generators and assess possibility of moving them to non-vulnerable locations	Medium	Facilities Operations & Maintenance			
27	Investigate utility loops and redundancies in electrical grid and continue to look into opportunities for alternate power	Medium	Facilities Operations & Maintenance			
28	Provide additional backup generators throughout campus to provide emergency lighting, power during power outages and severe weather.	Medium	Facilities Operations & Maintenance			
29	Install additional UPS units throughout all server rooms on campus to preclude power disruptions.	High	Facilities Operations & Maintenance			
30	Build a new, efficient Central Power Plant to provide electricity, steam, hot water, and chilled water for the main campus and reduce reliance on Idaho Power.	Medium	Facilities Operations & Maintenance			



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2016 Ada County Multi-Hazard Mitigation Plan: Volume 2—Planning Partner Annexes

## **Appendix A. Planning Partner Expectations**

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# A. PLANNING PARTNER EXPECTATIONS

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## ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether our planning process generates ten individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- **Participate in the process.** It must be documented in the plan that each planning partner “participated” in the process that generated the plan. There is flexibility in defining “participation”. Participation can vary based on the type of planning partner (i.e.: City or County, vs. a Special Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- **Consistency Review.** Review of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the “parent” plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).
- **Action Review.** For Plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- **Update Localized Risk Assessment.** Personalize the Risk Assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard’s impact to a jurisdiction. This phase will include:
  - A ranking of the risk
  - A description of the number and type of structures at risk
  - An estimate of the potential dollar losses to vulnerable structures
  - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- **Capability assessment.** Each planning partner must identify and review their individual regulatory, technical and financial capabilities with regards to the implementation of hazard mitigation actions.
- **Personalize mitigation recommendations.** Identify and prioritize mitigation recommendations specific to the each jurisdiction’s defined area.
- **Create an Action Plan.**
- **Incorporate Public Participation.** Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- Plan must be adopted by each jurisdiction.

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all

need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other “stakeholders” within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan’s development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each Planning Partner shall provide the following:

1. A “Letter of Intent to participate” or Resolution to participate to the Planning Team (see exhibit A).
2. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.
3. Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.
4. Provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.
5. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:
  - a. Steering Committee meetings
  - b. Public meetings or open houses
  - c. Workshops/ Planning Partner specific training sessions
  - d. Public review and comment periods prior to adoption

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

1. There will be one **mandatory** workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template which is the basis for each partner’s jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.
2. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.
3. Each partner will be expected to perform a “consistency review” of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. For example, if your community has a floodplain management plan that makes recommendations that are not consistent with any of the County’s Basin Plans, that plan will need to be reviewed for probable incorporation into the plan for your area.
4. Each partner will be expected to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.

5. Each partner will be expected to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.
6. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
7. Each partner will be required to sponsor at least one public meeting to present the draft plan to its constituents at least 2 weeks prior to adoption.
8. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be expected to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

**\*\* Note\*\*:** Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan. At a minimum, this means completing the ongoing plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.

## EXHIBIT A. EXAMPLE LETTER OF INTENT TO PARTICIPATE

Ada County Hazard Mitigation Planning Partnership  
C/O Rob Flaner, Tetra Tech, Inc.  
90 South Blackwood Ave.  
Eagle, ID 83616

Dear Ada County Planning Partnership,

Please be advised that the \_\_\_\_\_ (insert City or district name) is committed to participating in the update to the Ada County Hazard Mitigation Plan. As the jurisdictional representative tasked with this planning effort, I certify that we will commit all necessary resources in order to meet Partnership expectations as outlined in the “Planning Partners expectations” document provided by the planning team, in order to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

Mr./Ms. \_\_\_\_\_ will be our jurisdiction’s point of contact for this process and they can be reached at (*insert: address, phone number and e-mail address*).

Sincerely,

Name \_\_\_\_\_

Title \_\_\_\_\_

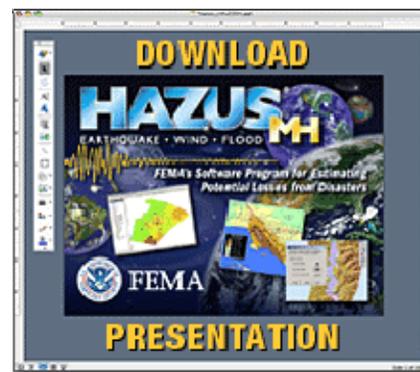
## EXHIBIT B. PLANNING TEAM CONTACT INFORMATION

Name	Representing	Address	Phone	e-mail
Doug Hardman	ACEM	7200 Barrister Dr. Boise, ID 83704	(208)577-4750	<a href="mailto:dhardman@adaweb.net">dhardman@adaweb.net</a>
Paul (Crash) Marusich	ACEM	7200 Barrister Dr. Boise, ID 83704	(208)577-4750	<a href="mailto:pmarusich@adaweb.net">pmarusich@adaweb.net</a>
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	(208) 939-4391	<a href="mailto:Rob.flaner@tetrattech.com">Rob.flaner@tetrattech.com</a>
Carol Bauman	Tetra Tech, Inc.	1020 SW Taylor St., Ste. 530 Portland, Oregon 97205	(503) 223-5388	<a href="mailto:Carol.Baumann@tetrattech.com">Carol.Baumann@tetrattech.com</a>
Stephen Veith	Tetra Tech, Inc.	1020 SW Taylor St., Ste. 530 Portland, Oregon 97205	(503) 223-5388	<a href="mailto:Stephen.veith@tetrattech.com">Stephen.veith@tetrattech.com</a>

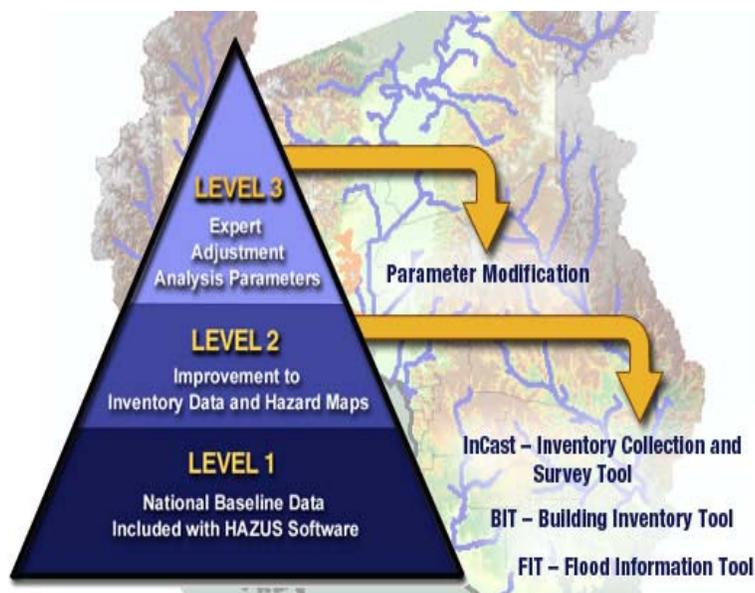
## EXHIBIT C. OVERVIEW OF HAZUS

### Overview of HAZUS-MH (Multi-Hazard)

[http://www.fema.gov/hazus/dl\\_mhpres.shtm](http://www.fema.gov/hazus/dl_mhpres.shtm) HAZUS-MH, is a nationally applicable standardized methodology and software program that contains models for estimating potential losses from earthquakes, floods, and hurricane winds. HAZUS-MH was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to HAZUS-MH development. Loss estimates produced by HAZUS-MH are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and earthquakes. Estimating losses is essential to



decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.

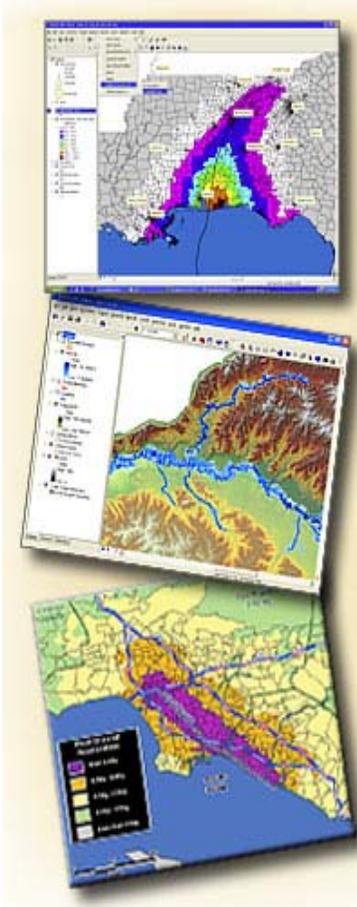


HAZUS-MH uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, and earthquakes on populations. The latest release, HAZUS-MH MR1, is an updated version of HAZUS-MH that incorporates many new features which improve both the speed and functionality of the models. For information on software and hardware requirements to run HAZUS-MH MR1, see [HAZUS-MH Hardware and Software Requirements](#).

### HAZUS-MH Analysis Levels

HAZUS-MH provides for three levels of analysis:

- A **Level 1** analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.
- A **Level 2** analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A **Level 3** analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on to the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.



Three data input tools have been developed to support data collection. The [Inventory Collection Tool \(InCAST\)](#) helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with HAZUS. InCAST has expanded capabilities for multi-hazard data collection. HAZUS-MH includes an enhanced Building Inventory Tool (BIT) allows users to import building data and is most useful when handling large datasets, such as tax assessor records. The [Flood Information Tool \(FIT\)](#) helps users manipulate flood data into the format required by the HAZUS flood model. All Three tools are included in the HAZUS-MH MR1 Application DVD.

## HAZUS-MH Models

The **HAZUS-MH Hurricane Wind Model** gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. [Details about the Hurricane Wind Model.](#)

The **HAZUS-MH Flood Model** is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical

damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. [Details about the Flood Model.](#)

The **HAZUS-MH Earthquake Model**, The HAZUS earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, inventory, and building interiors. The earthquake model also includes the Advanced Engineering Building Module for single- and group-building mitigation analysis. [Details about the Earthquake Model.](#)

The updated earthquake model released with HAZUS-MH includes:

- The (September 2002) National Hazard Maps
- Project '02 attenuation functions
- Updated historical earthquake catalog (magnitude 5 or greater)
- Advanced Engineering Building Module for single and group building mitigation analysis

Additionally, HAZUS-MH can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. HAZUS-MH also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, and earthquake) in HAZUS-MH.



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2016 Ada County Multi-Hazard Mitigation Plan: Volume 2—Planning Partner Annexes

## **Appendix B. Procedures for Linking to This Plan**

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## B. PROCEDURES FOR LINKING TO THIS PLAN

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Not all eligible local governments within Ada County are included in the Ada County Multi-Hazard Mitigation Plan Update. It is assumed that some or all of these non-participating local governments may choose to “link” to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act. In addition, some of the current partnership may not continue to meet eligibility requirements due to a lack of participation as prescribed by the plan. The following “linkage” procedures define the requirements established by the Plan’s Steering Committee and all planning partners for dealing with an increase or decrease in the number of planning partners linked to this plan. It should be noted that a currently non-participating jurisdiction within the defined planning area is not obligated to link to this plan. These jurisdictions can choose to do their own “complete” plan that addresses all required elements of section 201.6 of 44 CFR.

### INCREASING THE PARTNERSHIP THROUGH LINKAGE

The annual time period for the linkage process will be from January to May during any year. Eligible linking jurisdictions are instructed to complete all of the following procedures during this time frame:

- The eligible jurisdiction requests a “Linkage Package” by contacting the Point of Contact (POC) for the plan:
  - Name
  - Title
  - Address
  - City, State ZIP
  - Phone
  - e-mailThe POC will provide a linkage packages that includes:
  - Copy of Volume 1 and 2 of the plan
  - Planning partner’s expectations package.
  - A sample “letter of intent” to link to the Multi-Hazard Mitigation Plan.
  - A Special Purpose District or City template and instructions.
  - Catalog of Hazard Mitigation Alternatives
  - A “request for technical assistance” form.
  - A copy of Section 201.6 of Chapter 44, the Code of Federal Regulations, which defines the federal requirements for a local hazard mitigation plan.
- The new jurisdiction will be required to review both volumes of the Multi-Hazard Mitigation Plan, which includes the following key components for the planning area:
  - The planning area risk assessment
  - Goals and objectives
  - Plan implementation and maintenance procedures
  - Comprehensive review of alternatives

➤ County-wide initiatives.

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC. Technical assistance can be provided upon request by completing the request for technical assistance (TA) form provided in the linkage package. This TA may be provided by the POC or any other resource within the Planning Partnership such as a member of the Steering Committee or a currently participating City or Special Purposes District partner. The POC will determine who will provide the TA and the possible level of TA based on resources available at the time of the request.

- The new jurisdiction will be required to develop a public involvement strategy that ensures the public’s ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by the governing body. The Planning Partnership will have resources available to aid in the public involvement strategy such as the Plan website. However, it will be the new jurisdiction’s responsibility to implement and document this strategy for incorporation into its annex. It should be noted that the Jurisdictional Annex templates do not include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the plan. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format utilized by the initial planning effort as described in Volume 1 of the plan.
- Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the Regional plan format.
- The POC will review for the following:
  - Documentation of Public Involvement strategy
  - Conformance of template entries with guidelines outlined in instructions
  - Chosen initiatives are consistent with goals, objectives and mitigation catalog of the Multi-Hazard Mitigation Plan Update
  - A Designated point of contact
  - A ranking of risk specific to the jurisdiction.

The POC may utilize members of the Steering Committee or other resources to complete this review. All proposed linked annexes will be submitted to the Steering Committee for review and comment prior to submittal to the Idaho Office of Emergency Management (IOEM).

- Plans approved and accepted by the Steering Committee will be forwarded to IOEM for review with a cover letter stating the forwarded plan meets local approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.
- IOEM will reviews plans for federal compliance. Non-Compliant plans are returned to the Lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.
- FEMA reviews the new jurisdiction’s plan in association with the approved plan to ensure DMA compliance. FEMA notifies new jurisdiction of results of review with copies to IOEM and approved planning authority.
- New jurisdiction corrects plan shortfalls (if necessary) and resubmits to IOEM through the approved plan lead agency.

- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan (if not already accomplished) and forwards adoption resolution to FEMA with copies to lead agency and IOEM.
- FEMA regional director notifies new jurisdiction governing authority of plan approval.

The new jurisdiction plan is then included with the regional plan with the commitment from the new jurisdiction to participate in the ongoing plan implementation and maintenance.

## DECREASING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur any time during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both IOEM and FEMA in writing that the partner in question is no longer covered by the Multi-Hazard Mitigation Plan, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the “Planning Partner Expectations” package provided to each partner at the beginning of the process, or the plan maintenance and implementation procedures specified in Volume 1 of the plan. Each partner agreed to these terms by adopting the plan.

Eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are progress reports being submitted annually by the specified time frames?
- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the Planning Partners expectations package provided to them at the beginning of the process?

Participation in the plan does not end with plan approval. This partnership was formed on the premise that a group of planning partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Steering Committee of this pending action and provide evidence or justification for the action. Justification may include: multiple failures to submit annual progress reports, failure to attend meetings determined to be mandatory by the Steering Committee, failure to act on the partner’s action plan, or inability to reach designated point of contact after a minimum of five attempts.
- The Steering Committee will review information provided by POC, and determine action by a vote. The Steering Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Steering Committee has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action, and

ask the partner if it is their desire to remain as a partner. This notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.

- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Steering Committee to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Steering Committee's review will remain in the partnership, and no further action is required.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5 year planning cycle.

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2016 Ada County Multi-Hazard Mitigation Plan: Volume 2—Planning Partner Annexes

## **Appendix C. Annex Instructions and Templates**

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# 1. INSTRUCTIONS FOR COMPLETING MUNICIPALITY ANNEX TEMPLATE

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The jurisdictional annex templates for the 2016 Clark County Hazard Mitigation Plan will be completed in three phases. **This document provides instructions for completing all phases of the template for municipalities.**

**If your jurisdiction completed and submitted Phase 1 and Phase 2,** Phase 3 has been added to the end of your annex to date. Any planning team comments, questions or suggestions have been included as blue highlighted notes and/or comments. Any text edits were made via track changes. Any yellow highlights indicate areas where missing information should be filled in. Phase 3 instructions begin on page 8.

**If your jurisdiction did not complete Phase 1 or Phase 2,** please complete all phases at this time.

**Completed, draft templates should be completed by Friday, April 15, 2016. If you will not be able to meet this deadline, you must let the planning team know by April 8, 2016.**

**Any questions on completing the template should be directed to:**

Kristen Gelino  
Tetra Tech, Inc.  
(646) 576-4029  
e-mail: [Kristen.gelino@tetrattech.com](mailto:Kristen.gelino@tetrattech.com)

## Municipality Annex:

This document provides instructions for completing all phases of the jurisdictional annex template for municipalities. **Phase 3 templates should be completed by Friday, April 15, 2016. If you will not be able to meet this deadline, you must let the planning team know by April 8, 2016.**

### *Associated Documents:*

Phas32\_MUNICIPALITYNAME.dotm  
ClarkCo\_2016HMP\_Toolkit

## A Note About Formatting:

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

Content should be entered within the yellow, highlighted text that is currently in the template, rather than creating text in another document and pasting it into the template. Text from another source will alter the style and formatting of the document.

The numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of this numbering.

## PHASE 1 STARTS HERE

### CHAPTER TITLE

In the chapter title at the top of Page 1, type in the complete official name of your municipality (City of Owen, West County, etc.). Please do not change the chapter number. Revise only the jurisdiction name.

### HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

*Note: Both contacts should match the contacts designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, please let the planning team know by inserting a comment into the document.*

### JURISDICTION PROFILE

Provide information specific to your jurisdiction, in a style similar to the example provided in the box at right. This should be information not be provided in the overall mitigation plan document. For population, use the most current data for your jurisdiction from an official source (e.g., the U.S. Census or state office of financial management).

#### Example Jurisdiction Profile:

- **Date of Incorporation**—1858
- **Current Population**—17,289 as of July 2014 (2014 Department of Finance estimates)
- **Population Growth**—Based on the state data, Smithburg has experienced a relatively flat rate of growth. The overall population has increased 3.4% since 2010 and growth averaged 0.74% per year from 2000 to 2014.
- **Location and Description**—The City of Smithburg is on the Pacific coast, 275 miles south of Portland. Smithburg is the home of Smithburg State University and is situated between the communities of Murphy to the north and Blue Lake to the east. It sits at the intersection of State Routes 101 and 299.
- **Brief History**—The Smithburg area was settled in the 1850s as a supply center for miners. Timber later became the area's major economic resource. Smithburg was incorporated in 1858 and by 1913 Smithburg College was founded. Recently, the presence of the college has come to shape Smithburg's population into a young, liberal, and educated crowd.
- **Climate**—Smithburg's weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80% of that falling from November through April. The average year-round temperature is 59°F. Humidity averages 72 to 87 percent. Prevailing winds are from the north, and average 5 mph.
- **Governing Body Format**—The City is governed by a five-member city council. The City consists of three departments: Finance, Environmental Services, and Community Development. The City has 13 committees, commissions and task forces, which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.
- **Development Trends**—Anticipated development levels for Smithburg are low to moderate, consisting primarily of residential development. The majority of recent development has been infill, with a focus on affordable housing. The 2012 City of Smithburg general plan focuses on issues of the greatest concern to the community. City actions, such as those relating to land use allocations, annexations, zoning, subdivision, and capital improvements, must be consistent with the plan. Future growth and development in the City will be managed as identified in the general plan.

## PHASE 2 STARTS HERE

### CAPABILITY ASSESSMENT

**Please note that it is unlikely that you will be able to complete all sections of this phase on your own. You will likely need to reach out to other departments within your local government such as planning, finance, public works, etc. When reaching out to these individuals, you may want to provide them with a little background information about this planning process as you will certainly want some input/feedback during phase 3 of your annex development – selecting mitigation actions.**

#### Legal and Regulatory Capability

Describe the legal authorities available to your jurisdiction and/or enabling legislation at the state level affecting planning and land management tools that can support hazard mitigation actions. In the table titled “Legal and Regulatory Capability,” indicate “Yes” or “No” for each listed code, ordinance, requirement or planning document in each of the following columns:

- **Local Authority**—Enter “Yes” if your jurisdiction has prepared or adopted the identified item; otherwise, enter “No.” If yes, then enter the code, ordinance number, or plan name and its date of adoption in the comments column.
- **Other Jurisdiction Authority**—Enter “Yes” if there are any regulations that may impact your action that are enforced or administered by another agency (e.g., a state agency or special purpose district) or if you know that there are any state or federal regulations or laws that would prohibit local implementation of the identified item; otherwise, enter “No.” Note - If you answer yes, please indicate the other agency in the comments.
- **State Mandated**—Enter “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter “No.”
- **Comments**—Enter the code number and adoption date for any local code indicated as being in place; provide other comments as appropriate to describe capabilities for each entry.
- For the categories “General or Comprehensive Plan” and “Capital Improvement Plan,” answer the specific questions shown, in addition to completing the four columns indicating level of capability.

The table on the following page provides information and resources that may be helpful to you in completing the legal and regulatory capability table in you annex.

Legal and Regulatory Capability – Helpful Information	
Additional Information	
<b>Codes, Ordinances &amp; Requirements</b>	
Building Code	The State Building Code is the minimum requirements for all local jurisdictions in the State. Local jurisdictions may enforce more stringent standards. The latest version of the WA State Code became effective on July 1, 2013 (Chapter 19.27 RCW). It is recommended that building codes are adopted locally.  <b>Resource:</b> <a href="http://mrsc.org/Home/Stay-Informed/MRSC-Insight/February-2013/New-Building-Codes-Go-Into-Effect-on-July-1,-2013.aspx">http://mrsc.org/Home/Stay-Informed/MRSC-Insight/February-2013/New-Building-Codes-Go-Into-Effect-on-July-1,-2013.aspx</a>
Zoning Code	You may have a unified development code or separate ordinances for zoning, subdivision, etc. Clark County is a GMA community.  <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Development-Regulations-and-Zoning.aspx">http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Development-Regulations-and-Zoning.aspx</a>
Subdivisions	The subdivision of land into lots is governed in Washington State by chapter 58.17 RCW and by city and county ordinances adopted under that chapter's authority.  <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Subdivisions.aspx">http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Subdivisions.aspx</a>
Stormwater Management	Under Clean Water Act regulations, local governments in the Puget Sound Basin and those subject to the federal National Pollutant Discharge Elimination System (NPDES) Storm Water Program are required to have stormwater management programs. As authorized by the Clean Water Act, the U.S. Environmental Protection Agency's NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.  <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Environment/Water-Topics/Storm-and-Surface-Water-Management.aspx">http://mrsc.org/Home/Explore-Topics/Environment/Water-Topics/Storm-and-Surface-Water-Management.aspx</a> Map - <a href="http://waecy.maps.arcgis.com/home/item.html?id=df7f487bf29b4c24bf195146f22c3cb5">http://waecy.maps.arcgis.com/home/item.html?id=df7f487bf29b4c24bf195146f22c3cb5</a>
Post-Disaster Recovery	One action a community can take to move toward better management of disaster mitigation, preparedness, response, and recovery is the adoption of an ordinance before or after a damaging event to serve as either a forerunner or supplement to a full-blown recovery plan.  <b>Resource:</b> <a href="https://www.planning.org/research/postdisaster/pdf/modelrecoveryordinance.pdf">https://www.planning.org/research/postdisaster/pdf/modelrecoveryordinance.pdf</a>
Real Estate Disclosure	This is referring to real estate disclosure pertaining to natural hazards. There has been some recent legislation in WA State impacting this information.  <b>Resource:</b> <a href="http://mrsc.org/Home/Stay-Informed/MRSC-Insight/September-2015/New-Property-Disclosure-Requirements-Will-Impact-S.aspx">http://mrsc.org/Home/Stay-Informed/MRSC-Insight/September-2015/New-Property-Disclosure-Requirements-Will-Impact-S.aspx</a>
Growth Management	Clark County is a required Growth Management Act planning community. Local jurisdictions should have implementing laws for their Comprehensive Plans.  <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Development-Regulations-and-Zoning.aspx">http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Development-Regulations-and-Zoning.aspx</a>
Site Plan Review	Site plans include general site plan review and binding site plans  <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Site-Plans-and-Binding-Site-Plans.aspx">http://mrsc.org/Home/Explore-Topics/Planning/Development-Regulations/Site-Plans-and-Binding-Site-Plans.aspx</a>
Environmental Protection	This refers to critical areas and SEPA and/or Shoreline Management and anything specific to your jurisdiction as appropriate.  <b>Resource:</b> Critical Areas: <a href="http://mrsc.org/Home/ExploreTopics/Environment/Critical-Areas-and-Species/Critical-Areas.aspx">http://mrsc.org/Home/ExploreTopics/Environment/Critical-Areas-and-Species/Critical-Areas.aspx</a>  SEPA: <a href="http://mrsc.org/Home/Explore-Topics/Environment/Environmental-Laws/State-Environmental-Policy-Act.aspx">http://mrsc.org/Home/Explore-Topics/Environment/Environmental-Laws/State-Environmental-Policy-Act.aspx</a>  Shoreline Management: <a href="http://www.ecy.wa.gov/programs/sea/shorelines/smp/status.html">http://www.ecy.wa.gov/programs/sea/shorelines/smp/status.html</a>

Additional Information	
Flood Damage Prevention	All National Flood Insurance Program participating communities are required to have a flood damage prevention ordinance. <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Flood-Hazard-Management-Planning-(1).aspx">http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Flood-Hazard-Management-Planning-(1).aspx</a>
Emergency Management	Each local government in Washington State is authorized and directed to establish a local organization or to be a member of a joint local organization for emergency management in accordance with the state comprehensive emergency management plan and program (see RCW 38.52.070). <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx">http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx</a>
Climate Change Adaptation	This refers to any local ordinances that you may have that require that you examine or plan for climate change adaptation. It is unlikely that you have such laws currently on the books. An example from California is below. <b>Resource:</b> <a href="https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB379">https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB379</a>
Other	Please provide any other ordinance that you think is relevant to the hazard mitigation plan. An example might be a bulkhead ordinance or a public health and safety ordinance or a Continuity of Operations or Emergency Declaration Authority. <b>Resource:</b>
<b>Planning Documents</b>	
General or Comprehensive Plan	You may also want to list out any optional elements. Local comprehensive plans must include the following elements: land use, housing, capital facilities, utilities, transportation, and, for counties, a rural element. Shoreline master program policies are also an element of local comprehensive plans. Implementation of required parks and economic development elements is on hold until adequate state funding is available. Local comprehensive plans may also include optional elements. (See RCW 36.70A.080.) <i>Is the plan equipped to provide linkage to this mitigation plan?</i> Does the plan include information from the HMP and/or is the HMP included by reference? <b>Resource:</b>
Capital Improvement Plan	Each jurisdiction should have a CIP. <b>Resource:</b> <a href="http://www.commerce.wa.gov/Services/localgovernment/GrowthManagement/Capital-Facilities/Pages/default.aspx">http://www.commerce.wa.gov/Services/localgovernment/GrowthManagement/Capital-Facilities/Pages/default.aspx</a>
Floodplain or Watershed Plan	This might be a CRS Floodplain Management Plan or a Watershed Management Plan or a Comprehensive Flood Control Management Plan <b>Resource:</b> <a href="http://www.ecy.wa.gov/programs/eap/wrias/Planning/27-28.html">http://www.ecy.wa.gov/programs/eap/wrias/Planning/27-28.html</a> <a href="http://app.leg.wa.gov/RCW/default.aspx?cite=86.12.200">http://app.leg.wa.gov/RCW/default.aspx?cite=86.12.200</a>
Stormwater Plan	You will probably have a Stormwater Management Plan if you are a NPDES permittee. <b>Resource:</b> For example - <a href="http://www.cityofvancouver.us/publicworks/page/stormwater-management-plan">http://www.cityofvancouver.us/publicworks/page/stormwater-management-plan</a>
Habitat Conservation Plan	This is a specific plan relating to endangered species. <b>Resource:</b> <a href="http://www.fws.gov/endangered/esa-library/pdf/hcp.pdf">http://www.fws.gov/endangered/esa-library/pdf/hcp.pdf</a>
Economic Development Plan	Clark County belongs to the Oregon-based Portland Regional Partners Council of Economic Development. If you have a specific economic development plan, please include. <b>Resource:</b>
Shoreline Management Plan	Over 260 towns, cities and counties are required to comprehensively update their Shoreline Master Programs. Most local programs have not been fully updated in over 30 years. <b>Resource:</b> <a href="http://www.ecy.wa.gov/programs/sea/shorelines/smp/status.html">http://www.ecy.wa.gov/programs/sea/shorelines/smp/status.html</a>

Additional Information	
Community Wildfire Protection Plan	I don't believe any Clark jurisdictions have a CWPP. If you have a related plan, please list below. <b>Resource:</b> <a href="http://www.dnr.wa.gov/programs-and-services/wildfire/wildfire-preparedness/community-wildfire-protection">http://www.dnr.wa.gov/programs-and-services/wildfire/wildfire-preparedness/community-wildfire-protection</a>
Forest Management Plan	These refer to a variety of plans for urban and rural forests and street trees. <b>Resource:</b> Urban - <a href="http://mrsc.org/Home/Explore-Topics/Environment/Natural-Resources-Topics/Urban-Forestry.aspx">http://mrsc.org/Home/Explore-Topics/Environment/Natural-Resources-Topics/Urban-Forestry.aspx</a> Rural - <a href="http://www.clark.wa.gov/environment/documents/camp_bonneville_mngt_plan.pdf">http://www.clark.wa.gov/environment/documents/camp_bonneville_mngt_plan.pdf</a>
Climate Action Plan	Some Washington State cities include climate change plans as elements in their comprehensive plans, while some have standalone plans. Such plans are not required in Washington State. <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Environment/Special-Topics/Climate-Change.aspx">http://mrsc.org/Home/Explore-Topics/Environment/Special-Topics/Climate-Change.aspx</a>
Other	If you have any other plans that you feel are relevant for the hazard mitigation plan, please include them here. An example might be a vegetation management plan or a debris management plan. <b>Resource:</b>
Response/Recovery Planning	
Comprehensive Emergency Management Plan	Local jurisdictions are required to develop comprehensive emergency management plans. <b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx">http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx</a>
Threat & Hazard Identification & Risk Assessment	Threat and Hazard Identification and Risk Assessment (THIRA) provides a comprehensive approach for identifying and assessing risks and associated impacts. It expands on existing local, tribal, territorial, and state Hazard Identification and Risk Assessments (HIRAs) and other risk methodologies by broadening the factors considered in the process, incorporating the whole community throughout the entire process, and by accounting for important community-specific factors. <b>Resource:</b>
Post-Disaster Recovery Plan	This might also be a resiliency plan. <b>Resource:</b> <a href="http://mil.wa.gov/uploads/pdf/seismic-safety-committee/RWS%20final%20report.pdf">http://mil.wa.gov/uploads/pdf/seismic-safety-committee/RWS%20final%20report.pdf</a>
Continuity of Operations Plan	<b>Resource:</b> <a href="http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx">http://mrsc.org/Home/Explore-Topics/Public-Safety/Emergency-Services/Emergency-Management-and-Disaster-Planning/Emergency-Planning-at-the-Local-Government-Level.aspx</a>
Public Health Plan	Local plans might address pandemic, mass casualties, etc. <b>Resource:</b>

## Fiscal Capability

Identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation actions.

Complete the table titled “Fiscal Capability” by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your eligibility for this resource.

Please note that some helpful comments are included in the template document.

## Administrative and Technical Capability

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title in the right-hand column.

Please note that if you have contract support staff with these capabilities you can still answer “Yes.” Please just indicate contract support in the department column.

## National Flood Insurance Program Compliance

Identify your jurisdiction’s capabilities in terms of complying with the requirements of the National Flood Insurance Program.

Complete the table titled “National Flood Insurance Program Compliance” by indicating your jurisdiction’s capabilities related to each question in the table.

Please note that some helpful comments are included in the template document.

## Classification in Hazard Mitigation Programs

Complete the table titled “Community Classifications” to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in these columns if your jurisdiction is not participating.

Please note that some helpful comments are included in the template document.

## Education and Outreach Capabilities

Complete the table titled “Education and Outreach” to indicate your jurisdiction’s capabilities and existing efforts regarding natural hazard mitigation education and outreach.

## INTEGRATION WITH OTHER PLANNING INITIATIVES

After reviewing the plans, programs and ordinances identified in the above capability assessment tables, please identify those plans and programs where the goals and recommendations of the hazard mitigation plan have already been integrated and those plans and programs that offer opportunities for future integration. It is important to describe the process by which these plans and programs are or will be integrated. Generally speaking, FEMA recommends integration through

- Integrating plan goals with community objectives (e.g. incorporating goals for risk reduction and safety into the policies of other plans)
- Using the risk assessment to inform plans and policies (e.g. incorporation into land use plans and site plan review)
- Implementing mitigation actions through existing mechanisms (e.g. including mitigation projects in the capital improvement plan)

- Thinking about mitigation pre- and post-disaster (e.g. building recovery planning on existing mitigation plans and goals).

## PHASE 3 STARTS HERE

### JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

#### Chronological List of Hazard Events

In the table titled “Natural Hazard Events,” list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Please refer to the SHELDUS data and Federal Disaster Declarations included in the tool kit, and the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

If you do not have estimates for dollars of damage caused, please list “Not Available” in the appropriate column. Please note that tracking such damages, is a valid and useful mitigation action if your jurisdiction does not currently track such information.

### JURISDICTION-SPECIFIC NOTED VULNERABILITIES

#### Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided, Tetra Tech has inserted the following information based on data provided by FEMA:

- The number of any FEMA-identified repetitive-loss properties in your jurisdiction.
- The number of any FEMA-identified severe-repetitive-loss properties in your jurisdiction.
- The number (if any) of repetitive-loss or severe-repetitive-loss properties in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure.

Please review and verify the information that has been provided in this part of your annex.

#### Other Vulnerabilities

Please list any noted vulnerabilities in your jurisdiction related to hazard mitigation. This may include things such as the following:

- An urban drainage issue that results in localized flooding every time it rains.

- An area of the community that frequently loses power due to a lack of tree maintenance.
- A critical facility, such as a police station, that is not equipped with a generator.
- A neighborhood that has the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- Substantial number of buildings in one area of the community are unreinforced masonry.
- An area along the river is eroding and threatening public and/or private property.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

**Please complete this portion of the annex using the Risk Ranking Worksheet and Loss Estimate Matrix provided in the tool kit.**

**Note:** When completing this exercise it is important to remember that this exercise is about categorizing hazards into broad levels of risk (e.g. high, medium, low). It is not an exercise in precision.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although some weight can be given to expected future probability of occurrence based on established return intervals. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

In **Table 1**, list the probability of occurrence for each hazard as it pertains to your jurisdiction. Simply write, “**High**,” “**Medium**,” “**Low**,” or “**None**” in the grey column in Table 1:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

### Determine Potential Impacts of Each Hazard

The impact of each hazard are divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories are also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for

simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:

- High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values are assigned based on the percentage of the total *property value exposed* to the hazard event:
    - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
    - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
    - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)
    - No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
  - **Economy**—Values were assigned based on the percentage of the total *property value vulnerable* to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total replacement value of the property exposed to the hazard. For some hazards, such as wildfire and landslide, vulnerability may be considered to be the same or a portion of exposure due to the lack of loss estimation tools specific to those hazards.
    - High—Estimated loss from the hazard is 10 percent or more of the total replacement value (Impact Factor = 3)
    - Medium—Estimated loss from the hazard is 5 percent to 9 percent of the total replacement value (Impact Factor = 2)
    - Low—Estimated loss from the hazard is 4 percent or less of the total replacement value (Impact Factor = 1)
    - No impact—No loss is estimated from the hazard (Impact Factor = 0).

The following sections provide information on completing the risk ranking for your jurisdiction.

### **Impacts on People**

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column**. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire population is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

In the grey column in **Table 2**, please list the *percentage of the total population exposed* (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

### **Impacts on Property**

The percent of the total value exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **blue highlighted column**. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be

exposed. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

In the grey column in **Table 4**, please list the *percentage of the total value exposed* (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

### **Impacts on the Economy**

The loss estimates for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the loss estimate matrix in the **purple highlighted column**. For those hazards that have a defined extent and location, but do not have modelled loss results, loss estimates can be the same as exposure or a portion thereof. For example, a large percentage of the building stock may be exposed to landslide or wildfire risk, but it would not be expected that one event that resulted in loss to all exposed structures would occur. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be exposed, but impacts are generally considered to be “low.”

In the grey column in **Table 6**, please list the *percentage of the total value loss* (e.g. 4.5 or 10). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 10, between 10 and 5, and less than 5).

### **Determine Risk Rating for Each Hazard**

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

$$\text{Risk Rating} = \text{Probability Factor} \times \text{Weighted Impact Factor} \{ \text{people} + \text{property} + \text{economy} \}$$

The risk ranking results will be automatically tabulated for you for each hazard of concern in **Table 7**.

### **Complete Risk Ranking in Template**

Once **Table 7** has been completed above, complete the table titled “Hazard Risk Ranking” in your template. The hazard with the highest risk rating in **Table 7** should be listed at the top of table titled “Hazard Risk Ranking” in your template and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank. After completing this, review the distribution of hazard scores and determine “High,” “Medium,” and “Low” assignments for each hazard of concern. It is important to note, that this should be determined by the range of scores rather than assigning a certain number of hazards to each category.

It is also important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other than what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template (see notations in County-wide risk ranking in Tool Kit). Remember, one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. If you identify an action with a high priority that mitigates the risk of a hazard you have ranked low, that project may not be competitive in the grant arena.

## STATUS OF PREVIOUS PLAN ACTIONS

Provide a status report of actions recommended in your previous hazard mitigation plan. You must be able to reconcile your original action plan to meet FEMA requirements for plan updates. All the recommended actions from your previous plan have been entered in **Table 1-8** in your annex. Put an ✓ in one of the following three columns for each action to indicate its status:

- **Completed**—If the action has been completed, place a check mark in this column and enter a brief explanation in the “Comments” column (e.g., “Action #WC31 was completed by the Public Works Department on 3/12/2009”). Ongoing actions, such as annual outreach projects or maintenance activities, should also be indicated as “Completed,” with a statement about the ongoing nature of the action provided in the “Comments” column (e.g., “Ongoing action, implemented annually by Community Development Department”). Please note that these ongoing actions can have checkmarks in both the completed and carry over columns.
- **Carry Over to Plan Update**—If you did not complete an action and want to carry it over to your updated action plan, place a check mark in this column, and enter an explanatory statement in the comment section (e.g., “Action carried over as Action #WC14 in updated action plan”).
- **Removed; No Longer Feasible**—If you want to remove an action because you have determined that it is no longer feasible, place a check mark in this column. “No longer feasible” means that you have determined that you do not have the capability to implement the action or that the action does not serve the best interest of your jurisdiction. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. Place a comment in the comment section explaining why the action is no longer feasible (e.g., “Action no longer considered feasible due to lack of political support to complete it.”)

Additional information on each identified action item can be found in Chapter 7 of the 2004 plan. There is a table in the document that lists identified actions for each jurisdiction, hazards addressed, timeline, lead agency, etc.

**Note:** Populated previous plan action plan review tables were emailed out to the planning partnership on February 9<sup>th</sup>. If you completed your review of actions, you may copy and paste the table into your annex.

## HAZARD MITIGATION ACTION PLAN

### Action Plan Matrix

Identify the actions your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- You should identify at least one action for your highest ranked risk, but hazard-specific projects for every hazard are not required. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

#### Wording Your Action Descriptions:

Descriptions of your actions need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project's scope and impact. The following are typical descriptions for an action plan action:

- **Action 1**—Address repetitive-loss properties. Through targeted mitigation, acquire, relocate or retrofit the five repetitive loss structures in the County as funding opportunities become available.
- **Action 2**—Perform a non-structural, seismic retrofit of City Hall.
- **Action 3**—Acquire floodplain property in the Smith subdivision.
- **Action 4**—Enhance the County flood warning capability by joining the NOAA "Storm Ready" program.

### Recommended Actions

We recommend that the following actions be included in every planning partners' annex. The specifics of these actions should be adjusted as needed for the particulars of each community.

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.
- Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.
- Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.
- Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.
- Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:
  - Enforcement of the flood damage prevention ordinance
  - Participate in floodplain identification and mapping updates
  - Provide public assistance/information on floodplain requirements and impacts.
- Work with building officials to identify ways to improve the jurisdictions' BCEGS classification.
- Consider the development of a post-disaster recovery plan and a debris management plan.

- Consider participation in programs such as Firewise, StormReady and the Community Rating System.

**Complete the Table**

Complete the table titled “Hazard Mitigation Action Plan Matrix” for all the actions you have identified:

- Enter the action number and description .
- Indicate whether the action mitigates hazards for new or existing assets.
- Identify the specific hazards the action will mitigate.
- Identify by number the mitigation plan objectives that the action addresses (see Tool Kit).
- Indicate who will be the lead in administering the project. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department, please ensure that it is clear who the lead agency will be (i.e note with an \*)
- Enter an estimated cost in dollars if known; otherwise, enter “High,” “Medium” or “Low” as determined for the prioritization process described in the following section.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment to identify possible sources of funding.
- Indicate the time line as “short term” (1 to 5 years) or “long term” (5 years or greater) or on-going (a continual program)

**Action Item Numbering:**

- Please use the following action item numbering conventions:
  - Battle Ground: BG-1
  - Camas: CM-1
  - La Center: LC-1
  - Ridgefield: RF-1
  - Vancouver: VC-1
  - Washougal: WS-1
  - Woodland: WD-1
  - Yacolt: YA-1
  - Clark County: CC-1

**Note:** Please don’t forget to carryover actions as appropriate from the review of the previous plan actions. You may reword these actions to indicate next steps or to make them more specific.

Please see the table below for an example for the recommended initiatives above:

Example Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>EX-1</b> —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	Planning	High	HMGP, PDM, FMA, CDBG-DR	Short-term
<b>EX-2</b> —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and Existing	All Hazards	2, 4,	Planning	Low	Staff Time, General Funds	On-going
<b>EX-3</b> —Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
Existing	All Hazards	1, 2, 4, 12	Emergency Management	Medium	Staff Time, General Funds	Short-term
<b>EX-4</b> —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
<b>EX-5</b> —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 4	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
<b>EX-6</b> — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> <li>• Enforcement of the flood damage prevention ordinance</li> <li>• Participate in floodplain identification and mapping updates</li> <li>• Provide public assistance/information on floodplain requirements and impacts.</li> </ul>						
New and Existing	Flood	1, 4, 5, 9	Public Works	Low	Staff Time, General Funds	On-going
<b>EX-7</b> —Work with building officials to identify ways to improve the jurisdictions’ BCEGS classification.						
New	Earthquake, Flood, Landslide, Severe weather, Volcano Wildfire	5, 6, 7, 10, 12	Building and Development Services	Low	Staff Time, General Funds	Short-term
<b>EX-8</b> —Develop a post-disaster recovery plan and a debris management plan.						
Existing	All Hazards	1, 2, 4, 9	Emergency Management	Medium	EMPG	Long-term
<b>EX-9</b> —Participate in programs such as Firewise, StormReady and the Community Rating System.						
New and Existing	Dam Failure, Flood, Severe weather, Wildfire	1, 7	Emergency Management* and Public Works	Low	Staff Time, General Funds	Short-term

\*Identified Lead Agency

## Prioritization of Mitigation Actions

Complete the information in the table titled “Mitigation Strategy Priority Schedule” as follows:

- **Action #**—Indicate the action number from the previous annex table (Hazard Mitigation Action Plan Matrix).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- **Costs**—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.
  - Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
  - Low: Possible to fund under existing budget. Project is or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- **Do Benefits Exceed the Cost?**—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Project Grant-Eligible?**—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- **Can Project Be Funded Under Existing Program Budgets?**—Enter “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter “High,” “Medium” or “Low” as follows:
  - High Priority—An initiative that meets multiple objectives, has benefits that exceed cost, has funding secured or is an ongoing project and meets eligibility requirements for a grant program. High priority initiatives can be completed in the short term (1 to 5 years). The key factors for high priority initiatives are that they have funding secured and can be completed in the short term.
  - Medium Priority—An initiative that meets multiple objectives, that has benefits that exceed costs, and for which funding has not yet been secured, but is eligible for funding. Initiative can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured. The key factors for medium priority initiatives are that they are eligible for funding, but do not yet have funding secured, and they can be completed within the short term.
  - Low Priority—An initiative that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, and for which the time line for completion is long term (1 to 10 years). Low priority initiatives may be eligible for grant funding from other programs that have not yet been identified. Low priority projects are generally “blue-sky” or “wish-list.” projects. Financing is unknown, and they can be completed over a long term.

- **Grant Funding Priority**— Enter “High,” “Medium” or “Low” as follows:
  - High Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have high benefits, is listed as high or medium priority, and where local funding options are unavailable or where dedicated funds could be utilized for projects that are not eligible for grant funding.
  - Medium Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have medium or low benefits, is listed as medium or low priority, and where local funding options are unavailable.
  - Low Priority—An initiative that has not been identified as meeting grant eligibility requirements, or has low benefits.

This prioritization is a simple way to determine that your identified actions meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs. Those initiatives identified as high-priority grant funding initiatives should be closely reviewed for consideration when grant funding opportunities arise.

**Note:** If a jurisdiction wishes to identify a project as high priority that is outside of the prioritization scheme for high priorities. A note indicating so should be inserted and a rationale should be provided.

Please see the example below based off the recommended initiatives:

**Table 1-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
EX-1	5	High	High	Yes	Yes	No	Medium	High
EX-2	2	Medium	Low	Yes	No	Yes	High	Low
EX-3	4	Low	Medium	No	No	Maybe	Low	Low
EX-4	12	Low	Low	Yes	No	Yes	High	Low
EX-5	2	Low	Low	Yes	No	Yes	High	Low
EX-6	4	Medium	Low	Yes	No	Yes	High	Low
EX-7	5	Medium	Low	Yes	No	Yes	High	Low
EX-8	4	Medium	Medium	Yes	Yes	No	Medium	High
EX-9	2	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities

### Analysis of Mitigation Actions

Complete the table titled “Analysis of Mitigation Actions” summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- Prevention—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.

- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

Please see the example below based off the recommended initiatives, but please note that these recommendations are heavy on the prevention spectrum and light in other areas. Planning partners should aim to identify at least one action in each category:

Analysis of Mitigation Actions						
Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	EX-2, EX-3, EX-4, EX-5, EX-6, EX-8	EX-1, EX-6	EX-4, EX-6		EX-8	
Drought	EX-2, EX-3, EX-4, EX-5, EX-8	EX-1	EX-4,		EX-8	
Earthquake	EX-2, EX-3, EX-4, EX-5, EX-7, EX-8	EX-1, EX-7	EX-4		EX-8	
Flood	EX-2, EX-3, EX-4, EX-5, EX-6, EX-7, EX-8	EX-1, EX-6, EX-7	EX-4, EX-6	EX-9	EX-8	
Landslide	EX-2, EX-3, EX-4, EX-5, EX-7, EX-8	EX-1, EX-7	EX-4		EX-8	
Severe weather	EX-2, EX-3, EX-4, EX-5, EX-7, EX-8	EX-1, EX-7, EX-9	EX-4		EX-8, EX-9	
Volcano	EX-2, EX-3, EX-4, EX-5, EX-7, EX-8	EX-1, EX-7	EX-4		EX-8	

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Wildfire	EX-2, EX-3, EX-4, EX-5, EX-7	EX-1, EX-7, EX-9	EX-4, EX-9	EX-9		

## FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. Please note that this section is optional.

## ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. Please note that this section is optional.



# 1. MUNICIPAL JURISDICTION NAME

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## 1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Name, Title

Street Address

City, State ZIP

Telephone: xxx-xxx-xxxx

e-mail Address: xxx@xxx.xxx

### Alternate Point of Contact

Name, Title

Street Address

City, State ZIP

Telephone: xxx-xxx-xxxx

e-mail Address: xxx@xxx.xxx

## 1.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- Date of Incorporation—
- Current Population—
- Population Growth—
- Location and Description—
- Brief History—
- Climate—
- Governing Body Format—
- Development Trends—

## 1.3 CAPABILITY ASSESSMENT

An assessment of legal and regulatory capabilities is presented in Table 1-1. An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-4. Classifications under various community mitigation programs are presented in Table 1-5.

**Table 1-1. Legal and Regulatory Capability**

	Local Authority	State or Federal Prohibitions	Other Jurisdiction Authority	State Mandated
<b>Codes, Ordinances &amp; Requirements</b>				
Building Code				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Zoning Code				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Subdivisions				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Stormwater Management				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Post-Disaster Recovery				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Real Estate Disclosure				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Growth Management				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Site Plan Review				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Public Health and Safety				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Environmental Protection				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
<b>Planning Documents</b>				
General or Comprehensive Plan				
<i>Is the plan equipped to provide linkage to this mitigation plan? Yes/No</i>				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Capital Improvement Plan				
<i>What types of capital facilities does the plan address? List facility types</i>				
<i>How often is the plan updated? Indicate update frequency</i>				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Floodplain or Basin Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Stormwater Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Habitat Conservation Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Economic Development Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Shoreline Management Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Community Wildfire Protection Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				

	Local Authority	State or Federal Prohibitions	Other Jurisdiction Authority	State Mandated
<b>Response/Recovery Planning</b>				
Comprehensive Emergency Management Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Threat & Hazard Identification & Risk Assessment				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Terrorism Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Post-Disaster Recovery Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Continuity of Operations Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				
Public Health Plan				
<i>Comment: Insert Code Number and Adoption Date; Other Comments</i>				

**Table 1-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes/No
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
Withhold Public Expenditures in Hazard-Prone Areas	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No

**Table 1-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes/No	Insert appropriate information
Engineers or professionals trained in building or infrastructure construction practices	Yes/No	Insert appropriate information
Planners or engineers with an understanding of natural hazards	Yes/No	Insert appropriate information
Staff with training in benefit/cost analysis	Yes/No	Insert appropriate information
Surveyors	Yes/No	Insert appropriate information
Personnel skilled or trained in GIS applications	Yes/No	Insert appropriate information
Scientist familiar with natural hazards in local area	Yes/No	Insert appropriate information
Emergency manager	Yes/No	Insert appropriate information
Grant writers	Yes/No	Insert appropriate information

**Table 1-4. National Flood Insurance Program Compliance**

Criteria	Response
What local department is responsible for floodplain management?	Insert appropriate information
Who is your floodplain administrator? (department/position)	Insert appropriate information
Are any certified floodplain managers on staff in your jurisdiction?	Yes/No
What is the date of adoption of your flood damage prevention ordinance?	Insert appropriate information
When was the most recent Community Assistance Visit or Community Assistance Contact?	Insert appropriate information
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, please state what they are.</li> </ul>	Yes/No Insert appropriate information
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If no, please state why.</li> </ul>	Yes/No Insert appropriate information
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	Yes/No Insert appropriate information
Does your jurisdiction participate in the Community Rating System (CRS)? <ul style="list-style-type: none"> <li>If so, is your jurisdiction seeking to improve its CRS Classification?</li> <li>If not, is your jurisdiction interested in joining the CRS program?</li> </ul>	Yes/No Yes/No Yes/No

**Table 1-5. Community Classifications**

	Participating?	Classification	Date Classified
Community Rating System	Yes/No		Date
Building Code Effectiveness Grading Schedule	Yes/No		Date
Public Protection	Yes/No		Date
Storm Ready	Yes/No		Date
Firewise	Yes/No		Date

## 1.4 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-6 lists all past occurrences of natural hazards within the jurisdiction.



## 1.7 STATUS OF PREVIOUS PLAN INITIATIVES

Table 1-8 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 1-8** Hazard Mitigation Action Plan Matrix

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
<b>Action #—Description</b>			
<i>Comment:</i>			
Join the CRS program			
<i>Comment:</i>			
<b>Action #—Description</b>			
<i>Comment:</i>			
<b>Action #—Description</b>			
<i>Comment:</i>			
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Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action #—Description			
<i>Comment:</i>			
Action #—Description			
<i>Comment:</i>			

## 1.8 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-9 lists the actions that make up the Municipal Jurisdiction Name hazard mitigation action plan. Table 1-10 identifies the priority for each action. Table 1-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

**Table 1-9. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						

**Table 1-10. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>





# 1. INSTRUCTIONS FOR COMPLETING SPECIAL-PURPOSE DISTRICT ANNEX TEMPLATE

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The jurisdictional annex templates for the 2016 Clark County Hazard Mitigation Plan will be completed in three phases. **This document provides instructions for completing all phases of the template for municipalities.**

**If your jurisdiction completed and submitted Phase 1 and Phase 2,** Phase 3 has been added to the end of your annex to date. Any planning team comments, questions or suggestions have been included as blue highlighted notes and/or comments. Any text edits were made via track changes. Any yellow highlights indicate areas where missing information should be filled in. Phase 3 instructions begin on page 6.

**If your jurisdiction did not complete Phase 1 or Phase 2,** please complete all phases at this time.

**Completed, draft templates should be completed by Friday, April 15, 2016. If you will not be able to meet this deadline, you must let the planning team know by April 8, 2016.**

**Any questions on completing the template should be directed to:**

Kristen Gelino  
Tetra Tech, Inc.  
(646) 576-4029  
e-mail: Kristen.gelino@tetrattech.com

Assistance in completing Phase 3 and any uncompleted portions of Phase 1 and Phase 2 of the template will be provided at the workshop for all planning partners to be scheduled in March.

## Special Purpose District Annex:

This document provides instructions for completing **Phase 3** of the jurisdictional annex template for special purpose districts. **Phase 3 templates should be completed by Friday, April 15, 2016. If you will not be able to meet this deadline, you must let the planning team know by April 8, 2016.**

### *Associated Document:*

Phase3\_DISTRICTNAME.dotm  
ClarkCo\_2016HMP\_ToolKit

## A Note About Formatting:

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

Content should be entered within the yellow, highlighted text that is currently in the template, rather than creating text in another document and pasting it into the template. Text from another source will alter the style and formatting of the document.

The numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of this numbering.

## PHASE 1 STARTS HERE

### CHAPTER TITLE

In the chapter title at the top of Page 1, type in the complete official name of your district (e.g. West County Fire Protection District #1, Johnsonville Flood Protection District, etc.). Please do not change the chapter number. Revise only the jurisdiction name.

### HAZARD MITIGATION PLAN POINT OF CONTACT

Please provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

*Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, please let the planning team know by inserting a comment into the document.*

### JURISDICTION PROFILE

#### Overview

Please provide a brief summary description of your jurisdiction. Please be sure to include:

- the purpose of the jurisdiction,
- the date of inception,
- the type of organization,
- the number of employees,
- the mode of operation (i.e., how operations are funded),
- the type of governing body, and who has adoptive authority,
- a description of who the jurisdiction's customers are (if applicable, include number of users or subscribers), and
- a geographical description of the service area.

#### Example Jurisdiction Narrative Profile:

The Johnsonville Community Services District is a special-purpose district created in 1952 to provide water and sewer service to the unincorporated area east of the City of Smithburg known as Johnsonville. The District's designated service area expanded throughout the years to include other unincorporated areas of Jones County: Creeks Corner, Jones Hill, Fields Landing, King Salmon, and Freshwater. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. As of April 30, 2014, the District serves 7,305 water connections and 6,108 sewer connections, with a current staff of 21. Funding comes primarily through rates and revenue bonds.

Provide information similar to the example provided in the box above. This should be information that is specific to your jurisdiction and will not be provided in the overall, county-wide mitigation plan document.

## Service Area and Trends

In the first paragraph, insert the following:

- **Population Served**—List the population that your jurisdiction provides services to. If you do not know this number directly, create an estimate (e.g., the number of service connections times the average service area household size based on Census data).
- **Land Area Served**—Enter the service area of your jurisdiction in acres or square miles.
- **Value of Area Served**—Enter the approximate replacement value of structures in your service area based on the information provided in the table below. These numbers have been generated by overlaying your jurisdiction’s service area boundary on the general building stock information acquired and updated for the risk assessment portion of this plan. If you believe we have used an incorrect service area boundary for your jurisdiction, please let the planning team know and we will update the estimate.

### Boundary Map:

Maps that illustrate the service area boundary for all special-purpose district partners have been provided with this document. At this time we ask that you please confirm that the boundaries reflected on the maps are current and accurate for your jurisdiction. If you have a GIS-based boundary file that you would prefer we use, please let the planning team know.

Special Purpose District	Boundary Source	Estimated Replacement Value for Service Area (structure value)
Battle Ground Public Schools	Clark GIS schdst file	\$8.9 billion
Camas School District	Clark GIS schdst file	\$5.2 billion
Clark Public Utilities	Clark County boundary Unincorporated areas and Yacolt	Electrical service \$64.2 billion
Water service		\$26.7 billion
Clark Regional Wastewater District	UGA boundary from CRWWD (updated 12/7 version)	\$14.5 billion
C-TRAN	Vancouver Urban Growth Area, city limits of Camas, Washougal, Ridgefield, La Center, Battle Ground, and Yacolt	\$55.3 billion
Fire District 3	Clark GIS firedst file and Battle Ground city limits	\$5.9 billion
Green Mountain School District No. 103	Clark GIS schdst file	\$131.4 million
Port of Vancouver	Clark GIS portdst file	\$43.6 billion
Ridgefield School District	Clark GIS schdst file	\$2.7 billion

Enter a brief description of how your jurisdiction’s services are projected to expand in the foreseeable future and why. Note any identified capital improvements needed to meet the projected expansion. Examples are as follows:

- **For a Fire District**—Portions of the jurisdiction have experienced a 13-percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density will represent an increase in population and thus a projected increase in call volume. Our District is experiencing an average annual increase in call volume of 13 percent.
- **For Dike/Drainage/Flood Control District**—Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses within the service area. This increase in density of land use will result in an increase in impermeable surface within our service area and thus increase the demand on control facilities.
- **For a Water District**—Portions of the jurisdiction have experienced a 13 percent growth over the last five years. Land use designations allow for an increase in light commercial and residential land uses

within the service area. This increase in density of land use will represent an increase in the number of housing units within the service area and thus represent an expansion of the district’s delivery network.

## Assets

Complete the table titled “Special Purpose District Assets” as follows (Please note: estimates on replacement value are perfectly acceptable):

- **Property**—Enter the area of property owned by the jurisdiction in acres or square miles and the assessed value of that property.
- **List of Critical Infrastructure and Equipment**—List all infrastructure and equipment owned by your jurisdiction that is critical to the jurisdiction’s operations. Briefly describe the item and give its estimated replacement-cost value. Examples are as follows:
  - Fire Districts— This is the equipment that is essential for you to deliver services to this area should a natural hazard occur. It is not necessary to provide a detailed inventory of each engine and truck and its contents. A summary will suffice, such as “5 Engines, 2 ladders, and their contents.” Do not list reserve equipment.
  - Dike/Flood Control Districts—Miles of levees, pump stations, retention/detention ponds, tide gates, miles of ditches, etc., within natural hazard risk zones.
  - Water Districts—Total length of pipe (it is not necessary to specify size and type), pump stations, treatment facilities, dams and reservoirs, within natural hazard risk zones.
  - Public Utility Districts—Miles of power line (above ground and underground), generators, power generating sub-stations, miles of pipeline, etc.
  - School Districts—Anything, besides school buildings, that is critical for you to operate (e.g., school buses if you own a fleet of school buses).
- **Total Value of Critical Infrastructure/Equipment**—Enter total replacement-cost value of the critical infrastructure and equipment listed above.
- **List of Critical Facilities Owned by the Jurisdiction**—List all buildings and other facilities that are critical to your jurisdiction’s operations. Briefly describe the facility and give its estimated replacement-cost value.
- **Total Value of Critical Facilities**— Enter total replacement-cost value of the critical facilities listed above.

### Critical Facilities:

As part of the planning process, the planning team will be developing a critical facilities database to assess risk to critical facilities from natural hazards. If your jurisdiction has a GIS-based file of your jurisdiction’s critical facilities and/or infrastructure, please let the planning team know. Please note that the results of this assessment will be made available to the planning partnership, but will not be published in full in the plan document. The results will be summarized by facility type.

This asset inventory will be used to assess relative risk from each hazard of concern during the risk ranking exercise that will occur during phase 3 of the jurisdictional annex template development. You will be provided with supplemental information (i.e. HAZUS results and facility exposure information) that you will use to determine the percentage of the total value of your assets exposed to each hazard of concern.

## PHASE 2 STARTS HERE

### PLANNING AND REGULATORY CAPABILITIES

List any federal, state, local or district laws, ordinances, codes and policies that govern your jurisdiction that include elements related to hazard mitigation. Describe how these laws may support or conflict with the mitigation strategies of this plan. List any other plans, studies or other documents that address hazard mitigation issues for your jurisdiction. “None applicable” is a possible answer for this section.

### FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

If your jurisdiction is a Fire District and participates in the Public Protection Class Rating System, please complete the first sentence in this section. If your jurisdiction is not a fire district, please delete the yellow highlighted sentence.

#### Fiscal Capability

Complete the table titled “Fiscal Capability” to identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation actions. Indicate whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your eligibility for this resource.

Please note that some helpful comments are included in the template document.

#### Administrative and Technical Capability

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title in the right-hand column.

Please note that if you have contract support staff with these capabilities you can still answer “Yes.” Please just indicate contract support in the department column.

### EDUCATION AND OUTREACH CAPABILITIES

Complete the table titled “Education and Outreach” to indicate your jurisdiction’s capabilities and existing efforts regarding natural hazard mitigation education and outreach.

### INTEGRATION WITH OTHER PLANNING INITIATIVES

After reviewing the plans, programs and ordinances identified in the above capability assessment, please identify those plans and programs where the goals and recommendations of the hazard mitigation plan have already been integrated and those plans and programs that offer opportunities for future integration. It is important to describe the process by which these plans and programs are or will be integrated. Generally speaking, FEMA recommends integration through

- Integrating plan goals with community objectives (e.g. incorporating goals for risk reduction and safety into the policies of other plans)
- Using the risk assessment to inform plans and policies (e.g. incorporation into strategic plans)
- Implementing mitigation actions through existing mechanisms (e.g. including mitigation projects in the capital improvement plan)
- Thinking about mitigation pre- and post-disaster (e.g. building recovery planning on existing mitigation plans and goals).

## PHASE 3 STARTS HERE

### JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

#### Chronological List of Hazard Events

In the table titled “Natural Hazard Events,” list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Please refer to the SHELDUS data and Federal Disaster Declarations included in the tool kit, and the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Citizen input.

If you do not have estimates for dollars of damage caused, please list “Not Available” in the appropriate column. You may also provide a brief description of damages if desired. Please note that tracking such damages, is a valid and useful mitigation action if your jurisdiction does not currently track such information.

### JURISDICTION-SPECIFIC NOTED VULNERABILITIES

#### Other Vulnerabilities

Please list any noted vulnerabilities in your jurisdiction related to hazard mitigation. This may include things such as the following:

- An urban drainage issue that results in localized flooding every time it rains.
- An area of the community that frequently loses power due to a lack of tree maintenance.
- A critical facility, such as a police station, that is not equipped with a generator.
- A neighborhood that has the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- Substantial number of buildings in one area of the community are unreinforced masonry.
- An area along the river is eroding and threatening public and/or private property.

## HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using an adapted methodology from that which was used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy/operations. The instructions below outline steps for assessing risk in your jurisdiction to develop results that are to be included in the template.

**Please complete this portion of the annex using the Risk Ranking Worksheet and Loss Estimate Matrix information provided in the tool kit.**

**Note:** When completing this exercise it is important to remember that this exercise is about categorizing hazards into broad levels of risk (e.g. high, medium, low). It is not an exercise in precision.

### Determine Probability of Occurrence for Each Hazard

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although some weight can be given to expected future probability of occurrence based on established return intervals. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category.

In **Table 1**, list the probability of occurrence for each hazard as it pertains to your jurisdiction. Simply write, “**High**,” “**Medium**,” “**Low**,” or “**None**” in the grey column in Table 1:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

### Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on the economy/operations. These categories were also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy/operations was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:
  - High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the population is exposed to a hazard (Impact Factor = 0)

- **Property**—Values are assigned based on the percentage of the total *property value exposed* to the hazard event:
  - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
  - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
  - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)
  - No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
- **Economy or Operations**—Impact on operations is assessed based on estimates of *how long it will take your jurisdiction to become 100-percent operable* after a hazard event.
  - High = functional downtime of 365 days or more (Impact Factor = 3)
  - Medium = Functional downtime of 180 to 364 days (Impact Factor = 2)
  - Low = Functional downtime of 180 days or less (Impact Factor = 1)
  - No Impact = No functional downtime is estimated from the hazard (Impact Factor = 0)

The following sections provide information on completing the risk ranking for your jurisdiction.

### **Impacts on People**

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column**. It may be necessary for you to make estimates based on looking at the hazard maps and the populations that you serve. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire population is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

In the grey column in **Table 2**, please list the *percentage of the total population exposed* (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

### **Impacts on Property**

Estimate the impacts on property for your jurisdiction by reviewing the critical facility exposure estimates provided in the loss estimate information. Estimate the percentage of your total assets that are exposed to each hazard of concern (note: review your assets table in phase 1 of your annex). You may also wish to review the maps. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

In the grey column in **Table 4**, please list the *percentage of the total value exposed* (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

### **Impacts on the Economy/Operations**

The loss estimates for each critical facility that was impacted for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the critical facility vulnerability results in the **yellow highlighted column (note: this information is still being compiled and is forthcoming)**. For those hazards that do not have modelled results, use your subjective judgement and institutional knowledge.

In the grey column in **Table 6**, please list the *functional downtime in days* (e.g. 1 or 300). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 365, between 354 and 180, and less than 180).

## Determine Risk Rating for Each Hazard

A risk rating for each hazard is determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

$$\text{Risk Rating} = \text{Probability Factor} \times \text{Weighted Impact Factor} \{ \text{people} + \text{property} + \text{economy/operations} \}$$

The risk ranking results will be automatically tabulated for you for each hazard of concern in **Table 7**.

## Complete Risk Ranking in Template

Once **Table 7** has been completed above, complete the table titled “Hazard Risk Ranking” in your template. The hazard with the highest risk rating in **Table 7** should be listed at the top of table titled “Hazard Risk Ranking” in your template and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank. After completing this, review the distribution of hazard scores and determine “High,” “Medium,” and “Low” assignments for each hazard of concern. It is important to note, that this should be determined by the range of scores rather than assigning a certain number of hazards to each category.

It is also important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other than what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template (see notations in County-wide risk ranking in Tool Kit). Remember, one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. If you identify an action with a high priority that mitigates the risk of a hazard you have ranked low, that project may not be competitive in the grant arena.

## HAZARD MITIGATION ACTION PLAN

### Action Plan Matrix

Identify the actions your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part

#### Wording Your Action Descriptions:

Descriptions of your actions need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project’s scope and impact. The following are typical descriptions for an action plan action:

- **Action 1**—Address repetitive-loss properties. Through targeted mitigation relocate or retrofit the nine pump stations that have been repetitively damaged.
- **Action 2**—Perform a non-structural, seismic retrofit of the administrative building.
- **Action 3**—Develop a schedule to underground overhead powerlines.

or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.

- You should identify at least one action for your highest ranked risk, but hazard-specific projects for every hazard are not required. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

### **Recommended Actions**

We recommend that the following actions be included in every planning partners' annex. The specifics of these actions should be adjusted as needed for the particulars of each community.

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.
- Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments choices, such as the capital improvement program.
- Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.
- Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.
- Consider the development of a post-disaster recovery plan and a debris management plan.

### **Complete the Table**

Complete the table titled "Hazard Mitigation Action Plan Matrix" for all the actions you have identified:

- Enter the action number and description .
- Indicate whether the action mitigates hazards for new or existing assets.
- Identify the specific hazards the action will mitigate.
- Identify by number the mitigation plan objectives that the action addresses (see Tool Kit).
- Indicate who will be the lead in administering the project. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department, please ensure that it is clear who the lead agency will be (i.e note with an \*)
- Enter an estimated cost in dollars if known; otherwise, enter "High," "Medium" or "Low" as determined for the prioritization process described in the following section.
- Identify funding sources for the project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment to identify possible sources of funding.
- Indicate the time line as "short term" (1 to 5 years) or "long term" (5 years or greater) or on-going (a continual program)

#### **Action Item Numbering:**

- Please use the following action item numbering conventions:
  - Battle Ground Public Schools: BGPS-1
  - Clark Public Utilities: CPU-1
  - Clark Regional Wastewater District-CRWWD-1
  - C-TRAN: CTRAN-1
  - Fire District 3: FD3-1
  - Green Mountain School District No. 103: GMSD-1
  - Port of Vancouver: POV-1
  - Ridgefield School District: RSD-1

Please see the table below for an example for the recommended initiatives above:

Example Action Plan Matrix						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>EX-1</b> —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	Maintenance	High	HMGP, PDM, FMA, CDBG-DR	Short-term
<b>EX-2</b> — Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments choices, such as the capital improvement program.						
New and Existing	All Hazards	2, 4,	Board	Low	Staff Time, General Funds	On-going
<b>EX-3</b> —Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
Existing	All Hazards	1, 2, 4, 12	Emergency Management	Medium	Staff Time, General Funds	Short-term
<b>EX-4</b> —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
<b>EX-5</b> —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 4	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
<b>EX-6</b> —Develop a post-disaster recovery plan and a debris management plan.						
Existing	All Hazards	1, 2, 4, 9	Emergency Management	Medium	EMPG	Long-term

\*Identified Lead Agency

## Prioritization of Mitigation Actions

Complete the information in the table titled “Mitigation Strategy Priority Schedule” as follows:

- **Action #**—Indicate the action number from the previous annex table (Hazard Mitigation Action Plan Matrix).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter “High,” “Medium” or “Low” as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- **Costs**—Enter “High,” “Medium” or “Low” as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

- Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- Low: Possible to fund under existing budget. Project is or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- **Do Benefits Exceed the Cost?**—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Project Grant-Eligible?**—Enter “Yes” or “No.” Refer to the fact sheet on HMGP and PDM.
- **Can Project Be Funded Under Existing Program Budgets?**—Enter “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter “High,” “Medium” or “Low” as follows:
  - High Priority—An initiative that meets multiple objectives, has benefits that exceed cost, has funding secured or is an ongoing project and meets eligibility requirements for a grant program. High priority initiatives can be completed in the short term (1 to 5 years). The key factors for high priority initiatives are that they have funding secured and can be completed in the short term.
  - Medium Priority—An initiative that meets multiple objectives, that has benefits that exceed costs, and for which funding has not yet been secured, but is eligible for funding. Initiative can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured. The key factors for medium priority initiatives are that they are eligible for funding, but do not yet have funding secured, and they can be completed within the short term.
  - Low Priority—An initiative that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, and for which the time line for completion is long term (1 to 10 years). Low priority initiatives may be eligible for grant funding from other programs that have not yet been identified. Low priority projects are generally “blue-sky” or “wish-list.” projects. Financing is unknown, and they can be completed over a long term.
- **Grant Funding Priority**— Enter “High,” “Medium” or “Low” as follows:
  - High Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have high benefits, is listed as high or medium priority, and where local funding options are unavailable or where dedicated funds could be utilized for projects that are not eligible for grant funding.
  - Medium Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have medium or low benefits, is listed as medium or low priority, and where local funding options are unavailable.
  - Low Priority—An initiative that has not been identified as meeting grant eligibility requirements, or has low benefits.

This prioritization is a simple way to determine that your identified actions meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs. Those initiatives identified as high-priority grant funding initiatives should be closely reviewed for consideration when grant funding opportunities arise.

**Note:** If a jurisdiction wishes to identify a project as high priority that is outside of the prioritization scheme for high priorities. A note indicating so should be inserted and a rationale should be provided.

Please see the example below based off the recommended initiatives:

**Table 1-9. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>
EX-1	5	High	High	Yes	Yes	No	Medium	High
EX-2	2	Medium	Low	Yes	No	Yes	High	Low
EX-3	4	Low	Medium	No	No	Maybe	Low	Low
EX-4	12	Low	Low	Yes	No	Yes	High	Low
EX-5	2	Low	Low	Yes	No	Yes	High	Low
EX-6	4	Medium	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities

### Analysis of Mitigation Actions

Complete the table titled “Analysis of Mitigation Actions” summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

Please see the example below based off the recommended initiatives, but please note that these recommendations are heavy on the prevention spectrum and light in other areas. Planning partners should aim to identify at least one action in each category:

Analysis of Mitigation Actions						
Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Drought	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4,		EX-6	
Earthquake	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Flood	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Landslide	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Severe weather	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Volcano	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Wildfire	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	

## FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. Please note that this section is optional.

## ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. Please note that this section is optional.

# 1. SPECIAL PURPOSE DISTRICT NAME

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## 1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

### Primary Point of Contact

Name, Title  
Street Address  
City, State ZIP  
Telephone: xxx-xxx-xxxx  
e-mail Address: xxx@xxx.xxx

### Alternate Point of Contact

Name, Title  
Street Address  
City, State ZIP  
Telephone: xxx-xxx-xxxx  
e-mail Address: xxx@xxx.xxx

## 1.2 JURISDICTION PROFILE

### 1.2.1 Overview

Insert Narrative Profile Information, per Instructions

### 1.2.2 Service Area and Trends

The district serves a population of population. Its service area covers an area of area, which has a total value of \$ value.

Insert summary description of service trends.

### 1.2.3 Assets

Table 1-1 summarizes the critical assets of the district and their value.

**Table 1-1. Special Purpose District Assets**

Asset	Value
<b>Property</b>	
<u>number</u> acres of land	\$ <u>value</u>
<b>Critical Infrastructure and Equipment</b>	
<u>description</u>	\$ <u>value</u>
<b>Total:</b>	\$ <u>value</u>
<b>Critical Facilities</b>	
<u>description</u>	\$ <u>value</u>
<b>Total:</b>	\$ <u>value</u>

### 1.3 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- name of code, ordinance, policy or plan

### 1.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of X. This rating was achieved in MONTH, YEAR. An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3.

**Table 1-2. Fiscal Capability**

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No (if yes, please specify)

**Commented [GK1]:** If you are not a Fire District, please delete this sentence.

**Commented [GK2]:** These are relatively rare. See - <http://www.msrb.org/glossary/definition/private-activity-bond-pab.aspx>

**Commented [GK3]:** You should list those that you know you qualify for and have received or plan to pursue. See - <http://mrsc.org/Home/Explore-Topics/Finance/Revenues/Grant-Resources-for-Washington-Local-Governments.aspx>

**Commented [GK4]:** See - <http://mrsc.org/Home/Explore-Topics/Planning/Land-Use-Administration/Impact-Fees/Types-of-Impact-Fees-and-Other-Sources-of-Public-E.aspx>

**Table 1-3. Administrative and Technical Capability**

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes/No	Insert appropriate information
Engineers or professionals trained in building or infrastructure construction practices	Yes/No	Insert appropriate information
Planners or engineers with an understanding of natural hazards	Yes/No	Insert appropriate information
Staff with training in benefit/cost analysis	Yes/No	Insert appropriate information
Surveyors	Yes/No	Insert appropriate information
Personnel skilled or trained in GIS applications	Yes/No	Insert appropriate information
Scientist familiar with natural hazards in local area	Yes/No	Insert appropriate information
Emergency manager	Yes/No	Insert appropriate information
Grant writers	Yes/No	Insert appropriate information
Other	Yes/No	Insert appropriate information

### 1.5 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in [Table 1-4](#).

**Table 1-4. Education and Outreach**

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes/No (if yes, please specify)
Do you have personnel skilled or trained in website development?	Yes/No (if yes, please specify)
Do you have hazard mitigation information available on your website?	Yes/No
<ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Insert appropriate information
Do you utilize social media for hazard mitigation education and outreach?	Yes/No
<ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Insert appropriate information
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes/No
<ul style="list-style-type: none"> <li>If yes, please briefly specify.</li> </ul>	Insert appropriate information
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes/No
<ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Insert appropriate information
Do you have any established warning systems for hazard events?	Yes/No
<ul style="list-style-type: none"> <li>If yes, please briefly describe.</li> </ul>	Insert appropriate information

### 1.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

#### 1.6.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- Name of plan or program—Brief description of how the plan/program is integrated with the hazard mitigation plan
- Name of plan or program—Brief description of how the plan/program is integrated with the hazard mitigation plan

### 1.6.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- Name of plan or program—Brief description of how the plan/program can be integrated with the hazard mitigation plan
- Name of plan or program— Brief description of how the plan/program can be integrated with the hazard mitigation plan

## 1.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-5 lists all past occurrences of natural hazards within the jurisdiction.



**Table 1-7. Hazard Mitigation Action Plan Matrix**

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					
Action #	Description					

**Table 1-8. Mitigation Strategy Priority Schedule**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Grant Priority <sup>a</sup>

a. See the introduction to this volume for explanation of priorities.

**Table 1-9. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects

a. See the introduction to this volume for explanation of mitigation types.

### 1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

### 1.12 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

