1. UNINCORPORATED ADA COUNTY

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Paul "Crash" Marusich, Deputy Director
Ada County Emergency Management and Community Resilience (EMCR)
7200 Barrister Dr.
Boise, ID 83704
Telephone: 208-577-4750
e-mail Address: pmarusich@adacounty.id.gov

Alternate Point of Contact
Joe Lombardo, Director
Ada County Emergency Management and Community Resilience (EMCR)
7200 Barrister Dr.
Boise, ID 83704
Telephone: 208-577-4750
e-mail Address: jlombardo@adacounty.id.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title
Paul "Crash" Marusich	Deputy Director, EMCR
Stacey Yarrington	Community and Regional Planner, Ada County
Zach Kirk	Ada County Engineer/Floodplain Administrator

1.2 JURISDICTION PROFILE

1.2.1 Location and Features

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 27% 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 (northeast), Canyon (west), Elmore (southeast), Gem (north), and Owyhee (southwest) as shown in Figure 1-1.

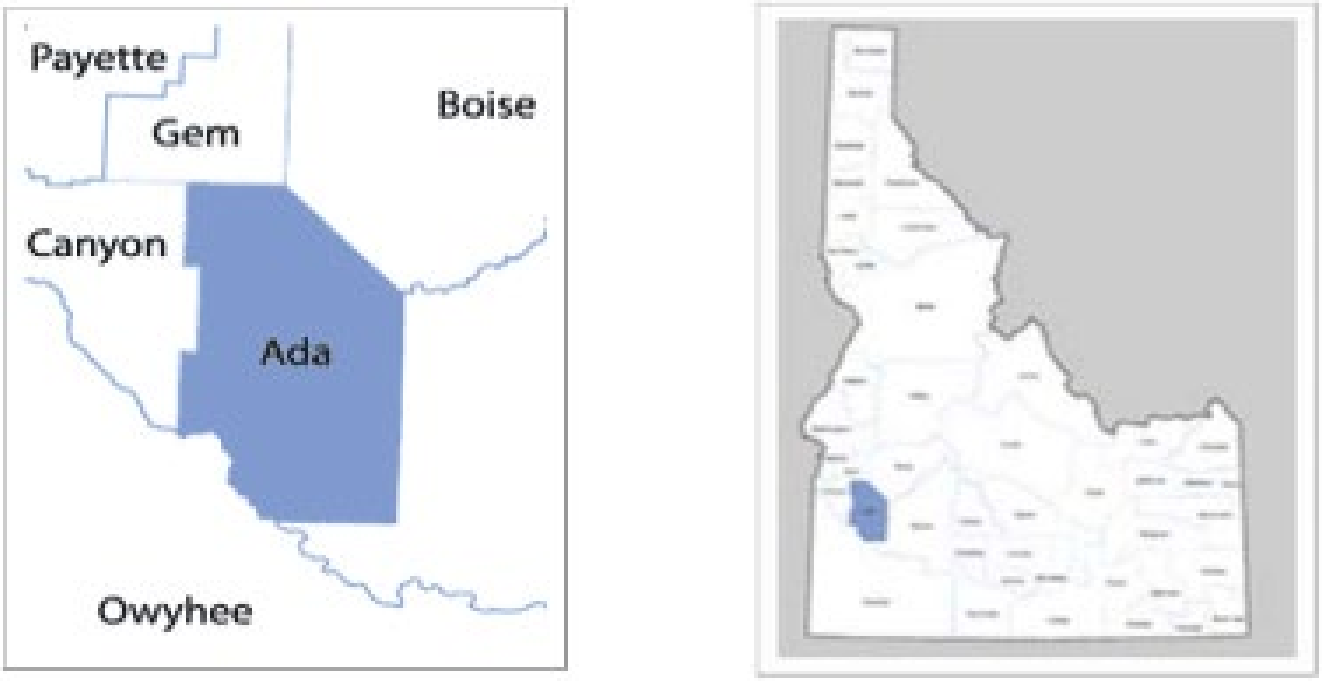


Figure 1-1. Ada County and Surroundings

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 www.adaprepare.id.gov.

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 over 20,000 students, which lies within the City of Boise.

Ada County's high desert semi-arid climate produces cold winters and hot and dry summers. January is the coldest month with average low temperatures in the low to mid 20s. July is the hottest month with average high temperatures peaking in the low to mid 90s. Average precipitation in Ada County is 12 inches per year, with most of the precipitation occurring during the cooler months and falling as snow at times. Very little precipitation falls during the summer months, though thunderstorms occasionally produce brief cloud bursts of rain.

1.2.2 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.

1.2.3 Governing Body Format

Ada County is headed by an elected three-member group, the Board of County Commissioners. The Board oversees departments both directly and through the County's Chief Operating Officer. 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 and Community Resilience is responsible for its implementation.

1.3 CURRENT TRENDS

1.3.1 Population

According to COMPASS, the population of Unincorporated Ada County as of April 2022, was 66,240. Since 2017, the population has grown at an average annual rate of 2.2 percent.

1.3.2 Development

Ada County has scene unprecedented growth over the last several years. Development is once again at an all-time high, with no sign of a slowing economy. Ada County has grown in population by approximately 22.7% between 2010 and 2020 according to the U.S. Census. In 2020, Ada County issued 543 residential and 52 commercial building permits within unincorporated parts of the county. Ada County has 4 approved Planned Communities and interest is once again growing to create more Planned Communities within the unincorporated areas of the county.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? ***If yes, give the estimated area annexed and estimated number of parcels or structures.***	No
Is your jurisdiction expected to annex any areas during the performance period of this plan? ***If yes, describe land areas and dominant uses.*** ***If yes, who currently has permitting authority over these areas?***	No
Are any areas targeted for development or major redevelopment in the next five years?	Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	A proposed PC located east of Kuna and south of Boise consisting of approximately 2,200 lots on approximately 750-acres. This proposed development is located within a WUI zone and has a Zone A Flood Plain thru a small portion of the site. A potential PC located east of Eagle and north of Boise consisting of approximately 250 lots on approximately 400-acres that surrounds an existing golf course. This proposed development is located within a WUI zone.

How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?

	2016	2017	2018	2019	2020
Single Family	496	520	444	553	526
Multi-Family	0	3	1	0	9
Other	253	199	274	224	227
Total	749	722	719	777	762

Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: 140 • Landslide: 0 • Wildfire Risk Areas: 1,494
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	There are four approved Planned Communities (PCs) within Ada County with a total of over 4,300 residential lots approved. Build-out is at approximately 51%, with over 2,200 building permits issued between the PCs. The majority of the new-construction permits that are listed in the Wildfire Risk area above, are located within the PCs.

1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 1-3.
- Development and permitting capabilities are presented in Table 1-4.
- An assessment of fiscal capabilities is presented in Table 1-5.
- An assessment of administrative and technical capabilities is presented in Table 1-6.
- An assessment of education and outreach capabilities is presented in Table 1-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-8.
- Classifications under various community mitigation programs are presented in Table 1-9.

Table 1-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
Comment: *Title 7, Chapter 2, Ada County Code adopts the 2018 IBC, 02/16/2021*				
Zoning Code	Yes	No	No	Yes
Comment: *Title 8, ACC adopted with amendments: 7-21-2021*				
Subdivisions	Yes	No	No	Yes
Comment: *Title 8, ACC adopted with amendments: 7-21-2021*				
Stormwater Management	Yes	No	Yes	Yes
Comment: *Title 8, Chapter 4, ACC adopted: 12/8/2010*				
Post-Disaster Recovery	Yes	Yes	Yes	Yes
Comment: *Ordinance 914-Flood Hazard Overlay District-6-10-2020*				
Real Estate Disclosure	Yes	No	No	No
Comment: *Realtor Listing Disclosure Page shows if flood insurance is required.*				
Growth Management	Yes	No	No	Yes
Comment: *Ada County Comprehensive Plan, adopted November 2016; Ada Co. Zoning ordinance-Title 8, ACC, adopted with amendments on 7-21-2021*				
Site Plan Review	Yes	No	No	Yes
Comment: *Title 8, Chapter 4-ACC adopted: 12/8/2010*				
Environmental Protection	Yes	Yes	Yes	Yes
Comment: *Title 8, Article A-ACC adopted: 6-14-2000*				
Flood Damage Prevention	Yes	Yes	No	Yes
Comment: *Title 8, Chapter 3-ACC, Article F adopted 6-10-2020*				
Emergency Management	Yes	No	Yes	Yes
Comment: *Idaho Code § 46-1009*				
Climate Change	No	No	No	No
Comment:				
Other	Yes	No	No	Yes
Comment: Flood Hazard Overlay District: Title 8, Chapter 3, article F, ACC, adopted: 6-10-2020 Wildland Urban Interface Overlay District: Title 8, Chapter 3, Article B, ACC, adopted: 6-14-2000 Southwest Planning Area Overlay District: Title 8, Chapter 3, article C, ACC adopted: 6-18-2008 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 & Specific Plan. Title 8, Ch. 21. Adopted: 3/12/1997 Private Roads. Title 8, Ch. 4, Article D, ACC. Adopted 10-2-2019				
Planning Documents				
General Plan	Yes	No	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? *Yes*				
Comment: *Ada County Comprehensive Plan, adopted 11/26/2007 Comprehensive Plan updated November 2016*				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? 4-year performance period, reviewed and updated annually				
Comment: *ACHD 8-19-2020, Ada County CIP Plan updated annually.*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Disaster Debris Management Plan	Yes	No	No	Yes
Comment: *: Recently developed Debris Management Annex is awaiting adoption as part of the community EOPs*				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: *The 2022 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.*				
Stormwater Plan	Yes	No	No	Yes
Comment: *EPA NPDES Municipal Separate Storm Sewer System Permit; Ada County Highway District-2-1-2021*				
Urban Water Management Plan	Yes	Yes	No	Yes
Comment: *Idaho Catalog of Stormwater Best Management Practices; April 2020*				
Habitat Conservation Plan	Yes	Yes	No	Yes
Comment: *Boise River Greenway Overlay District; 6-14-2020*				
Economic Development Plan	Yes	No	No	Yes
Comment: *Ada County 2025 Comp Plan; Pages 51-53*				
Shoreline Management Plan	No	No	No	No
Comment:				
Community Wildfire Protection Plan	Yes	No	No	Yes
Comment: *Mitigation Plan will serve as CWPP as approved by the Idaho Department of Lands ACC Title 8, Article 8; Wildland-Urban Fire Interface Overlay District-6-18-2008*				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	Yes	No	No	Yes
Comment: *The 2022 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.*				
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes
Comment: *Ada County EOP (2018) and hazard specific plans fulfill this function .*				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment: *Ada County THIRA 2018, Ada County Multi-Hazard Mitigation Plan*				
Post-Disaster Recovery Plan	No	No	No	No
Comment:				
Continuity of Operations Plan	Yes	No	No	Yes
Comment: *Ada County COOP Plan; updated 2016*				
Public Health Plan	No	Yes	No	Yes
Comment: *Central District Health Department Emergency Operations Plan, 2020*				
Other	No	No	No	Yes
Comment:				

Table 1-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department? Ada County Development Services	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 1-5. Fiscal Capability

Financial Resource	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 ***If yes, specify:*** Sewer-yes; Water-no; gas or electric-no	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	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other ***If yes, specify:***	None

Table 1-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices ***If Yes, Department /Position:*** Development Services/Planning & Zoning	Yes
Engineers or professionals trained in building or infrastructure construction practices ***If Yes, Department /Position:*** Development Services/Building Division	Yes
Planners or engineers with an understanding of natural hazards ***If Yes, Department /Position:*** Development Services/Engineering Division	Yes
Staff with training in benefit/cost analysis ***If Yes, Department /Position:*** Ability to contract for service	Yes
Surveyors ***If Yes, Department /Position:*** Development Services/Engineering Division	Yes
Personnel skilled or trained in GIS applications ***If Yes, Department /Position:*** Information Technology/GIS Info System Tech	Yes
Scientist familiar with natural hazards in local area ***If Yes, Department /Position:*** Planning partners available through universities and Idaho Office of Emergency Management	Yes
Emergency manager ***If Yes, Department /Position:*** Ada County Emergency Management and Community Resilience (EMCR)	Yes
Grant writers ***If Yes, Department /Position:*** Ability to contract for service	Yes
Other ***If Yes, Department /Position:***	No

Table 1-7. Education and Outreach Capability

Criterion	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?	Yes
If yes, briefly describe: Information regarding current and past hazard mitigation planning initiatives is easily accessible on the website.	
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe: Current Emergency Management Next Door, Facebook and Twitter accounts 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?	Yes
If yes, briefly describe: There is citizen representation on the Hazard Mitigation Steering Committee. Mitigation updates and initiatives are also discussed at the Ada City-County Emergency Management Executive Council and the Local Emergency Planning Committee meetings.	
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe: EMCR 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?	Yes
If yes, briefly describe: Code Red– residents may sign up to receive emergency notifications and critical community alerts. System is IPAWS enabled and may additionally access that integrated system for public warnings. Ada County Emergency Management and Community Resilience developed a Joint Information System Plan that delineates the processes with developing a regional joint information system and center for coordinating public information messaging.	

Table 1-8. National Flood Insurance Program Compliance

Criterion	Response
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)
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	06/10/2020
Does your floodplain management program meet or exceed minimum requirements?	Exceed
If exceeds, in what ways? 1.5-foot freeboard	
When was the most recent Community Assistance Visit or Community Assistance Contact?	02/12/2021
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
If so, state what they are.	
Are any RiskMAP projects currently underway in your jurisdiction?	No
If so, state what they are.	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	No
If no, state why. Remaining Zone A hazard areas in Unincorporated Ada County require additional analysis.	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
If so, what type of assistance/training is needed? Funding for CFM ongoing training.	

Criterion	Response
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** Yes ***If no, is your jurisdiction interested in joining the CRS program?***	Yes
How many flood insurance policies are in force in your jurisdiction? ***What is the insurance in force?*** $50,709,700 ***What is the premium in force?*** $126,034	170
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $134,106	32

a. According to FEMA Regional Flood Insurance Liaison, Region 10 as of April 21, 2022

Table 1-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code (INCITS 31-2009)	Yes	16001	2009
DUNS #	No	NA	NA
Community Rating System	Yes	7	02/12/2021
Building Code Effectiveness Grading Schedule (Idaho Not Listed in the 2019 Report)	No	NA	NA
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
	Briar Hill		2012
	Columbia Village		2013
	Boise Heights		2018
	Cartwright Ranch		2021
	Dry Creek Ranch		2021
	East Valley Neighborhood		2021
	Highlands Nines HOA		2021

1.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **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.

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

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

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Funnel Cloud	N/A	10/25/2021	Strong winds, heavy rain, localized flooding
Heavy Rain/Flash Flooding	N/A	08/01/2021	Extensive precipitation and localized flooding
Thunderstorm/Microburst	N/A	6/22/2021	Wind Gusts 59 mph
Thunderstorm/Severe Winds	N/A	5/01/2021	Wind Gusts to 62 mph, small hail
High Winds	N/A	3/29/2021	Wind Gusts to 60 mph
High Winds	N/A	2/26/2021	Wind Gusts to 50-59 mph
Thunderstorm/Severe Winds	N/A	5/30/2020	Downed trees, powerlines, fences

Type of Event	FEMA Disaster #	Date	Damage Assessment
High Winds	N/A	5/06/2020	Wind Gusts to 59 mph, dust storms
Thunderstorm/Flash Flooding	N/A	4/30/2020	Street flooding caused road closures
Thunderstorm/Severe Winds	N/A	10/19/2019	Downed trees, powerlines, fences
Thunderstorm/Microburst	N/A	9/05/2019	Wind Gusts 80 mph downed trees
Funnel Cloud	N/A	5/20/2019	Strong showers, thunderstorms, localized flooding
Thunderstorms/Severe Winds	N/A	8/24 & 8/30/2017	Downed large trees, removed branches
Thunderstorm/Severe Winds	N/A	6/04/2017	Downed trees throughout area
Flooding –Boise River above flood stage 101 days, local stream flooding	DR-4342	2/2017 to 6/2017	Public Assistance in Unincorporated Ada County: $312,575; PA Countywide: $4,493,792
350% of Average Snowfall – County Declaration of Emergency	County Resolution # 2200	Winter 2016-17	Ada County Highway District incurred major expenses during this period
Hailstorm	N/A	3/21/2016	Hail size up to 1”
Thunderstorm/Wind/Power Outages	N/A	8/11/2015	Downed trees, one vehicle damaged by a large branch
Thunderstorm/Wind	N/A	8/10/2015	Gusts at 61 mph
Thunderstorms/Flash Flooding	N/A	7/08/2015	1”+ rainfall in less than one hour
Hailstorm	N/A	5/26/2015	Hail size up to 1.5”
High Winds	N/A	03/17/2014	Estimated gusts 60 mph
Severe Hail, Wind, Thunderstorm	N/A	9/05/2013	Road flooding up to 1’ deep
Flood	N/A	5/08/2012	$540,000.00 - Garden City + ACHD
High Winds/ Micro-burst	N/A	8/21/2010	$36,100
Highway 16 Wildfire	N/A	7/28/2010	No Data Available
High Winds	N/A	3/29/2009	$36,700
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/Thunderstorm—Wind	N/A	7/25/2002	Trees, powerlines down. 5,000 without power. Dust storm reduced visibility on I-84 causing 12-car pileup, 4 injured
Wildfire	N/A	7/4/2002	No Data Available
Wildfire	DR-1341	9/1/2000	Hazardous air quality, undisclosed damage.
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/Thunderstorm—Wind	N/A	1/16/1999	No Data Available
Severe Storm/Thunderstorm—Wind	N/A	9/6/1998	$38,000.00
Flood	N/A	5/17/1998	No Data Available

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Hail, Wind, Thunderstorm	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/Thunderstorm—Wind	N/A	4/27/1995	$50,500.00
Severe Winter Storm/Thunderstorm	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/Thunderstorm—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
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/Thunderstorm—Wind	N/A	6/8/1976	No Data Available
Severe Thunderstorm—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

1.6.2 Hazard Risk Ranking

Table 1-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 1-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Wildfire	28	Medium
3	Flood	18	Medium
4	Earthquake	16	Medium
5	Dam/Canal Failure	12	Medium
6	Landslide	12	Medium
7	Drought	9	Low
8	Volcano	6	Low

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- 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.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

1.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 1-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action AC-001—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.		✓		
Comment: *Project is considered no longer feasible, remove from plan.*				
Action AC-002—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.	✓			
Comment: *Bypass and generator have been installed (2019)*				
Action AC-003—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.	✓			
Comment: *It was determined that transferring the transformers to Idaho Power would provide the best alternative for providing redundancies and return to service capabilities. This action was taken in 2019.*				
Action AC-004—Keep First Responder Facilities out of Flood areas wherever 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.			✓	AC-6
Comment: *Ongoing effort, must balance location circumstances with response times.*				
Action AC-005—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.			✓	AC-7
Comment: *Project requires additional coordination with irrigation facility providers.*				
Action AC-006—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.			✓	AC-3
Comment: *Ongoing process to include mailings to floodplain residents, insurance companies and lenders.*				
Action AC-007—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.			✓	AC-8
Comment: *Projects are assessed on an as needed basis as part of budgeted building maintenance and remodeling. No major retrofit has been identified as of yet.*				
Action AC-008—Continue outreach to Irrigation Districts in an effort to encourage their participation in the Mitigation Plan as planning partners.			✓	AC-9
Comment: *This will be on ongoing action that will include coordination with the US Bureau of Reclamation.*				
Action AC-009—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.			✓	AC-10
Comment: *Continuing review of national standards and adoption of relevant codes to reduce risk.*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action AC-010—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.			✓	AC-11
Comment: *This is a constant process conducted by Ada County Emergency Management and Community Resilience (EMCR). The Community Outreach Specialist conducts in-person presentations, writes a monthly preparedness pointer and informs the public through the agency website and social media platforms: Facebook, Twitter, NextDoor .*				
Action AC-011—Maintain emergency alert phone system to notify residents of evacuations orders and procedures during a natural hazard event.			✓	AC-12
Comment: *Ada County Dispatch maintains CodeRed, an IPAWS enabled platform, to conduct Community Mass Notification as needed.*				
Action AC-012— Perform a study to determine the feasibility of creating 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.			✓	AC-13
Comment: *At this time, funding for such a district has not been identified.*				
Action AC-013—Participate in Dam Failure and high water release exercises conducted by Army Corps of Engineers			✓	AC-14
Comment: *The agency participates in annual exercises conducted by either USACE or BOR.*				
Action AC-014—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.			✓	AC-15
Comment: *EMCR maintains an active dialogue with both USACE and the BOR. One of the primary points of contact is through the Idaho Silver Jackets.*				
Action AC-015—Continue to maintain/enhance the County's classification under the Community Rating System.			✓	AC-16
Comment: *Ada County actively pursues this goal through emergency, mitigation and community planning.*				
Action AC-016—Integrate Multi-Hazard Mitigation Plan into the 2016 update to the Ada County Comprehensive Plan.	✓			
Comment: *Key elements of the Mitigation Plan were included in the Ada County 2025 Comprehensive Plan Update.*				
Action AC-017—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.			✓	AC-1
Comment: *No buildings have been identified at this time.*				
Action AC-018—Support County-wide initiatives identified in Volume 1.			✓	AC-17
Comment: *Continue in the plan update*				
Action AC-019—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.			✓	AC-2
Comment: *BATool purchased and implemented as a means of streamlining this process for all partners.*				
Action AC-020—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.			✓	AC-18
Comment: *Records are in process of being digitized and maintained on servers outside of known hazard zones.*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action AC-021—Evaluate flood, Dam Failure and earthquake risk to all Paramedic Stations and identify cost-effective solutions to mitigate those risks.			✓	AC-19
Comment: *Tools have been developed to perform initial study.*				
Action AC-022—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.).		✓		
Comment: *This project has been reviewed and found not to be feasible.*				
Action AC-O23—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.			✓	AC-20
Comment: *Ongoing process, work to restore banks after 2017 flooding is being conducted in accordance with this initiative. Most of the repairs have been completed and included green solutions where applicable.*				

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 1-14 identifies the priority for each action. Table 1-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action AC-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide						
Existing	3, 8, 9	Ada County Planning and Development Services	EMCR	High	HMGP, BRIC, FMA, Increased Cost of Compliance (ICC)	Short-term
Action AC-2—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought, Volcano						
New & Existing	All	EMCR	N/A	Low	Staff Time, General Funds	Short-term
Action AC-3—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Flood						
New & Existing	2, 3, 4, 6, 8, 9	Ada County Planning and Development Services	N/A	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action AC-4— Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions.						
Hazards Mitigated: Drought, Flood, Extreme Weather, Wildfire						
New & Existing	2, 3, 4,6, 9, 10	EMCR	N/A	Low	Staff Time, General Funds	Ongoing
Action AC-5— Identify and install the most suitable backup power solution for critical facilities and infrastructure that lack adequate backup power. Solutions may vary based on circumstances and could include but are not limited to generators, switches, battery storage, and solar systems.						
Hazards Mitigated: Flood, Extreme Weather, Earthquake						
Existing	1, 3, 10	Ada County Operations Dept.	N/A	Medium	Ada County, BRIC, FMA	Ongoing
Action AC-6— Keep First Responder Facilities out of flood areas wherever 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.						
Hazards Mitigated: Flood, Extreme Weather						
New & Existing	1,10	Ada County Operations	N/A	Medium	Ada County, BRIC, FMA	Ongoing
Action AC-7— 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.						
Hazards Mitigated: Flood, Extreme Weather, Earthquake, Drought						
Existing	1, 2, 9, 10	Ada County Irrigation Districts	N/A	High	Ada County Irrigation Districts	Long-term
Action AC-8— 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.						
Hazards Mitigated: Earthquake						
Existing	1, 2, 3	Ada County Operations Dept.	N/A	Medium	Ada County, BRIC	Long-term
Action AC-9— Continue outreach to Irrigation Districts in an effort to encourage their participation in the Mitigation Plan as planning partners.						
Hazards Mitigated: Flood, Extreme Weather						
Existing	6, 9, 10	EMCR	N/A	Low	Ada County	Ongoing
Action AC-10— Determine feasibility of adopting appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought						
New and Existing	4, 5, 6	Ada County	N/A	Low	Ada County	Ongoing
Action AC-11— 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.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought						
New and Existing	2, 8, 9	EMCR	N/A	Low	EMCR	Ongoing
Action AC-12— Maintain emergency alert phone system to notify residents of evacuations orders and procedures during a natural hazard event.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought						
Existing	7, 8	Ada County Dispatch	N/A	Low	Ada County Dispatch	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action AC-13— Perform a socioeconomic analysis that examines the creation and maintenance 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.						
Hazards Mitigated: Flood, Wildfire, Landslide						
New	3, 4, 6, 9	Partnership of jurisdictions and academia	N/A	Medium	Partnership of jurisdictions, BRIC	Long-term
Action AC-14— Participate in Dam Failure and high water release exercises conducted by Army Corps of Engineers						
Hazards Mitigated: Flood, Dam/Canal Failure						
Existing	2, 9	EMCR	N/A	Low	EMCR	Ongoing
Action AC-15— 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.						
Hazards Mitigated: Dam/Canal Failure, Flood, Drought						
New and Existing	2, 9	EMCR	N/A	Low	EMCR	Ongoing
Action AC-16— Continue to maintain/enhance the County's classification under the Community Rating System.						
Hazards Mitigated: Flood						
New and Existing	3, 4, 5, 6, 8	Ada County Planning and Development Services	N/A	Low	Ada County	Ongoing
Action AC-17— Support County-wide initiatives identified in Volume 1.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought, Volcano						
New and Existing	All	EMCR	N/A	Low	Ada County	Short-term
Action AC-18— 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.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide						
Existing	1, 3, 10	Ada County Planning and Development Services	EMCR	High	FEMA Hazard Mitigation Grant Programs, ICC	Long-term
Action AC-19— Evaluate flood, dam/canal failure and earthquake risk to all Paramedic Stations and identify cost-effective solutions to mitigate those risks.						
Hazards Mitigated: Flood, Dam/Canal Failure, Earthquake						
Existing	1, 3, 10	Ada County Emergency Medical Services District (ACEMSD)	N/A	Medium	ACEMSD, BRIC, FMA	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action AC-20— 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.						
Hazards Mitigated: Flood, Dam/Canal Failure						
New and Existing	2, 5, 9	Ada County	N/A	Medium	Ada County, BRIC, FMA, Idaho Water Resources Board (IWRB)	Ongoing
Action AC-21— Update the Black's Creek Reservoir breach analysis and the resulting downstream flood inundation map using the most recent, highest resolution GIS data available. The model suggested for use should be HEC-RAS or an equivalent two-dimensional model that can satisfactorily recognize and address the hydrologic interactions with all natural and constructed geographic features that are located downstream of the facility. The breach analysis will model the reservoir at a full pool condition and will include two (2) scenarios consisting of (1) a non-flood failure (aka "sunny day"), and (2) a flood event failure during the 1% inflow design flood (aka 100-year flood).						
Hazards Mitigated: Flood, Dam/Canal Failure						
New and Existing	2, 6, 7, 8, 9	EMCR	City of Meridian	Medium	BRIC, FMA	Short-term
Action AC-22— Design and complete a Greenbelt Pathway Riverbank Stabilization project that includes three separate areas adjacent the Boise River, within Unincorporated Ada County, that were damaged during the 2017 flood.						
Hazards Mitigated: Flood, Soil Erosion, Extreme Weather						
Existing	6, 10	Ada County Operations Dept.	N/A	Low	American Rescue Plan Act (ARPA) 2021	Short-term
Action AC-23— Plan and complete a project to remove the horse barns located within the floodway of the Boise River on Expo Idaho land. The project will safely remove the structures, reduce flood risk, remove potential nonpoint source pollution, and stabilize the bare ground with natural solutions (i.e., native grasses) to prevent erosion.						
Hazards Mitigated: Flood, Soil Erosion, Surface Water Contamination						
Existing	3, 6, 9, 10	Ada County Operations Dept.	N/A	Low	ARPA 2021	Short-term
Action AC-23— Work with Boise River Flood Control District #10 to develop a channel and gravel management plan, leveraging the Boise River Management Tool (2-D BRMT), including a Digital Elevation Model of difference (DoD) map and biomass model in the river along Unincorporated Ada County. (Coordinates with Flood Control District #10 Action FCD10-15)						
Hazards Mitigated: Flood, Soil Erosion, Surface Water Contamination						
New & Existing	2, 6, 8, 9, 10	Ada County Development Services	Flood Control District #10	Low	FCD#10, Ada County	Short-term
Action AC-24— Integrate the Multi-Hazard Mitigation Plan into updates of the Ada County Comprehensive Plan.						
Hazards Mitigated: All Hazards						
New and Existing	2, 5, 6	Ada County Planning and Development Services	EMCR	Low	Ada County	Long-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 1-14. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
1	3	High	High	Yes	Yes	No	Medium	High
2	10	Medium	Low	Yes	No	Yes	High	Low
3	6	Medium	Low	Yes	No	Yes	High	Low
4	6	Medium	Low	Yes	No	Yes	High	Low
5	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
6	3	Medium	Medium	Yes	Yes	No	Low	Low
7	4	High	High	Yes	Yes	No	Low	Low
8	3	Medium	Medium	Yes	Yes	No	Medium	Medium
9	3	Low	Low	Yes	No	Yes	Low	Low
10	3	Medium	Low	Yes	No	Yes	High	Low
11	3	Medium	Low	Yes	No	Yes	High	Low
12	2	Medium	Low	Yes	Yes	Yes	High	Low
13	4	High	High	Yes	Yes	No	Medium	Medium
14	2	Low	Low	Yes	No	Yes	High	Low
15	2	Medium	Low	Yes	No	Yes	High	Low
16	5	Medium	Low	Yes	No	Yes	High	Low
17	10	Medium	Low	Yes	Yes	Yes	High	Low
18	3	High	High	Yes	Yes	No	Medium	Medium
19	3	Medium	Medium	Yes	Yes	No	Medium	Medium
20	3	High	Medium	Yes	Yes	No	Medium	High
21	5	Medium	Medium	Yes	Yes	No	Medium	High
22	2	Medium	Low	Yes	Yes	Yes	High	Low
23	4	Medium	Low	Yes	Yes	Yes	High	Low
24	3	Medium	Low	Yes	No	Yes	High	Low

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

Table 1-15. Analysis of Mitigation Actions

Hazard Type		Action Addressing Hazard, by Mitigation Type[a]						
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	AC-10	AC-1, 6, 18	AC-9, 11	AC-7, 23	AC-5, 12	AC-22, 23	AC-4, 7	AC-2, 4, 7, 17, 24
Medium-Risk Hazards								
Wildfire	AC-10	AC-1, 18	AC-11		AC-12		AC-4	AC-2, 4, 13, 17, 24
Flood	AC-3, 10, 16	AC-1, 6, 16, 18, 19	AC-3, 9, 11, 16	AC-7, 15, 20, 23	AC-5, 12	AC-22, 23	AC-4, 7	AC-2, 3, 4, 7, 13, 14, 15, 16, 17, 20, 21, 24

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
Earthquake	AC-10	AC-1, 8, 18, 19	AC-11	AC-7	AC-5, 12		AC-7	AC-2, 7, 8, 17, 24
Dam/Canal Failure	AC-10	AC-1, 18, 19	AC-11	AC-15, 20	AC-12			AC-2, 14, 15, 17, 20, 21, 24
Low-Risk Hazards								
Landslide	AC-10	AC-1, 18	AC-11		AC-12			AC-2, 13, 17, 24
Drought	AC-10		AC-11	AC-7, 15	AC-12		AC-4, 7	AC-2, 4, 7, 15, 17, 24
Volcano								AC-2, 17

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

1.9 PUBLIC OUTREACH

Table 1-16 lists public outreach activities for this jurisdiction.

Table 1-16. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Social Media-Plan Update, Twitter/Facebook/NEXTDOOR	08/16/2021	7,000
Social Media- Mitigation Preparedness Pointer, Twitter/Facebook/NEXTDOOR	02/01/2022	6,200
Emergency Preparedness and Disaster Mitigation Booth at Micron	May 16 & 20, 2022	161

1.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **2017 Ada County Multi-Hazard Mitigation Plan –** The previous HMP was reviewed to update this annex.
- **Ada County Zoning Ordinance (Ordinance Number 389, 6-14-2000 with amended sections)** - The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Ada County Building Code Ordinance (Ordinance Number 396, 10-16-2000 with amended sections)** - The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Hazard Overlay District (Ordinance Number 914, 6-10-2020) Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

- **Wildland-Urban Fire Interface Overlay District (Ordinance Number 699, 6-18-2008)** - The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Hillside Overlay District (Ordinance Number 766, 12-8-2010** - The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **FEMA Regional Flood Insurance Liaison** – The liaison was used to obtain the most up to date FEMA Flood Insurance Policy numbers for unincorporated Ada County.

2. CITY OF BOISE

2.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Mallory Wilson, Emergency Preparedness Coordinator
333 N. Mark Stall Place
Boise, ID 83704
Telephone: 208-570-6552
e-mail Address: mgwilson@cityofboise.org

Alternate Point of Contact

Romeo Gervais, Assistant Fire Chief
333 N. Mark Stall Place
Boise, ID 83702
Telephone: 208-570-6567
e-mail Address: rgervais@cityofboise.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 2-1.

Table 2-1. Local Hazard Mitigation Planning Team Members

Name	Title
Mallory Wilson	Emergency Preparedness Coordinator
Rachel Holford	Emergency Preparedness Senior Manager
Jason Blais	Building Official Senior Manager
Jim Pardy	City Engineer
Doug Rhinehart	Public Works Project Coordinator
Sara Arkle	Parks Resources Superintendent
Jerry McAdams	Wildfire Mitigation Specialist
Amy Parrish	Climate/Energy Data Analyst

2.2 JURISDICTION PROFILE

2.2.1 Location and Features

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.

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.

2.2.2 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.

2.2.3 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.

2.3 CURRENT TRENDS

2.3.1 Population

According to COMPASS, the population of the City of Boise as of April 2022 was 243,570. Since 2017, the population has grown at an average annual rate of 1.3 percent.

2.3.2 Development

Total building permits have stayed at a high level since 2016, with a temporary slowdown in 2020 as the pandemic set in (a high level of development resumed in the spring of 2021). Construction costs have increased significantly, which is reflected in permit values, and land values are significantly higher as well. Total permit counts since 2016 have increased, mainly due to trade permits (e.g., plumbing or electrical), commercial tenant improvement permits, and more home remodeling projects given rapid home price appreciation. Despite a significant housing shortage, new construction permits for single-family housing have stayed more or less level given limited tracts of undeveloped land within Boise compared to neighboring cities and rural county areas. Much infill development has occurred, which limits how much more can occur in the future. Downtown Boise has seen significant growth with numerous large commercial projects, many of which are large, multi-story multifamily projects. Growth in multifamily development is expected to continue. Commercial development has slowed somewhat with the pandemic and remote work, but given Boise's recent growth, and continuing in-migration, it is expected to continue at a robust level for the foreseeable future. In sum, development is expected to continue at a high level, but the composition may change as Boise continues to urbanize and build upward, with limited potential to build outward.

Future growth is anticipated south of the city, with development near the airport, in previously undeveloped areas, and potential annexation of new areas for both housing and commercial development. Additional foothills development is expected to be limited. Development east and southeast of the city, into undeveloped areas, is also likely to occur, though for the near term may be limited. Table 2-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan.

Table 2-2. Recent and Expected Future Development Trends

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	Estimate 500 or fewer acres annexed, and 250 or fewer buildings or structures.
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes
If yes, describe land areas and dominant uses.	Mainly housing on the south/southwest side of the city, with some commercial/industrial also being added.
If yes, who currently has permitting authority over these areas?	Planning & Development Services

Criterion	Response
Are any areas targeted for development or major redevelopment in the next five years?	Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	South and southwest development as noted above. Also, some on the east/southeast end of the city near Micron's facilities. New housing near Micron is a mostly undeveloped area with sagebrush. Also, while more limited now, some ongoing foothills housing development is in areas with sagebrush/wildland fire potential.

How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?

	2016	2017	2018	2019	2020
Single Family	696	726	711	704	682
Multi-Family	58	50	34	40	41
Other	116	137	105	105	76
Total	870	913	850	849	799

Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: Limited development in or near the river corridor, both residential and commercial. • Landslide: Housing in one such area of foothills was abandoned – limited housing had been built there. • High Liquefaction Areas: N/A • Wildfire Risk Areas: Some in the foothills on the north and east/southeast sides of the city, and in undeveloped land to the southeast.
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Significant infill has occurred and limited areas to build upon remain. Without significant annexation, remaining infill and redevelopment areas will be built out and additional infill development will become increasingly limited. The city is bounded on the north by foothills and on the west and southwest by Eagle, Meridian, and a developed area of Ada County.

2.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 2-3.
- Development and permitting capabilities are presented in Table 2-4.
- An assessment of fiscal capabilities is presented in Table 2-5.
- An assessment of administrative and technical capabilities is presented in Table 2-6.
- An assessment of education and outreach capabilities is presented in Table 2-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-8.
- Classifications under various community mitigation programs are presented in Table 2-9.

Table 2-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
Comment: *2018 International Building Code (IBC)/Title 9, Building Codes and Regulations, Chapter 1A Building Code: adopted 1/1/2021* *2018 International Existing Building Code (IEBC)/Title 9, Building Codes and Regulations, Chapter 10 Existing Building Code: adopted 1/1/2021* *2018 International Residential Code (IRC)/Title 9, Building Codes and Regulations, Chapter 1B One-And-Two-Family Dwelling Building Code: adopted 1/1/2021*				
Zoning Code	Yes	No	No	Yes
Comment: *Title 11, Development Code*				
Subdivisions	Yes	No	No	No
Comment: *Title 11, Development Code*				
Stormwater Management	Yes	Yes	Yes	Yes
Comment: *Title 10, Public Utilities, Chapter 6, Stormwater Management and Discharge Control and Title 9, Building Codes and Regulations, Chapter 14, Construction Site Erosion Control, Boise shares responsibility with ACHD and others for the National Pollutant Discharge Elimination System (NPDES) program*				
Post-Disaster Recovery	No	No	No	No
Comment: *N/A*				
Real Estate Disclosure	No	No	No	No
Comment: *Idaho Statute 55-2508*				
Growth Management	Yes	No	No	No
Comment: *Blueprint Boise, Adopted 11/2011*				
Site Plan Review	Yes	No	No	No
Comment: *Requirement of Title 11, Development Code*				
Environmental Protection	Yes	Yes	No	Yes
Comment: *Blueprint Boise, Adopted 11/2011, Boise River Resource Management and Master Plan, Adopted 8/21/2014, Waterways Overlay Districts, Boise River System Overlay Districts, Title 11, Development Code*				
Flood Damage Prevention	Yes	No	No	Yes
Comment: *2018 International Building Code (IBC)/Title 9, Building Codes and Regulations, Chapter 1A Building Code: adopted 1/1/2021* *2018 International Residential Code (IRC)/Title 9, Building Codes and Regulations, Chapter 1B One-And-Two-Family Dwelling Building Code: adopted 1/1/2021* *Title 11, Development Code*				
Emergency Management	Yes	Yes	No	Yes
Comment: *Boise City Office of Emergency Preparedness now in place; Ada County Emergency Management*				
Climate Change	Yes	No	No	Yes
Comment: *Boise's Climate Action Roadmap 2021*				
Other	No	No	No	No
Comment: *N/A*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Planning Documents				
General Plan	Yes	No	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? *Yes* ***Comment:*** *Blueprint Boise, Adopted 11/2011*				
Capital Improvement Plan	Yes	No	No	No
What types of capital facilities does the plan address? *All city facilities* ***How often is the plan updated?*** *Annual budget, with 5-year capital improvement plan*				
Disaster Debris Management Plan	Yes	No	No	No
Comment: *Public Works Disaster Debris Operational Guidance document; Planning coordination with Ada County Debris Management Plan*				
Floodplain or Watershed Plan	Yes	Yes	No	Yes
Comment: *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.*				
Stormwater Plan	Yes	Yes	Yes	Yes
Comment: *Stormwater Management Program*				
Urban Water Management Plan	No	No	No	No
Comment: *N/A*				
Habitat Conservation Plan	Yes	No	No	No
Comment: *Foothills and Open Space Management Plan,* Boise River Resource Management and Master Plan, Adopted 8/21/2014				
Economic Development Plan	Yes	No	No	No
Comment: *City of Boise Economic Development Strategic Plan, November 2021*				
Shoreline Management Plan	No	No	No	No
Comment: *Enter Comment*				
Community Wildfire Protection Plan	No	Yes	No	Yes
Comment: *The 2017 version of this plan serves as the CWPP. In addition, the 2021 update to the Ada County Multi-Hazard mitigation plan is being prepared to qualify as a CWPP for the Ada County Planning area.*				
Forest Management Plan	Yes	No	No	No
Comment: *2015 Community Forestry Strategic Management Plan*				
Climate Action Plan	Yes	No	No	Yes
Comment: *Boise's Climate Action Roadmap, 2021*				
Comprehensive Emergency Management Plan	Yes	Yes	No	Yes
Comment: *2020 City of Boise, Emergency Operations Plan*				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	No
Comment: *Ada County THIRA, May 2015*				
Post-Disaster Recovery Plan	No	No	No	Yes
Comment: *Coordination with Ada County on future development of Recovery Plan*				
Continuity of Operations Plan	Yes	No	No	No
Comment: *City of Boise Continuity of Operations Plan in development*				
Public Health Plan	No	Yes	No	No
Comment: *Central District Health Department Emergency Operations Plan, 2019*				
Other	No	No	No	No
Comment: *N/A*				

Table 2-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department? Planning and Development Services	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes

Table 2-5. Fiscal Capability

Financial Resource	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
If yes, specify: Geothermal, Solid Waste, Water Renewal (enterprise funds)	
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

Table 2-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
If Yes, Department /Position: City Planning and Development Staff and Public Works Engineers	
Engineers or professionals trained in building or infrastructure construction practices	Yes
If Yes, Department /Position: City Planning Staff and Public Works Engineers	
Planners or engineers with an understanding of natural hazards	Yes
If Yes, Department /Position: City Planning and Development Staff and Public Works Engineers	
Staff with training in benefit/cost analysis	Yes
If Yes, Department /Position: City Budget Staff	
Surveyors	Yes
If Yes, Department /Position: City Public Works Staff- City Surveyor	
Personnel skilled or trained in GIS applications	Yes
If Yes, Department /Position: City Planning and Development Staff, Public Works Staff, IT Staff, Fire Data Analyst	
Scientist familiar with natural hazards in local area	Yes
If Yes, Department /Position: Parks and Recreation – Foothills Restoration Specialist; Close coordination with Boise State University Hazard and Climate Resiliency Institute	
Emergency manager	Yes
If Yes, Department /Position: City Office of Emergency Management (2 Staff) Ada County Emergency Management (EMCR)	
Grant writers	Yes
If Yes, Department /Position: City Police and Fire Staff, Department of Finance and Administration Budget Staff and Grants Manager	

Table 2-7. Education and Outreach Capability

Criterion	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?	Yes
If yes, briefly describe: Wildfire and flood information on city website. Links to EMCR site.	
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe: 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?	Yes
If yes, briefly describe: Planning and Zoning Commission, Parks and Recreation Commission, Public Works Commission, Building Code Committee	
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe: Various city public education events throughout the year.	
Do you have any established warning systems for hazard events?	Yes
If yes, briefly describe: Code Red– residents may sign up to receive emergency notifications and critical community alerts. Access to IPAWS infrastructure through State system.	

Table 2-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Planning and Development Services
Who is your floodplain administrator? (department/position)	Planning Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	2020
Does your floodplain management program meet or exceed minimum requirements?	Exceeds
If exceeds, in what ways? Increased freeboard requirements in all SFHAs.	
When was the most recent Community Assistance Visit or Community Assistance Contact?	Summer 2019
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	Yes
If so, state what they are. Boise City annexed property that had existing violations (undersize culverts) that preexisted Boise City jurisdiction.	
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.***	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
If no, state why. Updated mapping in progress	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
If so, what type of assistance/training is needed? Training for new floodplain administrator	
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
If yes, is your jurisdiction interested in improving its CRS Classification? No	
If no, is your jurisdiction interested in joining the CRS program? N/A	

Criterion	Response
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** $276,428,300 ***What is the premium in force?*** $624,142	950
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $102,909	55

a. According to FEMA statistics as of March 31, 2022

Table 2-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	1600108830	N/A
DUNS #	Yes	070017017	N/A
Community Rating System	Yes	6	2015
Building Code Effectiveness Grading Schedule	Yes	3	2021
Public Protection	Yes	3	2013
Storm Ready	Yes	N/A	N/A
Firewise	Yes	N/A	N/A

2.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

2.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **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.
- **Stormwater Management Plan**—Provides guidance and requirements for construction, industrial and municipal activities to meet NPDES requirements

2.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- 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 will reference this HMP in land use sections.
- **Boise's Climate Action Roadmap**—Provides guidance for addressing current and future hazards related to the changing climate
- **City of Boise Emergency Operations Plan**—ensure next plan update aligns with hazard mitigation plan updates.
- **Disaster Recovery Plan**—Engage with County on recovery planning initiatives.
- **Community Wildfire Protection Plan—**will reference wildfire hazard maps and data in this HMP.
- **Stormwater Management Program—**flood and extreme weather data may be used in the program.
- **City of Boise Water Renewal Utility Plan—**will consider drought hazard data from the Hazard Mitigation Plan.
- **Emergency Preparedness**—further promote mitigation planning and grant opportunities within the city

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

2.6 RISK ASSESSMENT

2.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 2-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 2-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Excessive Heat	N/A	6/28/2021	Cooling shelters; minimal local costs
Earthquake	N/A	3/31/2020	No local damage; evaluated infrastructure
COVID-19 Pandemic	DR-4534	1/20/2020 - ongoing	N/A
Winter Storms	N/A	December 2016	N/A
Flooding	DR-4342	3/29/2017	$3,341,756.00
Severe Wind	N/A	3/29/2009	$33,000 (countywide)
Wildfire	N/A	7/28/2009	$1.66 Million
Flooding	N/A	9/11/1997	$57,000
Wildfire	N/A	8/26/1996	$3.3 million

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Wind	N/A	4/27/1995	$50,000 (countywide)
Flooding	N/A	02/1986	$20,000
Flooding	N/A	06/1983	$147,000 (countywide)
Earthquake	N/A	10/28/1983	Minimal local damage
Landslide	N/A	11/1980	Unknown
Flooding	N/A	1/12/1979	Unknown

2.6.2 Hazard Risk Ranking

Table 2-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 2-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Wildfire	22	Medium
3	Dam/Canal Failure	18	Medium
4	Flood	18	Medium
5	Earthquake	16	Medium
6	Landslide	12	Low
7	Drought	9	Low
8	Volcano	6	Low

2.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Canal failure: Boise has numerous canals, many of which are situated above homes and businesses. Canal failure would result in flooding of those properties.
- Mass Gatherings: Increase in number and size of large special events taking place within the City.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

2.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 2-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 2-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action B-1—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			✓	B-6
Comment: *Additional modifications planned to the river channel at Esther Simplot Whitewater Park. The final Letter of Map Revision (LOMR) is now anticipated to be submitted to FEMA for approval in 2023.. With the LOMR approval the Flood Insurance Rate Maps (FIRM) will be modified in this area to include all improvements and increased conveyance channels.*				
Action B-2—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.			✓	B-7
Comment: *This is an ongoing program, which will likely need additional future funding to conduct updates to the Riskmap (e.g., LiDAR, Rapid Eye imagery and data translation).*				
Action B-3—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.			✓	B-8
Comment: *Consistent funding mechanisms will need to be found to create an annual woody debris pickup program.*				
Action B-4—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.	✓			
Comment: *Initial condition assessment of fire stations was completed with four slated for remodeling priority.*				
Action B-5—Flood Containment Facility Maintenance: Continue to maintain foothills flood containment facilities such as the Cottonwood flood ponds and flume, etc.			✓	B-9
Comment: Ongoing indefinitely. Facilities are inspected, monitored and maintained on reoccurring basis.				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action B-6—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-4
Comment: *The City continues to maintain good standing under the program.*				
Action B-7—Continue to maintain/enhance the City's classification under the Community Rating System			✓	B-10
Comment: *The City continues to participate in the Community Rating System.*				
Action B-8—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-1
Comment: *Current discussions and analysis of potential plans are ongoing.*				
Action B-9—Update and adopt a new Wildland Urban Interface (WUI) Code to replace the existing code. Improve and update existing WUI hazard zones.			✓	B-11
Comment: *The City of Boise is currently leading a working group on adopting a consistent area-wide WUI code, and will be updating the Boise City Code as part of this process.*				
Action B-10—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern			✓	B-12
Comment: *Ongoing discussions and considerations during all project planning, analysis, and educations programs.*				
Action B-11— Support County-wide initiatives identified in Volume 1.			✓	B-13
Comment: *Continued efforts to coordinate with identified stakeholders.*				
Action B-12—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.			✓	B-3
Comment: *Key representatives from each identified area continue to coordinate and provide information to and from their respective areas.*				
Action B-13—Offer NOAA SKYWARN Spotter Training for community members to encourage awareness and better ability to provide local information for weather predictions.		✓		
Comment: *Have not seen any recent information from NWS on SKYWARN training opportunities. Will revisit if opportunities are made available again in the future.*				
Action B-14—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.		✓		
Comment: *The City has no additional action planned in regards to the landslide, but will continue to monitor for any changes.*				
Action B-15—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.			✓	B-14
Comment: *The City of Boise continues to work with local experts in combination with best practices on all projects. Public Works Engineering staff is resolved in ensuring our riverbanks are not completely rocked and is using techniques to soften the bank repairs, when applicable, with vegetation and natural techniques.*				
Action B-16—Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation projects.			✓	B-15
Comment: *Ongoing with distinct need to build capacity. Stack Rock fuels mitigation will be a large, landscape-scale project.*				

2.8 HAZARD MITIGATION ACTION PLAN

Table 2-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 2-14 identifies the priority for each action. Table 2-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 2-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action B-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: All Hazards						
Existing	1, 2, 3, 4, 9	Planning and Development	Public Works, EMCR	High	HMGP, BRIC, FMA	Short-term
Action B-2— Evaluate and integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community.						
Hazards Mitigated: Flood, Drought, Extreme Weather, Wildfire, Landslide, Dam/Canal Failure, Earthquake						
New & Existing	2, 5, 6	Boise Fire, Planning and Development, Public Works	Other City Departments as appropriate	Low	Staff Time, General Funds	Ongoing
Action B-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: All Hazards						
New & Existing	1, 2, 6, 7, 8, 9, 10	Boise Fire, Planning and Development, Public Works	Parks and Recreation	Low	Staff Time, General Funds	Short-term
Action B-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Flood						
New & Existing	1, 2, 9, 10	Planning and Development	N/A	Low	Staff Time, General Funds	Ongoing
• **Action B-5**—Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions. •						
Hazards Mitigated: Drought, Flood, Extreme Weather, Wildfire						
New & Existing	2, 3, 4, 6, 9, 10	Public Works	N/A	Low	Staff Time, General Funds	Short-term
Action B-6— 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						
Hazards Mitigated: Flood						
Existing	1, 2, 3, 9, 10	Public Works	N/A	Medium	Local Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action B-7— 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. (Coordinates with North Ada County Fire & Rescue Action NACFR-5 and Whitney Fire Protection District Action WFD-9)						
Hazards Mitigated: Wildfire						
New & Existing	2, 4, 6, 8, 9, 10	Boise Fire	N/A	Medium	Western States Grant, HMGP Grant, Local Funds	Short-term and ongoing
Action B-8— Conduct wildland fire prevention education and outreach via the internet, social media and direct public 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. (Coordinates with North Ada County Fire & Rescue Action NACFR-14, Whitney Fire Protection District Action WFD-7)						
Hazards Mitigated: Wildfire						
New and Existing	1, 8, 9, 10	Boise Fire	NACFR, Whitney Fire	Low	Western State Grant, Local Funds	Short-term and Ongoing
Action B-9— Flood Containment Facility Maintenance: Continue to maintain foothills flood containment facilities such as the Cottonwood flood ponds and flume, etc.						
Hazards Mitigated: Flood						
Existing	1, 2, 9, 10	Public Works	N/A	Low	Local Funds	Short-term and Ongoing
Action B-10— Continue to maintain/enhance the City's classification under the Community Rating System						
Hazards Mitigated: Flood						
New & Existing	1, 2, 9, 10	Public Works	Planning and Development Services	Low	Local Funds	Ongoing
Action B-11— Update, adopt, and enforce a new Wildland Urban Interface (WUI) Code to replace the existing code. Improve and update existing WUI hazard zones. (Coordinates with North Ada County Fire & Rescue Action NACFR-3, Whitney Fire Protection District Action WFD-3)						
Hazards Mitigated: Wildfire						
New & Existing	1, 2, 4, 5, 6, 9, 10	Boise Fire	Planning and Development Services, NACFR, Whitney Fire	Low	Local Funds	Short-Term
Action B-12— Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.						
Hazards Mitigated: All hazards						
New & Existing	1, 2, 4, 5, 6, 9, 10	Planning and Development Services	N/A	Low	Local Funds	Ongoing
Action B-13— Support County-wide initiatives identified in Volume 1.						
Hazards Mitigated: All Hazards						
New & Existing	1, 2, 6, 7, 8, 9, 10	EMCR	Boise Fire, Planning and Development, Public Works	Low	Local Funds	Short-Term and Ongoing
Action B-14— 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.						
Hazards Mitigated: Flooding, Dam Failure						
New and Existing	2, 5, 9	Public Works	Parks and Recreation	Medium	Local Funds	Long-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action B-15— Meet and coordinate with private organizations, state, federal and other local agencies to develop, conduct and maintain wildfire mitigation and fuel-reduction projects, including prescribed fire (Rx fire), pile-burning and managed fire. Increase capacity to conduct these projects through hiring personnel and expenditures for equipment and biological control methods. (Coordinates with Flood Control District #10 Action FCD10-12, North Ada County Fire & Rescue District Action NACFR-15, Whitney Fire Protection District WFD-8)						
Hazards Mitigated: Wildfire						
New & Existing	1, 6, 9, 10	Boise Fire	FCD #10, NACFR, Whitney Fire	Low	Local Funds	Short-Term and Ongoing
Action B-16— Identify and construct Boise River enhancements to decrease river temperature in order to favor aquatic species by restoring native riparian vegetation, side channels, and wetlands. The side channel projects may also provide an opportunity to lower flood risks to certain areas along the river.						
Hazards Mitigated: Flood						
New and Existing	2, 10	Public Works	N/A	Medium	Local Funds, BRIC, HMGP	Short and Long Term
Action B-17—Construction of new facility to serve as Fire Station 5. New building will be brought up to current seismic code.						
Hazards Mitigated: Earthquake						
New	1, 3, 10	Public Works	Boise Fire	Low	Local Funds	Short-Term
Action B-18—Relocate Fire Logistics facility as part of broader support facilities campus relocation project. Current facility						
Hazards Mitigated: Flood, Earthquake						
New	1, 3, 10	Public Works	Boise Fire	Low	Local Funds	Short-Term
Action B-19—Conduct a feasibility study for improvements in the South Channel Boise River near Eagle Island State Park. The City has been engaged with multiple stakeholders discussing potential improvements in the S Channel Boise River and on adjacent lands. Improvements include the creation of a side channel, bank stabilization, improved flood flow control including increased protection of the Idaho Fish and Game Fish Hatchery.						
Hazards Mitigated: Flood						
Existing	1, 2, 3, 10	Public Works	N/A	Medium	BRIC, HMGP, Local Funds	Short-Term
Action B-20 – Reconnect Alta Harris Creek to the Boise River at Barber Pool. Trout Unlimited has worked for nearly ten years to reconnect Alta Harris Creek with the Boise River. A channel has been constructed and vegetation established. The final phase of this project is to connect the creek to an area above Barber Pool to provide continuous flow and to provide fish passage. This project will also provide flood risk reduction.						
Hazards Mitigated: Flood						
New and Existing	2, 10	Public Works	N/A	Medium	Local funds, BRIC, HMGP	Short and Long Term
Action B-21 – Continue Firewise Community program for residents in the foothills and promote adoption of Firewise for development within the wildland urban interface overlay. (Coordinates with North Ada County Fire & Rescue Action NACFR-4, Whitney Fire Protection District WFD-5)						
Hazards Mitigated: Wildfire						
New and Existing	1, 2, 5, 6, 8, 9	Boise Fire Department	NACFR, Whitney Fire	Low	Local funds	Short-term and ongoing
Action B-22 – Campaign to get neighborhoods to revise covenants and homeowners' association (HOA) rules to mitigate natural hazards. (Coordinates with North Ada County Fire & Rescue Action NACFR-9)						
Hazards Mitigated: Flood, Earthquake, Wildfire						
New and Existing	2, 5, 6, 8, 9	Boise Fire Department	NACFR	Low	Staff Time, General Fund	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action B-23 – Establish Strategic Planning process for foothills. (Coordinates with North Ada County Fire & Rescue Action NACFR-11, Eagle Fire Protection District EFD-12)						
Hazards Mitigated: Wildfire						
Existing	2, 3, 4, 5, 6, 9	Boise Fire Department	NACFR	Medium	Rural Fire Assistance Grant, National Fire Plan	Long-term/Ongoing
Action B-24 – Develop/enhance ability to capture perishable data, including dollar values, after significant events. (Coordinates with North Ada County Fire & Rescue Action NACFR-12)						
Hazards Mitigated: All Hazards						
Existing	2	Boise Fire Department	NACFR	Low	Local Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 2-14. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
1	5	High	High	Yes	Yes	No	Medium	High
2	3	Medium	Low	Yes	No	Yes	High	Low
3	7	Low	Low	Yes	No	Yes	High	Low
4	4	Medium	Low	Yes	No	Yes	High	Low
5	6	Medium	Low	Yes	No	Yes	High	Medium
6	5	High	Medium	Yes	Yes	No	Medium	Low
7	6	High	Medium	Yes	Yes	Yes	Medium	Medium
8	4	Medium	Low	Yes	Yes	Yes	Low	Low
9	4	Medium	Low	Yes	No	Yes	High	Low
10	4	Medium	Low	Yes	No	Yes	High	Low
11	7	High	Low	Yes	No	Yes	High	Low
12	7	Medium	Low	Yes	No	Yes	Medium	Low
13	7	Medium	Low	Yes	Yes	No	Medium	Medium
14	3	High	Medium	Yes	Yes	No	Medium	High
15	4	High	Low	Yes	No	Yes	High	Low
16	2	Medium	Medium	Yes	Yes	Yes	Medium	High
17	3	High	Low	Yes	No	Yes	High	Low
18	3	High	Low	Yes	No	Yes	High	Low
19	4	Medium	Medium	Yes	Yes	Yes	Medium	High
20	2	High	Medium	Yes	Yes	No	High	High
21	6	High	Low	Yes	Yes	Yes	High	High
22	5	High	Low	Yes	Yes	Yes	Medium	Medium
23	6	Medium	Medium	Yes	Yes	Yes	High	High
24	1	Low	Low	Yes	Yes	Yes	Medium	Medium

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

Table 2-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	B-2, 12, 3	B-1	B-13, 3		B-13		B-1, 2, 5, 6	B-2, 5, 24
Medium-Risk Hazards								
Dam Failure	B-2, 12, 3	B-1	B-13, 3		B-13			B-2, 24
Earthquake	B-2, 12, 3, 22	B-1, 17, 18	B-13, 3		B-13, 17, 18			B-2, 22, 24
Flood	B-2, 9, 4, 10, 12, 3, 14, 22	B-6, 9, 4, 10, 1, 14, 19	B-13, 3	B-6, 4, 10, 14, 16, 19, 20	B-9, 13	B-6, 16, 19, 20	B-1, 2, 4, 5, 6, 9, 14, 16, 19, 20	B-2, 5, 14, 19 22, 24
Wildfire	B-2,7, 8, 11, 12, 3, 15, 21, 22, 23	B-7, 8, 1, 11, 15	B-13, 3	B-6, 4, 10, 14	B-7, 8, 11, 13, 15		B-1, 2, 5, 7, 8, 11, 15	B-2, 5, 15, 21, 22, 23, 24
Low-Risk Hazards								
Drought	B-2, 12, 3	B-1	B-13, 3		B-13		B-2, 5	B-2, 5, 24
Landslide	B-2, 12	B-1						B-2, 24
Volcano		B-1						B-24

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

2.9 PUBLIC OUTREACH

Table 2-16 lists public outreach activities for this jurisdiction.

Table 2-16. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Wildfire mitigation/Firewise outreach activities	Various	Unknown

2.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **2017 Ada County Multi-Hazard Mitigation Plan** – The previous HMP was reviewed to update this annex.
- **City of Boise Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Boise Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Boise Water Renewal Utility Plan** – The plan was reviewed for potential projects that would lead to reduction of flood risk.

- **Boise's Climate Action Roadmap** – Reviewed for integration opportunities and analysis of mitigation actions for climate resilience.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

CITY OF BOISE

0 1.5 3 Miles

Lucky Peak Dam Failure Inundation Area

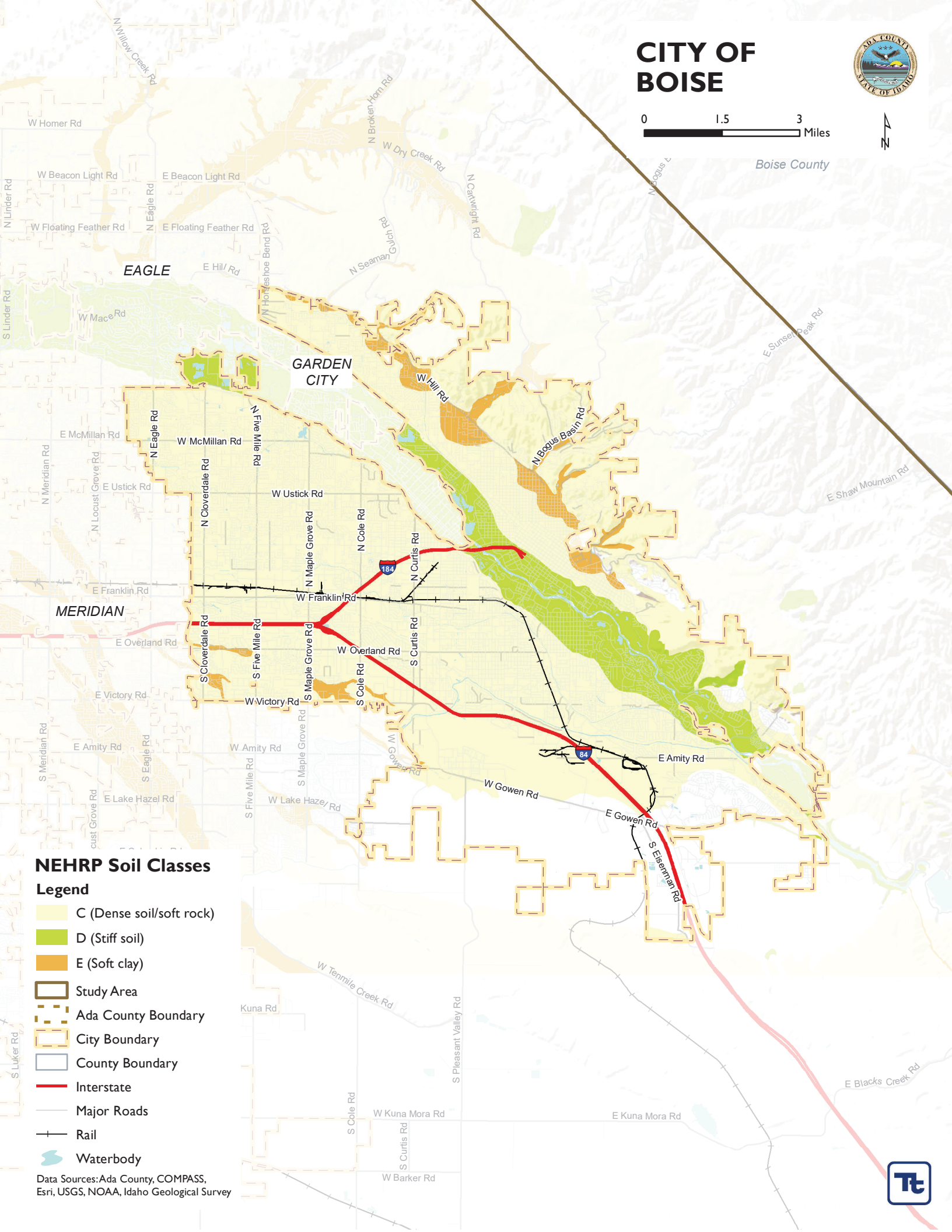
Legend

- Maximum Pool Inundation Area

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

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, IDWR


CITY OF BOISE
0
1.5
3
Miles
N
Boise County
EAGLE
GARDEN CITY
MERIDIAN
W Homer Rd
W Beacon Light Rd
E Beacon Light Rd
W Floating Feather Rd
E Floating Feather Rd
E Hill Rd
W Mace Rd
E McMillan Rd
W McMillan Rd
W Ustick Rd
E Ustick Rd
E Franklin Rd
W Franklin Rd
E Overland Rd
W Overland Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Hazel Rd
W Gowen Rd
E Gowen Rd
E Amity Rd
W Hill Rd
N Bogus Basin Rd
E Sunset Peak Rd
E Shaw Mountain Rd
N Broken Horn Rd
W Dry Creek Rd
N Cartwright Rd
N Seaman Gulch Rd
N Willow Creek Rd
N Linder Rd
N Eagle Rd
N Horseshoe Bend Rd
S Linder Rd
N Meridian Rd
N Locust Grove Rd
N Cloverdale Rd
N Five Mile Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
S Meridian Rd
S Eagle Rd
S Locust Grove Rd
S Five Mile Rd
S Maple Grove Rd
S Eisenman Rd
S Pleasant Valley Rd
S Luker Rd
S Cole Rd
S Curtis Rd
W Tenmile Creek Rd
Kuna Rd
W Kuna Mora Rd
E Kuna Mora Rd
W Barker Rd
E Blacks Creek Rd
184
84
NEHRP Soil Classes
Legend
C (Dense soil/soft rock)
D (Stiff soil)
E (Soft clay)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey

CITY OF BOISE

0 1 2 Miles

N

Boise County

EAGLE

GARDEN CITY

MERIDIAN

W Homer Rd
W Beacon Light Rd
E Beacon Light Rd
W Floating Feather Rd
E Floating Feather Rd
E Hill Rd
W Mace Rd
E McMillan Rd
W McMillan Rd
E Ustick Rd
W Ustick Rd
E Franklin Rd
W Franklin Rd
E Overland Rd
W Overland Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Haze/ Rd
E Columbia Rd
E Hubbard Rd
W Hill Rd
E Amity Rd
W Gowen Rd
E Gowen Rd
E Kuna Mora Rd
E Blacks Creek Rd
E Shaw Mountain Rd
E Sunset Peak Rd
N Willow Creek Rd
N Broken Horn Rd
W Dry Creek Rd
N Cartwright Rd
N Seaman Gulch Rd
N Horseshoe Bend Rd
N Linder Rd
S Linder Rd
N Eagle Rd
N Meridian Rd
N Locust Grove Rd
N Cloverdale Rd
N Five Mile Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
N Bogus Basin Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
S Meridian Rd
S Eagle Rd
S Locust Grove Rd
S Five Mile Rd
S Maple Grove Rd
W Gowen Rd
S Pleasant Valley Rd
S Luker Rd
S Eisenman Rd

184
84

100-Year Probabilistic Earthquake Scenario

Legend

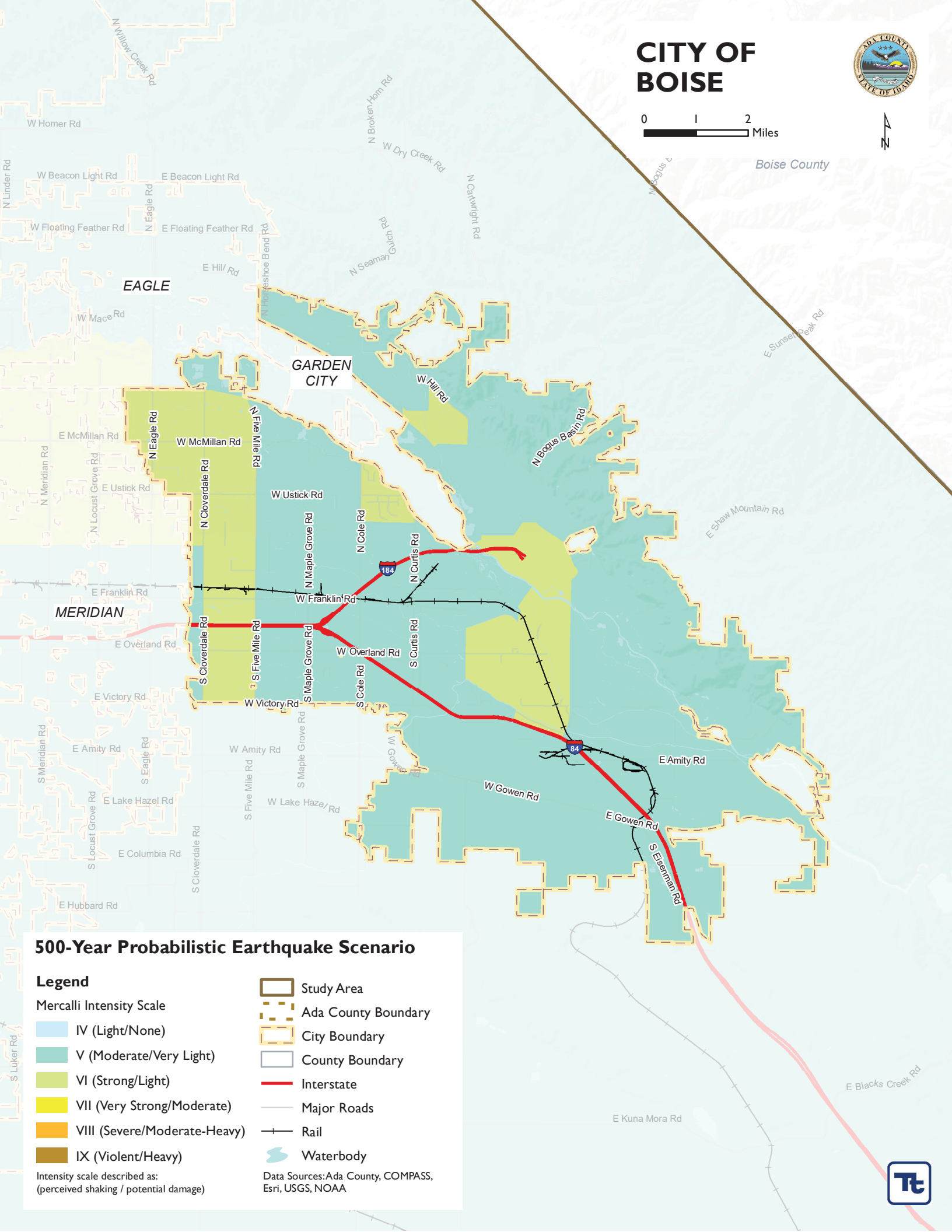
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



500-Year Probabilistic Earthquake Scenario

Legend

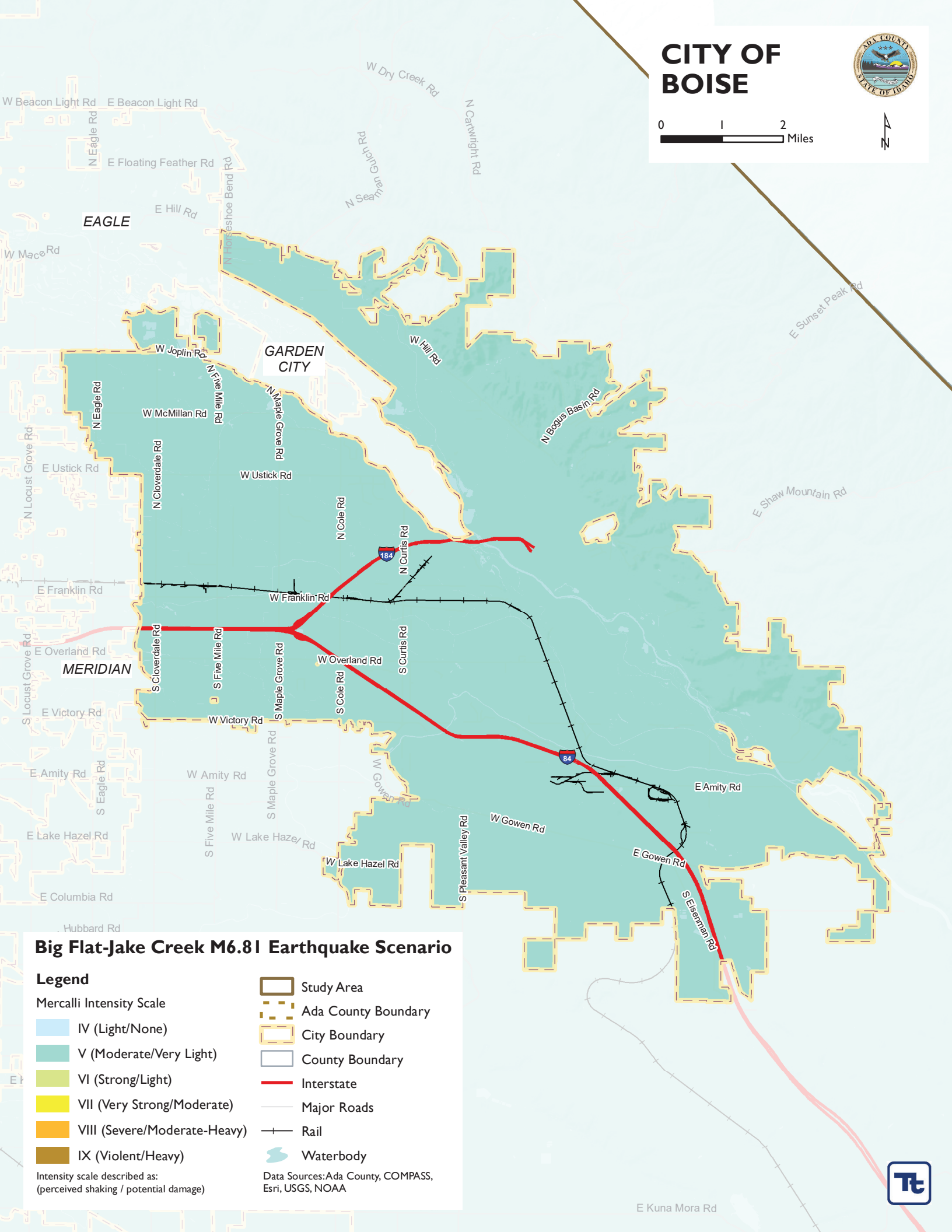
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



Big Flat-Jake Creek M6.81 Earthquake Scenario

Legend

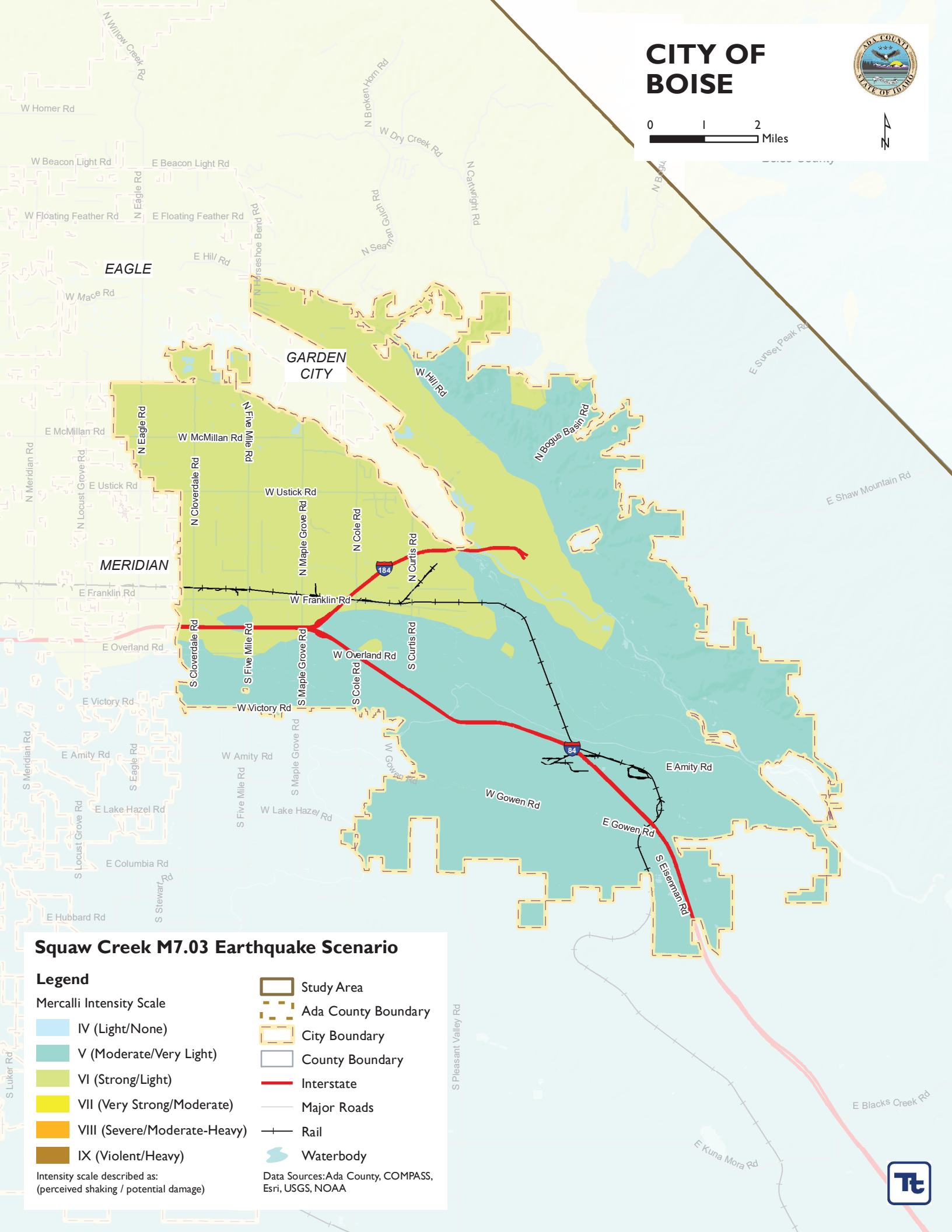
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF BOISE
0 1 2 Miles
N
EAGLE
GARDEN CITY
MERIDIAN
W Homer Rd
W Beacon Light Rd
E Beacon Light Rd
W Floating Feather Rd
E Floating Feather Rd
E Hill Rd
W Mace Rd
N Willow Creek Rd
N Broken Horn Rd
W Dry Creek Rd
N Cartwright Rd
N Seaman Gulch Rd
N Horseshoe Bend Rd
N Eagle Rd
E McMillan Rd
W McMillan Rd
N Five Mile Rd
N Cloverdale Rd
N Meridian Rd
N Locust Grove Rd
E Ustick Rd
W Ustick Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
W Hill Rd
N Bogus Basin Rd
E Sunset Peak Rd
E Shaw Mountain Rd
E Franklin Rd
W Franklin Rd
184
E Overland Rd
W Overland Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
E Victory Rd
W Victory Rd
84
E Amity Rd
W Amity Rd
S Meridian Rd
S Eagle Rd
S Locust Grove Rd
E Lake Hazel Rd
W Lake Hazel Rd
S Five Mile Rd
S Maple Grove Rd
W Gowen Rd
E Gowen Rd
S Eisenman Rd
E Columbia Rd
S Stewart Rd
E Hubbard Rd
S Pleasant Valley Rd
E Blacks Creek Rd
E Kuna Mora Rd
S Luker Rd
Squaw Creek M7.03 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF BOISE

0 1.5 3 Miles

N

Boise County

EAGLE

GARDEN CITY

MERIDIAN

W Hill Rd
N Bogus Basin Rd
W McMillan Rd
W Ustick Rd
W Franklin Rd
W Overland Rd
W Victory Rd
E Amity Rd
W Gowen Rd
E Gowen Rd
S Eisenman Rd
N Eagle Rd
N Five Mile Rd
N Cloverdale Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
184
84

FEMA Flood Hazard Areas

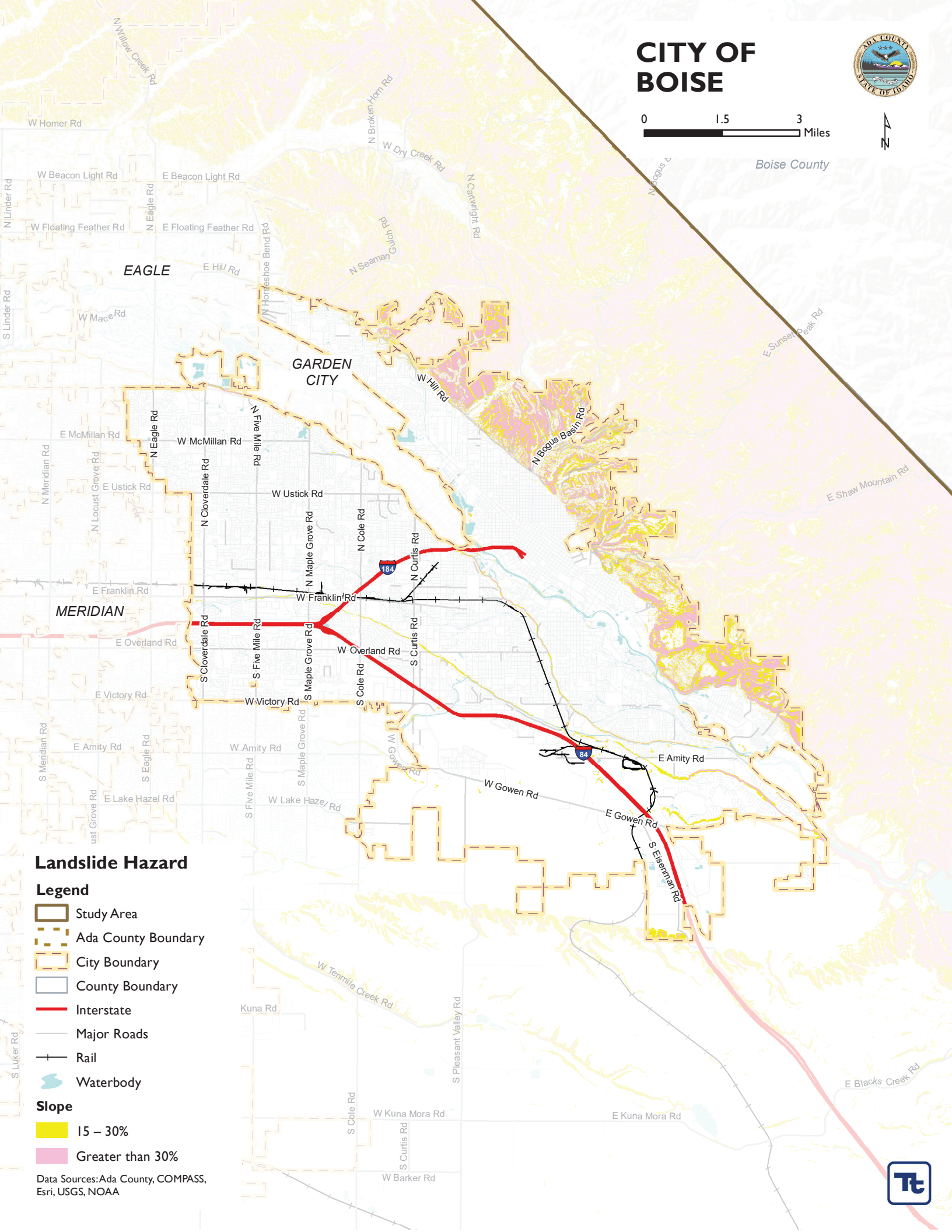
Flood Boundary

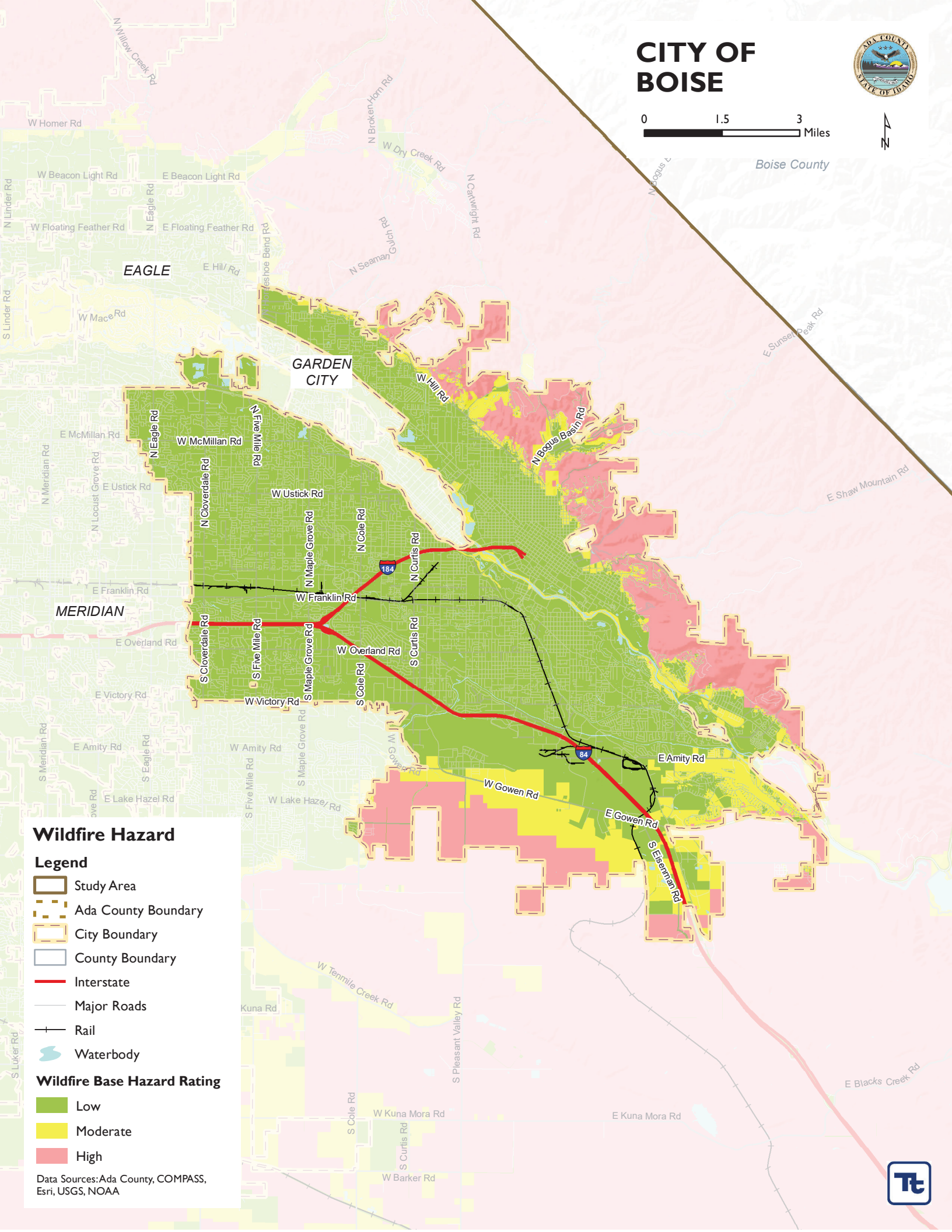
- 1% Annual Chance (100 Year)
- 0.2% Annual Chance (500 Year)

Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA


CITY OF BOISE
0
1.5
3
Miles
N
Boise County
EAGLE
GARDEN CITY
MERIDIAN
W Homer Rd
W Beacon Light Rd
E Beacon Light Rd
W Floating Feather Rd
E Floating Feather Rd
E Hill Rd
W Mace Rd
E McMillan Rd
W McMillan Rd
E Ustick Rd
W Ustick Rd
E Franklin Rd
W Franklin Rd
E Overland Rd
W Overland Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Hazel Rd
W Dry Creek Rd
N Seaman Gulch Rd
N Cartwright Rd
W Hill Rd
N Bogus Basin Rd
E Sunset Peak Rd
E Shaw Mountain Rd
N Willow Creek Rd
N Broken Horn Rd
N Linder Rd
S Linder Rd
N Eagle Rd
S Eagle Rd
N Horseshoe Bend Rd
N Meridian Rd
S Meridian Rd
N Locust Grove Rd
S Locust Grove Rd
N Cloverdale Rd
S Cloverdale Rd
N Five Mile Rd
S Five Mile Rd
N Maple Grove Rd
S Maple Grove Rd
N Cole Rd
S Cole Rd
N Curtis Rd
S Curtis Rd
W Gowen Rd
E Gowen Rd
E Amity Rd
S Eisenman Rd
W Tenmile Creek Rd
Kuna Rd
S Pleasant Valley Rd
E Blacks Creek Rd
W Kuna Mora Rd
E Kuna Mora Rd
W Barker Rd
S Luker Rd
184
84
Landslide Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Slope
15 – 30%
Greater than 30%
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF BOISE
0
1.5
3
Miles
N
Boise County
EAGLE
GARDEN CITY
MERIDIAN
W Hill Rd
N Bogus Basin Rd
W McMillan Rd
N Eagle Rd
N Five Mile Rd
N Cloverdale Rd
W Ustick Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
184
W Franklin Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
W Overland Rd
W Victory Rd
84
E Amity Rd
W Gowen Rd
E Gowen Rd
S Eisenman Rd
W Homer Rd
W Beacon Light Rd
E Beacon Light Rd
W Floating Feather Rd
E Floating Feather Rd
E Hill Rd
W Mace Rd
E McMillan Rd
E Ustick Rd
E Franklin Rd
E Overland Rd
E Victory Rd
W Amity Rd
E Lake Hazel Rd
W Lake Haze Rd
W Tenmile Creek Rd
Kuna Rd
W Kuna Mora Rd
E Kuna Mora Rd
W Barker Rd
E Blacks Creek Rd
E Shaw Mountain Rd
E Sunset Peak Rd
S Pleasant Valley Rd
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

3. CITY OF EAGLE

3.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Michael Williams, CFM, Floodplain Administrator/Planner III
660 East Civic Lane
Eagle, Idaho 83616
Telephone: 208-489-8774
e-mail Address: mwilliams@cityofeagle.org

Alternate Point of Contact
Morgan Bessaw, CFM, Planner II
660 East Civic Lane
Eagle, Idaho 83616
Telephone: 208-489-8776
e-mail Address: mbessaw@cityofeagle.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 3-1.

Table 3-1. Local Hazard Mitigation Planning Team Members

Name	Title
Michael Williams, CFM	Floodplain Administrator
Morgan Bessaw, AICP, CFM	Planner II

3.2 JURISDICTION PROFILE

3.2.1 Location and Features

The City of Eagle covers approximately 31 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, 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.

Eagle, Idaho 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.

3.2.2 History

The City of Eagle was incorporated on May 27, 1971. 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.

3.2.3 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.

3.3 CURRENT TRENDS

3.3.1 Population

According to COMPASS, the population of the City of Eagle as of April 2022 was 33,960. Since 2017, the population has grown at an average annual rate of 5.2 percent.

3.3.2 Development

Single family housing still is still the most common development, however, multi-family development, and commercial development is increasing in Eagle.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 3-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 3-2. Recent and Expected Future Development Trends

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	851-acres containing approximately 15 structures. Most of the parcels were annexed to develop residential subdivisions.
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes
If yes, describe land areas and dominant uses.	Primarily the foothills north of the city. The dominant use will be single-family residential
If yes, who currently has permitting authority over these areas?	Ada County, Boise County, and Gem County
Are any areas targeted for development or major redevelopment in the next five years?	Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	The city is experiencing exponential growth along with the other cities located within the Treasure Valley. The city anticipates the growth will continue through the next HMP timeframe. Some of the area where the City is anticipating growth is located within an area without base flood elevations. The area is currently being studied for submittal of a Conditional Letter of Map Revision (CLOMR).

Criterion	Response					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2016	2017	2018	2019	2020
	Single Family	494	670	699	492	523
	Multi-Family	0	18	9	18	1
	Other	23	26	18	33	11
	Total	517	714	726	543	535
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: 0 • Landslide: 0 • High Liquefaction Areas: 0 • Wildfire Risk Areas: 0					
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City does not maintain a buildable lands inventory. However, the City is experiencing exponential growth and anticipates the areas south of the foothills will be built out within the next 10-years.					

3.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 3-3.
- Development and permitting capabilities are presented in Table 3-4.
- An assessment of fiscal capabilities is presented in Table 3-5.
- An assessment of administrative and technical capabilities is presented in Table 3-6.
- An assessment of education and outreach capabilities is presented in Table 3-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-8.
- Classifications under various community mitigation programs are presented in Table 3-9.

Table 3-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
Comment: *Title 7, Chapter 1, Article A adopts the 2012 International Building Code (IBC). Effective January 1, 2015*				
Zoning Code	Yes	No	Yes	Yes
Comment: *Title 8, Chapters 1 thru 11. Adopted 4/11/2003*				
Subdivisions	Yes	No	No	Yes
Comment: *Title 9, Chapters 1 thru 6. Adopted: 11/15/1983*				
Stormwater Management	Yes	No	No	No
Comment: *Title 9, Chapter 4 (9-4-1-10) includes provisions for drainage. Adopted 1979. *Note-ACHD deploys stormwater standards as they pertain to roads.*				
Post-Disaster Recovery	No	No	No	No
Comment:				
Real Estate Disclosure	No	Yes	Yes	No
Comment: *Realtor Listing Disclosure Page shows if flood insurance is required.*				
Growth Management	Yes	No	No	Yes
Comment: *Title 7, Chapter 6 (Ord. 345, 5-11-1999)includes new growth and development*				
Site Plan Review	No	No	No	No
Comment:				
Environmental Protection	No	No	No	No
Comment:				
Flood Damage Prevention	Yes	No	No	Yes
Comment: *Flood Damage Prevention Ordinance, Title 10. Last amended 7/23/2019*				
Emergency Management	No	No	No	No
Comment:				
Climate Change	No	No	No	No
Comment:				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan equipped to provide linkage to this mitigation plan? *Yes* ***Comment:*** City of Eagle Comprehensive Plan adopted 11/15/2017.				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? *Yearly* ***Comment:*** *City of Eagle FY 2021-2025 Capital Plan Adopted October 27, 2020, Resolution 20-25*				
Disaster Debris Management Plan	No	No	No	No
Comment:				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: *The 2022 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.*				
Stormwater Plan	No	No	No	No
Comment:				
Urban Water Management Plan	No	No	No	No
Comment:				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan	No	No	No	No
Comment:				
Economic Development Plan	Yes	No	No	Yes
Comment: *Economic Development component added as part of the Comprehensive Plan*				
Shoreline Management Plan	No	No	No	No
Comment:				
Community Wildfire Protection Plan	Yes	No	No	No
Comment: *The 2022 Ada County Multi-Hazard mitigation Plan is being prepared as a CWPP for the Ada County planning area.*				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	No	No	No	No
Comment:				
Comprehensive Emergency Management Plan	No	No	No	No
Comment:				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment: *EMCR has prepared and maintains a THIRA for the Ada county operational area*				
Post-Disaster Recovery Plan	No	No	No	No
Comment:				
Continuity of Operations Plan	No	No	No	No
Comment:				
Public Health Plan	No	Yes	No	No
Comment: *Central District Health Department Emergency Operations Plan, 2013*				

Table 3-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department? Planning and Zoning Department	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 3-5. Fiscal Capability

Financial Resource	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
If yes, specify: Water	
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

Table 3-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices ***If Yes, Department /Position:*** Eagle Planning and Zoning	Yes
Engineers or professionals trained in building or infrastructure construction practices ***If Yes, Department /Position:*** Eagle Building Department	Yes
Planners or engineers with an understanding of natural hazards ***If Yes, Department /Position:*** Floodplain Administrator	Yes
Staff with training in benefit/cost analysis ***If Yes, Department /Position:*** Eagle Planning and Zoning	Yes
Surveyors ***If Yes, Department /Position:***	No
Personnel skilled or trained in GIS applications ***If Yes, Department /Position:*** IT Department, GIS Technician	Yes
Scientist familiar with natural hazards in local area ***If Yes, Department /Position:*** Can contract for service	Yes
Emergency manager ***If Yes, Department /Position:*** Ada County Emergency Management	Yes
Grant writers ***If Yes, Department /Position:*** Steve Noyes, Trails and Pathways Superintendent	Yes
Other ***If Yes, Department /Position:***	No

Table 3-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes (Ellen Mattila)
Do you have personnel skilled or trained in website development?	Yes (Ellen Mattila)
Do you have hazard mitigation information available on your website? ***If yes, briefly describe:*** Floodplain Information	Yes
Do you use social media for hazard mitigation education and outreach? ***If yes, briefly describe:*** Ada County & City Social Media	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ***If yes, briefly describe:*** Planning & Zoning, Comprehensive Plan	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? ***If yes, briefly describe:*** Website, email blast, PSA	Yes
Do you have any established warning systems for hazard events? ***If yes, briefly describe:*** 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.	Yes

Table 3-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Eagle Planning and Zoning
Who is your floodplain administrator? (department/position)	Mike Williams, CFM, Planning and Zoning, Planner III
Are any certified floodplain managers on staff in your jurisdiction?	Yes (Mike Williams/Morgan Bessaw)

Criterion	Response
What is the date that your flood damage prevention ordinance was last amended?	07/23/2019
Does your floodplain management program meet or exceed minimum requirements? ***If exceeds, in what ways?*** Higher Standards	Exceed
When was the most recent Community Assistance Visit or Community Assistance Contact?	10/2020
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? ***If so, state what they are.***	No
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.***	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? ***If no, state why.***	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? ***If so, what type of assistance/training is needed?*** Continuing Education	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** Yes ***If no, is your jurisdiction interested in joining the CRS program?***	Yes
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** $113,010,600 ***What is the premium in force?*** $209,571	312
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $198,703	15

a. According to FEMA statistics as of March 31, 2022

Table 3-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	1600120380	N/A
DUNS #	Yes	024950599	N/A
Community Rating System	Yes	7	07/19/2021
Building Code Effectiveness Grading Schedule	Yes	C3/R4	N/A
Public Protection	Yes	3/9	N/A
Storm Ready	Yes	Participant	N/A
Firewise	No	N/A	N/A

3.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

3.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

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

3.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- All future updates to the City of Eagle Comprehensive Plan—the comprehensive plan will continue to use hazard mapping and hazard data in updates of the land use, hazard areas, and implementation chapters.
- Future Emergency Operation Plan updates for the City of Eagle—updates to the EOP will consider the natural and human-caused hazards in this HMP when developing strategies for emergency operations.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

3.6 RISK ASSESSMENT

3.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 3-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

3.6.2 Hazard Risk Ranking

Table 3-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 3-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4534	1/20/2020-present	unknown
Flooding	DR-4342	3/29/2017-06/15/2017	Countywide: $4,493,792
Rain on Snow Flood	N/A	2012	N/A
Wildfire	N/A	07/28/2010	$7,000,000
Wildland Fire	N/A	07/11/2010	N/A
Wildland Fire	N/A	08/29/2009	N/A
Severe Storm	N/A	01/02/2009	N/A
Wildland Fire	N/A	09/18/2008	N/A
Wildland Fire	N/A	08/08/2006	N/A
Severe Storm	N/A	07/04/2006	N/A
Flood	N/A	6/2006	$500,000.00
Flood	N/A	6/2006	$100,000.00
Flood	N/A	1/1-5/1997	No estimates available
Flood	N/A	7/1983	$50,000

Table 3-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Flood	24	Medium
3	Wildfire	22	Medium
4	Dam/Canal Failure	18	Medium
5	Earthquake	16	Medium
6	Landslide	12	Low
7	Drought	9	Low
8	Volcano	6	Low

3.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 1
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Isolation – Some access in and out of the City are on State Highways and ACHD roadways which are located within areas of special flood hazard. These facilities may be impacted during a flood event (ie. bridges) and adjacent roadways which may not allow vehicular access.
- ITD and ACHD roadway drainage facilities may become overburdened and cause flooding in some areas of the City.
- A hospital is located within an area of special flood hazard and may not be accessible during a 1%-chance flood event.
- The Eagle Sewer District wastewater treatment plant is located in close proximity to the river and may be breached during a major flood event.
- Irrigation canal failures – There are several irrigation canals located throughout the City which in the event of a bank failure would cause damage to surrounding properties and structures.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

3.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 3-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 3-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Action E-1—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.			✓	E-10
Comment: *No progress*				
Action E-2—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.	✓			
Comment: *Completed in 2018*				
Action E-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.			✓	E-4
Comment: *Ongoing*				
Action E-4—Continue to maintain/enhance the City's classification under the Community Rating System			✓	E-11
Comment: *Ongoing*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action E-5—Integrate Multi-Hazard Mitigation Plan into future updates to the City of Eagle Comprehensive Plan. ***Comment:*** *Ongoing*			✓	E-2
Action E-6—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. ***Comment:*** *Retain as ongoing since the city has a repetitive loss property*			✓	E-1
Action E-7—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern. ***Comment:*** *Ongoing – working on wildland urban interface ordinance*			✓	E-12
Action E-8—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. ***Comment:*** *Remove – ACHD jurisdiction*		✓		
Action E-9—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. ***Comment:*** *Remove – ACHD jurisdiction*		✓		
Action E-10—Support County-wide initiatives identified in Volume 1. ***Comment:*** *Ongoing*			✓	E-13
Action E-11—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1. ***Comment:*** *Ongoing*			✓	E-3
Action E-12—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. ***Comment:*** *Working with Eagle Fire Protection District on a Wildland Urban Interface Ordinance*			✓	E-7
Action E-13—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. ***Comment:*** *Working with Karl Gebhardt from Natural Resources Inc.*			✓	E-8

3.8 HAZARD MITIGATION ACTION PLAN

Table 3-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 3-14 identifies the priority for each action. Table 3-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 3-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action E-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure, Earthquake, Landslide					
Existing	3, 8, 9	Eagle Planning & Zoning	EMCR	High	HMGP, BRIC, FMA, Increased Cost of Compliance (ICC)	Short-term
Action E-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including updates to the City of Eagle Comprehensive Plan.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure, Earthquake, Landslide					
New & Existing	2, 5, 6	Eagle Planning & Zoning	N/A	Low	Staff Time, General Funds	Ongoing
Action E-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure, Earthquake, Landslide, Drought, Volcano					
New & Existing	All	City of Eagle	EMCR	Low	Staff Time, General Funds	Short-term
Action E-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated:	Flood					
New & Existing	2, 3, 4, 6, 8, 9	City of Eagle	N/A	Low	Staff Time, General Funds	Ongoing
Action E-5—Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Drought					
New & Existing	2, 3, 4, 6, 9, 10	City of Eagle		Low	Staff Time, General Funds	Short-term
Action E-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Lexington Hills well.						
Hazards Mitigated:	Extreme Weather, Earthquake, Drought					
Existing	1, 6, 10	City Water Department		Med	Staff Time, General Funds, HMBP, BRIC	Ongoing
Action E-7—In partnership with Eagle Fire Protection District, Middleton Rural Fire District, and Star 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. (Coordinates with Eagle Fire Protection District Action EFD-10, Star Joint Fire Protection District Action SFD-6)						
Hazards Mitigated:	Wildfire					
New & Existing	2, 4, 5, 6, 7, 8, 9	City of Eagle	Eagle Fire Protection, Middleton Rural Fire District, Star Fire Protection District	Low	Staff Time HMGP, BRIC	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action E-8—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.						
Hazards Mitigated:	Extreme Weather, Flood, Dam/Canal Failure					
New & Existing	2, 4, 5, 6, 8	City of Eagle	EMCR, Fire Departments, USACE	Low	Staff Time, HMG, BRIC	Ongoing
Action E-9—Develop a Joint Emergency Operation Plan with Eagle City, Eagle Sewer District, and Eagle Fire Protection 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 and Eagle Fire District will aid in planning for all hazards. (Coordinates with Eagle Sewer District Action ESD-7 and Eagle Fire Protection District EFD-8)						
Hazards Mitigated:	All Hazards					
New and Existing	All	City of Eagle	Eagle Sewer District, Eagle Fire District	Medium	City Funds, District Funds, HMGP	Short-term
Action E-10— Partner with Federal Agencies to install electronic flow monitoring stations on the North Channel of the Boise River Eagle Rd Bridge 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.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure					
New and Existing	2, 7, 8, 9	City of Eagle	Eagle Fire District, EMCR, Federal Partners	Medium	FMA, BRIC, Local Funding	Short-term
Action E-11— Continue to maintain/enhance the City's classification under the Community Rating System						
Hazards Mitigated:	Flood					
New and Existing	2, 3, 4, 6, 8, 9	City of Eagle		Low	General Funds	Ongoing
Action E-12— Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure, Earthquake, Landslide, Drought					
New and Existing	4, 6	Eagle Planning and Zoning		Low	General Funds	Short-term
Action E-13— Support County-wide initiatives identified in Volume 1.						
Hazards Mitigated:	Extreme Weather, Flood, Wildfire, Dam/Canal Failure, Earthquake, Landslide, Drought, Volcano					
New and Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	City of Eagle	EMCR	Low	General Funds, Staff Time	Ongoing
Action E-14— Create green infrastructure and alternate transportation routes by constructing a trail system alongside canals that will connect to the larger pathway that adjoins the Boise River. This system will provide additional routes for bicyclists who already use the current pathways as alternate transportation, which will reduce road congestion and vehicle emissions while allowing access to monitor, maintain, and repair canal systems as needed.						
Hazards Mitigated:	Dam/Canal Failure					
New and Existing	6, 9	City of Eagle		High	General Funds, Grant Funding	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 3-14. Mitigation Action Priority

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

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

Table 3-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	E-12	E-1			E-6		E-5	E-2, 3, 8, 9, 10, 13
Medium-Risk Hazards								
Flood	E-4, 11, 12	E-1, 11	E-4				E-5	E-2, 3, 4, 8, 9, 10, 13
Wildfire	E-12	E-1		E-7			E-5	E-2, 3, 9, 10, 13
Dam/Canal Failure	E-12	E-1		E-14		E-14		E-2, 3, 7, 8, 9, 10, 13, 14
Earthquake	E-12	E-1			E-6			E-2, 3, 9, 13
Landslide	E-12	E-1						E-2, 3, 9, 13
Drought	E-12				E-6		E-5	E-3, 9, 13
Volcano								E-3, 9, 13

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

3.9 PUBLIC OUTREACH

Table 3-16 lists public outreach activities for this jurisdiction.

Table 3-16. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Meeting with Banbury HOAs	03/17	100+
Flood Insurance Rate Map Information (Realtors, Lending Institutions)	01/18	100+
Property owners within ASFH	01/20	50
Property owners within ASFH	01/21	50

3.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

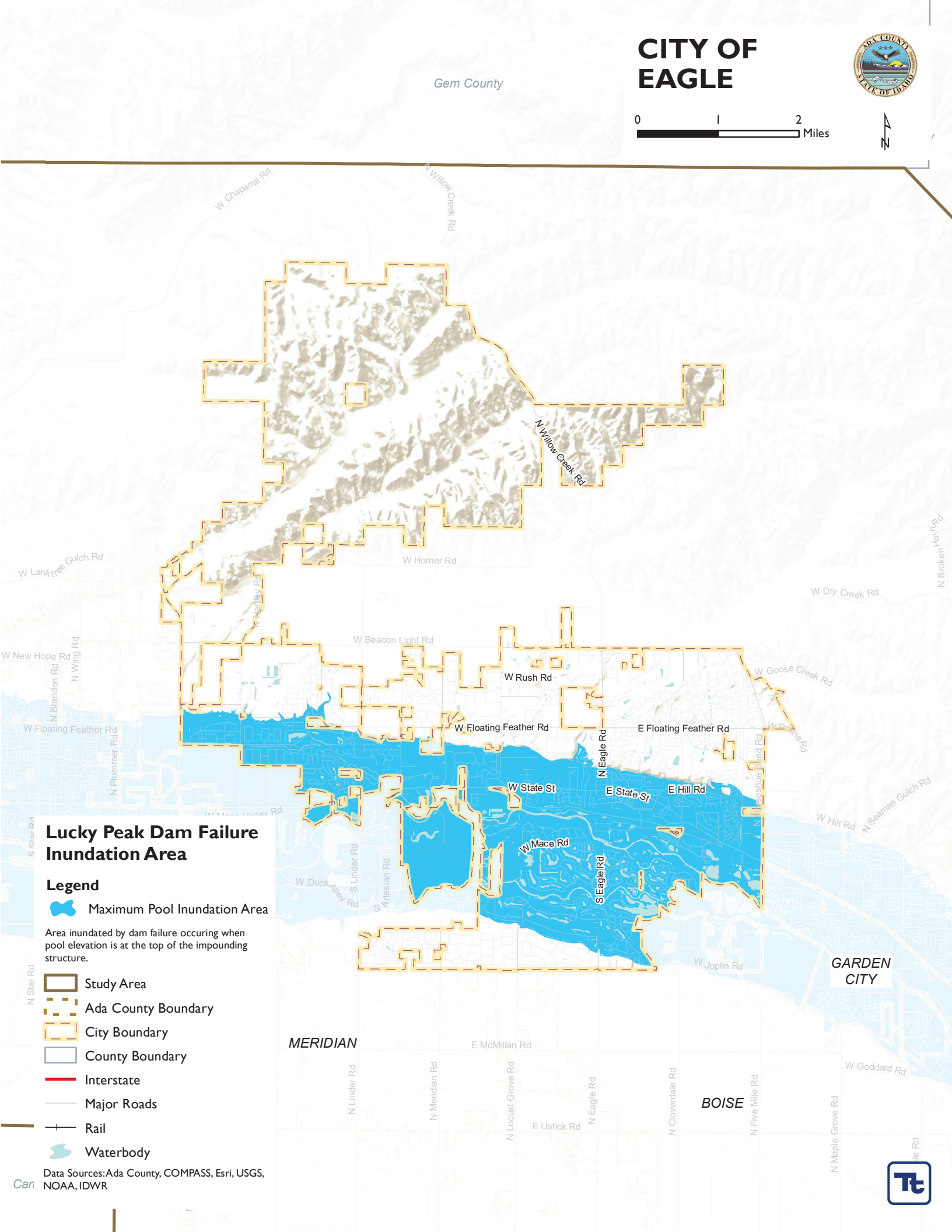
- **2017 Ada County Multi-Hazard Mitigation Plan** – The previous HMP was reviewed to update this annex.
- **City of Eagle Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Eagle Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

CITY OF EAGLE

0 1 2 Miles



Lucky Peak Dam Failure Inundation Area

Legend

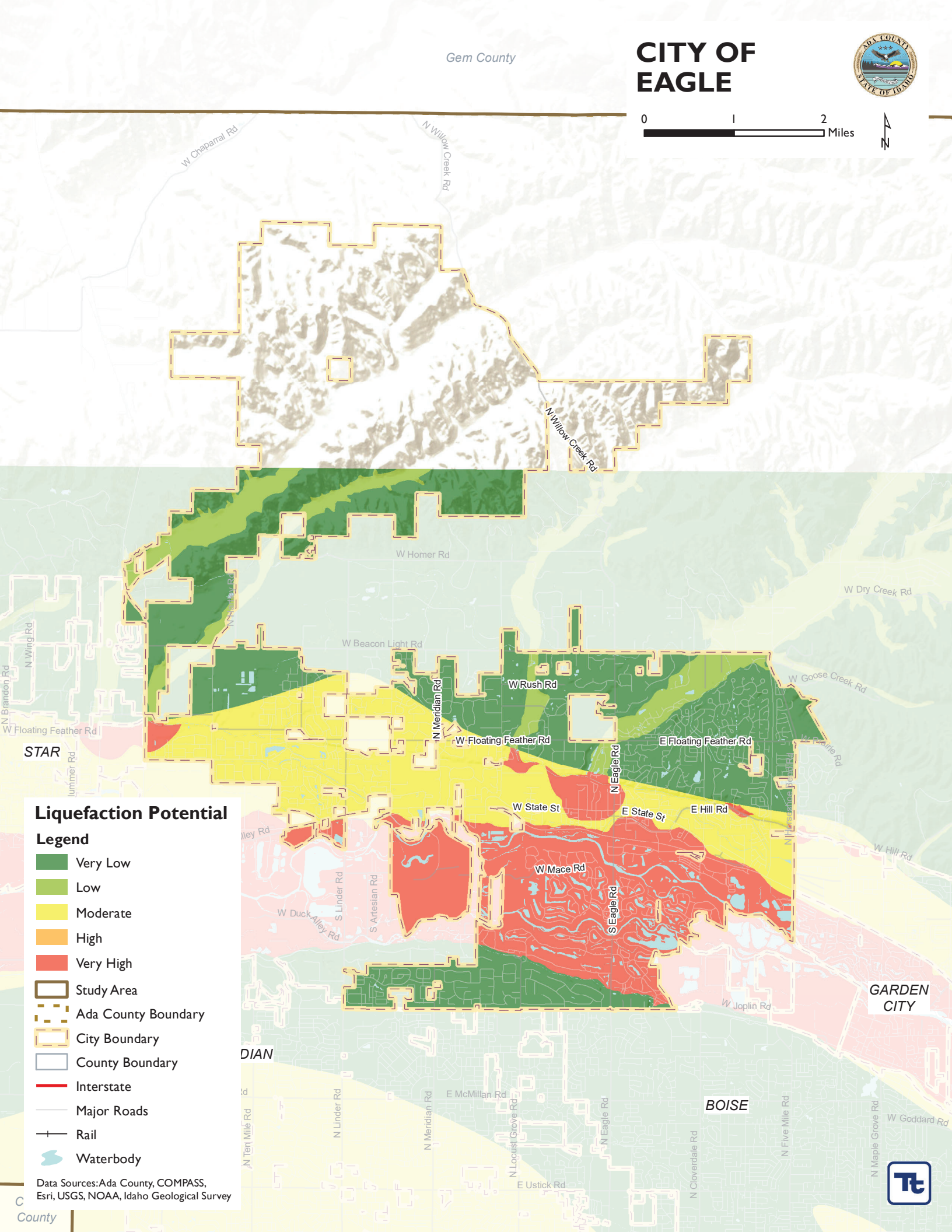
Maximum Pool Inundation Area

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

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, IDWR

CITY OF EAGLE



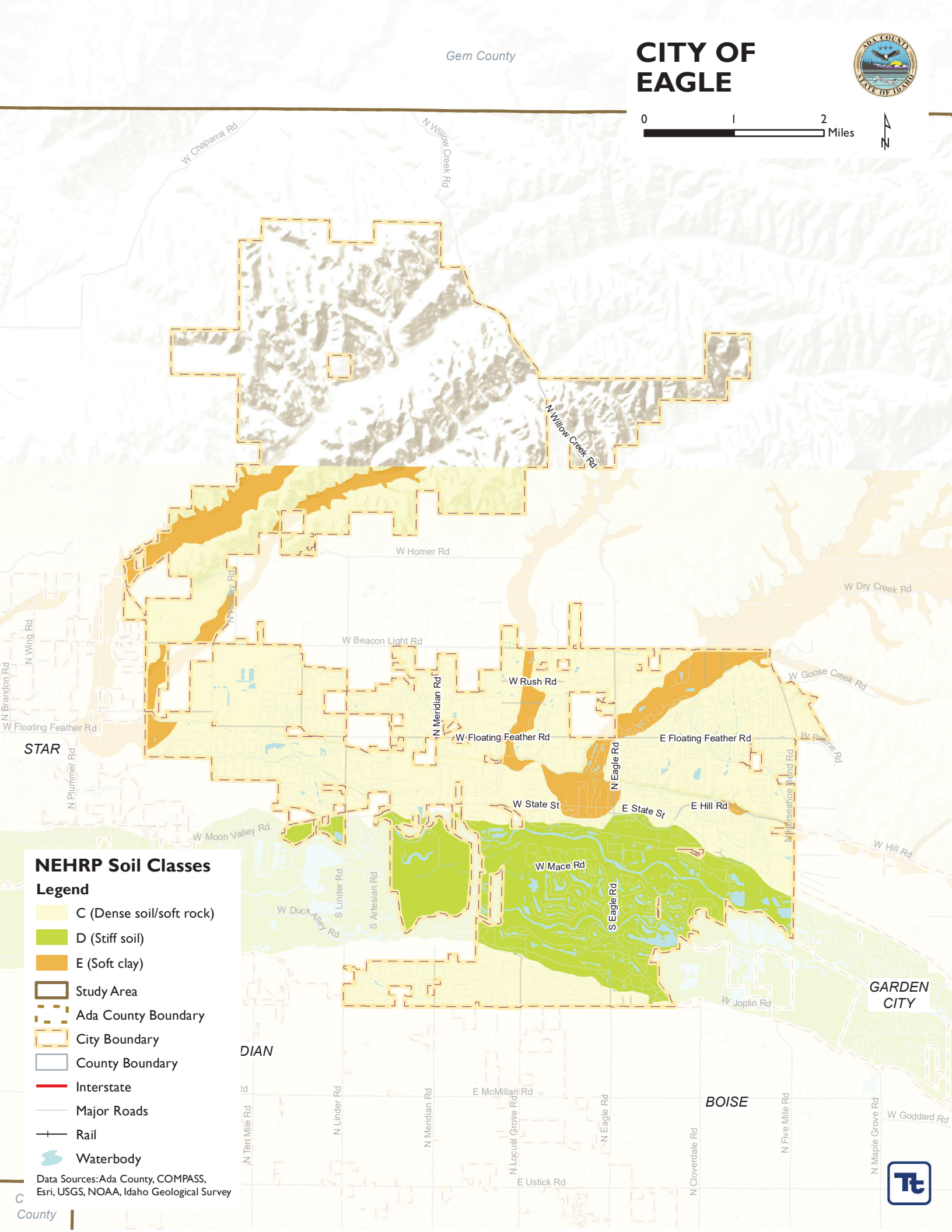
Liquefaction Potential

Legend

- Very Low
- Low
- Moderate
- High
- Very High
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey

CITY OF EAGLE



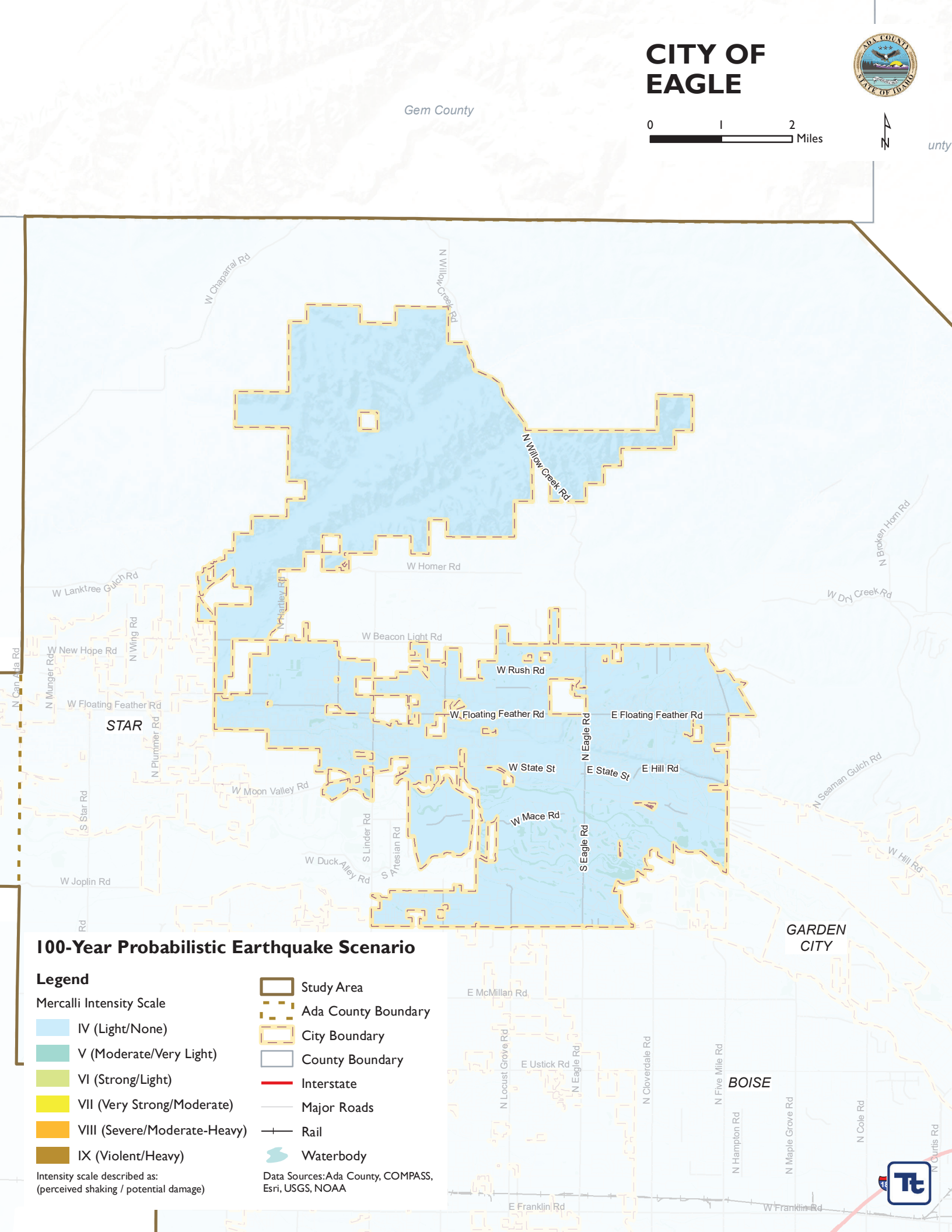
NEHRP Soil Classes

Legend

- C (Dense soil/soft rock)
- D (Stiff soil)
- E (Soft clay)
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey

CITY OF EAGLE



100-Year Probabilistic Earthquake Scenario

Legend

Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

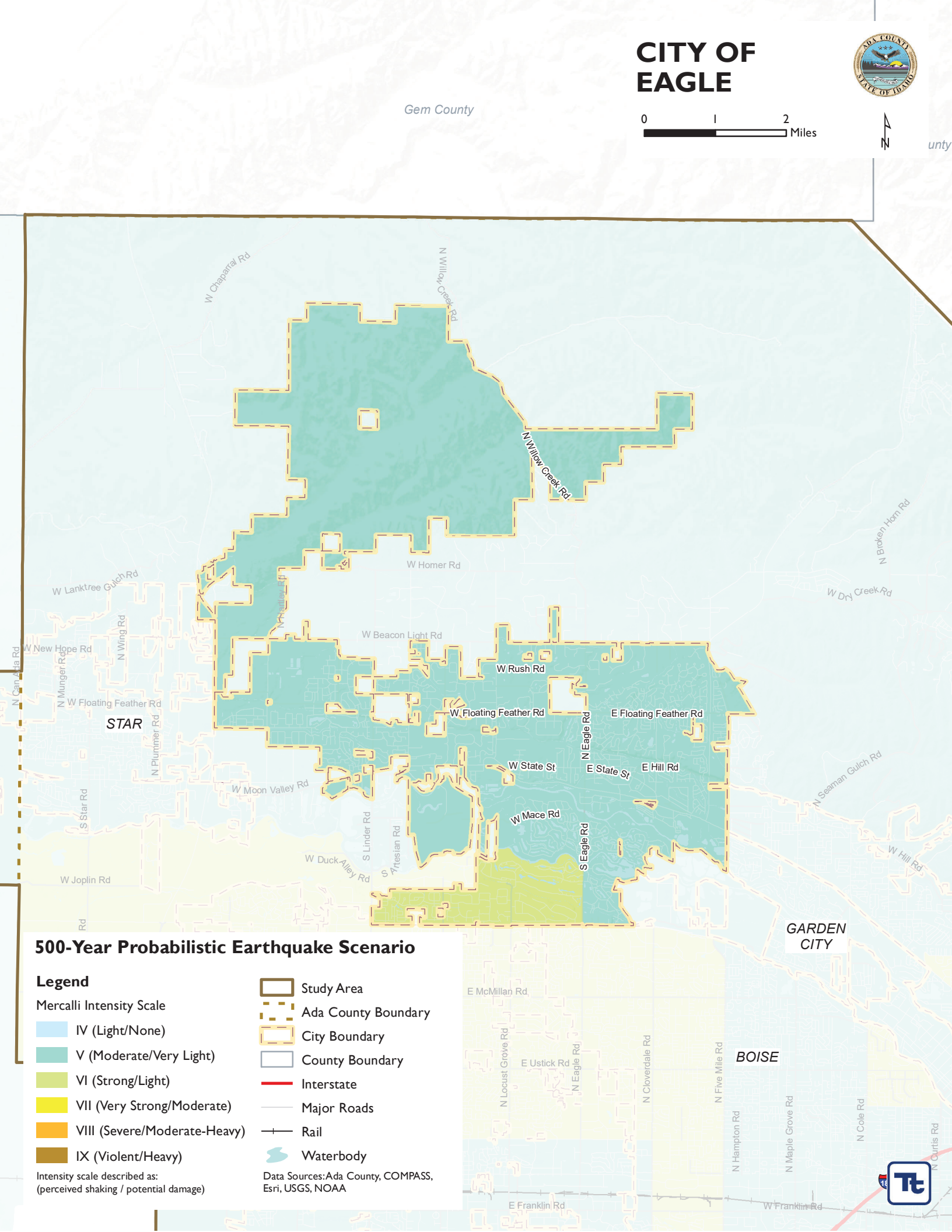
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF EAGLE

0 1 2 Miles

N



500-Year Probabilistic Earthquake Scenario

Legend

Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

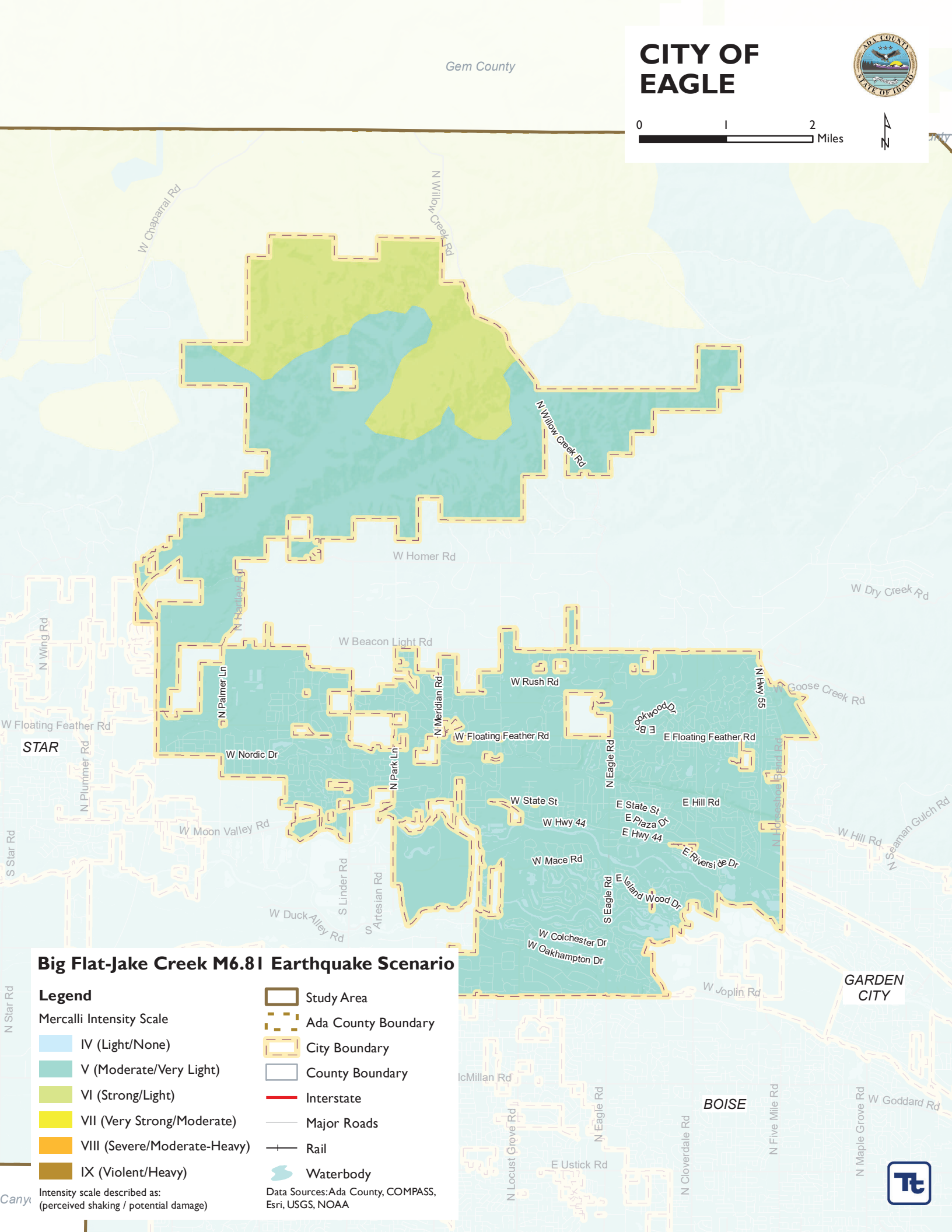
Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF EAGLE

0 1 2 Miles



Big Flat-Jake Creek M6.81 Earthquake Scenario

Legend

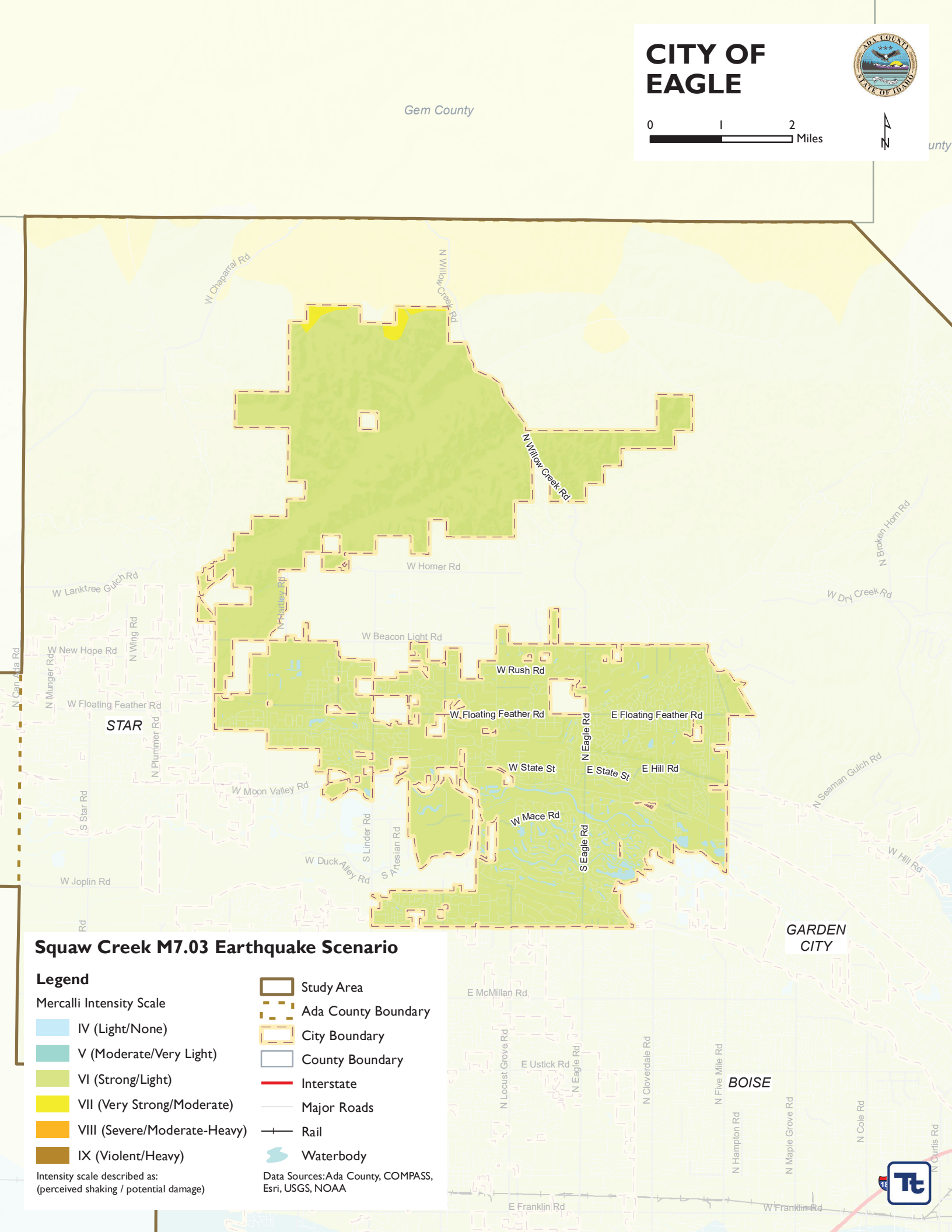
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

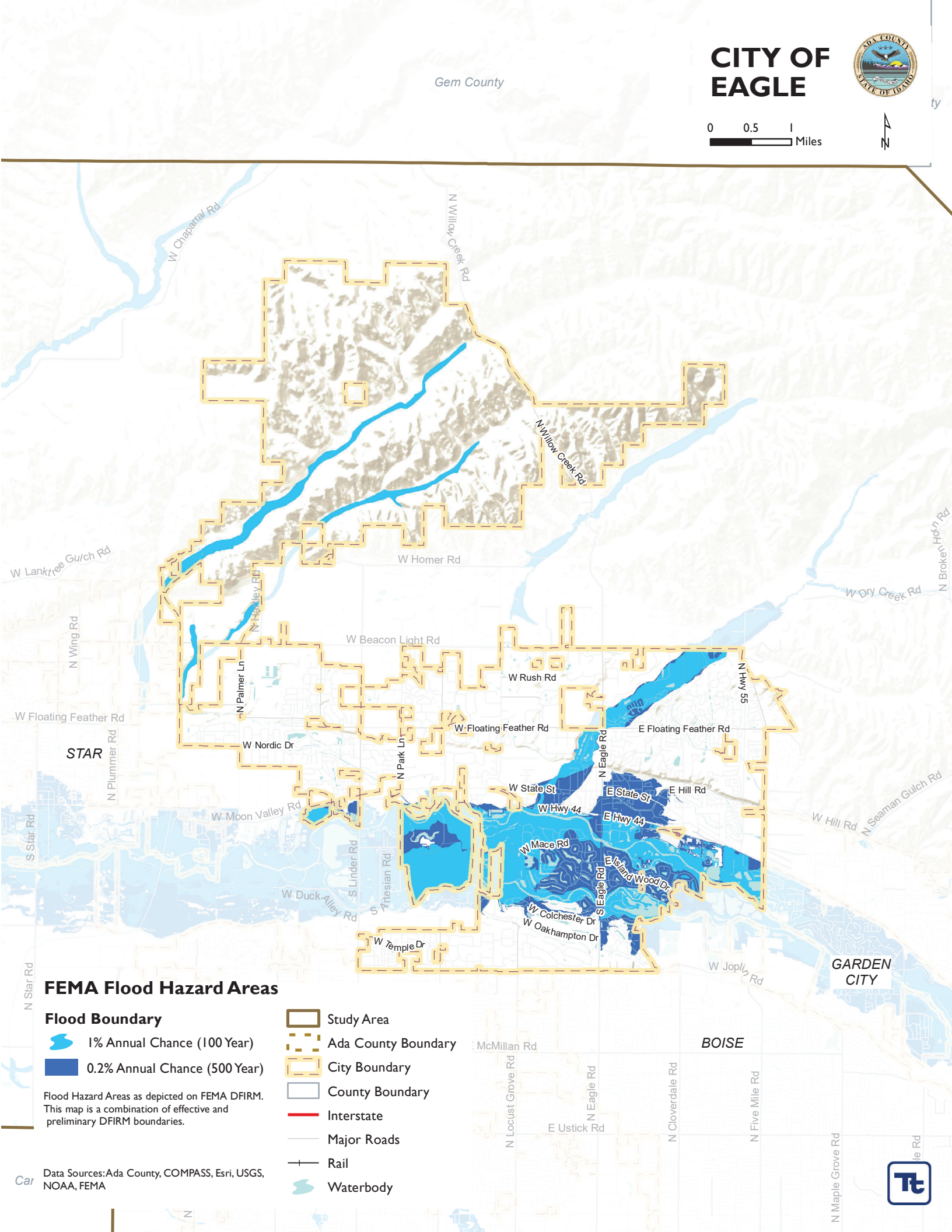
Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF EAGLE
0
1
2
Miles
N
Gem County
W Chaparral Rd
N Willow Creek Rd
N Willow Creek Rd
W Homer Rd
W Lanktree Gulch Rd
N Hartley Rd
N Broken Horn Rd
W Dry Creek Rd
W Beacon Light Rd
W New Hope Rd
N Wing Rd
N Munger Rd
N Can Ada Rd
W Floating Feather Rd
STAR
N Plummer Rd
W Rush Rd
W Floating Feather Rd
E Floating Feather Rd
N Eagle Rd
W State St
E State St
E Hill Rd
W Moon Valley Rd
S Star Rd
S Linder Rd
S Ariesian Rd
W Mace Rd
S Eagle Rd
N Seaman Gulch Rd
W Duck Alley Rd
W Joplin Rd
W Hill Rd
GARDEN CITY
E McMillan Rd
N Locust Grove Rd
E Ustick Rd
N Eagle Rd
N Cloverdale Rd
N Five Mile Rd
BOISE
N Hampton Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
E Franklin Rd
W Franklin Rd
Squaw Creek M7.03 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF EAGLE



FEMA Flood Hazard Areas

Flood Boundary

- 1% Annual Chance (100 Year)
- 0.2% Annual Chance (500 Year)

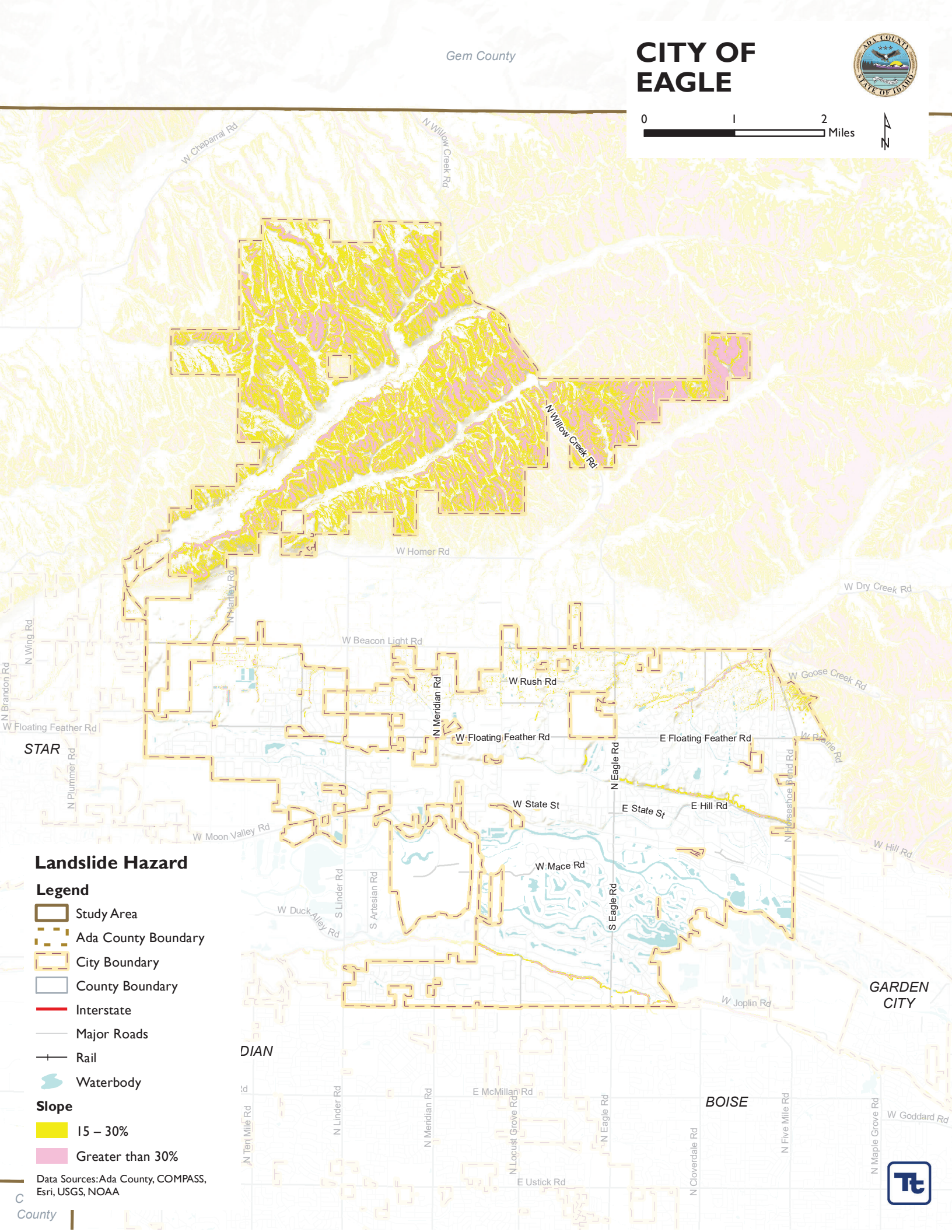
Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA

CITY OF EAGLE

0 1 2 Miles



Landslide Hazard

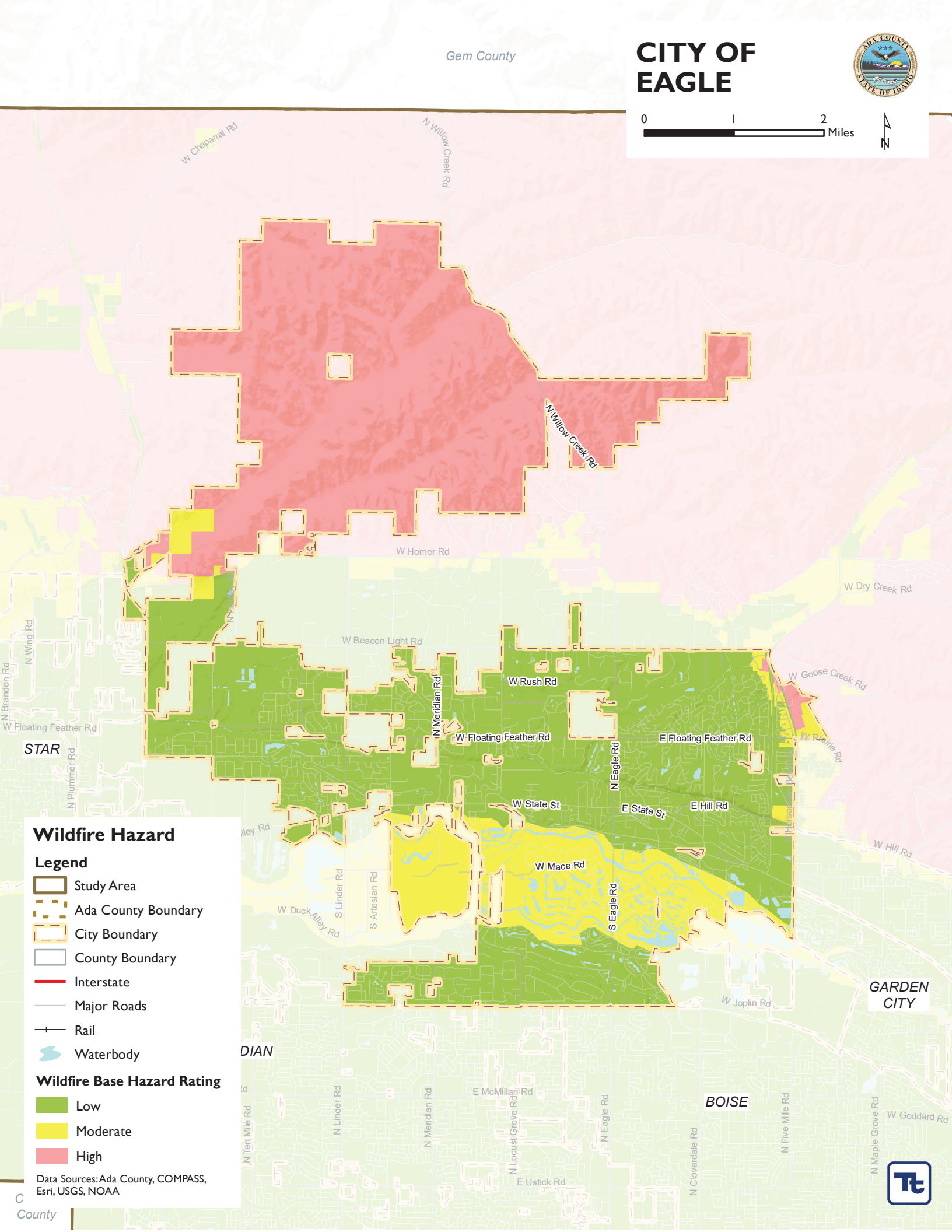
Legend

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Slope

- 15 – 30%
- Greater than 30%

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF EAGLE
0
1
2
Miles
N
Gem County
W Chaparral Rd
N Willow Creek Rd
N Willow Creek Rd
W Homer Rd
W Dry Creek Rd
W Beacon Light Rd
N Wing Rd
N Brandon Rd
W Floating Feather Rd
STAR
N Plummer Rd
W Rush Rd
N Meridian Rd
W Floating Feather Rd
E Floating Feather Rd
W Goose Creek Rd
W Prairie Rd
N Eagle Rd
W State St
E State St
E Hill Rd
W Hill Rd
W Mace Rd
S Eagle Rd
S Linder Rd
S Artesian Rd
W Duck Alley Rd
W Joplin Rd
GARDEN CITY
DIAN
E McMillan Rd
BOISE
N Linder Rd
N Meridian Rd
N Locust Grove Rd
N Eagle Rd
N Cloverdale Rd
N Five Mile Rd
N Maple Grove Rd
W Goddard Rd
E Ustick Rd
N Ten Mile Rd
C
County
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

4. CITY OF GARDEN CITY

4.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Jenah Thornborrow, Development Services Director
6015 N Glenwood
Garden City, ID 83714
Telephone: (208) 472-2924
e-mail Address: jthorn@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

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 4-1.

Table 4-1. Local Hazard Mitigation Planning Team Members

Name	Title
Colin Schmidt	Public Works Director
Jenah Thornborrow	Development Services Director
Kena Champion	Development Services Administrative Assistant

4.2 JURISDICTION PROFILE

4.2.1 Location and Features

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.

Garden City has an average temperature of 52.0ºF and receives an average of 12.19 inches of annual precipitation since 1865. Summers are typically warm to hot and dry averaging 71.9ºF for June, July, and August since 1865. Winters are generally cold and dry with occasional snow showers averaging 32.5ºF for December, January, and February since 1865. Spring and Fall are both mild with light precipitation averaging 51.0ºF for March, April, and May and 52.3ºF for September, October, and November since 1865.

4.2.2 History

Garden City was incorporated on May 22, 1949. The history of Garden City is tied to the Boise River which 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 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 the "Chinese Garden."

The "Village of Garden City" was incorporated in 1949 primarily for gambling. The "original townsite" encompassed 100 acres, including the area from 32nd to 37th streets. Before 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 different directions to distinguish the area from Boise.

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 over the next few decades was a result of few land-use regulations or oversite.

In 2006 there was a large planning effort in the form of a new comprehensive plan and subsequent supportive zoning. This effort garnered considerable public support and supported a revisioning of the city.

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/ Branstetter 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 and is of the highest valued property in the valley.

4.2.3 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 Planning and Zoning Commission, Design Review Committee, and Parks and Waterways Committee.

The City Council is responsible for the adoption of this plan, the effected city departments are responsible for its implementation.

4.3 CURRENT TRENDS

4.3.1 Population

According to COMPASS, the population of Garden City as of April 2022 was 13,040. Since 2017, the population has grown at an average annual rate of 2.7 percent.

4.3.2 Development

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, and much of the housing in the eastern portion of the city was in mobile/ manufactured 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 reflect 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 greenfield 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 the redevelopment of under-utilized properties.

Garden City is seeing fewer industrial uses. As the valley grows the housing types are shifting where the city is redeveloping. Many of the properties that were previously mobile/manufactured home communities are being redeveloped. Garden City continues to see an increase in mixed-use development, particularly artisans and small businesses, and increasing residential densities.

Identifying previous and future development trends are achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 4-2. Recent and Expected Future Development Trends

Criterion						
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?						Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	6.4 acres vacant at time of annexation. Anticipated to contain 24 lots.					
Is your jurisdiction expected to annex any areas during the performance period of this plan?						This is market driven
If yes, describe land areas and dominant uses. ***If yes, who currently has permitting authority over these areas?***	TBD If annexed, Garden City					
Are any areas targeted for development or major redevelopment in the next five years?						The city is seeing infill development throughout the City.
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Flood Hazard risks are anticipated to affect 74% of the City.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		**2016**	**2017**	**2018**	**2019**	**2020**
	Single Family	57	67	33	14	43
	Multi-Family	N/A	N/A	1	3	12
	Other	7	7	2	3	11
	Total	64	74	36	20	66

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: There have been 105 permits issued in the floodplain during between 2016-2020. • Landslide: 0 • High Liquefaction Areas: 0 • Wildfire Risk Areas: 0
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Garden City is predominantly infill development

4.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity-building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 4-3.
- Development and permitting capabilities are presented in Table 4-4.
- An assessment of fiscal capabilities is presented in Table 4-5.
- An assessment of administrative and technical capabilities is presented in Table 4-6.
- An assessment of education and outreach capabilities is presented in Table 4-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-8.
- Classifications under various community mitigation programs are presented in Table 4-9.

Table 4-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity ?
Codes, Ordinances, & Requirements				
Building Code	Yes	Yes	Yes	No
Comment: Title 7 of Garden City Code currently adopts the 2018 International Building Code and International Residential Code. This is updated on a three year cycle following the State of Idaho's requirements . North Ada County Fire and Rescue District is responsible for implementing the fire code, which is also required to be updated on a three year cycle following the State of Idaho's requirements.				
Zoning Code	Yes	No	Yes	Yes
Comment: Title 8 of Garden City Code. Title 8 is reviewed on a biannual basis.				
Subdivisions	Yes	No	Yes	No
Comment: Title 8-5 of Garden City Code. Title 8 is reviewed on a biannual basis.				
Stormwater Management	Yes	No	No	Yes
Comment: Garden City complies with the requirements as per EPA requirements in NPDES, and Idaho Department of Water Resources (IDWR) requirements				
Post-Disaster Recovery	Yes	No	No	Yes
Comment: Garden City participates in regional planning for mitigation, preparation and recovery through Ada County City Emergency Management & Community Resilience (EMCR)				
Real Estate Disclosure	Yes	No	No	Yes
Comment: This is part of the Floodplain management are required to remain in compliance with FEMA requirements				
Growth Management	Yes	No	No	Yes
Comment: Garden City creates and maintains a Comprehensive Plan to manage growth. Garden City has also adopted the COMPASS CIM projections.				
Site Plan Review	Yes	No	No	Yes
Comment: Garden City conducts a site inspections to ensure compliance with City regulations and codes at the time of redevelopment and through code enforcement actions.				
Environmental Protection	Yes	No	No	Yes
Comment: Title 6 of Garden City Code Last Update 2015				
Flood Damage Prevention	Yes	No	No	Yes
Comment: Titles 7 and 8 of Garden City Code				
Emergency Management	Yes	No	No	Yes
Comment: *Police Department*				
Climate Change	No	No	No	NA
Comment:				
Other	No	No	No	NA
Comment:				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan equipped to provide linkage to this mitigation plan? *No* ***Comment:*** Garden City creates and maintains a Comprehensive Plan. Amended 2021				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? *Annually* ***Comment:*** 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.				
Disaster Debris Management Plan	Yes	Yes	No	No
Comment: *Work with EMCR*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity ?
Floodplain or Watershed Plan	Yes	Yes	No	Yes
Comment: 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.				
Stormwater Plan	Yes	Yes	No	No
Comment: Garden City complies with the requirements as per EPA requirements in NPDES				
Urban Water Management Plan	No	Yes	No	No
Comment:				
Habitat Conservation Plan	No	Yes	Yes	Yes
Comment: Under Title 36 of the Idaho State Statues 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.				
Economic Development Plan	Yes	Yes	No	Yes
Comment: Garden City has established a Comprehensive Plan, Capital Improvement, and is also incorporated in the Boise Valley Economic Plan				
Shoreline Management Plan	No	No	No	NA
Comment:				
Community Wildfire Protection Plan	No	Yes	No	Yes
Comment: *The 2017 Ada County Multi-hazard Mitigation Plan is being developed to be a qualifying CWPP for the Ada County planning area*				
Forest Management Plan	No	No	No	NA
Comment:				
Climate Action Plan	No	No	No	NA
Comment:				
Comprehensive Emergency Management Plan	Yes	No	No	Yes
Comment: *Work with EMCR*				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment: Ada County Multi-Hazard Mitigation Plan, Ada County THIRA 2015				
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:				
Continuity of Operations Plan	Yes	No	No	Yes
Comment: *Work with EMCR*				
Public Health Plan	No	Yes	No	No
Comment: *Central District Health Department Emergency Operations Plan, 2013*				
Other	Yes	No	No	Yes
Comment: 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				

Table 4-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? ***If no, who does? If yes, which department?*** Development Services	Yes
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

Table 4-5. Fiscal Capability

Financial Resource	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 ***If yes, specify:*** Monthly Water/sewer base rate	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	No

Table 4-6. Administrative and Technical Capability

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

Table 4-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Mayor
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? ***If yes, briefly describe:*** gardencityidaho.org	Yes
Do you use social media for hazard mitigation education and outreach? ***If yes, briefly describe:*** EMCR website and floodplain page	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ***If yes, briefly describe:***	No

Criterion	Response
Do you have any other programs in place that could be used to communicate hazard-related information? ***If yes, briefly describe:*** Social Media, emergency broadcasting, geo Notify	Yes
Do you have any established warning systems for hazard events? ***If yes, briefly describe:*** 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.	Yes

Table 4-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Development Services
Who is your floodplain administrator? (department/position)	Development Services Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2020
Does your floodplain management program meet or exceed minimum requirements? ***If exceeds, in what ways?*** Adopted higher regulatory standards and improving CRS classification	Exceed
When was the most recent Community Assistance Visit or Community Assistance Contact?	2018 visit/ annual contact via audit
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? ***If so, state what they are.***	No
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.***	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? ***If no, state why.*** Flooding will not adhere to a model. There will be debris, etc. Irrigation structures are not included in model.	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? ***If so, what type of assistance/training is needed?*** Ongoing	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** Yes ***If no, is your jurisdiction interested in joining the CRS program?***	Yes
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** $148,653,700 ***What is the premium in force?*** $357,118	485
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $44,557	18

a. According to FEMA statistics as of March 31, 2022

Table 4-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	1600129620	N/A
DUNS #	Yes	169195369	N/A
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

4.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

4.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **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.
- **Comprehensive Plan**—Parks and Waterway Plan and 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.

4.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Zoning Code**—The City is conducting a comprehensive update to its zoning code. Additional mitigation and abatement measures may be considered for incorporation into the code.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

4.6 RISK ASSESSMENT

4.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 4-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 4-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4534	January 20, 2020, and continuing	$7,223,399 noted for State of Idaho. This caused medical illnesses, loss of life, economic impacts due to loss of work.
Weather- Heat	N/A	Summer 2021	18 days of over 100 degrees reaching to 107 on July 6, 2021.
Weather- Rain	N/A	August 1, 2021	Heavy thunderstorm rain
Weather- Heat	N/A	Summer 2020	11 days of over 100 degrees reaching to 105 on July 30, 2020.
Earthquake	N/A	March 31, 2020	6.5 magnitude near Stanley, Idaho Personal property damages.
Weather- Heat	N/A	Summer 2018	11 days of over 100 degrees reaching to 110 on August 10, 2018.
Weather- Heat		Summer 2017	8 days of over 100 degrees.
Flooding	DR-4342	March 29-June 15, 2017	$3,341,756 noted for all areas affected. Garden City specifically had flooding resulting in some minor damages to the private property. There were scouring of greenbelt paths, removal of a bridge, and considerable resources to monitoring, emergency prevention (sandbagging, etc.)
Weather- Snow	N/A	December 2016- March 2017	Local emergency declarations. 39" of snow Regionally, millions in claims related to structural damages.
Weather- Thunderstorm	N/A	August 22, 2013	
Weather- Thunderstorm	N/A	August 6, 2012	
Flood	N/A	May 8, 2012	$540,000 (including ACHD and Ada County)
Water Main Break at Remington Street	N/A	April 1, 2012	$500,000
Weather- Wind	N/A	March 29, 2009	$33,000
Weather- Hail	N/A	August 6, 2009	
Weather- Hail	N/A	May 20, 2008	
Weather- Thunderstorm	N/A	September 4, 2007	
Weather- Thunderstorm	N/A	June 29, 2006	
Weather- Hail	N/A	June 13, 2006	
Weather- Thunderstorm	N/A	May 19, 2004	
Weather- Thunderstorm	N/A	August 31, 2004	
Weather- Thunderstorm	N/A	August 21, 2004	
Weather- Hail	N/A	June 29, 2004	
Weather- Hail	N/A	May 18, 2004	
Weather- Thunderstorm	N/A	January 30, 2004	
Weather- Thunderstorm	N/A	May 30, 2003	

Type of Event	FEMA Disaster #	Date	Damage Assessment
Weather- Heat	N/A	Summer 2003	20 days of over 100 degrees
Weather- Thunderstorm	N/A	July 26, 2002	
Weather- Thunderstorm	N/A	July 22, 2002	
Weather- Thunderstorm	N/A	July 14, 2002	
Weather- Thunderstorm	N/A	February 7, 2002	
Weather- Hail	N/A	May 16, 2000	
	N/A	September 1998	$38,000
Weather- Storm	N/A	April 1998	$20,000
Flood	N/A	September 1997	$57,000
Flood	N/A	March 7, 1997	$50,000,000
Flood	N/A	January 1997	$65,000,000
Weather-Lightning	N/A	July 1995	$5,000
Weather-Storm	N/A	April 27, 1995	$50,000
Weather-Snow	N/A	November 1992	$9,800.00
Weather-Wind	N/A	October 1992	$6,250.00
Flood	N/A	August 1992	$4,545
Drought	N/A	1987-1992	$500,000,000
Weather-Storm	N/A	January 1988	$8,700
Weather-Wind	N/A	July 1987	$10,000
Flooding	N/A	February 1986	$20,000
Weather- Snow	N/A	Winter 1985-1986	39.5” of snow
Earthquake	N/A	October 1983	$4,000,000
Flood	N/A	June 1983	$147,000
Weather- Snow	N/A	Winter 1983-1984	37.4” of snow
Weather- Wind	N/A	June 1981	$50,000
Weather-Wind	N/A	March 1981	$36,000
Flood	N/A	January 1979	$50,000
Weather- Rain Flooding	DR-186	December 31, 1964	
Flood	DR-120	February 14, 1963	
Flood	DR-116	June 26, 1961	
Flood	DR-76	May 27, 1957	
Flood	DR-55	April 21, 1956	
Weather- Snow	N/A	Winter 1948-1949	45.4” of snow
Weather- Snow	N/A	Winter 1929-1930	48.8” of snow
Weather- Snow	N/A	Winter 1916-1917	50” of snow

4.6.2 Hazard Risk Ranking

Table 4-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

Table 4-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Flood	48	High
2	Extreme Weather	33	High
3	Dam/Canal Failure	18	Medium
4	Earthquake	16	Medium
5	Wildfire	12	Low
6	Drought	9	Low
7	Volcano	6	Low
8	Landslide	3	Low

4.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 1
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Flood—With an estimated 74% of Garden City located in the 100-year floodplain, flooding from the Lower Boise River is the city's highest risk because of the probability of anticipated flooding. Many structures were constructed before being designated in the floodplain and are lower than the anticipated base flood elevation. Aging and compact water and sewer infrastructure could increase water or sewer failure or contamination during flooding. This hazard forms safety and health concerns during and after the flood. There may be a loss of water, sewer, electrical, or gas services. Garden City has vital evacuation routes through the city with a small police department. The police department will have to manage the city's evacuation and much of the surrounding municipalities' evacuation moving through Garden City. Being a small city with limited resources may result in a prolonged recovery period, especially for the vulnerable populations east of Glenwood Street.
- Flood—Settlers Canal is at a higher elevation than the city. If the canal is not adequately maintained, it could pose a flood threat. This threat is not identified in the FEMA Special Flood Hazard Area (SFHA).
- Flooding—The ITD system through Garden City, for the most part, does not have a drainage system. The ACHD drainage system is undersized. ACHD and ITD roadway drainage could cause flooding in Garden City if the drainage system is lacking, undersized, or not maintained. Since 2002 there have been 7 flash floods in Ada County, with an identified $10,000 of damages. The impervious nature of urbanization

exacerbates this risk. It is anticipated that the one repetitive loss of property in Garden City is due to inadequate street drainage.

- Air Quality, Wildfire—While the direct risk of wildfires is low, the air quality associated with the wildfires in other areas of Idaho and nearby states creates an air quality concerns for Garden City. From 2017-2021 there have been 199 days of impacted air quality of moderate/yellow category (AQI 51+) or above due to wildfires.
- Air Quality, Inversion—The air quality associated with the inversion is a vulnerability for Garden City. The inversion is generally during the winter months when low cloud formations and fog create dense air and traps air pollutants on the valley floor. From 2017-2021 there have been 234 days of impacted air quality of moderate/yellow category (AQI 51+) or above due to the inversion.
- Weather, Snow—There is a correlation between the heavy snow years and the flood years; there is also a direct vulnerability associated with each snow event. There are increased accidents and increased strain on the utility systems used to heat. In heavy snow years, the region has inadequate snow removal capabilities that limit access to goods, services, employment, and medical or emergency services.
- Weather, Heat—7 of the top 10 hottest summers in the Boise-wide area have been in the last 20 years (up to and including 2021). High heat can affect the air quality, and ancillary conditions result in health concerns. The heat can reduce outdoor activities resulting in economic impacts on private industries. Over strain on the utilities, particularly electricity and water, during these heat events is a vulnerability. Over-taxation of the electrical system can cause failure. Over-taxation on water systems could result in adverse effects on potable water.
- All Hazards—Access to power is imperative in weather events for life safety and needed in all hazardous events. There is an increased need for electrical resiliency. Recent growth trends have resulted in more people utilizing the electrical system. Additionally, there may be an increased need in addition to the growing population. For example, with the cost of gasoline prices increasing and the availability of electric cars, it is anticipated that there may be a shift in energy sources for vehicles. From May 4, 2017, to April 29, 2022, in Garden City, there have been 1,386 electrical power outages resulting in 703,490.4 customer hours of outages (the number of customers affected by each outage X the hours of each outage). An estimated 43% of the outages were identified as events related to conflicts from infrastructure being above ground. The events include outages related to weather events such as lightning or that cause ice loading or wind/ vegetation damage, animals or other foreign objects like balloons or kites, vandalism, and vehicular collisions. Events that are not considered to be due to the system being above ground might include planned maintenance, operator error, underground facility damage, corrosion, contamination, mechanical fail, improper installation, hardware fail, or unknown causes. Downed power lines increase the risk of electrocution.
- All Hazards—The evacuation routes are limited due to infrastructure and geography. Many of the roadways, especially the eastern portion of the city where there is an area of persistent poverty, are not designed to facilitate movement except for those in automobiles. Not all residents have access to personal vehicles. Moreover, Chinden, the principal evacuation route, is inadequate for non-vehicular mobility purposes. Chinden does not accommodate bike lanes, has few and unsafe crossings, irregular sidewalks, and uncontrolled access points. Additionally, many residents or businesses utilize Boise in their addressing. This could be confusing during an emergency response.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

4.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 4-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 4-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Action GC-1—Green Infrastructure Flood Mitigation—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.			✓	GC-7
Comment: *In Process. Garden City has entered into an agreement with USACE for a GI study*				
Action GC-2—Levees Analysis Levee Analysis—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.			✓	GC8
Comment: *In Process. Garden City has entered into an agreement with USACE for a GI study*				
Action GC-3—Water and Sewer Pipe replacement			✓	GC-9
Comment: *Public Works continues with sewer and water pipe replacements.*				
Action GC-4—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.			✓	GC-4
Comment: *Ongoing. The City adopted a FEMA approved flood hazard ordinance with higher regulatory standards and revised special flood hazard area maps (SFHA) June of 2020. The city continues to provide public assistance and information on its website, in the Garden City Library, and on requested basis through the Development Services Department. The city intends on continuing to adopt any necessary amendments to the flood hazard code, updated SFHA maps, and provide assistance.*				
Action GC-5—Continue to maintain/enhance the City's classification under the Community Rating System (CRS)			✓	GC-10
Comment: *Ongoing. The city had a five-year cycle visit March of 2022. The materials provided at the cycle visit include additional activities the code adopted in 2020 includes enhanced higher regulatory standards. Following, the city requested a reduction in the classification during this visit. The results have not been received at this time. Regardless if there is a reduction in the classification the city will endeavor to maintain its classification under the CRS.*				
Action GC-6—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.			✓	GC-1
Action GC-7—Integrate Multi-Hazard Mitigation Plan into the Garden City Comprehensive Plan.	✓		✓	GC-2
Comment: *Adopted by reference in the Comprehensive Plan on July 22, 2019. This will be updated to carry over.*				
Action GC-8—Establish emergency preparedness inventory with inspection and replacement plan			✓	GC-11
Comment: *Ongoing. Equipment is inventoried. The backup generators have monthly testing and inspection. Further replacement plans will be needed as the equipment ages.*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action GC-9—Maintain Capital Improvement Plan for capital facilities/infrastructure within the City.			✓	GC-12
Comment: *Ongoing. The City maintains a CIP for capital infrastructure within the City. This plan is updated annually.*				
Action GC-10—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern	✓			
Comment: *Garden City has adopted higher regulatory standards through the flood hazard ordinance in June of 2020.*				
Action GC-11—Support County-wide initiatives			✓	*GC-13*
Comment: *Ongoing.*				
Action GC-12—Continuing of Operations Plan			✓	GC-14
Comment: *Ongoing.*				
Action GC-13—EOP Emergency Operations Plan			✓	GC-15
Comment: *Adopted RES1013-16 on June 27, 2016. Annual Reviews are required.*				
Action GC-14—Recovery Plan		✓		
Comment: *A recovery plan is likely largely based on the funding that is available after a disaster. Funding often is very specific. The city intends on maintaining a fund balance.*				
Action GC-15—Garden City Parks security camera installation			✓	GC-16
Comment: *The parks security cameras have been installed. Additional cameras will be installed as funding allows. There are trees and vegetation that are removed along the banks of the Boise River. Additional cameras may be appropriate along the river.*				
Action GC-16—Streetlight replacement/conversion to alternative energy streetlights			✓	GC-17
Comment: *Ongoing.*				
Action GC-17—Acquisition of vulnerable property for use as parks.			✓	GC-7
Comment: *The city has been in contact with Ada County requesting that Lady Bird Park be relocated to be adjacent to the river so that it can be constructed to provide flood conveyance and potentially naturally functioning open space.*				
Action GC-18—Purchase of stand-by generator for City Hall and Operations Center			✓	GC-6
Action GC-19—Obtain portable generators for use in Ada County during power outages and other emergency situations.			✓	GC-6
Comment: *There is one portable generator for this use.*				
Action GC-20—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.			✓	GC-18
Comment: *Ongoing. Garden City has developed partnerships with Boise River Enhancement Network (BREN) to identify native and appropriate plantings. This list is made available to the public. The City Code requires the use of native and appropriate plantings within 25' of the greenbelt.*				

4.8 HAZARD MITIGATION ACTION PLAN

Table 4-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 4-14 identifies the priority for each action. Table 4-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 4-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action GC-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Flood						
Existing	1, 3, 8, 10	Planning	USACE, Public Works, EMCR	High	HMGP, BRIC, FMA	Ongoing
Action GC-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community as drafted or amended.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Landslide						
New & Existing	1, 2, 4, 5, 6, 8, 9, 10	Planning	All City Departments, Planning Partners	Low	Local	Ongoing
Action GC-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	All City Departments	All Planning Partners	Low	Local	Short-term Ongoing
Action GC-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Flood						
New & Existing	1, 4, 5, 6, 8	Development Services	EMCR, FCD10, Environmental Division	Low	Local	Short-term Ongoing
Action GC-5— Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions**.**						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Landslide						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	All Departments	Planning Partners, BSU, NOAA	Low	HMGP, Local	Short-term Ongoing
Action GC-6—Purchase generators and backup power capabilities for critical facilities and infrastructure that lack adequate backup power including: • City Hall • Operations Center • Obtain portable generators • Obtain a fuel truck that can fuel the generators at the police department, public works, wells, lift stations, and city hall.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Landslide						
New & Existing	1, 9, 10	Public Works	EMCR, Public Works, Private, Ada County	Medium	HMGP, BRIC, Local	Short-term
Action GC-7— Green Infrastructure Flood Mitigation—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.						
Hazards Mitigated: Flood						
New & Existing	1, 2, 3, 4, 6, 9	Development Services	Public Works, USACE, IDWR	High	HMGP, BRIC, FMA, USACE	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action GC-8— Levees Analysis—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.						
Hazards Mitigated: Flood						
New & Existing	1, 2, 3, 4, 6, 9, 10	Development Services	USACE, FEMA	High	FMA, USACE	Long-term
Action GC-9— Water and Sewer Pipe replacement						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Landslide						
New & Existing	1, 3, 4, 6, 9, 10	Public Works		High	HMGP, BRIC, FMA, Local, Urban Renewal	Long-term Ongoing
Action GC-10— Continue to maintain/enhance the City's classification under the Community Rating System (CRS)						
Hazards Mitigated: Flood						
New & Existing	8, 9	Development Services	FEMA, FCD10, EMCR, ACHD	Low	Local	Ongoing
Action GC-11— Maintain emergency preparedness inventory inspections and establish a replacement plan.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 9, 10	Public Works	Police Department	Low	Local	Ongoing
Action GC-12— Maintain Capital Improvement Plan for capital facilities/infrastructure within the city.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Landslide						
New & Existing	1, 3, 6, 7, 8, 9, 10	Treasurer's Office	Public Works, Police, Development Services	Low	Local	Ongoing
Action GC-13— Support County-wide initiatives.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	All City Departments	Planning Partners	Low	Local	Ongoing
Action GC-14— Continuing of Operations Plan						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
Existing	1, 9, 10	Mayor's Office	All departments, Planning Partners	Low	Local	Short-term Ongoing
Action GC-15— Annually review the EOP Emergency Operations Plan.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
Existing	1, 7, 8, 9, 10	Police Department	Public Works, Mayor's Office, Treasure's Office, Development Services, Planning Partners	Low	Local, HMGP	Ongoing
Action GC-16— Garden City parks and river security camera installation.						
Hazards Mitigated: Flood, Extreme Weather						
New & Existing	1, 3, 10	Public Works	Police Department, Development Services, IDL, IDWR, USACE	Medium	Local	Short-term Ongoing
Action GC-17— Streetlight replacement/conversion to alternative energy streetlights.						
Hazards Mitigated: Extreme Weather						
New & Existing	1, 3, 4, 7, 9	Public Works	Idaho Power, ACHD	High	HMGP, BRIC, Urban Renewal	Long-term Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action GC-18—Coordinate with stakeholders, local experts to establish a plan and policies for wetland, habitat, and stream protection and restoration for conveyance, resiliency, and habitat.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Wildfire, Drought, Landslide						
New & Existing	1, 2, 4, 6, 9, 10	Development Services	ACHD, IDWR, BREN, USACE, US Fish and Wildlife, BSU	Medium	HMGP	Ongoing
Action GC-19—Develop a roadway drainage plan that includes elevating the street above the 100-year floodplain for Chinden Boulevard, a major evacuation route for the city and valley.						
Hazards Mitigated: Flood, Dam/Canal Failure, Extreme Weather						
New & Existing	1, 2, 3, 4, 5, 6, 7, 9, 10	ITD	Garden City, ACHD	High	BRIC, ITD	Long-term
Action GC-20—Develop a system drainage plan for all of city to address undersized drainage for street network.						
Hazards Mitigated: Flood, Dam/Canal Failure, Weather						
New & Existing	1, 2, 3, 4, 5, 6, 7, 9, 10	ACHD	ITD, ACHD	High	BRIC, ACHD	Long-term
Action GC-21—Remedy the repetitive loss property.						
Hazards Mitigated: Flood						
Existing	3, 9	Development Services	ACHD	High	HMGP, BRIC, FMA	Long-term
Action GC-22—Placement of free Wi-Fi in public locations such as parks to provide access to internet and emergency messaging.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	7, 8, 9	Library		Medium	BRIC	Short-term
Action GC-23—Undergrounding of powerlines to make the electrical grid more resilient by minimizing damages from weather events. This assists also in the allowance of street trees which then reduces the urban stormwater runoff, can be cooling in extreme weather, and provide assistance for better air quality. The undergrounding of utilities should be strategically targeted to lines that include critical facilities, are directly adjacent to vehicular travel ways, or include a number of tall adjacent trees.						
Hazards Mitigated: Extreme Weather, Wildfire						
New & Existing	1, 3, 4, 9, 10	Development Services	Idaho Power, ACHD, ITD	High	HMGP,BRIC, FMA	Long-term
Action GC-24— Improve open space preservation practices that target floodplain capacity and will ensure optimal points under the CRS 420 activity.						
Hazards Mitigated: Flood						
New & Existing	9	Development Services	Public Works, River Club Golf Course	Low	Local	Short-term Ongoing
Action GC-25—Obtain and maintain 90 days of chemicals for potable water in case of a well outage						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Landslide						
New & Existing	1, 3, 4, 9, 10	Public Works		Medium	BRIC	Short-term Ongoing
Action GC-26—Implement IT technologies that facilitate the ability to work remotely.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 7, 10	IT	All departments	Medium-High	HMGP, BRIC	Short-term Ongoing
Action GC-27— Implement IT technologies that ensure access to the system in case of loss of electricity or a server.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 7, 10	IT	All departments	Medium-High	HMGP, BRIC	Short-term Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action GC-28— Work with stakeholders to establish a regional plan for public outreach and education that can be utilized for CRS credit for the 330 Program for Public Information PPI activity. The outreach must include information related to hazard risks and critical information dissemination. Improve open space preservation practices that target floodplain capacity and will ensure optimal points under the CRS 420 activity.						
Hazards Mitigated: Flood						
New & Existing	1, 4, 7, 8, 9	Development Services		Medium	Local	Short-term Ongoing
Action GC-29— Work with the Post Office to encourage the use of a Garden City specific address within Garden City to better inform residents' knowledge of hazards and emergency response activities in their city.						
Hazards Mitigated: Flood, Extreme Weather, Dam/Canal Failure, Earthquake, Wildfire, Drought, Volcano, Landslide						
New & Existing	1, 6, 9	Development Services		Low	Local	Short-term Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 4-14. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
1	4	High	High	Yes	Yes	No	Low	High
2	8	Medium	Low	Yes	No	Yes	High	Low
3	10	Medium	Low	Yes	No	Yes	High	Low
4	5	Medium	Low	Yes	No	Yes	High	Low
5	7	Medium	Low	Yes	Yes	Yes	High	Medium
6	3	High	Medium	Yes	Yes	No	Medium	High
7	6	Medium	High	No	Yes	No	Low	Medium
8	7	High	High	Yes	Yes	No	Medium	High
9	6	High	High	Yes	Yes	No	Medium	High
10	10	Low	Low	Yes	No	Yes	High	Low
11	3	High	Low	Yes	No	Yes	High	Low
12	7	Low	Low	Yes	No	Yes	High	Low
13	10	Medium	Low	Yes	No	Yes	High	Low
14	3	High	Low	Yes	No	Yes	High	Low
15	5	High	Low	Yes	Yes	Yes	High	Low
16	3	Low	Medium	No	No	No	Medium	Low
17	5	Low	High	No	Yes	No	Low	Medium
18	6	Medium	Medium	Yes	Yes	No	Medium	Medium
19	9	High	High	Yes	Yes	No	Low	High
20	9	High	High	Yes	Yes	No	Low	High
21	2	High	High	Yes	Yes	No	Low	High
22	3	High	Medium	Yes	Yes	No	Medium	High
23	5	High	High	Yes	Yes	No	Low	High

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
24	1	Low	Low	Yes	No	Yes	High	Low
25	5	High	Medium	Yes	Yes	Maybe	High	Medium
26	3	High	Medium	Yes	Yes	Maybe	Medium	Medium
27	3	High	Medium	Yes	Yes	Maybe	Medium	Medium
28	5	Medium	Medium	Yes	No	Maybe	Medium	Low
29	3	Medium	Low	Yes	No	Yes	High	Low

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

Table 4-15. Analysis of Mitigation Actions

Hazard Type		Action Addressing Hazard, by Mitigation Type[a]						
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Flood	GC-2, 3, 4, 10, 12, 13, 18	GC-1, 4, 11, 13, 21	GC-2, 4, 10, 13, 18, 29	GC-7, 13, 18	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-7, 8, 9, 13, 19, 20, 23	GC-4, 5, 7, 13	GC-2, 3, 4, 10, 13, 14, 15, 16, 24, 28
Extreme Weather	GC-2, 3, 5, 12, 13	GC-1, 5, 11, 13	GC-2, 5 , 3, 29	GC-5, 13	GC-2, 5, 6, 13, 14, 15, 25, 26, 27, 29	GC-5, 9, 13, 19, 20, 23	GC-5, 13, 17, 23	GC-2, 3, 13, 14, 15
Medium-Risk Hazards								
Dam/Canal Failure	GC-2, 3, 12, 13	GC-1, 11, 13	GC-2, 13, 29	GC-13	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-9, 13, 19, 20	GC-5, 13	GC-2, 3, 5, 13, 14, 15
Earthquake	GC-2, 3, 12, 13	GC-1, 11, 13	GC-2, 13, 29	GC-13	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-9, 13	GC-5, 13	GC-2, 3, 13, 14, 15
Low-Risk Hazards								
Wildfire	GC-2, 3, 12, 13	GC-1, 11, 13	GC-2, 13, 29	GC-13	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-9, 13, 23	GC-5, 13	GC-2, 3, 13, 14, 15
Drought	GC-2, 3, 12, 13	GC-1, 11, 13	GC-2, 13, 29	GC-13	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-9, 13	GC-5, 13, 17	GC-2, 3, 13, 14, 15
Volcano			GC-29					GC-3, 13, 14, 15
Landslide	GC-2, 3, 12, 13	GC-1, 11, 13	GC-2, 13, 29	GC-13	GC-2, 6, 13, 14, 15, 25, 26, 27, 29	GC-9, 13	GC-5, 13	GC-2, 3, 13, 14, 15

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

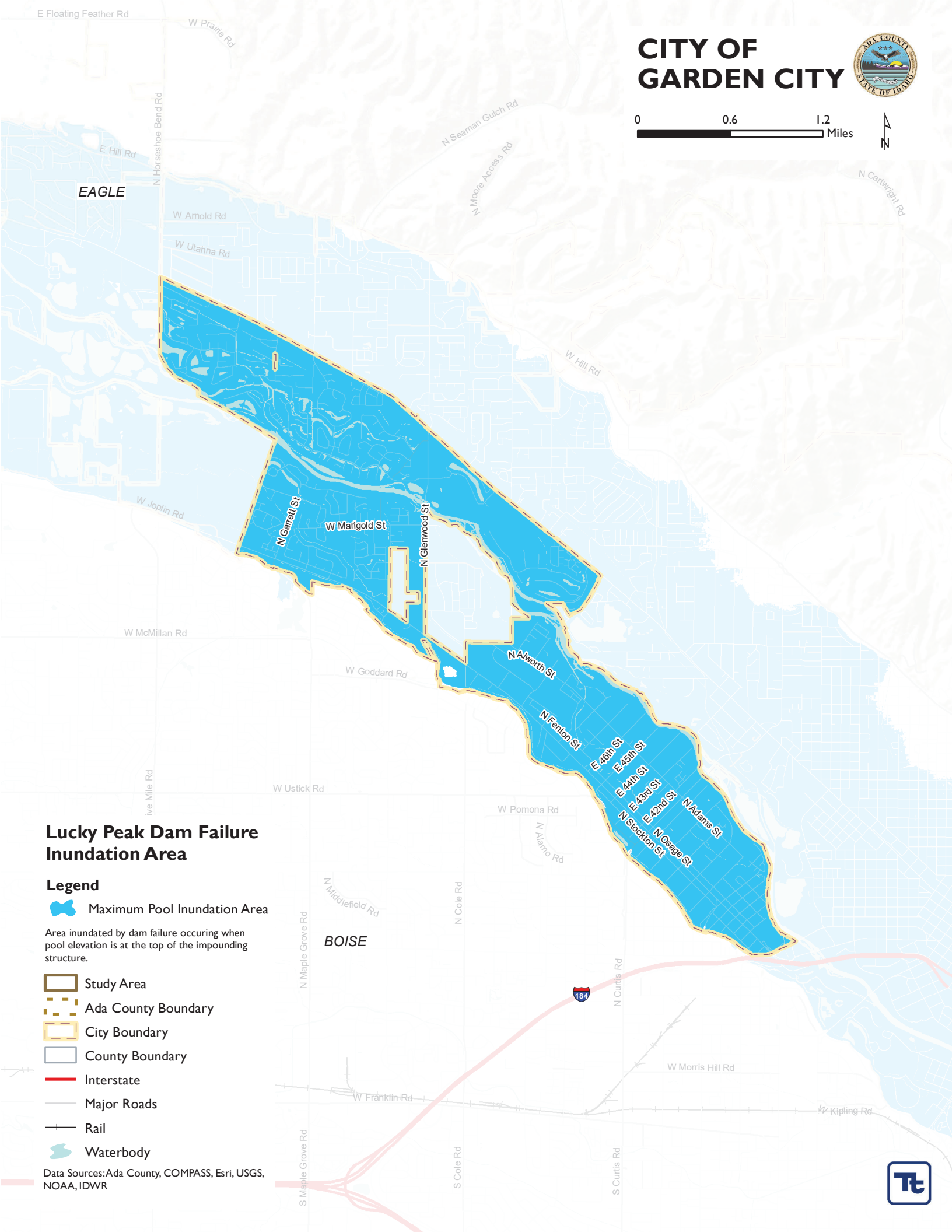
4.9 INFORMATION SOURCES USED FOR THIS ANNEX

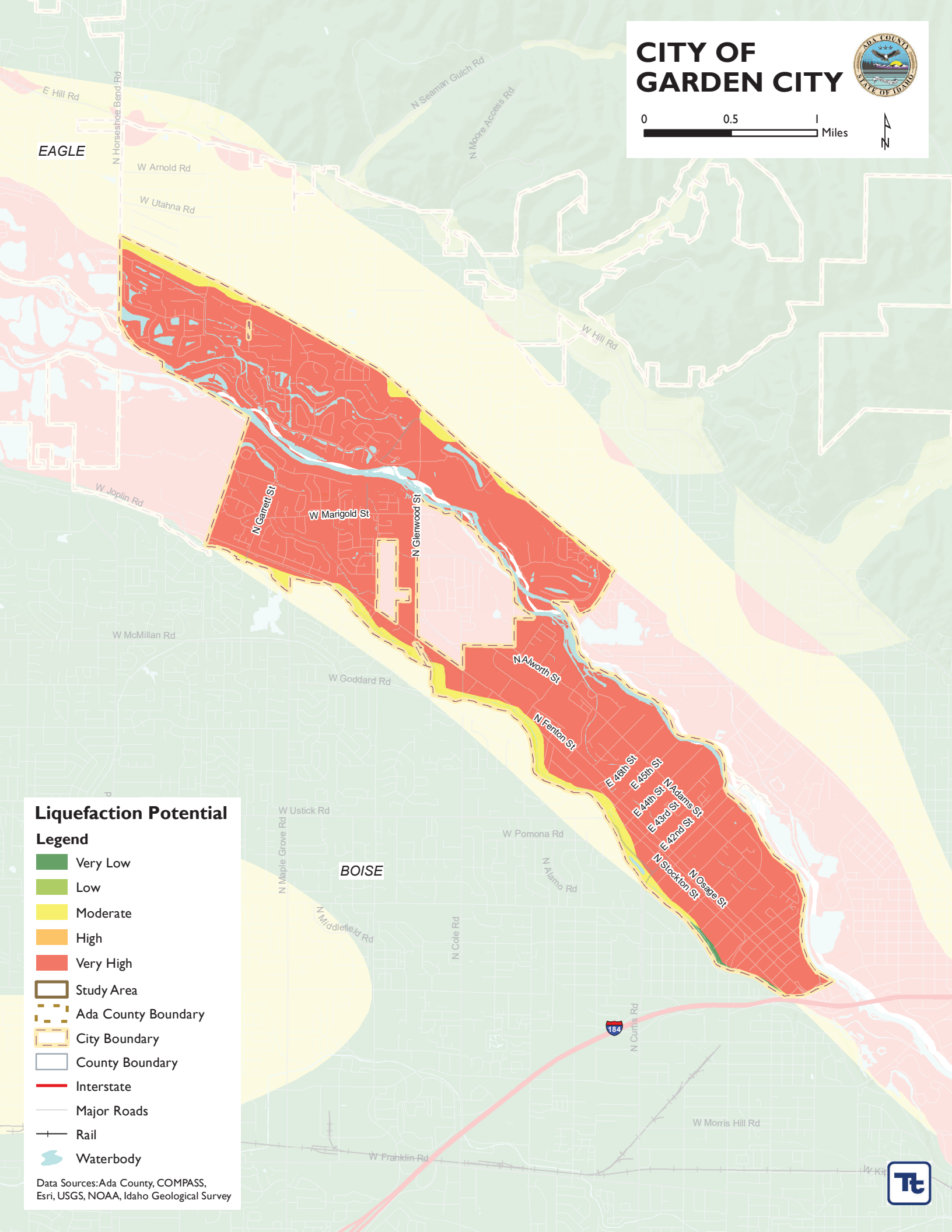
The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

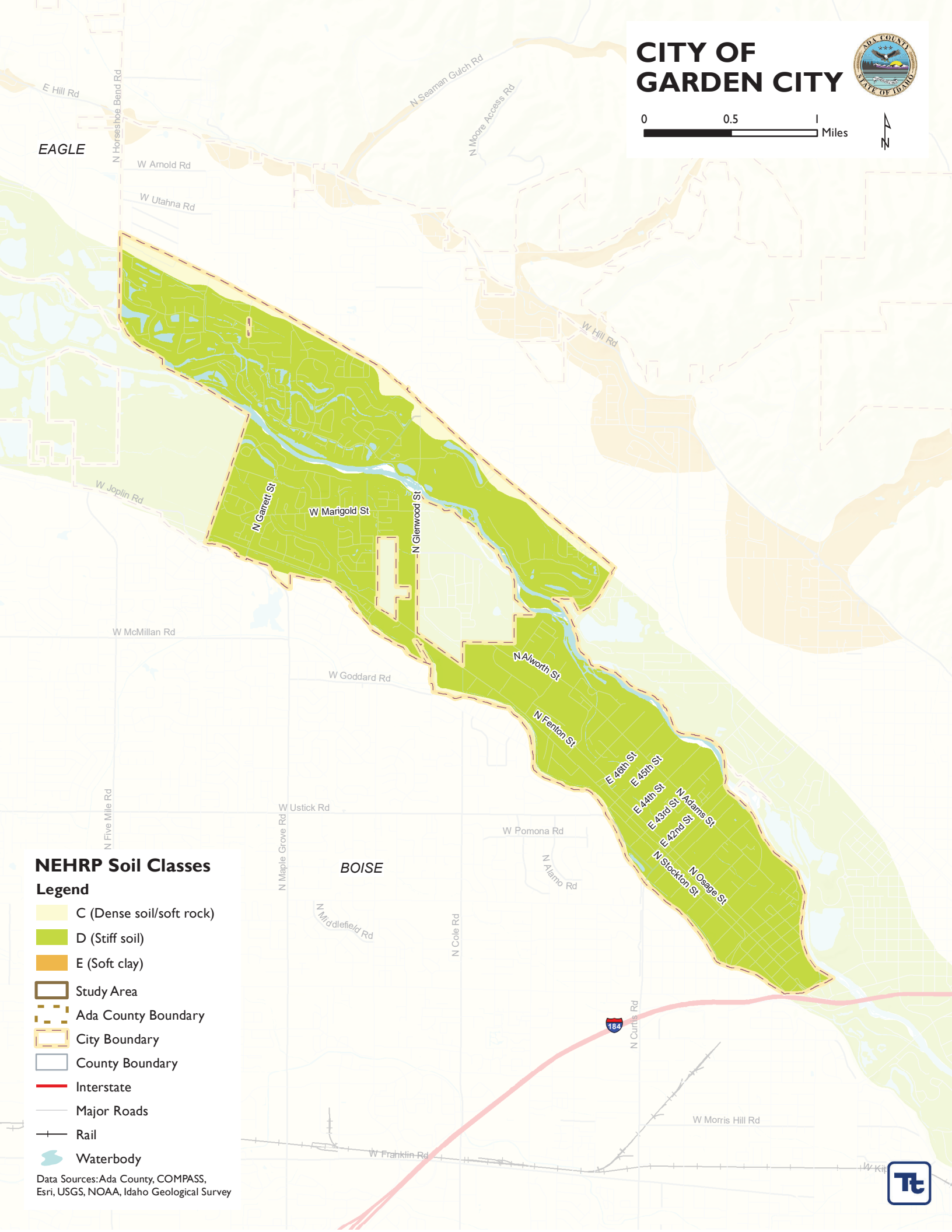
- **2017 Ada County Multi-Hazard Mitigation Plan** – The previous HMP was reviewed to update this annex.
- **Garden City Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Garden City Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

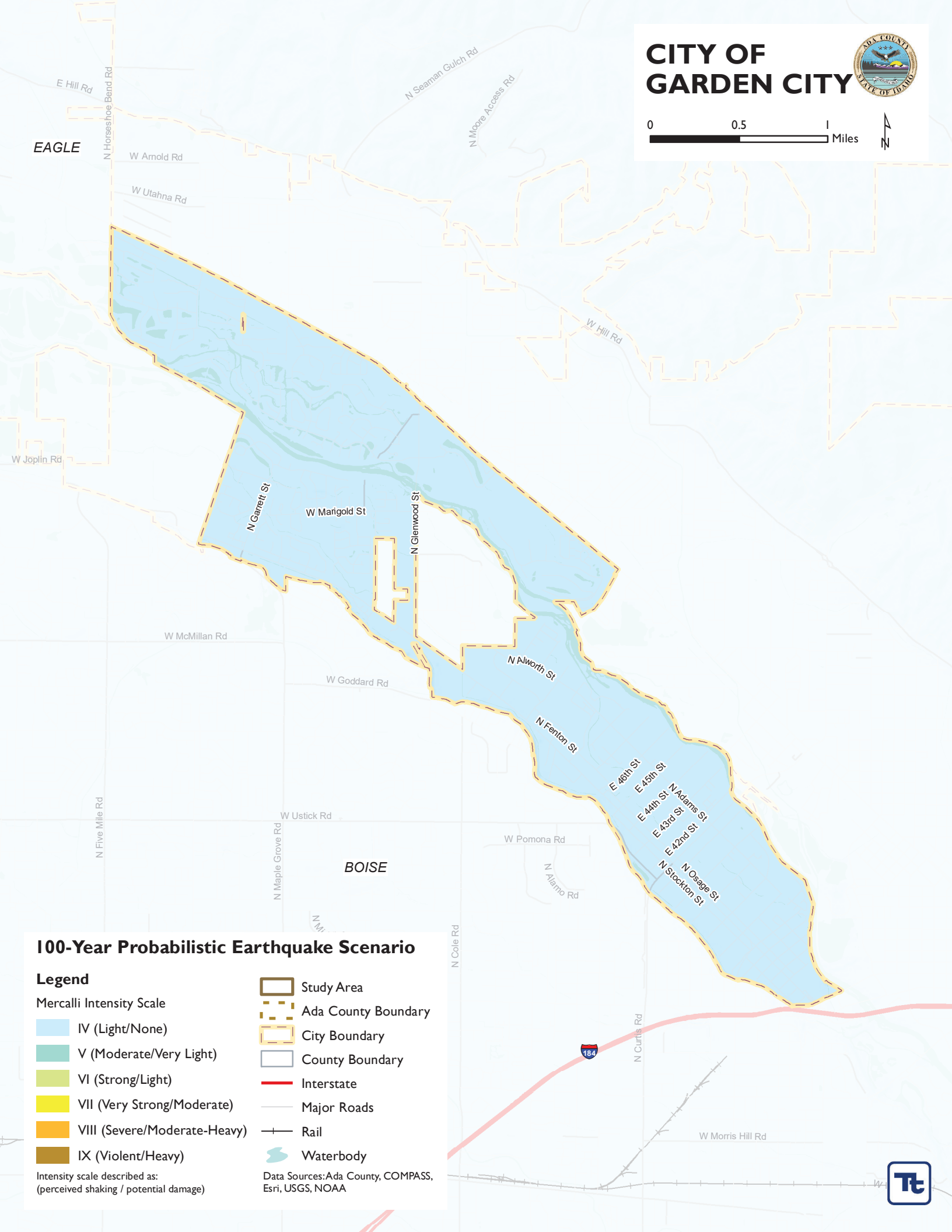
The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.


CITY OF GARDEN CITY
0
0.6
1.2
Miles
N
EAGLE
BOISE
E Floating Feather Rd
W Prairie Rd
N Horseshoe Bend Rd
E Hill Rd
N Seaman Gulch Rd
N Moore Access Rd
N Cartwright Rd
W Arnold Rd
W Utahna Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Alworth St
N Fenton St
E 46th St
E 45th St
E 44th St
E 43rd St
E 42nd St
N Adams St
N Stockton St
N Osage St
W Ustick Rd
W Pomona Rd
N Alamo Rd
N Middlefield Rd
N Cole Rd
N Maple Grove Rd
N Curtis Rd
184
W Morris Hill Rd
W Franklin Rd
W Kipling Rd
S Maple Grove Rd
S Cole Rd
S Curtis Rd
Lucky Peak Dam Failure Inundation Area
Legend
Maximum Pool Inundation Area
Area inundated by dam failure occuring when pool elevation is at the top of the impounding structure.
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, IDWR

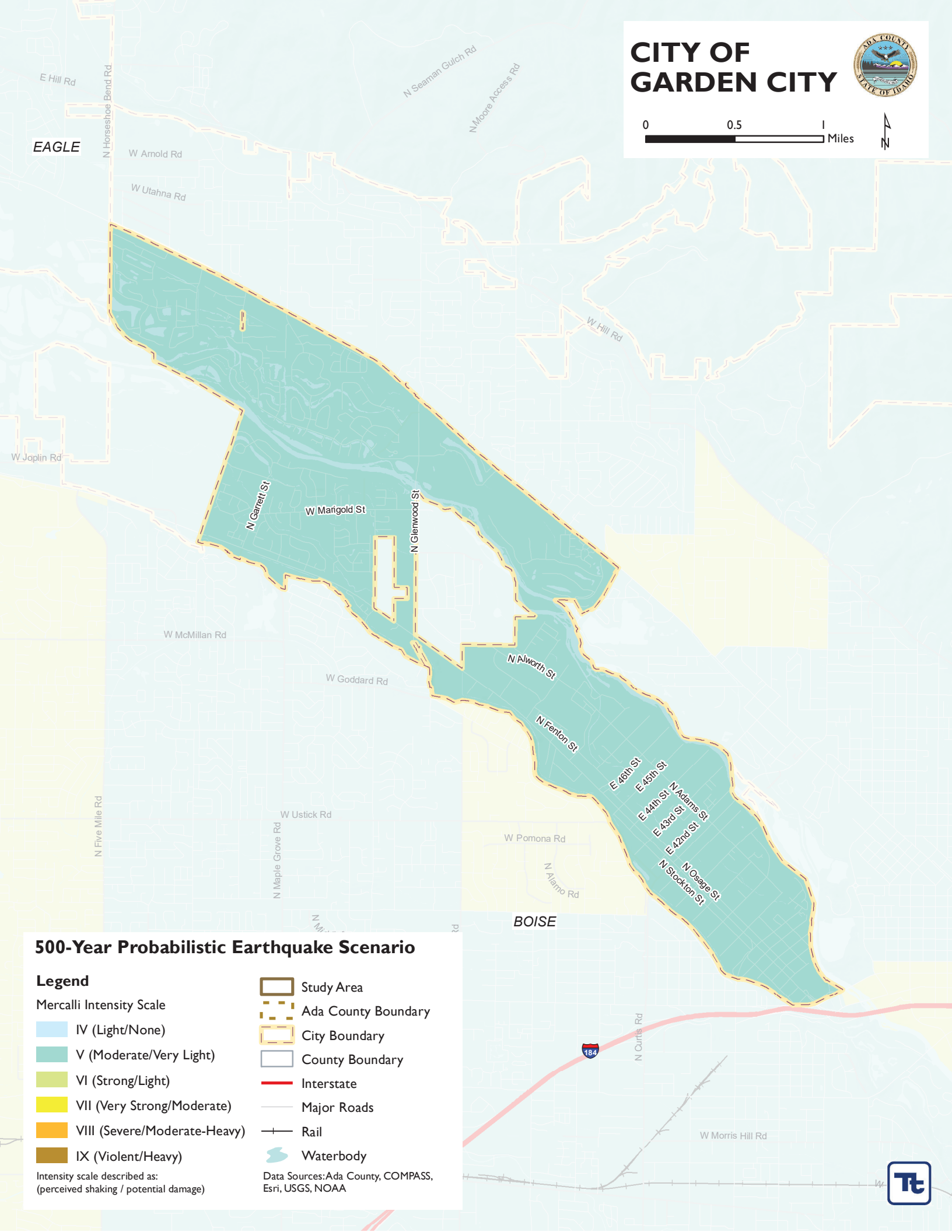

CITY OF GARDEN CITY
0
0.5
1
Miles
N
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Alworth St
N Fenton St
E 46th St
E 45th St
E 44th St
N Adams St
E 43rd St
E 42nd St
N Stockton St
N Osage St
W Ustick Rd
N Maple Grove Rd
W Pomona Rd
N Alamo Rd
N Middlefield Rd
N Cole Rd
N Curtis Rd
184
W Morris Hill Rd
W Franklin Rd
Liquefaction Potential
Legend
Very Low
Low
Moderate
High
Very High
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources:Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF GARDEN CITY
0
0.5
1
Miles
N
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Allworth St
N Fenton St
E 46th St
E 45th St
E 44th St
E 43rd St
E 42nd St
N Adams St
N Stockton St
N Osage St
N Five Mile Rd
W Ustick Rd
N Maple Grove Rd
W Pomona Rd
N Alamo Rd
N Middlefield Rd
N Cole Rd
184
N Curtis Rd
W Morris Hill Rd
W Franklin Rd
NEHRP Soil Classes
Legend
C (Dense soil/soft rock)
D (Stiff soil)
E (Soft clay)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF GARDEN CITY
0
0.5
1
Miles
N
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Allworth St
N Fenton St
E 46th St
E 45th St
E 44th St
N Adams St
E 43rd St
E 42nd St
N Osage St
N Stockton St
N Five Mile Rd
N Maple Grove Rd
W Ustick Rd
W Pomona Rd
N Alamo Rd
N Cole Rd
N Curtis Rd
184
W Morris Hill Rd
100-Year Probabilistic Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF GARDEN CITY

0 0.5 1 Miles



500-Year Probabilistic Earthquake Scenario

Legend

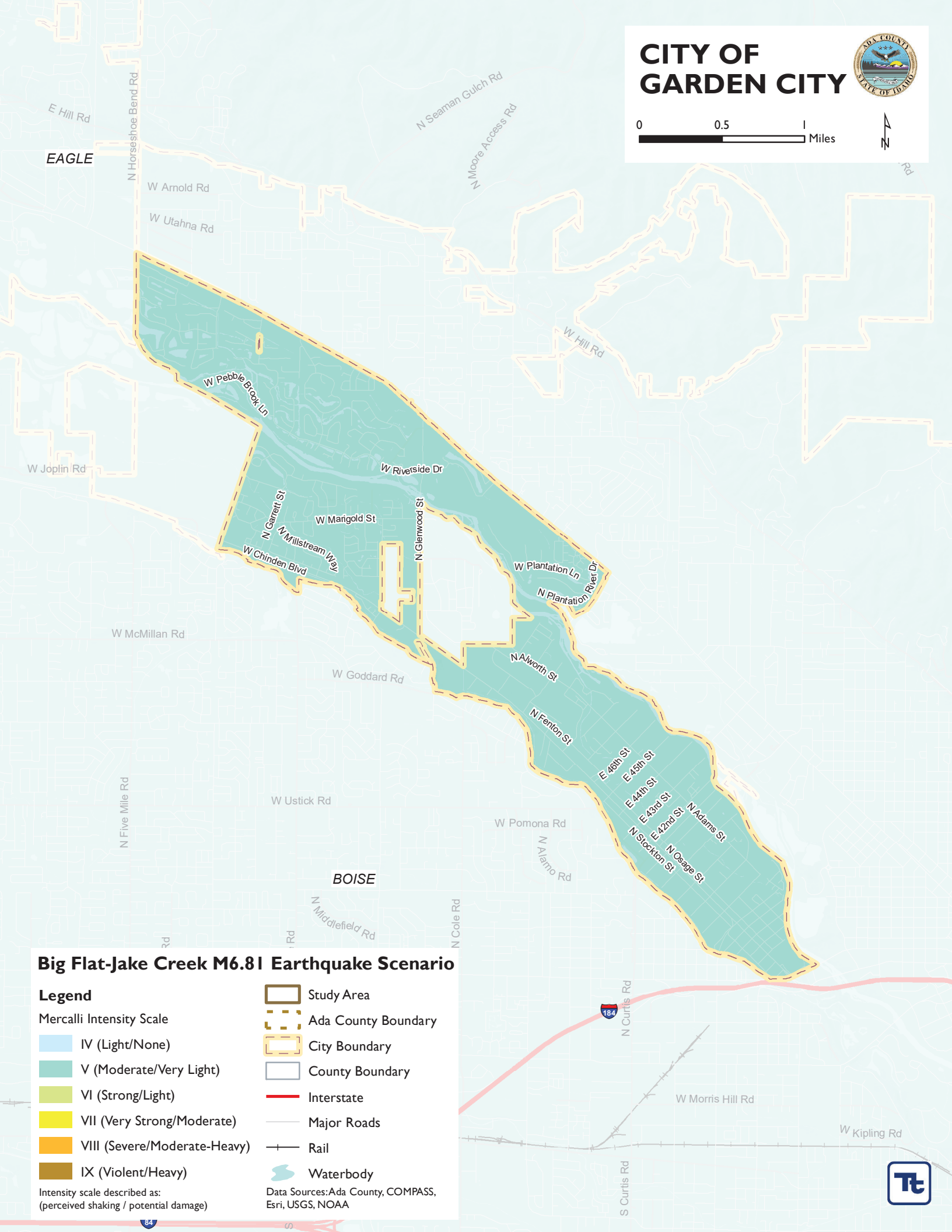
Mercalli Intensity Scale

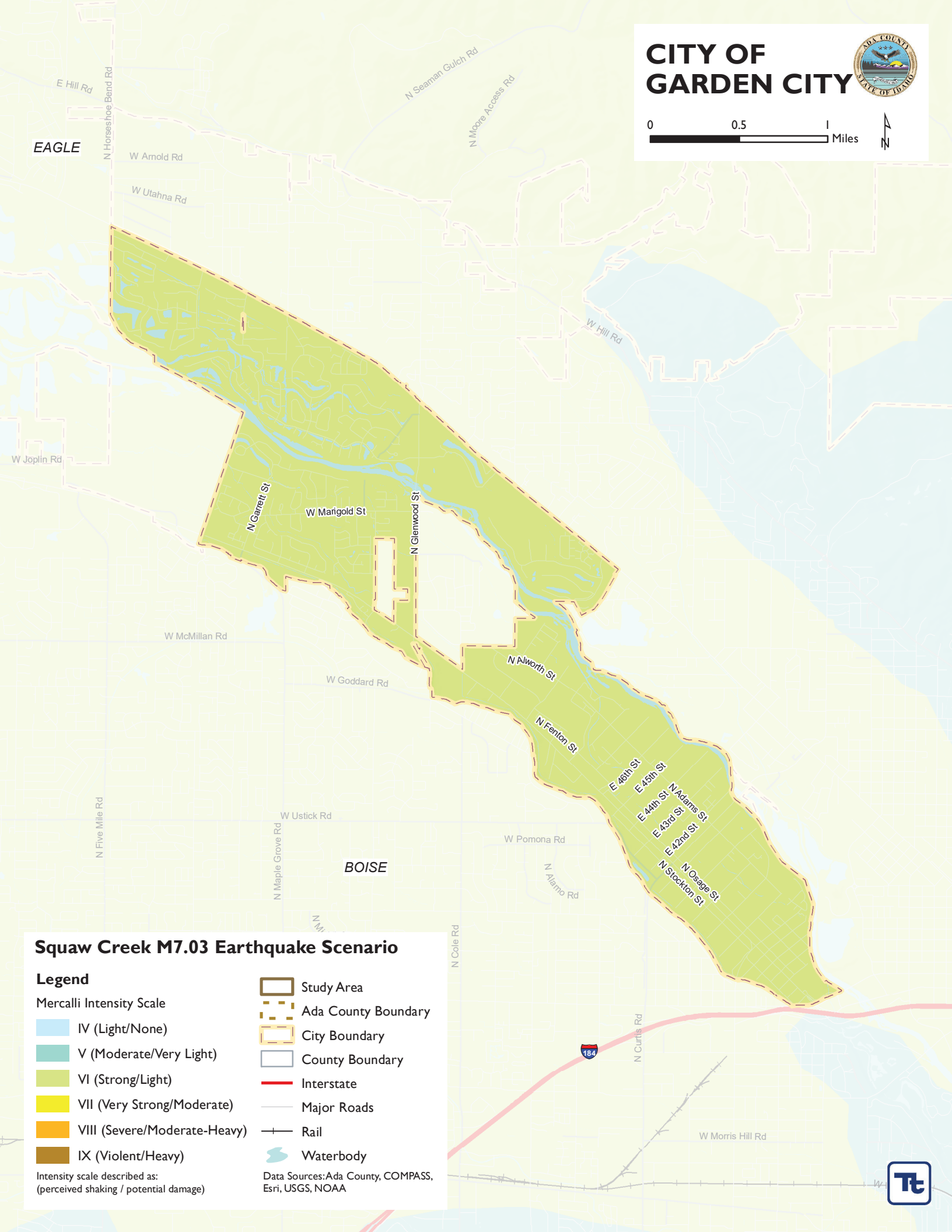
- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

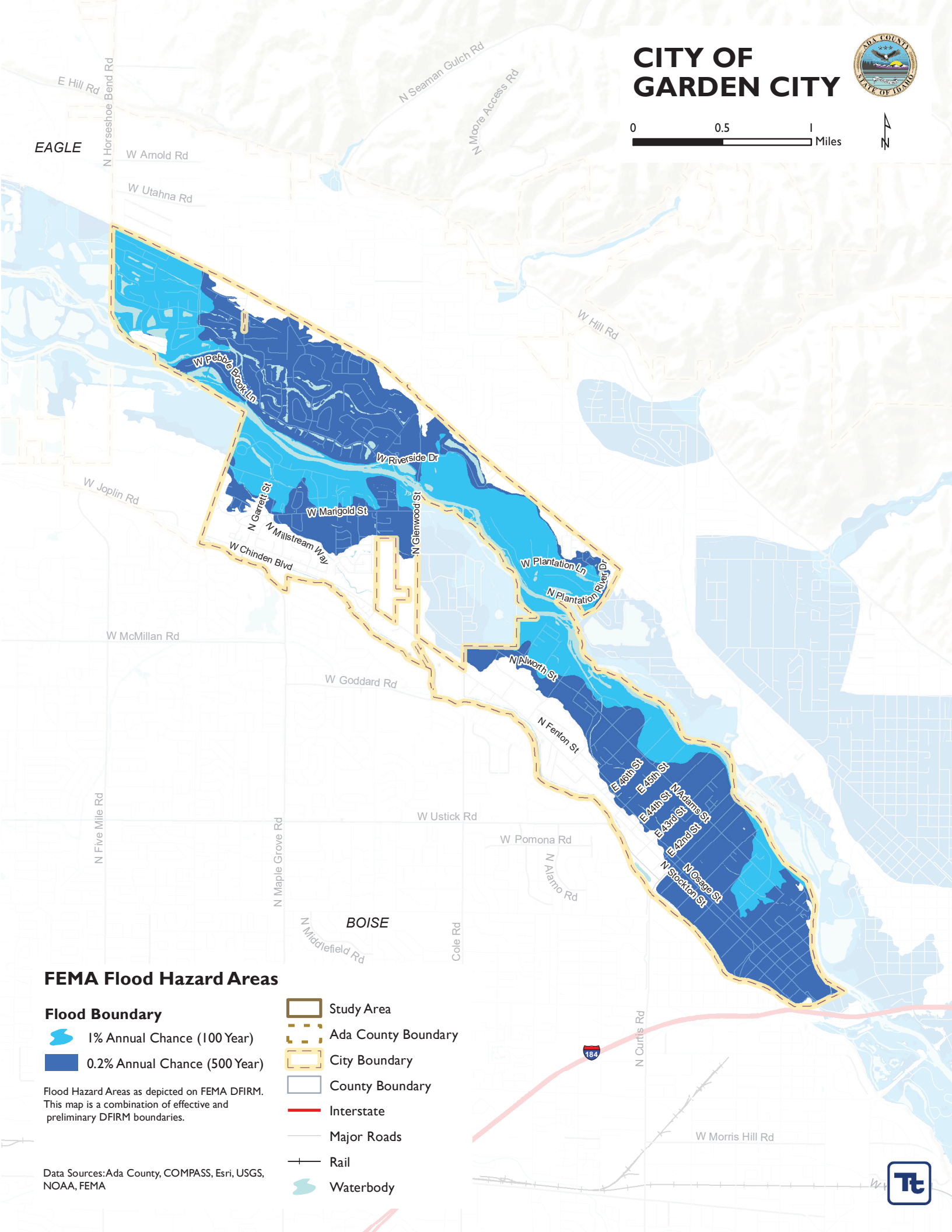
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF GARDEN CITY
0
0.5
1
Miles
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
W Pebble Brook Ln
W Riverside Dr
N Garrett St
W Marigold St
N Millstream Way
W Chinden Blvd
N Glenwood St
W Plantation Ln
N Plantation River Dr
W McMillan Rd
W Goddard Rd
N Ailworth St
N Fenton St
E 46th St
E 45th St
E 44th St
E 43rd St
E 42nd St
N Adams St
N Stockton St
N Osage St
N Five Mile Rd
W Ustick Rd
W Pomona Rd
N Alamo Rd
N Middlefield Rd
N Cole Rd
N Curtis Rd
W Morris Hill Rd
W Kipling Rd
S Curtis Rd
184
84
Big Flat-Jake Creek M6.81 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF GARDEN CITY
0
0.5
1
Miles
N
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Alworth St
N Fenton St
E 46th St
E 45th St
E 44th St
N Adams St
E 43rd St
E 42nd St
N Osage St
N Stockton St
W Ustick Rd
W Pomona Rd
N Alamo Rd
N Five Mile Rd
N Maple Grove Rd
N Cole Rd
N Curtis Rd
184
W Morris Hill Rd
Squaw Creek M7.03 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF GARDEN CITY

0 0.5 1 Miles



FEMA Flood Hazard Areas

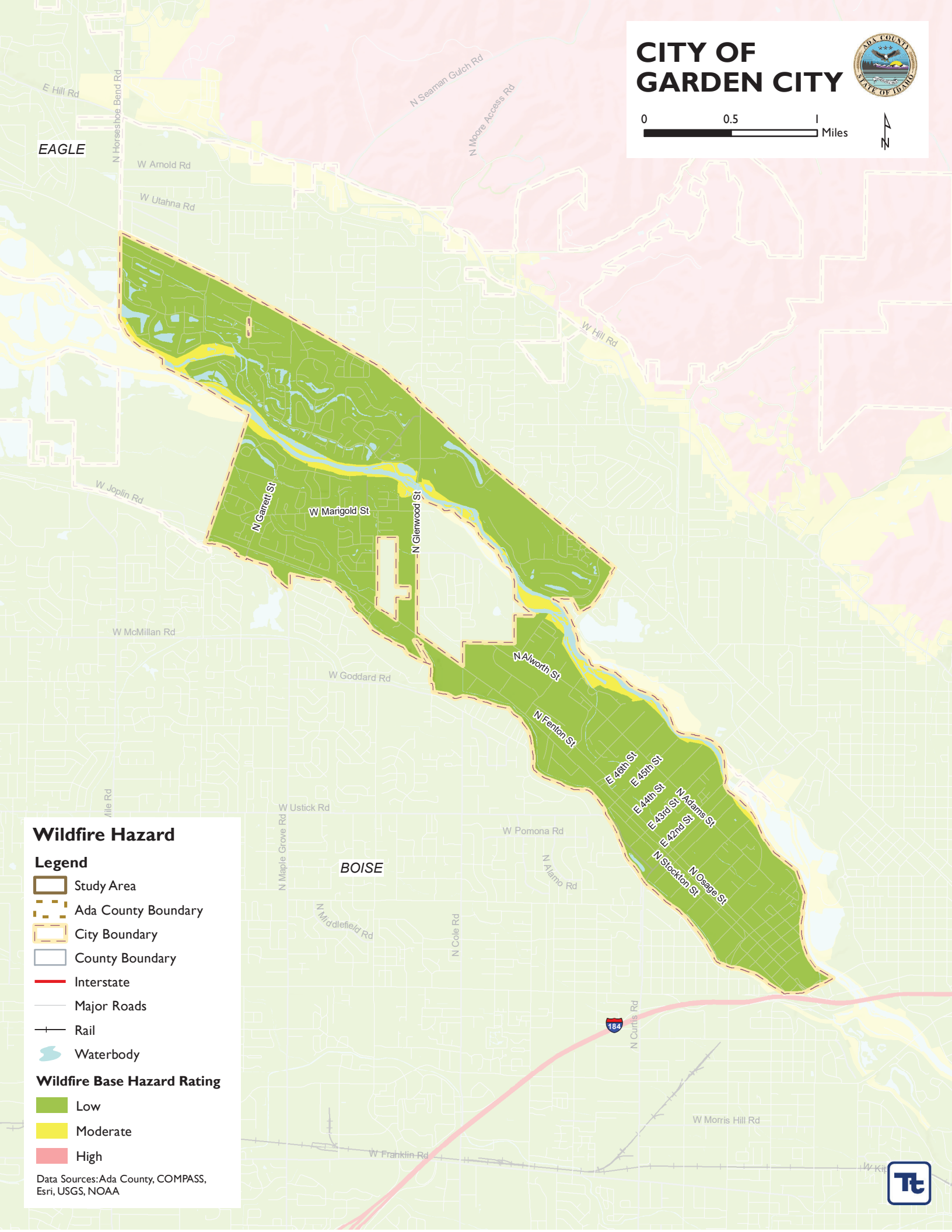
Flood Boundary

- 1% Annual Chance (100 Year)
- 0.2% Annual Chance (500 Year)

Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA


CITY OF GARDEN CITY
0
0.5
1
Miles
N
EAGLE
BOISE
E Hill Rd
N Horseshoe Bend Rd
W Arnold Rd
W Utahna Rd
N Seaman Gulch Rd
N Moore Access Rd
W Hill Rd
W Joplin Rd
N Garrett St
W Marigold St
N Glenwood St
W McMillan Rd
W Goddard Rd
N Alworth St
N Fenton St
E 46th St
E 45th St
E 44th St
E 43rd St
E 42nd St
N Adams St
N Stockton St
N Osage St
W Ustick Rd
N Maple Grove Rd
W Pomona Rd
N Alamo Rd
N Middlefield Rd
N Cole Rd
184
N Curtis Rd
W Morris Hill Rd
W Franklin Rd
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

5. CITY OF KUNA

5.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Mike Borzick, GIS Manager
6950 S Ten Mile Rd
Meridian, ID 83642
Telephone: 208-287-1726
e-mail Address: MBorzick@KunaID.gov

Alternate Point of Contact
Brady Barrosa
6950 S Ten Mile Rd
Meridian, ID 83642
Telephone: 208-287-1722
e-mail Address: Bbarrosa@KunaID.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 5-1.

Table 5-1. Local Hazard Mitigation Planning Team Members

Name	Title
Mike Borzick	GIS Manager
Doug Hansen	Planning and Zoning Dir
Morgan Treasure	Economic Development Dir
Brady Barrosa	Staff Engineer
Troy Behunin	Planner

5.2 JURISDICTION PROFILE

5.2.1 Location and Features

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.

The nearby Morley Nelson Snake River Birds of Prey National Conservation Area 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.

5.2.2 Climate

Kuna's climate is semi-arid, with four distinct seasons. Kuna experiences hot and dry summers with highs exceeding 100 °F 5.6 days in a typical year and 90 °F on 46 days. Due to the aridity, summer nights often offer significant and crisp cool-downs. Winters are cold, with a January average of 30.2 °F, and lows falling to 0 °F or

below on around 4 nights per year. Snowfall averages 19 inches, but typically falls in bouts of 3 inches 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.

5.2.3 History

The City of Kuna was incorporated on September 15, 1915. 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.

5.2.4 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 seven departments: Finance; Economic Development; Parks; 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.

5.3 CURRENT TRENDS

5.3.1 Population

According to COMPASS the population of the City of Kuna as of April 2022 was 27,480. Since 2017, the population has grown at an average annual rate of 7.9 percent.

5.3.2 Development

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 15,210 in 2010 to 24,011 in 2020. This represents a 57.9 percent increase in population growth in 10 years. Kuna was a contender for CNN/Money's "Best Place to Live 2005" list. Kuna is transitioning from a rural community to a suburban city, and residential development has outpaced commercial development. Kuna has identified additional commercial areas as a component of the Comprehensive Land Use Plan. The next step is to implement the plan by establishing new zoning districts, rezoning property, and possibly forming an urban renewal district. City actions relating to land use, annexations, zoning, subdivision and design review, redevelopment and capital improvements must be consistent with the Comprehensive Plan. Future growth and development will be managed according to the Comprehensive Land Use Plan and it will be reviewed and amended as necessary.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 5-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 5-2. Recent and Expected Future Development Trends

Criterion						
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?						Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	Approximately 61 parcels containing 2,810.91 acres have been annexed since 2016					
Is your jurisdiction expected to annex any areas during the performance period of this plan?						Yes
If yes, describe land areas and dominant uses.	Areas withing the Area of City Impact					
If yes, who currently has permitting authority over these areas?	Planning and Zoning					
Are any areas targeted for development or major redevelopment in the next five years?						Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Facebook (Meta) has a large Server Farm that will be constructing East of town and is sure to bring more industrial to that area.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		**2016**	**2017**	**2018**	**2019**	**2020**
	Single Family	258	365	551	706	880
	Multi-Family	11	32	8	28	1
	Other	N/A	N/A	N/A	N/A	N/A
	Total	269	397	559	734	881
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: 14 • Landslide: 0 • High Liquefaction Areas: 0 • Wildfire Risk Areas: 0					
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The city doesn't have an inventory of lands, but from the normal build cycles once a subdivision is constructed the builder generally pulls all the Building Permits for the entire subdivision. Only a couple of the projects have Custom builders that fill slowly.					

5.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 5-3.
- Development and permitting capabilities are presented in Table 5-4.
- An assessment of fiscal capabilities is presented in Table 5-5.
- An assessment of administrative and technical capabilities is presented in Table 5-6.
- An assessment of education and outreach capabilities is presented in Table 5-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-8.
- Classifications under various community mitigation programs are presented in Table 5-9.

Table 5-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	No	No
Comment: ***Comment****:* Title 4, Chapter 1 Kuna Municipal Code (KMC), adopts the 2012 IBC per state mandate. (12/2013)				
Zoning Code	Yes	No	No	No
Comment: ***Comment****:* Title 5, KMC, Adopted 1996				
Subdivisions	Yes	No	No	No
Comment: ***Comment****:* Title 65, KMC, Adopted 1977				
Stormwater Management	No	Yes	Yes	Yes
Comment: ***Comment****: Ada County Highway Department (ACHD) – 11/11/2015*				
Post-Disaster Recovery	No	No	No	Yes
Comment:				
Real Estate Disclosure	No	No	No	No
Comment:				
Growth Management	Yes	No	No	No
Comment: ***Comment****:* Kuna Comprehensive Plan, adopted 2009				
Site Plan Review	Yes	No	No	No
Comment: ***Comment****:* Title 5, Chapter 4, KMC adopted 8/21/2007				
Environmental Protection	No	No	No	Yes
Comment:				
Flood Damage Prevention	Yes	No	No	Yes
Comment: ***Comment****:* Flood Damage Prevention-Title 4, Chapter 5 KMC. Adopted 8/11/2003				
Emergency Management	No	No	No	Yes
Comment:				
Climate Change	No	No	No	No
Comment:				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan equipped to provide linkage to this mitigation plan? *Yes*				
Comment: 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				
Capital Improvement Plan	Yes	No	No	No
How often is the plan updated? *Annually*				
Comment: *Enter Comment*				
Disaster Debris Management Plan	Yes	Yes	No	Yes
Comment: *Enter Comment*				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: Comment: The 2017 Ada County Multi-Hazard Mitigation Plan will qualify as a flood hazard management plan under CRS criteria upon its completion and adoption.				
Stormwater Plan	Yes	No	Yes	Yes
Comment: Comment: 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.				
Urban Water Management Plan	No	No	No	No
Comment:				
Habitat Conservation Plan	No	No	No	Yes
Comment:				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan	Yes	No	No	Yes
Comment:				
Shoreline Management Plan	No	No	No	No
Comment:				
Community Wildfire Protection Plan	Yes	No	No	Yes
Comment: *The 2017 Ada County Multi-hazard Mitigation plan is being developed as a CWPP for the Ada County planning area.*				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	No	No	No	No
Comment:				
Comprehensive Emergency Management Plan	No	No	No	Yes
Comment:				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	Yes
Comment: *EMCR has developed and maintains a THIRA for the Ada County planning area.*				
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:				
Continuity of Operations Plan	Yes	No	No	Yes
Comment: *City of Kuna Continuity of Operations (COOP), April 10, 2012*				
Public Health Plan	No	Yes	No	Yes
Comment: ***Comment****: Central District Health Department Emergency Operations Plan, 2013*				

Table 5-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	No
If no, who does? If yes, which department? Development isn't "Permitted" – it does go through an approval process, but no "Permit" is issued.	
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 5-5. Fiscal Capability

Financial Resource	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
If yes, specify: Sewer, Water, Irrigation (Pressure and Gravity)	
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

Table 5-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
If Yes, Department /Position: Public Works/Director Public Works/City Engineer Public Works/Staff Engineers Public Works/GIS Manager, Plan Reviewer Planning/Director Planning/Staff	
Engineers or professionals trained in building or infrastructure construction practices	Yes
If Yes, Department /Position: Public Works/Director Public Works/City Engineer Public Works/Staff Engineers Public Works/GIS Manager, Plan Reviewer	
Planners or engineers with an understanding of natural hazards	Yes
If Yes, Department /Position: Public Works/Director Public Works/City Engineer Public Works/Staff Engineers Public Works/GIS Manager, Plan Reviewer	
Staff with training in benefit/cost analysis	Yes
If Yes, Department /Position: Public Works/Director	
Surveyors	Yes
If Yes, Department /Position: Public Works/GIS Manager – Contract as needed	
Personnel skilled or trained in GIS applications	Yes
If Yes, Department /Position: Public Works/GIS Manager	
Scientist familiar with natural hazards in local area	Yes
If Yes, Department /Position: Contract as needed	
Emergency manager	Yes
If Yes, Department /Position: Ada County	
Grant writers	Yes
If Yes, Department /Position: City Clerk/Director - Contract as needed	

Table 5-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes, Economic Developer
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
If yes, briefly describe:	
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe: Approved COOP	
Do you have any established warning systems for hazard events?	Yes
If yes, briefly describe: 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.	

Table 5-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	GIS Department / Planning & Zoning
Who is your floodplain administrator? (department/position)	Public Works / GIS Manager
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	10/02/2003
Does your floodplain management program meet or exceed minimum requirements? ***If exceeds, in what ways?***	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? ***If so, state what they are.***	No
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.*** We had LiDar flown with the hope STARR was updating our RiskMAP	Yes
Do your flood hazard maps adequately address the flood risk within your jurisdiction? ***If no, state why.*** Mapping is grossly inaccurate	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? ***If so, what type of assistance/training is needed?*** CFM training	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** ***If no, is your jurisdiction interested in joining the CRS program?*** Yes	No
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** $187,300 ***What is the premium in force?*** $1,114	1
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $0	0

a. According to FEMA statistics as of March 31, 2022

Table 5-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	1600144290	N/A
DUNS #	Yes	126045272	N/A
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
Tsunami Ready	No	N/A	N/A

5.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and

where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

5.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **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

5.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Future updates to the **City of Kuna's Comprehensive Plan**—the comprehensive plan will continue to use hazard mapping and hazard data in updates of the land use and safety sections.
- Continued **CWPP** integration with the Hazard Mitigation Plan wildfire maps and hazard data.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

5.6 RISK ASSESSMENT

5.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 5-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

5.6.2 Hazard Risk Ranking

Table 5-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 5-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4534	January 20, 2020, and continuing	N/A
Flooding	DR-4342	March 29 – June 15, 2017	Public Assistance Countywide: $4,493,792
Thunderstorm Wind	N/A	10/19/2019	Several large trees, power lines and fences down, and car damage
Thunderstorm Wind	N/A	8/11/2015	Downed trees and power outages
Severe Wind	N/A	3/29/2009	$33,000 (countywide)
Canal Breach	N/A	6/5/2006	Unknown (40 homes)
Severe Wind	N/A	4/27/1995	$50,000 (countywide)
Flooding	N/A	6/1983	$147,000 (countywide)

Table 5-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Flood	18	Medium
3	Earthquake	16	Medium
4	Wildfire	12	Low
5	Drought	9	Low
6	Volcano	6	Low
7	Dam/Canal Failure	0	Low
8	Landslide	0	Low

5.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Manmade Canal failures
- Wildfires around Transmission Power Lines

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

5.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 5-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 5-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Action K-1— Provide redundancy with Conduit and Fiber hard-wired into all critical facilities.			✓	K-1
Comment: *Ongoing. Staff is continually budgeting, requesting development to design and build conduit in needed zones to close any holes or complete loops.*				
Action K-2—Develop and maintain an inventory of City Critical Facilities			✓	K-7
Comment: *Ongoing. This action is complete as of this planning period, but needs to stay in the forefront and can never truly be completed.*				
Action K-3—Open Space Preservation in identified high risk hazard area			✓	K-2
Comment: *This is being completed with our Comprehensive Plan, it is currently in the last stages of being approved at the City level and should be heading to the County sometime thereafter. In approval process 8/13/20*				
Action K-4—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.			✓	K-4
Comment: *Hiring of our new Staff Engineers. Staff is dedicated and supported by the Public Works Director to get more FEMA training and to ultimately become Floodplain Manager Certified.*				
Action K-5—Continue to integrate Multi-Hazard Mitigation Plan into future updates of the Kuna Comprehensive Plan			✓	K-2
Comment: *Comprehensive Plan is currently under its last stages of review.*				
Action K-6—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.			✓	K-10
Comment: *No known properties that have sustained any damage more or less repeated damages*				
Action K-7—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.	✓			
Comment: *In our Comprehensive Plan we have created buffer areas and riparian zone in and along Indian Creek, Mason Creek and several other large canals to push homes and structures back from those water ways for preservation of green space but also to hopefully mitigate any potential damages during a flood type event.*				
Action K-8—Support County-wide initiatives identified in Volume 1.			✓	K-8
Comment: *Continue this process as the city grows.*				
Action K-9—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.			✓	K-3
Comment: *We will gladly continue our support of this plan*				
Action K-10—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			✓	K-9
Comment: *SCADA now runs on Cradle Points – however we need to continue this process as the City grows*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action K-11—Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.		✓		
Comment: *Better suited with the Kuna Rural Fire Department*				

5.8 HAZARD MITIGATION ACTION PLAN

Table 5-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 5-14 identifies the priority for each action. Table 5-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 5-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action K-1—Where appropriate support development lead construction of conduit infrastructure to close any loops or holes in the City of Kuna's Fiber Infrastructure. Where needed, budget for and construct needed infrastructure.						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Dam/Canal Failure, Landslide						
Existing	1, 3, 8, 9, 10	City of Kuna	EMCR	High	HMGP, BRIC, FMA, ICC	Short-term
Action K-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the Kuna Comprehensive Plan						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Dam/Canal Failure, Landslide						
New & Existing	3, 4, 5, 8, 9	City of Kuna	EMCR	Low	Staff Time, General Funds	Ongoing
Action K-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Drought, Volcano, Dam/Canal Failure, Landslide						
New & Existing	All	City of Kuna	EMCR	Low	Staff Time, General Funds, FEMA Mitigation Grant Funding for 5-year update	Short-term
Action K-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Flood, Dam/Canal Failure						
New & Existing	2 ,3, 4 ,5 ,6 ,9	Planning & Zoning	N/A	Low	Staff Time, General Funds	Ongoing
Action K-5—Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions including but not limited to the following: • Lack of Irrigation Water • Wildfire • Canal Failures						
Hazards Mitigated: Extreme Weather, Flood, Drought, Wildfire						
New & Existing	2, 3, 4, 5, 6, 9	City of Kuna	EMCR	Low	Staff Time, General Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action K-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including City Hall and the new Kuna East Operations Center						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Dam/Canal Failure, Landslide						
New & Existing	All	City of Kuna	EMCR	Low	General Funds, Development	Short Term
Action K-7— Develop and maintain an inventory of City Critical Facilities						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Drought, Volcano, Dam/Canal Failure, Landslide						
Existing	All	Public Works	GIS Department	Medium	General Funds	Ongoing
Action K-8— Support County-wide initiatives identified in Volume 1.						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Drought, Volcano, Dam/Canal Failure, Landslide						
New & Existing	All	City of Kuna	EMCR	Low	Unknown	Ongoing
Action K-9— Continually update the SCADA process, look for redundancy with Fiber and Cell usage.						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Drought, Volcano, Dam/Canal Failure, Landslide						
New & Existing	All	City of Kuna	EMCR	Medium	Budget Process	Short Term
Action K-10— Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Extreme Weather, Flood, Earthquake, Wildfire, Volcano, Dam/Canal Failure, Landslide						
New & Existing	3, 8, 9	City of Kuna		High	HMGP, FMA, BRIC	Short Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 5-14. Mitigation Action Priority

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

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

Table 5-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	2, 4, 5	1, 6, 10	8, 9	2, 4, 5	6, 9		5	3, 7, 8
Medium-Risk Hazards								
Flood	2, 5	1, 6, 10	8, 9	2, 4, 5	6, 9		5	3, 7, 8
Earthquake	2	1, 6, 10	8, 9	2	6, 9			3, 7, 8
Low-Risk Hazards								
Wildfire	2, 5	1, 6, 10	8, 9	2, 5	6, 9		5	3, 7, 8
Drought	5	1, 6	8, 9	2, 5	6, 9		5	3, 7, 8
Volcano					6, 9			3, 7, 8
Dam/Canal Failure	2, 4	1, 6, 10	8, 9	2, 4	6, 9			3, 7, 8
Landslide	2,	1			6, 9			3, 7, 8

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

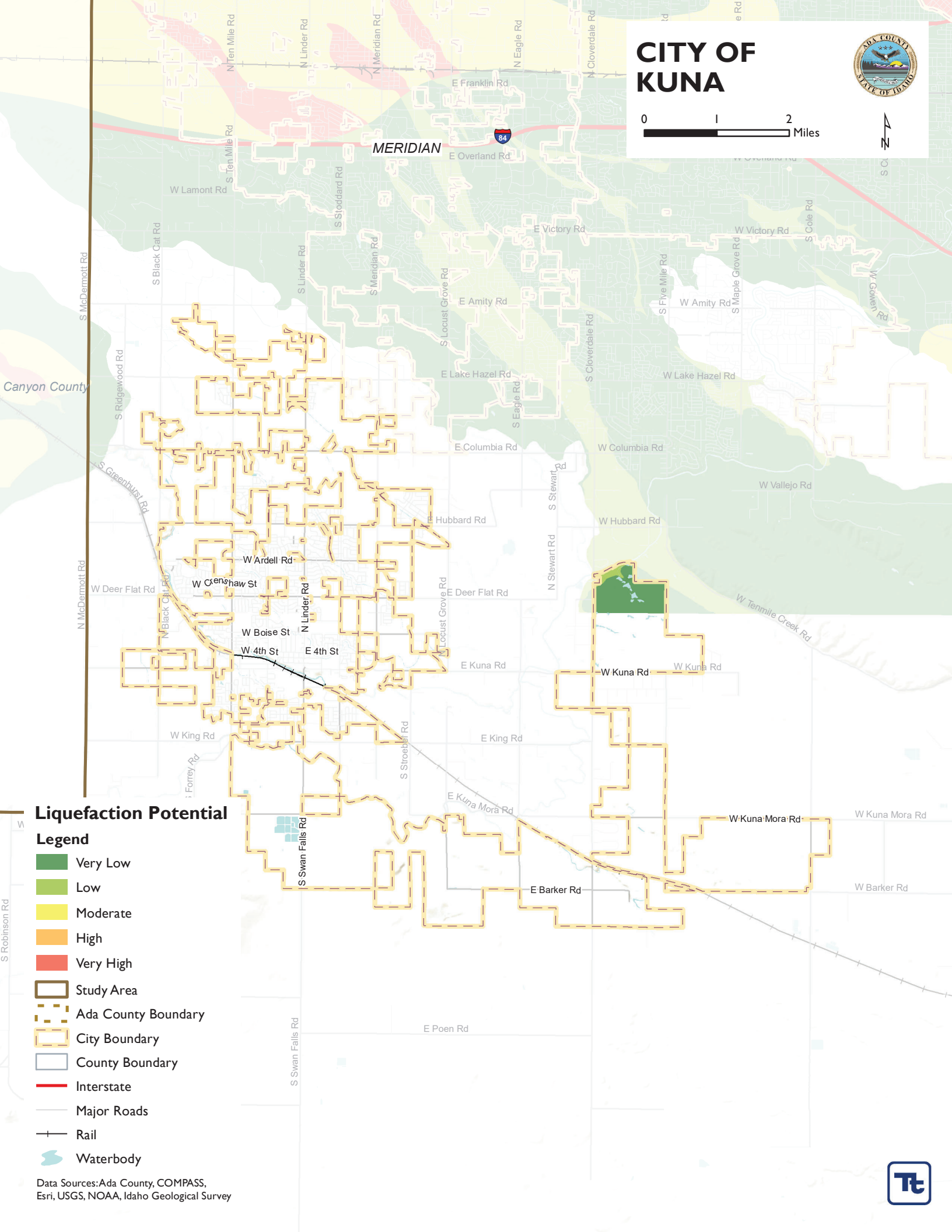
5.9 INFORMATION SOURCES USED FOR THIS ANNEX

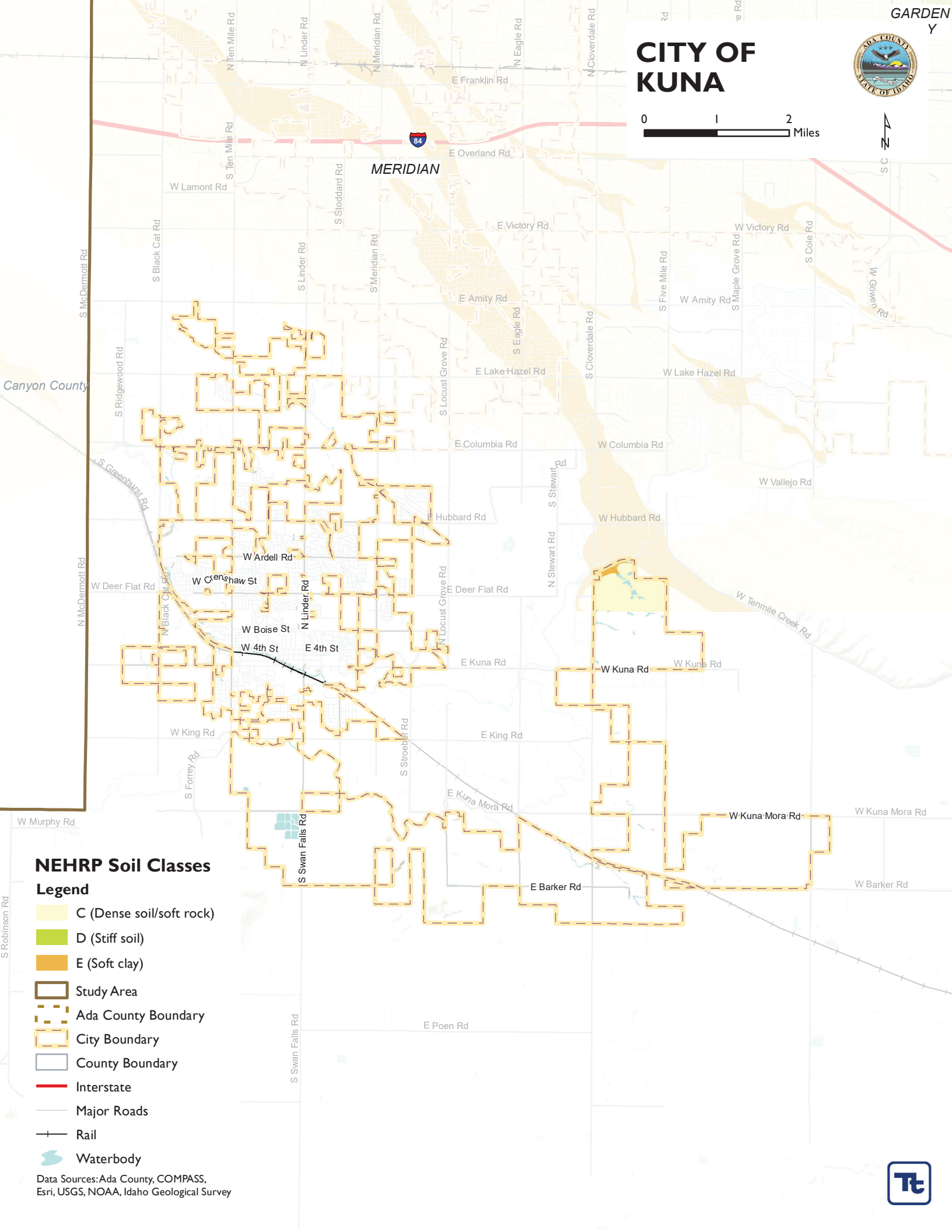
The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

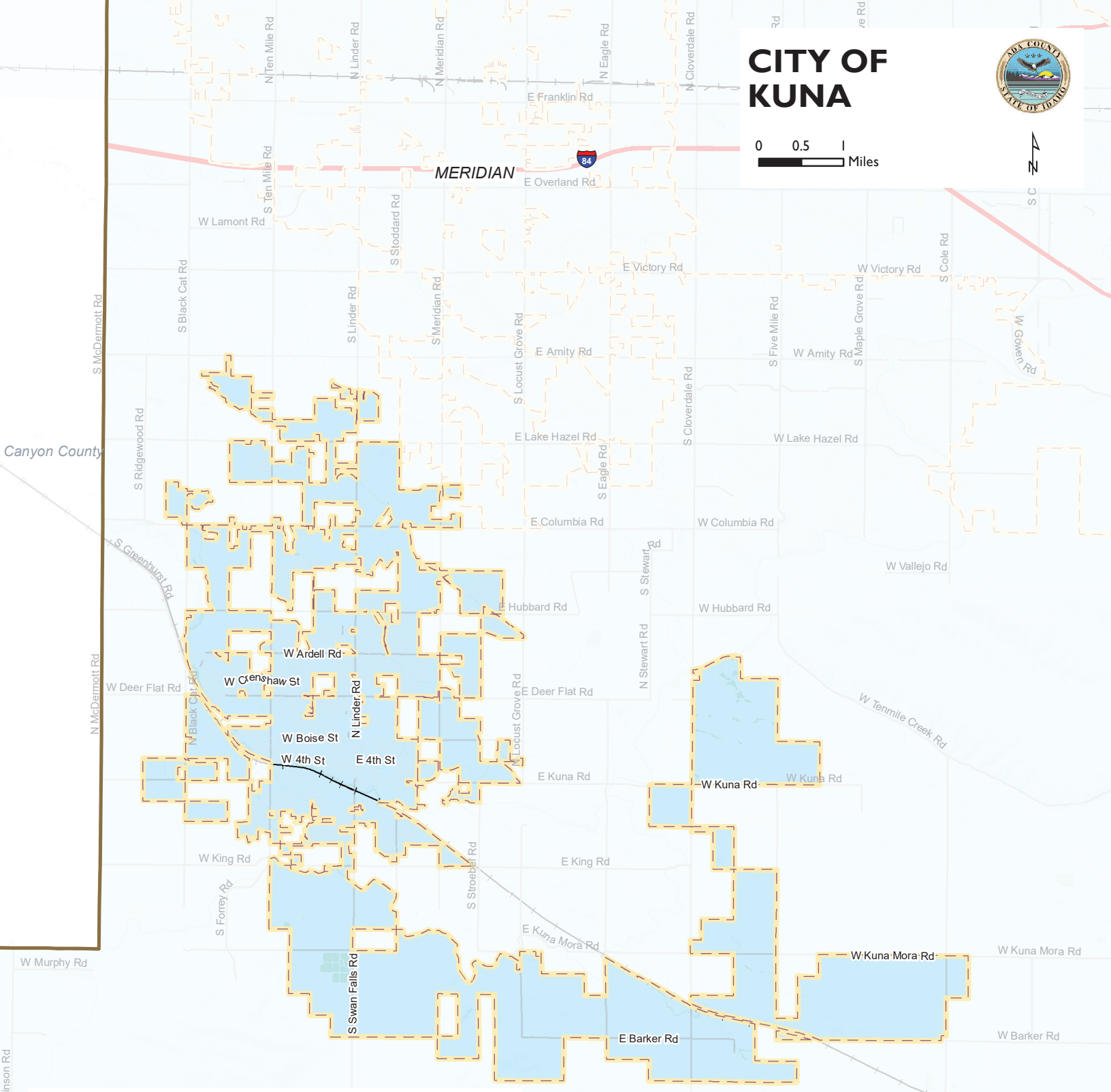
- **2017 Ada County Multi-Hazard Mitigation Plan** – The previous HMP was reviewed to update this annex.
- **Kuna Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.


CITY OF KUNA
0
1
2
Miles
N
MERIDIAN
E Franklin Rd
E Overland Rd
W Lamont Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Hazel Rd
E Columbia Rd
W Columbia Rd
W Vallejo Rd
E Hubbard Rd
W Hubbard Rd
E Deer Flat Rd
W Deer Flat Rd
W Ardell Rd
W Greenshaw St
W Boise St
W 4th St
E 4th St
E Kuna Rd
W Kuna Rd
W Kuna Rd
W King Rd
E King Rd
E Kuna Mora Rd
W Kuna Mora Rd
W Kuna Mora Rd
E Barker Rd
W Barker Rd
E Poen Rd
Canyon County
N Ten Mile Rd
S Ten Mile Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
N Cloverdale Rd
S Stoddard Rd
S Black Cat Rd
S Linder Rd
S Meridian Rd
S Locust Grove Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
W Gowen Rd
S McDermott Rd
S Ridgewood Rd
S Cloverdale Rd
S Eagle Rd
S Greenhurst Rd
S Stewart Rd
N Stewart Rd
N McDermott Rd
N Black Cat Rd
N Locust Grove Rd
W Tenmile Creek Rd
S Stroebel Rd
S Forrey Rd
S Swan Falls Rd
S Robinson Rd
Liquefaction Potential
Legend
Very Low
Low
Moderate
High
Very High
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF KUNA
0
1
2
Miles
N
GARDEN Y
MERIDIAN
Canyon County
E Franklin Rd
E Overland Rd
W Lamont Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Hazel Rd
E Columbia Rd
W Columbia Rd
W Vallejo Rd
E Hubbard Rd
W Hubbard Rd
E Deer Flat Rd
W Deer Flat Rd
W Ardell Rd
W Cranshaw St
W Boise St
W 4th St
E 4th St
E Kuna Rd
W Kuna Rd
W King Rd
E King Rd
E Kuna Mora Rd
W Kuna Mora Rd
W Murphy Rd
E Barker Rd
W Barker Rd
E Poen Rd
W Tenmile Creek Rd
N Ten Mile Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
N Cloverdale Rd
S Ten Mile Rd
S Stoddard Rd
S Black Cat Rd
S Linder Rd
S Meridian Rd
S McDermott Rd
S Ridgewood Rd
S Locust Grove Rd
S Eagle Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
W Gowen Rd
S Greenhurst Rd
N McDermott Rd
N Black Cat Rd
N Locust Grove Rd
S Stewart Rd
N Stewart Rd
S Forrey Rd
S Stroebel Rd
S Swan Falls Rd
S Robinson Rd
NEHRP Soil Classes
Legend
C (Dense soil/soft rock)
D (Stiff soil)
E (Soft clay)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey



100-Year Probabilistic Earthquake Scenario

Legend

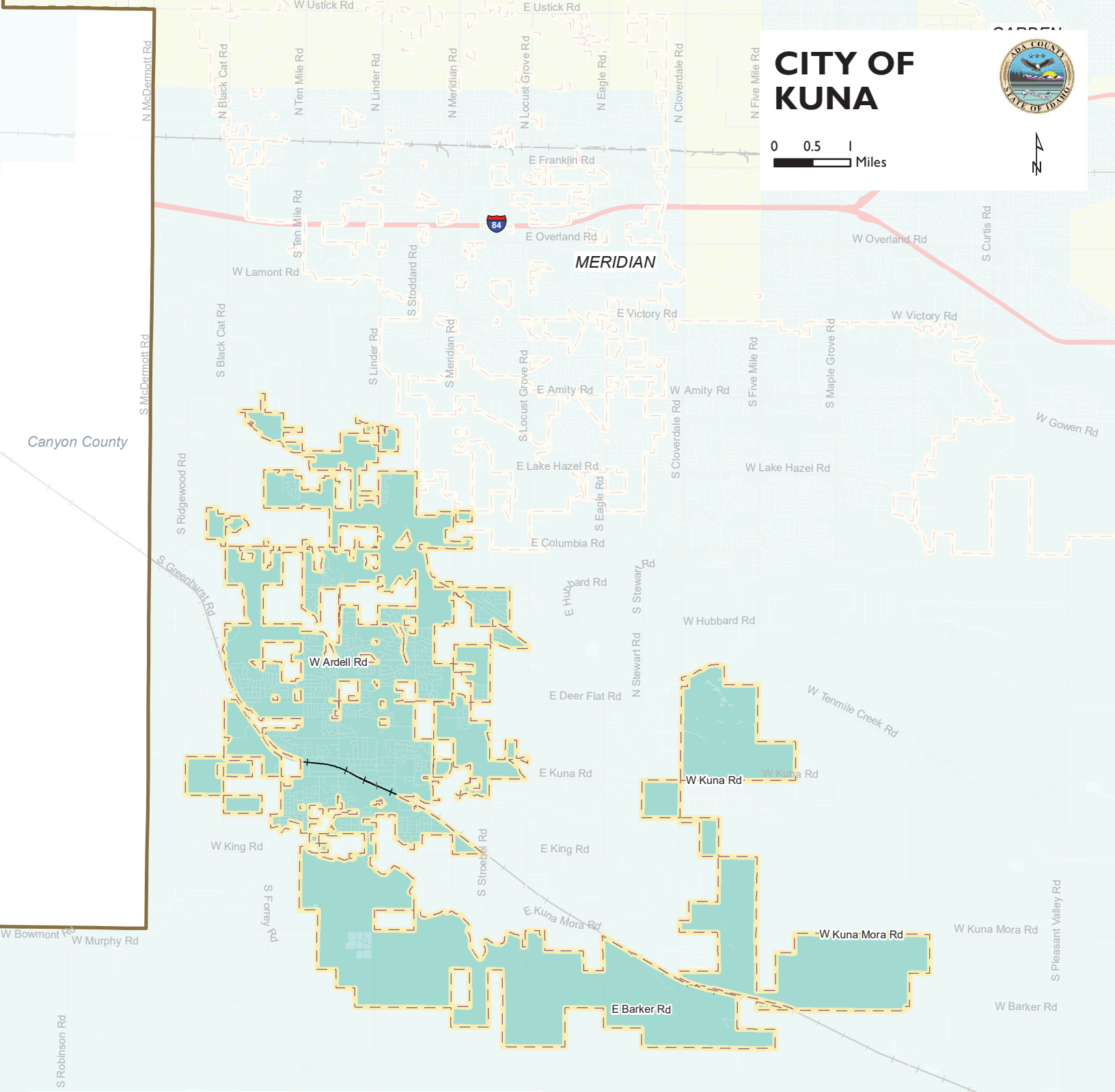
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



500-Year Probabilistic Earthquake Scenario

Legend

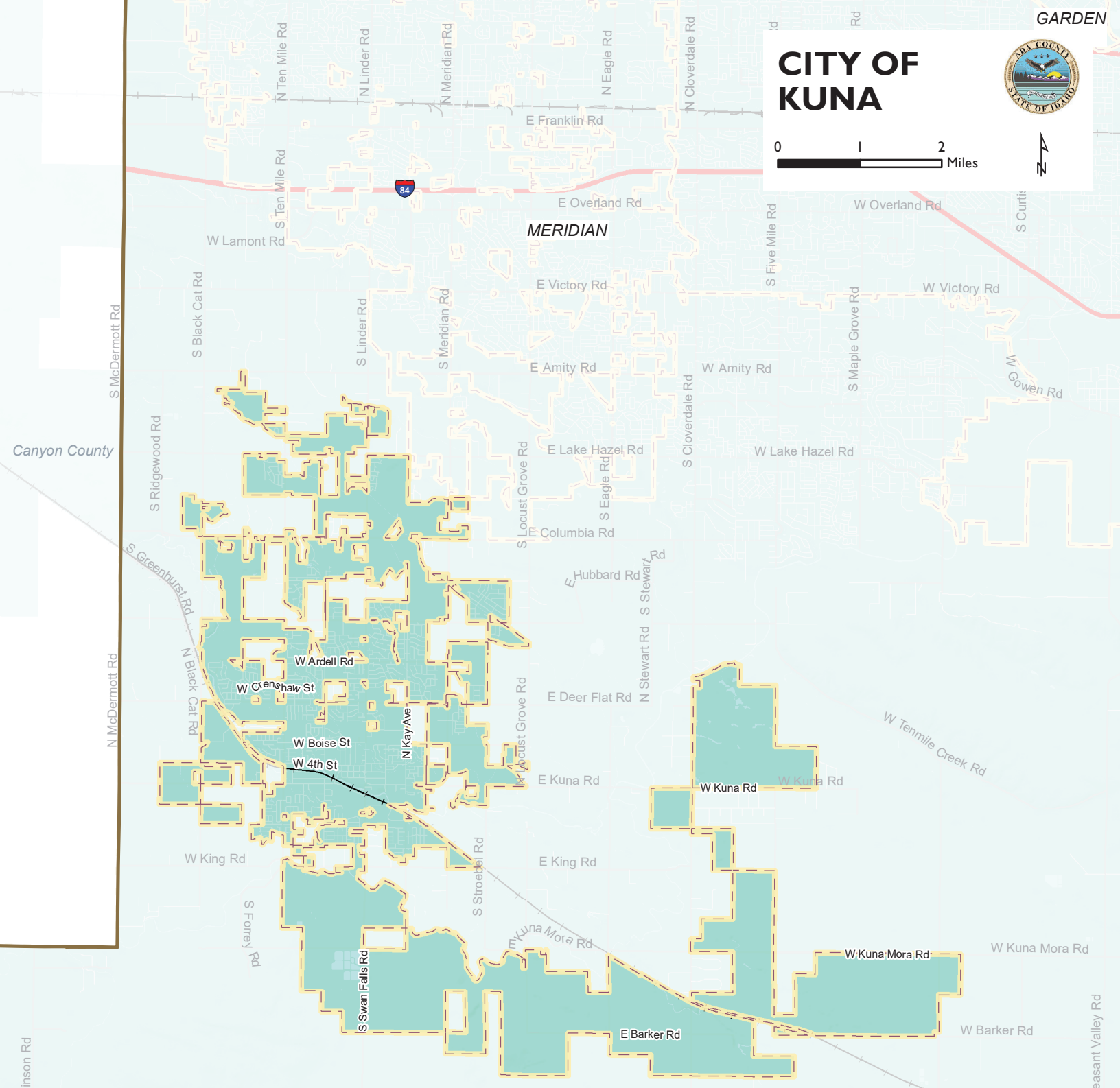
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



Big Flat-Jake Creek M6.81 Earthquake Scenario

Legend

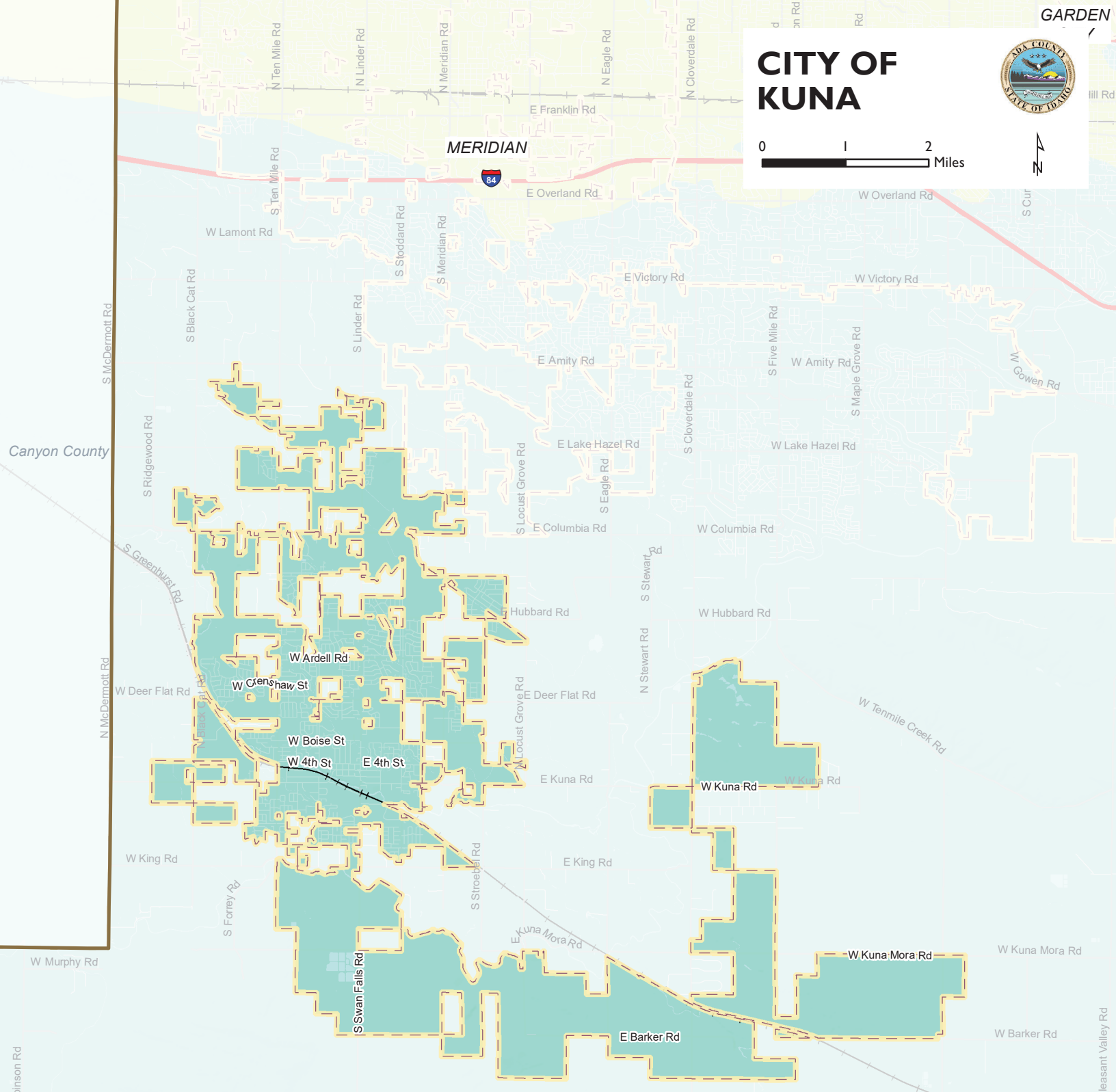
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



Squaw Creek M7.03 Earthquake Scenario

Legend

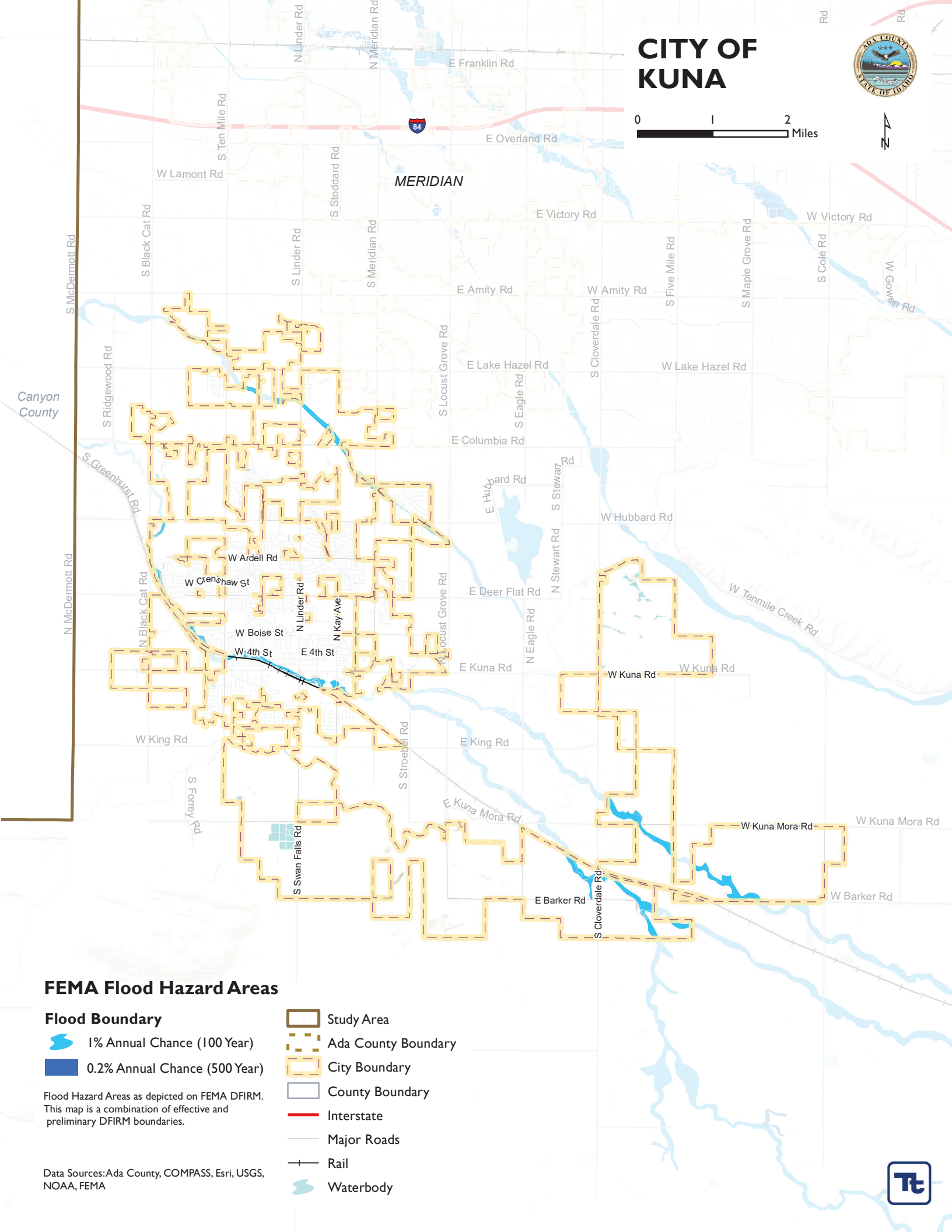
Mercalli Intensity Scale

- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



FEMA Flood Hazard Areas

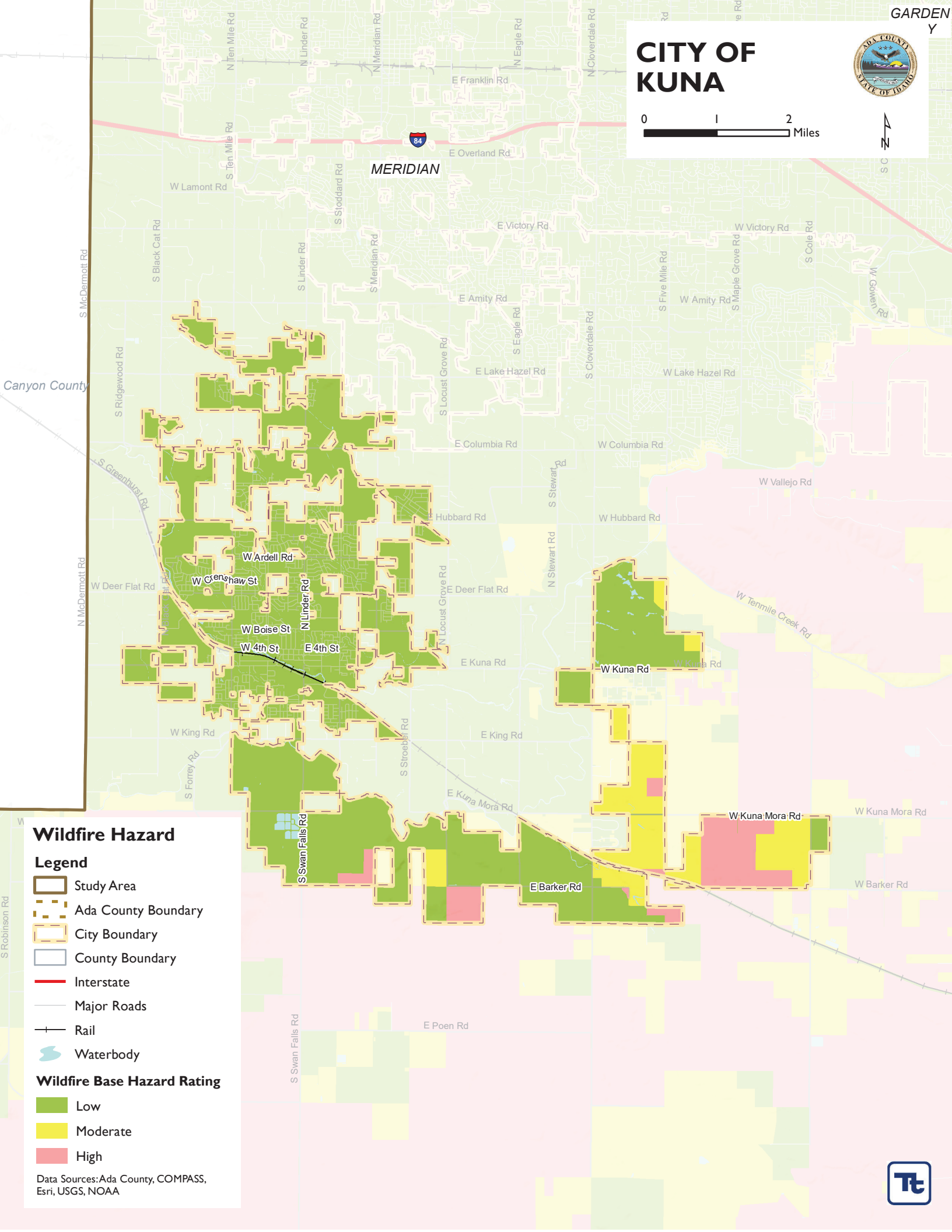
Flood Boundary

- 1% Annual Chance (100 Year)
- 0.2% Annual Chance (500 Year)

Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA


CITY OF KUNA
0
1
2
Miles
N
GARDEN
Y
MERIDIAN
Canyon County
E Franklin Rd
E Overland Rd
W Lamont Rd
E Victory Rd
W Victory Rd
E Amity Rd
W Amity Rd
E Lake Hazel Rd
W Lake Hazel Rd
E Columbia Rd
W Columbia Rd
W Vallejo Rd
E Hubbard Rd
W Hubbard Rd
E Deer Flat Rd
W Deer Flat Rd
W Ardell Rd
W Crenshaw St
W Boise St
W 4th St
E 4th St
N Linder Rd
E Kuna Rd
W Kuna Rd
W Tenmile Creek Rd
W King Rd
E King Rd
E Kuna Mora Rd
W Kuna Mora Rd
S Swan Falls Rd
E Barker Rd
W Barker Rd
E Poen Rd
S Ten Mile Rd
N Ten Mile Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
N Cloverdale Rd
S Stoddard Rd
S Meridian Rd
S Black Cat Rd
S McDermott Rd
N McDermott Rd
S Ridgewood Rd
S Linder Rd
S Locust Grove Rd
N Locust Grove Rd
S Eagle Rd
S Cloverdale Rd
S Five Mile Rd
S Maple Grove Rd
S Cole Rd
W Gowen Rd
S Greenhurst Rd
S Stewart Rd
N Stewart Rd
S Strobel Rd
S Forrey Rd
S Robinson Rd
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

6. CITY OF MERIDIAN

6.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Jason Korn, Environmental Programs Coordinator
33 E Broadway Ave
Meridian, ID 83642
Telephone: 208-489-0364
e-mail Address: jkorn@meridiancity.org

Alternate Point of Contact
Joanna Hopson, Business Programs Manager
33 E Broadway Ave
Meridian, ID 83702
Telephone: 208-898-5500
e-mail Address: jhopson@meridiancity.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 6-1.

Table 6-1. Local Hazard Mitigation Planning Team Members

Name	Title
Caleb Hood	Planning Division Manager
Joe Bongiorno	Deputy Chief
Jason Korn	Environmental Programs Coordinator
Joanna Hopson	Business Programs Coordinator

6.2 JURISDICTION PROFILE

6.2.1 Location and Features

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.

Meridian is favored by a mild, arid climate. July is the hottest month, with the average high temperature of 90º F. January is the coldest month with an average low temperature of 22º 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.

6.2.2 History

The City of Meridian was incorporated in August 1903. 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.

6.2.3 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.

6.3 CURRENT TRENDS

6.3.1 Population

According to COMPASS, the population of the City of Meridian as of April 2022 was 133,470. Since 2017, the population has grown at an average annual rate of 7.2 percent.

6.3.2 Development

As of November 2021, single family housing is the predominant development in Meridian, accounting for 82% of all dwelling units. Additionally, at the end of 2021, Meridian provided 21% of available jobs in Ada County, or 53,035. Meridian seeks to offer a diversity of housing products, create strong and sustainable jobs, improve infrastructure, and support diversified modes of transportation.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 6-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 6-2. Recent and Expected Future Development Trends

Criterion		Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?		Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	1,876 acres; 10,500 parcels	
Is your jurisdiction expected to annex any areas during the performance period of this plan?		Yes
If yes, describe land areas and dominant uses.	Agricultural	
If yes, who currently has permitting authority over these areas?	Ada County	
Are any areas targeted for development or major redevelopment in the next five years?		Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	West Meridian including the Fields Area west of McDermott (north of I-84) south of Chinden. This area includes Tenmile and Fivemile Creek SFHA. South East Meridian south of Amity and generally north of Columbia, between Eagle and Meridian roads. No known hazard risk areas. South West Meridian, south of I-84 west of Tenmile Rd. No know hazard risk areas.	

Criterion	Response					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		**2016**	**2017**	**2018**	**2019**	**2020**
	Single Family	1368	1428	1812	2109	1867
	Multi-Family	45	86	110	104	111
	Other	66	79	79	110	52
	Total	1569	1692	2171	2273	2076
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• Special Flood Hazard Areas: 5 new structures since 2016. 1 Mobile Home and 4 Commercial buildings all elevated above BFE. Development on Ninemile, Eightmile and Fivemile Creek floodplains. • Landslide: 0 • High Liquefaction Areas: 0 • Wildfire Risk Areas: 0					
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Total area of Meridian area of annexed is 60.3% with 39.7% not annexed Land use breakdown of area currently annexed compared to area not yet annexed: Residential: 56% annexed / 44% not annexed Mixed Use: 17% annexed / 83% not annexed Employment: 71% annexed / 29% not annexed Civic: 84% annexed / 16 % not annexed					

6.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 6-3.
- Development and permitting capabilities are presented in Table 6-4.
- An assessment of fiscal capabilities is presented in Table 6-5.
- An assessment of administrative and technical capabilities is presented in Table 6-6.
- An assessment of education and outreach capabilities is presented in Table 6-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-8.
- Classifications under various community mitigation programs are presented in Table 6-9.

Table 6-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
Comment: ***Comment*** *: Meridian City Code Title 10, Chapter 1; Adopted 1/12 2020; Ord. #20-1905*				
Zoning Code	Yes	No	No	No
Comment: ***Comment****: Meridian City Code Title 11, Chapter 2; Adopted 7/8/2008; Ord. #08-1372*				
Subdivisions	Yes	No	No	No
Comment: ***Comment****: Meridian City Code Title 11, Chapter 6; Adopted 7/8/2008; Ord. #08-1372*				
Stormwater Management	No	Yes	No	No
Comment: ***Comment****: ACHD owns and operates storm drain system on public roadways. City of Meridian Design Standards Section 7, Grading and Drainage Standards.*				
Post-Disaster Recovery	No	No	No	No
Comment:				
Real Estate Disclosure	No	No	No	No
Comment:				
Growth Management	Yes	No	No	No
Comment: ***Comment****: City of Meridian Comprehensive Plan; Adopted 12/17/2019; Resolution #19-2179*				
Site Plan Review	Yes	No	No	No
Comment: ***Comment****: Multiple City Ordinances and Departments.*				
Environmental Protection	Yes	No	No	No
Comment: ***Comment****: Multiple City Ordinances and Departments.*				
Flood Damage Prevention	Yes	No	No	No
Comment: ***Comment****: Meridian City Code Title 10, Chapter 6; Adopted 5/12/2020; Ord. #20-1879*				
Emergency Management	Yes	Yes	No	Yes
Comment: ***Comment****: Emergency Management for the City of Meridian is done in partnership with ACCEM. Meridian participates through the EMCR Board as well as representation on TAG (Technical Advisory Group).*				
Climate Change	No	No	No	No
Comment:				
Planning Documents				
General Plan	Yes	No	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? *No* ***Comment:*** *City of Meridian Comprehensive Plan; Adopted 12/17/2019; Resolution #19-2179*				
Capital Improvement Plan	Yes	No	No	No
How often is the plan updated? *Every year, 10-year time frame.* ***Comment:*** *Capital Improvement Plan has been integrated into Comprehensive Financial Plan for FY23-FY32*				
Disaster Debris Management Plan	No	Yes	No	Yes
Comment: *Draft Debris Management Annex awaiting adoption in EOP.*				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: *The 2022 Ada County Multi-Hazard Mitigation Plan qualifies as a flood hazard management plan under CRS criteria upon its completion and adoption*				
Stormwater Plan	No	Yes	No	No
Comment: *ACHD owns and operates storm drain system on public roadways and maintains a Stormwater Management Plan. Private Property runoff managed by City of Meridian Design Standards Section 7, Grading and Drainage Standards.*				
Urban Water Management Plan	No	No	No	No
Comment:				
Habitat Conservation Plan	No	No	No	No
Comment:				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan	Yes	Yes	No	No
Comment: *Meridian has economic development staff and an Urban Renewal Agency, Meridian Development Corp. (MDC). MDC has development plans for various districts including those with flood hazard concerns.*				
Shoreline Management Plan	No	No	No	No
Comment:				
Community Wildfire Protection Plan	No	No	No	No
Comment:				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	Yes	No	No	No
Comment:				
Comprehensive Emergency Management Plan	Yes	Yes	No	No
Comment: *The City has adopted a Comprehensive Emergency Operations Plan utilizing Emergency Support Functions.*				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	No
Comment: *Ada County THIRA – September 2018*				
Post-Disaster Recovery Plan	No	No	No	No
Comment:				
Continuity of Operations Plan	Yes	No	No	No
Comment: *Individual Departments have updated COOP plans 2021*				
Public Health Plan	No	Yes	No	No
Comment: *Central District Health Department Emergency Operations Plan, 2020. Fire Department does have input on Public Health planning via the ACCESS EMS system.*				

Table 6-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department? Community Development, Building Services	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 6-5. Fiscal Capability

Financial Resource	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
If yes, specify: Water and sewer utilities	
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

Table 6-6. Administrative and Technical Capability

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

Table 6-7. Education and Outreach Capability

Criterion	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, briefly describe:*** Links to Ada County Mitigation websites	Yes
Do you use social media for hazard mitigation education and outreach? ***If yes, briefly describe:*** Flood Safety Awareness Week posts	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ***If yes, briefly describe:***	No
Do you have any other programs in place that could be used to communicate hazard-related information? ***If yes, briefly describe:*** Annual CRS mailings to property owners in floodplain, Social Media and in person outreach events such as Public Works Week.	Yes
Do you have any established warning systems for hazard events? ***If yes, briefly describe:*** Code Red – residents may sign up to receive emergency notifications and critical community alerts. Ada County EMCR developed a Joint Information System Plan that delineates the processes with developing a regional joint information system and center for coordinating public information messaging.	Yes

Table 6-8. National Flood Insurance Program Compliance

Criterion	Response
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
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	5/12/2020
Does your floodplain management program meet or exceed minimum requirements?	Exceed
If exceeds, in what ways? 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?	11/6/2017
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? Many Zone A hazard areas remain on Tenmile Creek and Fivemile Creek that require additional analysis. Many areas are mis-aligned and far from the actual waterway channel.	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? Need ongoing training for CFM certification and cross training backup floodplain management staff	Yes
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
If yes, is your jurisdiction interested in improving its CRS Classification? No	
How many flood insurance policies are in force in your jurisdiction?[a]	120
What is the insurance in force? $32,569,900	
What is the premium in force? $87,637	
How many total loss claims have been filed in your jurisdiction?[a]	1
What were the total payments for losses? $-	

a. According to FEMA statistics as of March 31, 2022

Table 6-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	1600152120	N/A
DUNS #	Yes	028451367	N/A
Community Rating System	Yes	8	7/25/2016
Building Code Effectiveness Grading Schedule	Yes	5	10/19/2020
Public Protection	Yes	ISO Class 3	2020
Storm Ready	Yes	Blue	N/A
Firewise	No	N/A	N/A

6.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard

mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

6.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **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.

6.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Comprehensive Plan Existing Conditions Report (ECR)—**Integrate mitigation plan risk assessment into hazardous areas section and reference mitigation actions in specific hazard sections.
- **Comprehensive Financial Plan (CFP)—**Mitigation may be funded, in part, through the City CFP plan and if grant funds are awarded for mitigation they need to be programmed into the CFP.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

6.6 RISK ASSESSMENT

6.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 6-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

6.6.2 Hazard Risk Ranking

Table 6-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 6-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Thunderstorm/Microburst	N/A	6/22/2021	Tree broken in half due to thunderstorm outflow winds. Estimated 60MPH wind gusts
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

Table 6-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Flood	18	Medium
3	Earthquake	16	Medium
4	Drought	9	Low
5	Dam/Canal Failure	6	Low
6	Landslide	6	Low
7	Volcano	6	Low
8	Wildfire	0	Low

6.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

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

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

6.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 6-12 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 6-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action 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.	✓			
Comment: *Wastewater treatment plant installed new switch for backup generator and has moved above ground power lines underground in 2021. Added new item to address backup power availability at other critical facilities.*				
Action M-2—Become a "Firewise Community"			✓	M-8
Comment: *Becoming a Firewise community is still a goal of the Meridian Fire Department as the City expands into more wildfire prone areas.*				
Action 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.			✓	M-4
Comment: *City of Meridian maintains good standing under the NFIP and continues to enforce flood damage prevention ordinance through floodplain administration program.*				
Action M-4—Maintain, and improve where beneficial, participation rating in the Community Rating System (CRS)			✓	M-15
Comment: *City of Meridian currently maintains a CRS Rating of 8 and underwent Cycle Verification in 2020.*				
Action M-5—Evaluate surface water protection program, including surface water restoration, stormwater management, capital improvement program integration, and potential regulatory and fee impacts.		✓		
Comment: *The Ada County Highway District operates the storm drain system and maintains a Stormwater Management Plan in the City of Meridian. Potential stream restoration and flood mitigation projects are listed as separate mitigation actions.*				
Action 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.			✓	M-14
Comment: *Culverts that have yet to be replaced are carried over to new plan.*				
Action M-7—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.	✓			
Comment: *ITD completed culvert improvements , LOMR effective November 2, 2018*				
Action M-8—Assist local irrigation districts with vulnerability assessments on the Ridenbaugh and New York Canal systems in the Meridian Area of Impact.		✓		
Comment: *Project is considered no longer feasible, remove from plan.*				
Action M-9—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.		✓		
Comment: *This action has been re-worded to include all high or medium risk hazard areas.*				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action M-10—Integrate Multi-Hazard Mitigation Plan into the City of Meridian's Comprehensive Plan.	✓			
Comment: *The Meridian City Council adopted a new Comprehensive Plan by resolution 19-2179 on December 17th, 2019. Multi-Hazard Mitigation Plan is integrated and referenced in the new comp plan. Sections Livable/Public Safety address hazards and coordination.*				
Action M-11—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern.	✓			
Comment: *To date, flood standards are consistent with community needs. Standards higher than the NFIP minimum remain in the new flood damage prevention ordinance effective 6/19/20. Other standards will be evaluated on on-going basis.*				
Action M-12—Support County-wide initiatives identified in Volume 1.			✓	M-19
Comment: *The city continues to support County-wide initiatives*				
Action M-13—Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.			✓	M-3
Comment: *Meridian continues to support the Ada County Multi-Jurisdictional Hazard Mitigation Plan planning process. Annual progress reporting using BATool.*				
Action M-14—Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.			✓	M-7
Comment: *Fire safety and prevention education and outreach program is an ongoing effort of the Meridian Fire Department.*				
Action M-15—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.			✓	M-18
Comment: *Continue to evaluate projects as opportunity arises.*				

6.8 HAZARD MITIGATION ACTION PLAN

Table 6-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 6-14 identifies the priority for each action. Table 6-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 613. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action M-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide						
Existing	3, 8, 9	City of Meridian	N/A	High	HMGP, BRIC, FMA	Short-term
Action M-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Flood Damage Prevention Ordinance, Community Risk Assessment and Comprehensive Plan.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought						
New & Existing	2, 5, 6	City of Meridian	Ada County	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action M-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated: Wildfire, Extreme Weather, Flood, Earthquake, Dam/Canal Failure, Landslide, Drought, Volcano						
New & Existing	All	City of Meridian	Ada County	Low	Staff Time, General Funds	Short-term
Action M-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated: Flood						
New & Existing	2, 3, 4, 6, 8, 9	City of Meridian	N/A	Low	Staff Time, General Funds, Enterprise Funds	Ongoing
Action M-5— Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions.						
Hazards Mitigated: Drought, Flood, Extreme Weather, Wildfire						
New & Existing	New & Existing	City of Meridian	N/A	Low	Staff Time, General Funds	Short-term
Action M-6— Identify and install the most suitable backup power solution for critical facilities and infrastructure that lack adequate backup power. Solutions may vary based on circumstances and could include but are not limited to generators, switches, battery storage, and solar systems.						
Hazards Mitigated: Flood, Extreme Weather, Earthquake						
Existing	1, 3, 10	City of Meridian	N/A	Medium	General Funds, Enterprise Funds, BRIC, HMGP	Long-term
Action M-7— Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.						
Hazards Mitigated: Wildfire						
New & Existing	4, 5, 7, 8, 9	City of Meridian	N/A	Low	Staff Time	Ongoing
Action M-8— Become a "Firewise Community"						
Hazards Mitigated: Wildfire						
New & Existing	4, 5, 7, 8, 9	City of Meridian	N/A	Low	Staff Time	Long-term
Action M-9— Update the Black's Creek Reservoir breach analysis and the resulting downstream flood inundation map using the most recent, highest resolution GIS data available. The model suggested for use should be HEC-RAS or an equivalent two-dimensional model that can satisfactorily recognize and address the hydrologic interactions with all natural and constructed geographic features that are located downstream of the facility. The breach analysis will model the reservoir at a full pool condition and will include two (2) scenarios consisting of (1) a non-flood failure (aka "sunny day"), and (2) a flood event failure during the 1% inflow design flood (aka 100-year flood).						
Hazards Mitigated: Flood, Dam/Canal Failure						
New & Existing	2, 6, 7, 8, 9	City of Meridian	N/A	Medium	BRIC, FMA, HMGP	Short-term
Action M-10— Ensure adequate water supply in drought conditions through purchasing space in new surface water storage projects.						
Hazards Mitigated: Drought, Dam/Canal Failure						
New & Existing	1, 9, 10	City of Meridian	IDWR	High	Enterprise Funds, Federal Grants	Long-term
Action M-11— Increase community capability for drought resilience by developing a water conservation plan						
Hazards Mitigated: Drought						
New & Existing	1, 2, 5, 6, 8	City of Meridian	N/A	Low	Staff Time, Grants	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action M-12— Increase community capability for mitigating landslide risk by developing hillside grading/drainage policies that provide adequate protections in steep topography.						
Hazards Mitigated: Landslide, Flood						
New	2, 4, 5	City of Meridian	N/A	Low	Staff Time	Long-term
Action M-13— Construct Ninemile Creek Flood Mitigation Project as designed to eliminate flood risk to people, property and critical lifelines. The proposed improvements include constructing storm drain infrastructure and pipeline from Story Park to the outlet into the existing Ninemile Creek Channel north of the Union Pacific Railroad tracks. (Coordinates with the Meridian Development Corporations Action MDC-4.)						
Hazards Mitigated: Flood						
Existing	1, 3, 9, 10	City of Meridian	MDC	$4.5 Million	HMGP, BRIC, MDC, FMA	Short-term
Action M-14— Partner with ACHD to facilitate the replacement of roadway culverts to include design and construction of crossings on Fivemile, Ninemile, Eightmile and Tenmile Creeks. (Coordinates with Ada County Highway District Action ACHD-5)						
Hazards Mitigated: Flood, Extreme Weather						
Existing	1, 3, 9, 10	ACHD	City of Meridian	High	ACHD, General Funds, BRIC, FMA, HMGP	Long -term
Action M-15— Continue to maintain/enhance the City's classification under the Community Rating System.						
Hazards Mitigated: Flood						
New & Existing	3, 4, 5, 6, 8	City of Meridian	N/A	Low	Staff Time, General Funds, Enterprise Funds	Ongoing
Action M-16— Correct alignment issues on the National Flood Hazard Layer to correctly align with creek channels on Fivemile and Tenmile Creeks to more accurately reflect flood risk.						
Hazards Mitigated: Flood						
New & Existing	2, 9	City of Meridian	FEMA	Low	General Funds, Enterprise Funds, Federal Grants	Long-Term
Action M-17—Conduct detailed hydraulic analysis on remaining FEMA Flood Zone A areas on Fivemile and Tenmile Creeks. Update maps through LOMR to accurately reflect flood risk.						
Hazards Mitigated: Flood						
New & Existing	2, 9	City of Meridian	FEMA	Low	General Funds, Enterprise Funds, Federal Grants	Long-Term
Action M-18— 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						
Hazards Mitigated: Flood						
New & Existing	2, 5, 9	City of Meridian	N/A	Medium	General Funds, BRIC, FMA, HMGP	Long-Term
Action M-19— Support County-wide initiatives identified in Volume 1.						
Hazards Mitigated: All hazards						
New & Existing	All	City of Meridian	EMCR	Low	Staff Time, General Funds	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 6-14. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Pursuit Priority[a]
1	3	High	High	Yes	Yes	No	Medium	High
2	7	Medium	Low	Yes	No	Yes	High	Low
3	3	Low	Low	Yes	No	Yes	High	Low
4	6	Medium	Low	Yes	No	Yes	High	Low
5	7	Medium	Low	Yes	No	Yes	High	Medium
6	3	High	Medium	Yes	Yes	No	Medium	High
7	5	Low	Low	Yes	No	Yes	Medium	Low
8	5	Low	Low	Yes	No	Yes	Medium	Low
9	5	Medium	Medium	Yes	Yes	No	Medium	High
10	3	High	High	Yes	Yes	No	Medium	Medium
11	5	Medium	Low	Yes	Yes	Yes	Medium	Low
12	3	Medium	Low	Yes	No	Yes	Medium	Low
13	4	High	High	Yes	Yes	No	High	High
14	4	High	High	Yes	Yes	No	Medium	Medium
15	5	Medium	Low	Yes	No	Yes	High	Low
16	2	Medium	Low	Yes	Yes	No	Medium	Medium
17	2	High	Medium	Yes	Yes	No	Medium	Medium
18	3	High	Medium	Yes	Yes	No	Medium	Medium
19	10	Low	Low	Yes	No	Yes	High	Low

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

Table 6-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	M-2	M-1	M-5		M-6	M-14	M-5	M-3, 5, 19
Medium-Risk Hazards								
Flood	M-2, 4, 12, 15, 16, 17	M-1	M-4, 5, 9	M-18	M-6	M-13, 14	M-5, 18	M-3, 4, 5, 9, 12, 15, 16, 17, 18, 19
Earthquake	M-2	M-1			M-6			M-3, 19
Low-Risk Hazards								
Drought	M-2, 11		M-5	M-10		M-10	M-5	M-3, 5, 10, 11, 19
Dam/Canal Failure	M-2	M-1	M-9	M-10		M-10		M-3, 9, 10, 19
Landslide	M-2, 12	M-1						M-3, 12, 19
Volcano								M-3, 19
Wildfire	M-2	M-1	M-5, 7, 8				M-5	M-3, 5, 8, 19

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

6.9 PUBLIC OUTREACH

Table 6-16 lists public outreach activities for this jurisdiction.

Table 6-16. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Social Media share of Ada County survey posts	12/8/2021	unknown
Meridian Public Works Week – Floodplain Booth HMP information	6/8/2022	unknown

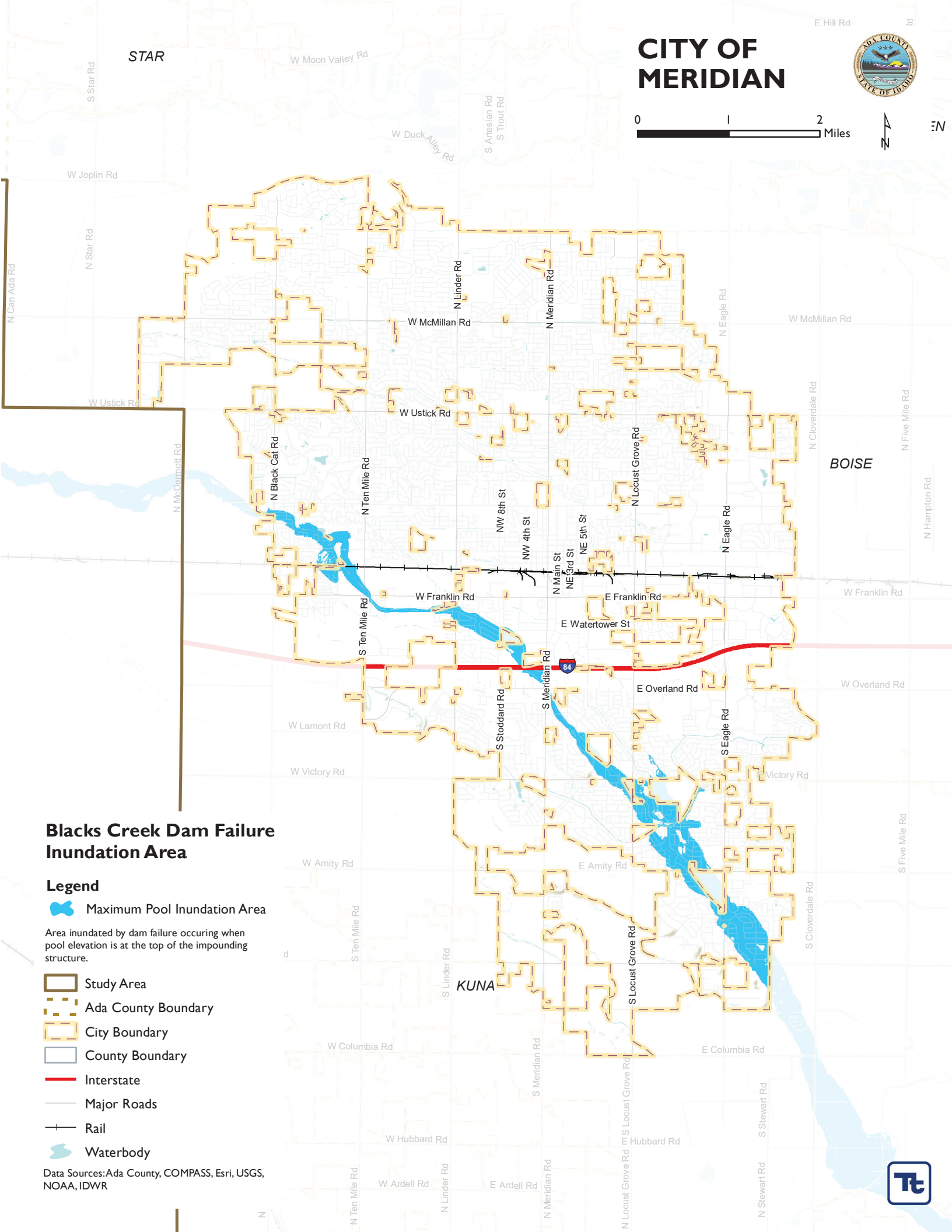
6.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **2017 Ada County Multi-Hazard Mitigation Plan –** The previous HMP was reviewed to update this annex.
- **City of Meridian Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Meridian Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.



Blacks Creek Dam Failure Inundation Area

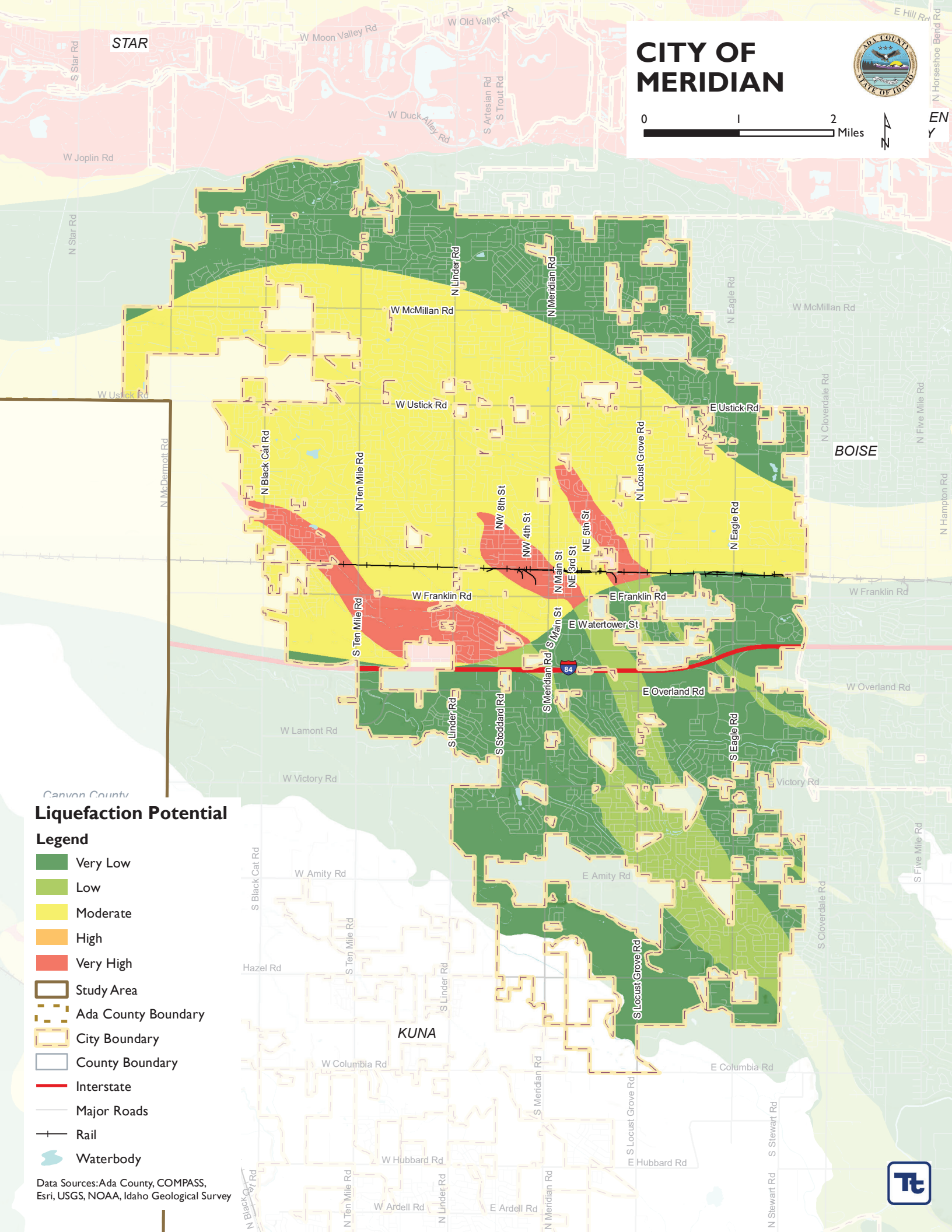
Legend

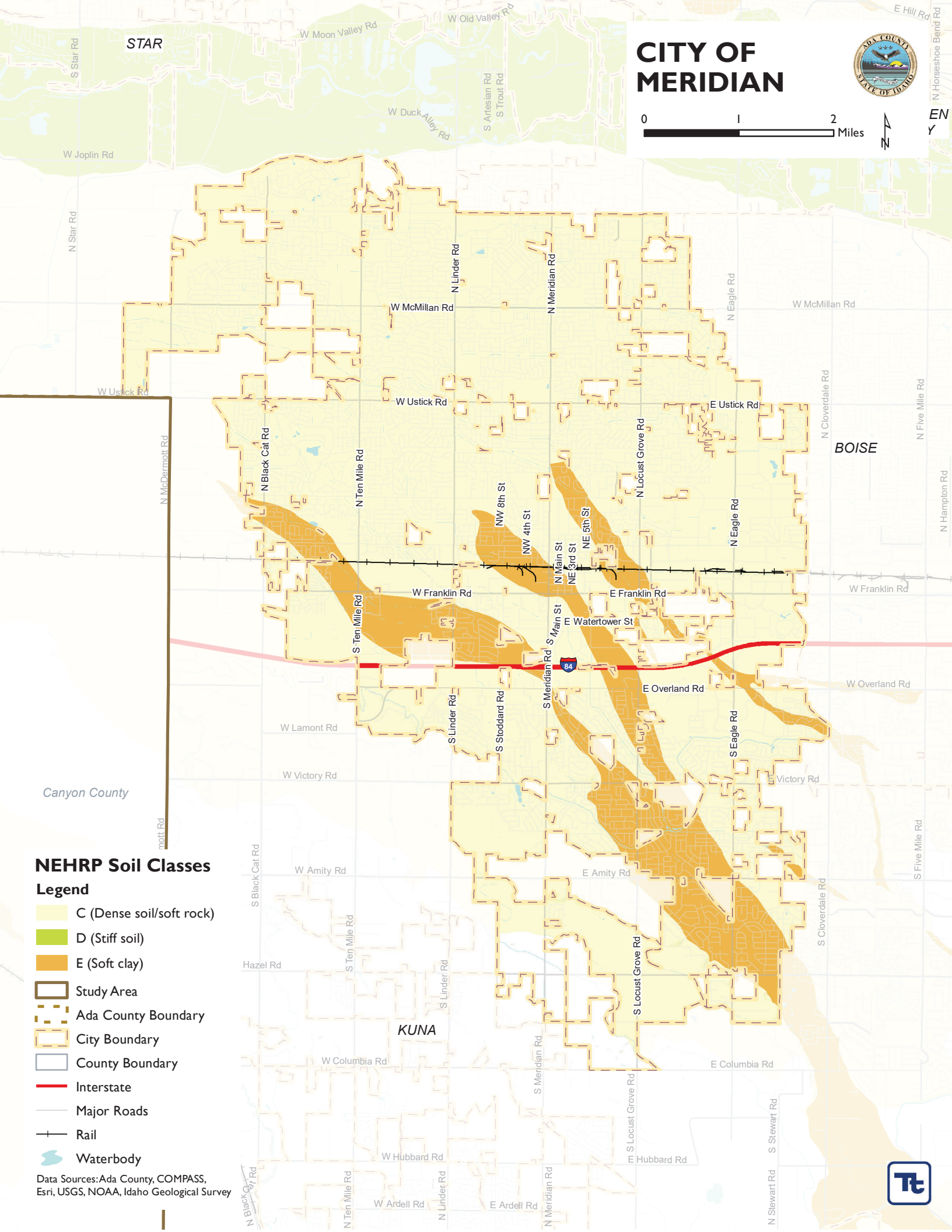
Maximum Pool Inundation Area

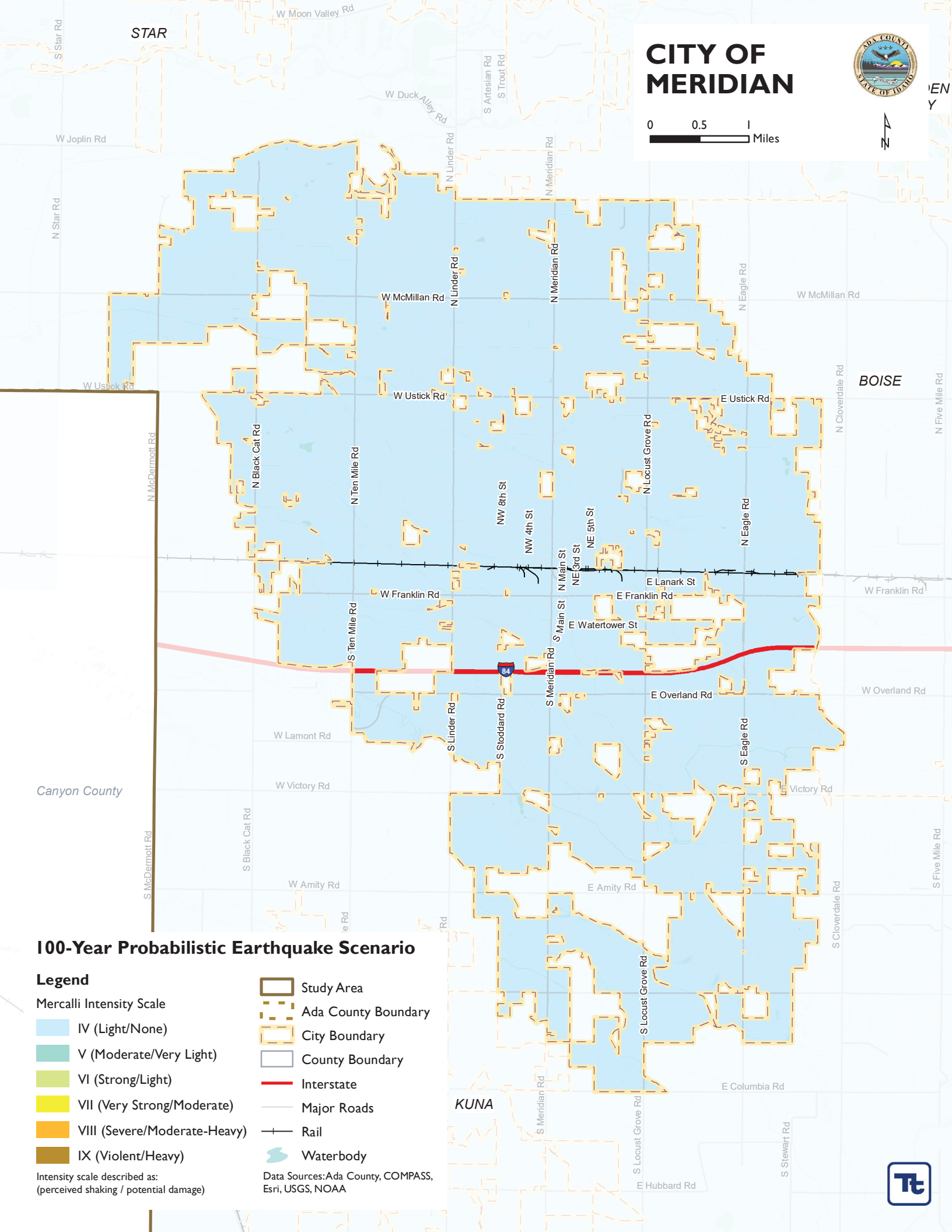
Area inundated by dam failure occuring when pool elevation is at the top of the impounding structure.

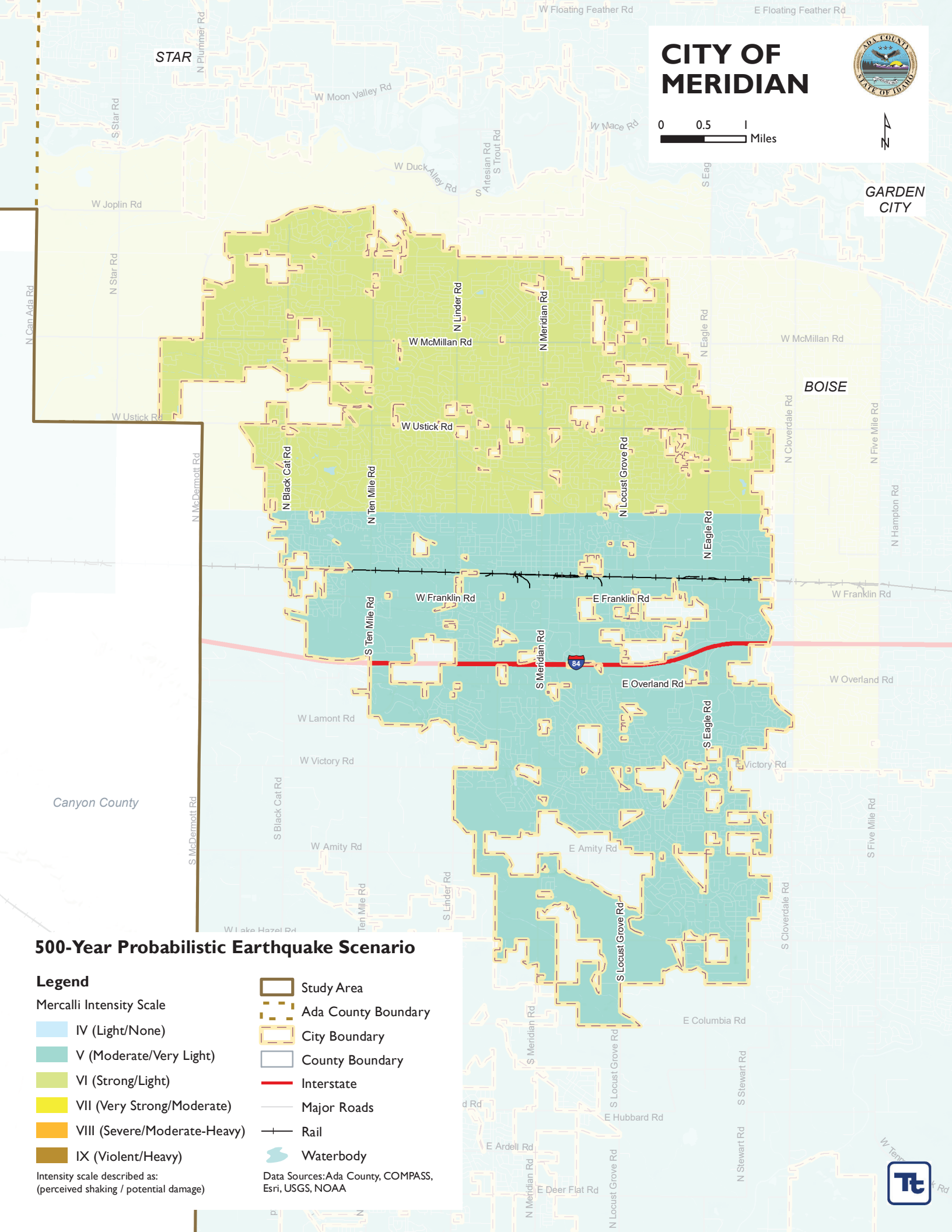
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, IDWR


CITY OF MERIDIAN
0
1
2
Miles
N
STAR
BOISE
KUNA
Canyon County
W Moon Valley Rd
W Old Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
E Hill Rd
N Horseshoe Bend Rd
N Linder Rd
N Meridian Rd
W McMillan Rd
N Eagle Rd
W Ustick Rd
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
NW 8th St
NW 4th St
NE 5th St
NE 3rd St
N Main St
N Locust Grove Rd
N Eagle Rd
N Hampton Rd
W Franklin Rd
E Franklin Rd
S Ten Mile Rd
S Main St
E Watertower St
S Meridian Rd
84
E Overland Rd
W Overland Rd
W Lamont Rd
S Linder Rd
S Stoddard Rd
S Eagle Rd
W Victory Rd
Victory Rd
W Amity Rd
E Amity Rd
S Black Cat Rd
S Five Mile Rd
S Cloverdale Rd
Hazel Rd
S Locust Grove Rd
W Columbia Rd
E Columbia Rd
S Meridian Rd
S Stewart Rd
W Hubbard Rd
E Hubbard Rd
W Ardell Rd
E Ardell Rd
N Ten Mile Rd
N Linder Rd
N Meridian Rd
N Stewart Rd
Liquefaction Potential
Legend
Very Low
Low
Moderate
High
Very High
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources:Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF MERIDIAN
0
1
2
Miles
N
STAR
BOISE
KUNA
Canyon County
W Moon Valley Rd
W Old Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
E Hill Rd
N Horseshoe Bend Rd
N Linder Rd
N Meridian Rd
W McMillan Rd
N Eagle Rd
W Ustick Rd
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N Hampton Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
N Locust Grove Rd
NW 8th St
NW 4th St
NE 5th St
NE 3rd St
N Main St
W Franklin Rd
E Franklin Rd
E Watertower St
S Ten Mile Rd
S Main St
S Meridian Rd
84
E Overland Rd
W Overland Rd
W Lamont Rd
S Linder Rd
S Stoddard Rd
S Eagle Rd
W Victory Rd
E Victory Rd
W Amity Rd
E Amity Rd
S Black Cat Rd
S Cloverdale Rd
S Five Mile Rd
Hazel Rd
S Locust Grove Rd
W Columbia Rd
E Columbia Rd
S Stewart Rd
W Hubbard Rd
E Hubbard Rd
W Ardell Rd
E Ardell Rd
NEHRP Soil Classes
Legend
C (Dense soil/soft rock)
D (Stiff soil)
E (Soft clay)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF MERIDIAN
0 0.5 1 Miles
N
STAR
BOISE
KUNA
Canyon County
W Moon Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
W McMillan Rd
W Ustick Rd
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
NW 8th St
NW 4th St
NE 5th St
NE 3rd St
N Main St
N Locust Grove Rd
N Eagle Rd
E Lanark St
W Franklin Rd
E Franklin Rd
S Ten Mile Rd
S Main St
E Watertower St
84
S Meridian Rd
E Overland Rd
W Overland Rd
S Linder Rd
S Stoddard Rd
S Eagle Rd
W Lamont Rd
W Victory Rd
E Victory Rd
S McDermott Rd
S Black Cat Rd
W Amity Rd
E Amity Rd
S Five Mile Rd
S Cloverdale Rd
S Locust Grove Rd
E Columbia Rd
S Stewart Rd
E Hubbard Rd
100-Year Probabilistic Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



500-Year Probabilistic Earthquake Scenario

Legend

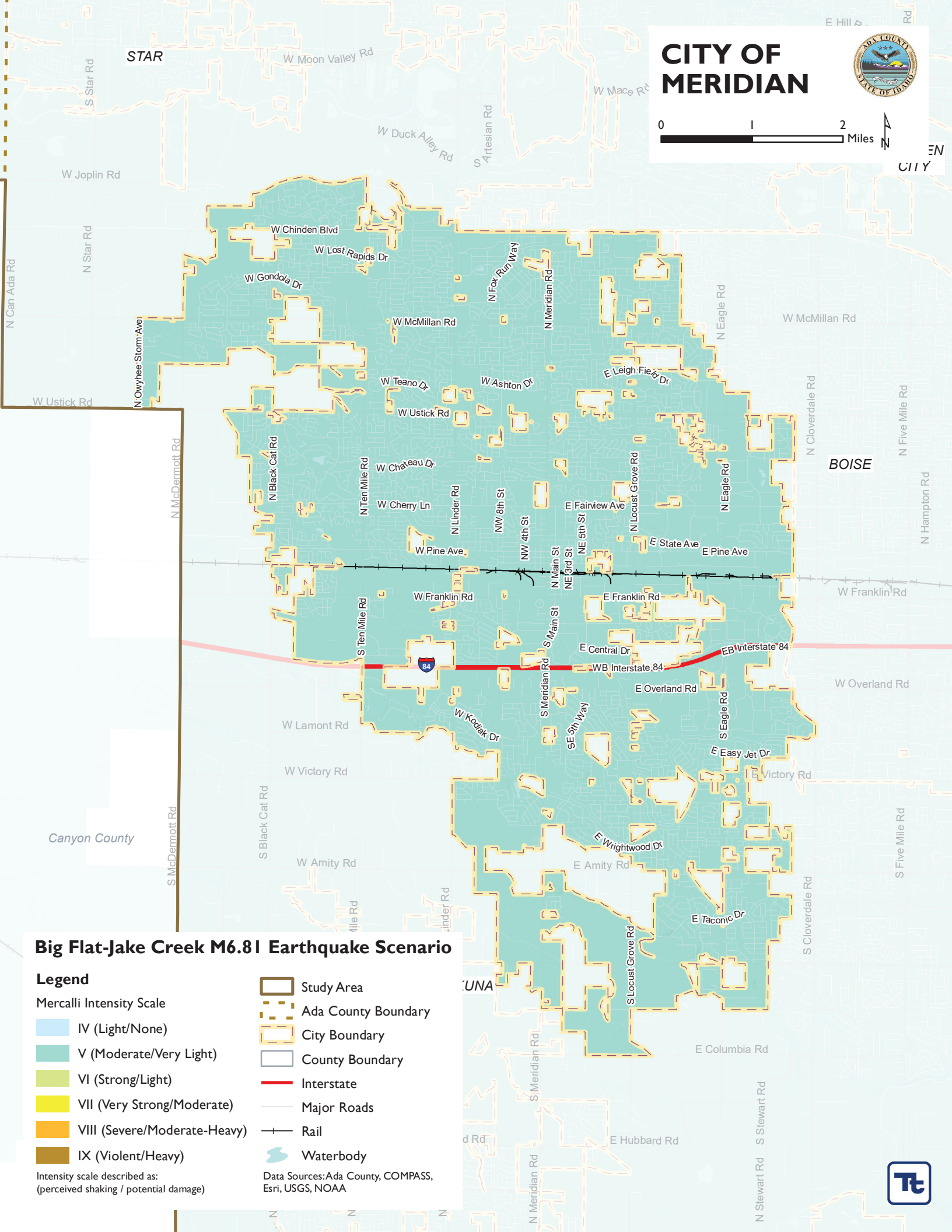
Mercalli Intensity Scale

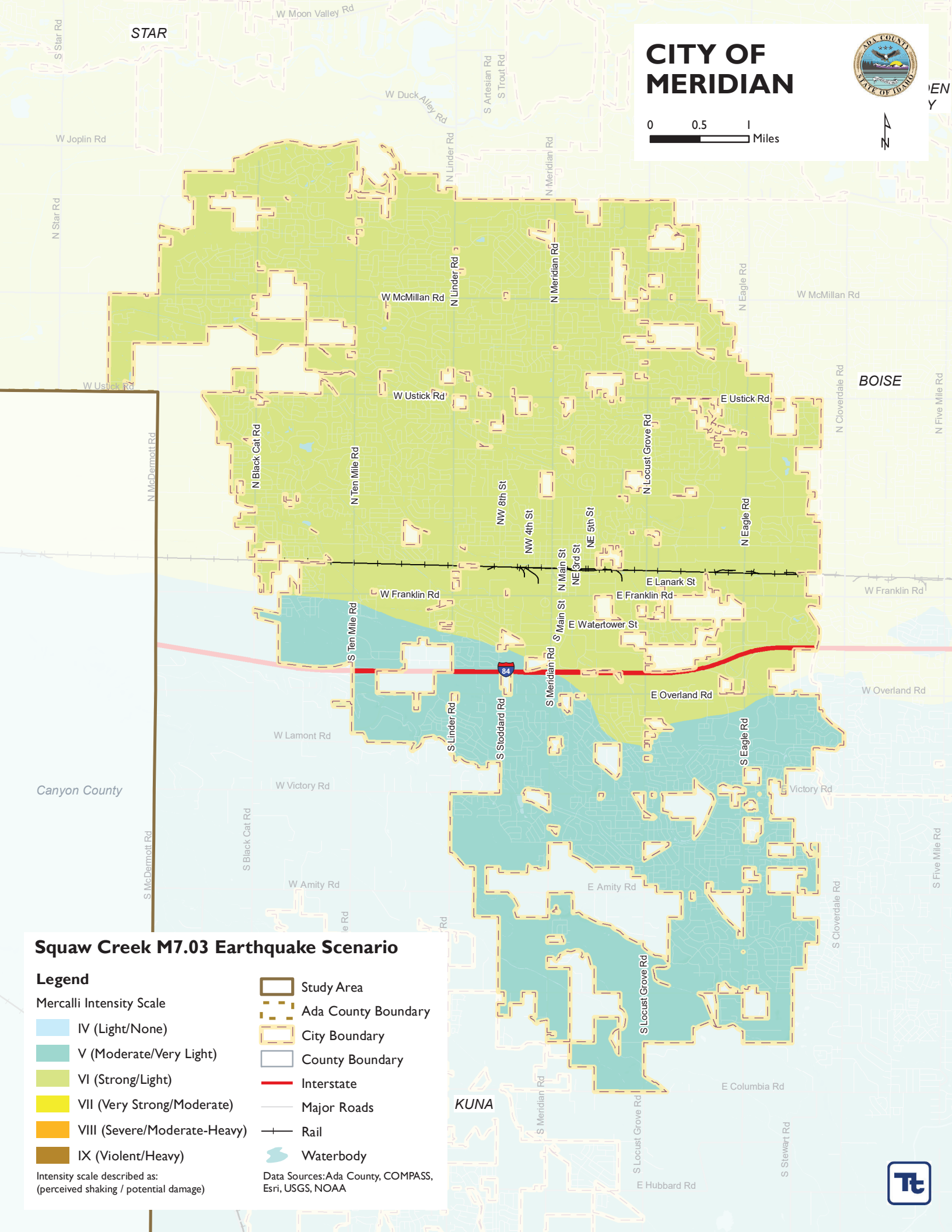
- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

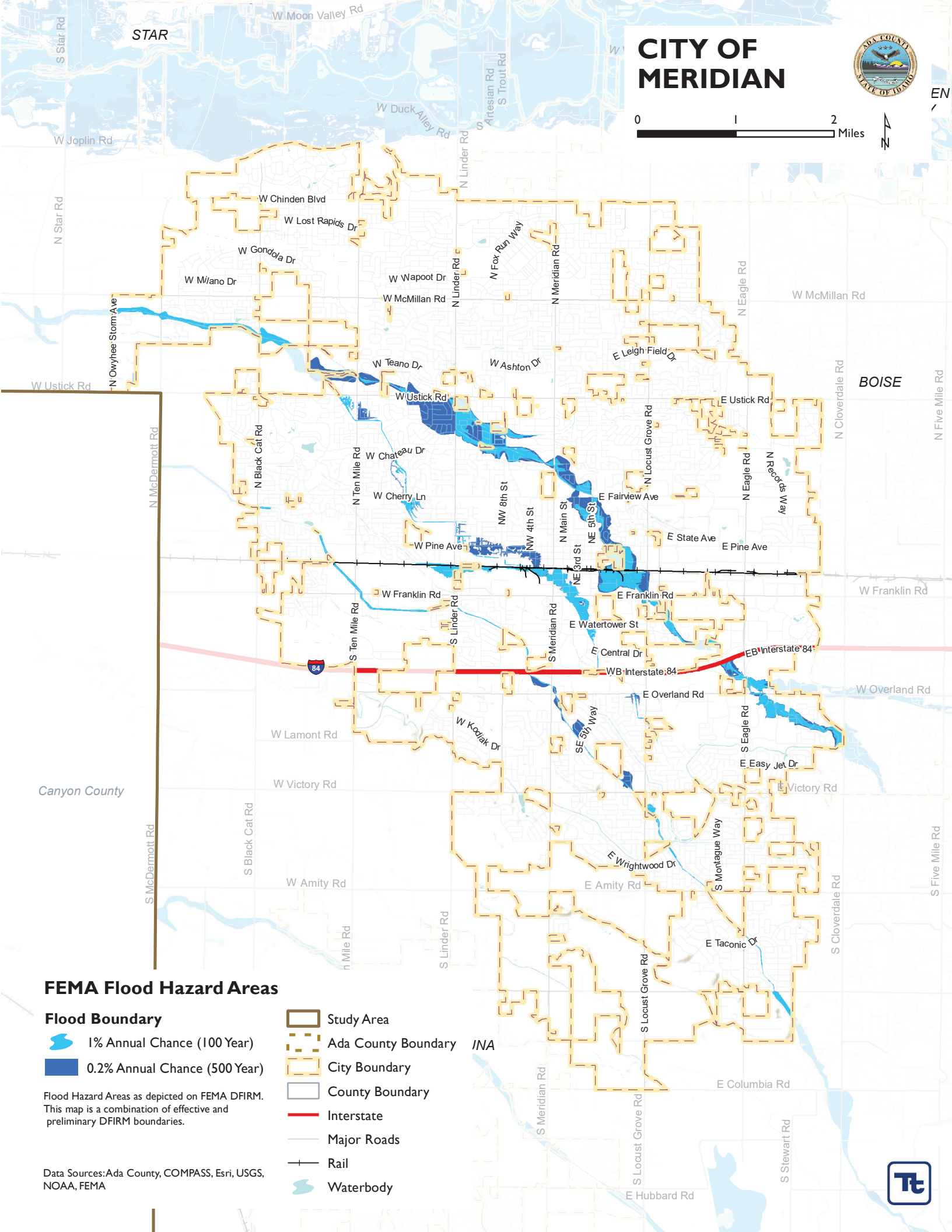
Intensity scale described as:
(perceived shaking / potential damage)

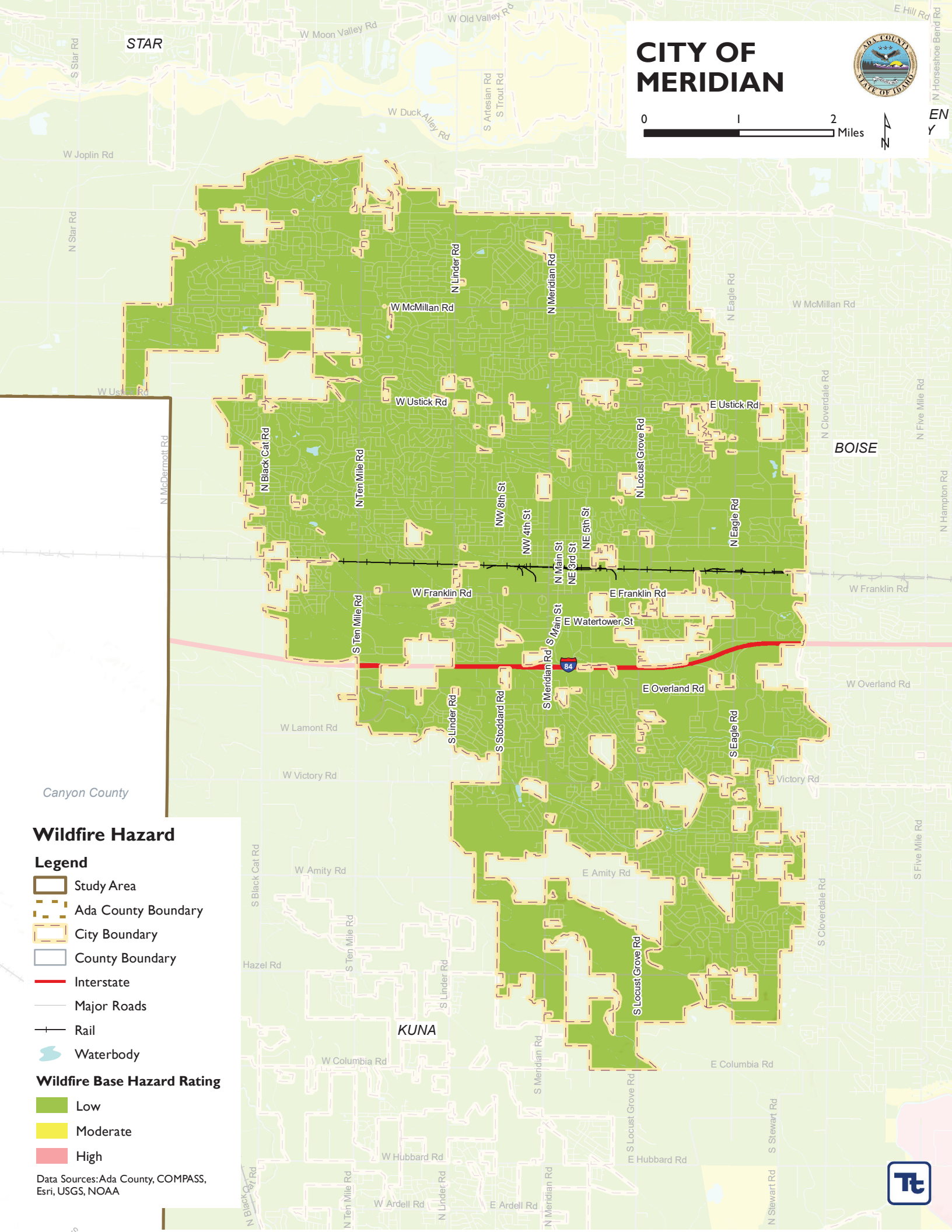
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF MERIDIAN
0
1
2
Miles
STAR
BOISE
Canyon County
W Moon Valley Rd
W Duck Alley Rd
W Joplin Rd
W Chinden Blvd
W Lost Rapids Dr
W Gondola Dr
W McMillan Rd
W Teano Dr
W Ashton Dr
E Leigh Field Dr
W Ustick Rd
W Chateau Dr
W Cherry Ln
W Pine Ave
W Franklin Rd
E Franklin Rd
E Fairview Ave
E State Ave
E Pine Ave
E Central Dr
EB Interstate 84
WB Interstate 84
E Overland Rd
W Lamont Rd
W Victory Rd
E Easy Jet Dr
E Wrightwood Dr
W Amity Rd
E Amity Rd
E Taconic Dr
E Columbia Rd
E Hubbard Rd
N Owyhee Storm Ave
N Black Cat Rd
N Ten Mile Rd
N Linder Rd
NW 8th St
NW 4th St
N Main St
NE 3rd St
NE 5th St
N Locust Grove Rd
N Eagle Rd
N Fox Run Way
N Meridian Rd
S Ten Mile Rd
S Main St
S Meridian Rd
SE 5th Way
S Eagle Rd
S Locust Grove Rd
N Can Ada Rd
N Star Rd
S Star Rd
N McDermott Rd
S McDermott Rd
S Black Cat Rd
S Artesian Rd
N Cloverdale Rd
S Cloverdale Rd
N Five Mile Rd
S Five Mile Rd
N Hampton Rd
S Stewart Rd
N Stewart Rd
Big Flat-Jake Creek M6.81 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF MERIDIAN
0 0.5 1 Miles
N
STAR
BOISE
KUNA
Canyon County
W Moon Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
W McMillan Rd
W Ustick Rd
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
NW 8th St
NW 4th St
NE 3rd St
NE 5th St
N Main St
N Locust Grove Rd
E Lanark St
E Franklin Rd
W Franklin Rd
S Ten Mile Rd
S Main St
E Watertower St
84
S Meridian Rd
E Overland Rd
W Overland Rd
W Lamont Rd
S Linder Rd
S Stoddard Rd
S Eagle Rd
W Victory Rd
E Victory Rd
S McDermott Rd
S Black Cat Rd
W Amity Rd
E Amity Rd
S Five Mile Rd
S Cloverdale Rd
S Locust Grove Rd
E Columbia Rd
S Meridian Rd
S Stewart Rd
E Hubbard Rd
Squaw Creek M7.03 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF MERIDIAN
0
1
2
Miles
N
STAR
BOISE
Canyon County
W Moon Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
N Linder Rd
W Chinden Blvd
W Lost Rapids Dr
W Gondola Dr
W Milano Dr
W Wapoot Dr
W McMillan Rd
N Fox Run Way
N Meridian Rd
N Eagle Rd
N Owyhee Storm Ave
W Ustick Rd
W Teano Dr
W Ashton Dr
E Leigh Field Dr
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
W Chateau Dr
W Cherry Ln
N Locust Grove Rd
N Records Way
NW 8th St
NW 4th St
N Main St
NE 5th St
E Fairview Ave
E State Ave
E Pine Ave
W Pine Ave
NE 3rd St
W Franklin Rd
E Franklin Rd
S Ten Mile Rd
S Linder Rd
S Meridian Rd
E Watertower St
E Central Dr
EB Interstate 84
WB Interstate 84
84
W Overland Rd
E Overland Rd
W Kodiak Dr
SE 5th Way
S Eagle Rd
E Easy Jet Dr
W Lamont Rd
W Victory Rd
E Victory Rd
S Black Cat Rd
S McDermott Rd
S Montague Way
E Wrightwood Dr
W Amity Rd
E Amity Rd
S Five Mile Rd
S Cloverdale Rd
E Taconic Dr
S Locust Grove Rd
E Columbia Rd
S Meridian Rd
S Stewart Rd
E Hubbard Rd
INA
FEMA Flood Hazard Areas
Flood Boundary
1% Annual Chance (100 Year)
0.2% Annual Chance (500 Year)
Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody


CITY OF MERIDIAN
0
1
2
Miles
N
STAR
BOISE
KUNA
Canyon County
W Moon Valley Rd
W Old Valley Rd
W Duck Alley Rd
W Joplin Rd
S Star Rd
N Star Rd
S Artesian Rd
S Trout Rd
E Hill Rd
N Horseshoe Bend Rd
W McMillan Rd
N Linder Rd
N Meridian Rd
N Eagle Rd
W Ustick Rd
E Ustick Rd
N Cloverdale Rd
N Five Mile Rd
N Hampton Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
NW 8th St
NW 4th St
NE 6th St
NE 3rd St
N Main St
N Locust Grove Rd
N Eagle Rd
W Franklin Rd
E Franklin Rd
S Ten Mile Rd
E Watertower St
S Main St
S Meridian Rd
84
E Overland Rd
W Overland Rd
W Lamont Rd
S Linder Rd
S Stoddard Rd
S Eagle Rd
W Victory Rd
E Victory Rd
W Amity Rd
E Amity Rd
S Black Cat Rd
S Cloverdale Rd
S Five Mile Rd
Hazel Rd
S Locust Grove Rd
W Columbia Rd
E Columbia Rd
S Stewart Rd
W Hubbard Rd
E Hubbard Rd
W Ardell Rd
E Ardell Rd
N Stewart Rd
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

7. CITY OF STAR

7.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact
Jacob Qualls, City Clerk / Treasurer
10769 West State Street
PO Box 130
Star, ID 83669
Telephone: 208-908-5452
e-mail Address: jqualls@staridaho.org

Alternate Point of Contact
Trevor A. Chadwick, Mayor
10769 West State Street
PO Box 130
Star, ID 83669
Telephone: 208-286-7247
e-mail Address: tchadwick@staridaho.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 7-1.

Table 7-1. Local Hazard Mitigation Planning Team Members

Name	Title
Jacob Qualls	City Clerk / Treasurer
Trevor Chadwick	Mayor
Shawn Nickel	City Planner
Ryan Field	Assistant City Planner
Bob Little	Buildings & Grounds Maintenance Supervisor
Ryan Morgan	Floodplain Administrator
Dana Partridge	Public Information Officer
Eddie Gomez	Building Permit Technician Lead

7.2 JURISDICTION PROFILE

7.2.1 Location and Features

The City of Star is located on the Boise River 10 miles west of Boise.

The current boundaries generally extend from Highway 20/26 (Chinden), Highway 16, Floating Feather Road, CanAda Road and into Kinsgbury within Canyon County, encompassing an area of about 25 square miles.

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.

7.2.2 History

The City of Star was incorporated on December 22, 1905 and dis-incorporated around the 1929 and then reincorporated on December 10, 1997. 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 20 new buildings had been erected.

Rapid growth came with the 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.

7.2.3 Governing Body Format

Star has a strong-mayor form of Municipal Government with four council members. The Council assumes responsibility for the adoption of this plan, and is responsible for its implementation.

7.3 CURRENT TRENDS

7.3.1 Population

According to COMPASS, the population of the City of Star as of April 2022 was 15,230. Since 2017, the population has grown at an average annual rate of 12.8 percent.

7.3.2 Development

- 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 60-acres along the river for recreation development. Blake Haven Park is located on Star Road across from Star Elementary School. Hunter's Creek and Pavilion Park are the newest additions to the city's park system. Pavilion Park has an additional dog park within it called Waggin Tails Dog Park. Some of the new subdivisions have developed open space for their residents, but not all are public facilities. The city is also requiring many of the new developments which abut canals to provide a pathway along these canals and waterways and tie into the city's pathway system..
- 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 LIMITED in Star, with the exception of a new development at Highway 44 and Highway 16 in the northwest corner.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 7-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 7-2. Recent and Expected Future Development Trends

Criterion		Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?		Yes
If yes, give the estimated area annexed and estimated number of parcels or structures.	2,039.38 acres 896 homes 196 apartments 4,075 open lots	
Is your jurisdiction expected to annex any areas during the performance period of this plan?		Yes
If yes, describe land areas and dominant uses.	Residential	
If yes, who currently has permitting authority over these areas?	Planning and Building Department	

Criterion	Response
Are any areas targeted for development or major redevelopment in the next five years?	Yes
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Development is planned for 4,500 buildable mixed-use lots encompassing 1,500 acres (approximately 95% residential, 5% commercial, and golf course) in the WUI on the northern boundary of the city.

How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?

	2016	2017	2018	2019	2020
Single Family	206	334	269	326	592
Multi-Family	7	0	0	0	0
Other	63	73	139	173	109
Total	276	407	408	499	701

Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	• 30-40% of new-construction permits are in the flood hazard area.
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The city is approximately 90% built-out, but as private property owners continue to request to be annexed into the city limits of Star; the city is expected to continue to grow in the next five years.

7.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 7-3.
- Development and permitting capabilities are presented in Table 7-4.
- An assessment of fiscal capabilities is presented in Table 7-5.
- An assessment of administrative and technical capabilities is presented in Table 7-6.
- An assessment of education and outreach capabilities is presented in Table 7-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-8.
- Classifications under various community mitigation programs are presented in Table 7-9.

Table 7-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
Comment: Title 7.1, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508				
Zoning Code	Yes	No	No	Yes
Comment: Title 8, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508				
Subdivisions	Yes	No	No	No
Comment: Title 8.6, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508				
Stormwater Management	Yes	No	Yes	Yes
Comment: Title 8.4, Star City Code: Local Land Use Planning Act, Idaho Code 67-6508				
Post-Disaster Recovery	No	No	No	No
Comment:				
Real Estate Disclosure	No	No	No	No
Comment:				
Growth Management	No	Yes	No	No
Comment: Ada County Comprehensive Plan, adopted 11/26/2007; Ada Co. Zoning ordinance-Title 8, ACC, adopted 12/8/2010				
Site Plan Review	Yes	No	No	No
Comment: Title 8, Chapter 4-ACC adopted: 12/8/2010				
Environmental Protection	Yes	No	No	Yes
Comment: Titles 3, 5, 7, 8, 10, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508				
Flood Damage Prevention	Yes	No	No	Yes
Comment: Title 10, Star City Code; Local Land Use Planning Act, Idaho Code 67-6508				
Emergency Management	No	Yes	No	Yes
Comment: Ada County Emergency Management Plan				
Climate Change	No	No	No	No
Comment:				
Planning Documents				
General Plan	Yes	No	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? Yes				
Comment: Comprehensive Plan, 2008; It was updated in 2020 with additions and changes and it now called "City of Star Comprehensive Plan – Shining Bright Into the Future – 2040 and Beyond" and 2021 and the Plan is being updated as of the creation of this All-Hazard Mitigation Plan once again in 2022. Additionally, there is a South of the River Sub-Area Plan which was adopted in 2021/2022 as a supplement to the Star Comprehensive Plan.				
Capital Improvement Plan	Yes	Yes	Yes	Yes
How often is the plan updated? *As required by law for Impact Fee Implementation and as CIP Projects are completed.*				
Comment: The city has many capital improvement plans; which include the city's own Parks. Other plans the City utilizes are the Canyon Highway District 4 Capital Improvement Plan; Ada County Highway District Capital Improvement policies; Idaho Transportation Capital Improvement Plans and Policies; Star Fire Capital Improvement Plans; Star Water & Sewer District Capital Improvement Plans and; Ada County Sheriff's Office Capital Improvements Plans which are being developed,				
Disaster Debris Management Plan	No	No	No	No
Comment:				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: ***Comment****:* 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. The City also has updated its Flood Control Code in 2021 – Ordinance 336 (Title 10 of the City of Star Code).				
Stormwater Plan	Yes	No	No	Yes
Comment: 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.				
Urban Water Management Plan	No	No	No	No
Comment:				
Habitat Conservation Plan	Yes	No	No	Yes
Comment: *Comprehensive Plan – Chapter 9*				
Economic Development Plan	Yes	No	No	Yes
Comment: *2011- Downtown Revitalization Plan*				
Shoreline Management Plan	Yes	No	No	Yes
Comment: *Comprehensive Plan – Chapter 9*				
Community Wildfire Protection Plan	No	No	No	Yes
Comment: *Comprehensive Plan – Chapter 9*				
Forest Management Plan	No	No	No	No
Comment:				
Climate Action Plan	Yes	No	No	Yes
Comment: 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.				
Comprehensive Emergency Management Plan	No	No	No	No
Comment:				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	No	No
Comment:				
Post-Disaster Recovery Plan	No	No	No	No
Comment:				
Continuity of Operations Plan	No	No	No	No
Comment:				
Public Health Plan	No	Yes	No	No
Comment: *Central District Health Department Emergency Operations Plan, 2013*				

Table 7-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? ***If no, who does? If yes, which department?*** Planning & Zoning Department	Yes
Does your jurisdiction have the ability to track permits by hazard area?	We are developing a computer system to help track. Currently we are using local knowledge, city engineer to help identify these areas.
Does your jurisdiction have a buildable lands inventory?	Yes

Table 7-5. Fiscal Capability

Financial Resource	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
If yes, specify:	
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
If yes, specify:	

Table 7-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices ***If Yes, Department /Position:*** Building & Planning Department	Yes
Engineers or professionals trained in building or infrastructure construction practices ***If Yes, Department /Position:*** Building & Planning Department	Yes
Planners or engineers with an understanding of natural hazards ***If Yes, Department /Position:*** Building & Planning Department	Yes
Staff with training in benefit/cost analysis ***If Yes, Department /Position:*** Can contract with County	Yes
Surveyors ***If Yes, Department /Position:*** Planning / City Engineer (hired and contracted)	Yes
Personnel skilled or trained in GIS applications ***If Yes, Department /Position:***	No
Scientist familiar with natural hazards in local area ***If Yes, Department /Position:*** Can contract with County	Yes
Emergency manager ***If Yes, Department /Position:*** Ada County Emergency Management	Yes
Grant writers ***If Yes, Department /Position:*** Can contract with County	Yes
Other ***If Yes, Department /Position:***	No

Table 7-7. Education and Outreach Capability

Criterion	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, briefly describe:***	No
Do you use social media for hazard mitigation education and outreach? ***If yes, briefly describe:*** Facebook, Instagram, Website, Mailchimp, Star Courier	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ***If yes, briefly describe:***	No
Do you have any other programs in place that could be used to communicate hazard-related information? ***If yes, briefly describe:*** We are developing processes to reverse 911 and communicate with our citizens as needed during an emergency.	No
Do you have any established warning systems for hazard events? ***If yes, briefly describe:*** 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.	Yes

Table 7-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Planning
Who is your floodplain administrator? (department/position)	Planning / Engineer / City Clerk
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	05/04/2021
Does your floodplain management program meet or exceed minimum requirements? ***If exceeds, in what ways?*** 2-foot freeboard, more open space than federal requirements, surface utilities are required to be 6" above BFE.	Exceeds
When was the most recent Community Assistance Visit or Community Assistance Contact?	CAV 1/24/2007, CAC 4/10/2008 \Update
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? ***If so, state what they are.***	No
Are any RiskMAP projects currently underway in your jurisdiction? ***If so, state what they are.***	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? ***If no, state why.***	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? ***If so, what type of assistance/training is needed?*** General floodplain management training.	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? ***If yes, is your jurisdiction interested in improving its CRS Classification?*** ***If no, is your jurisdiction interested in joining the CRS program?*** Yes	No
How many flood insurance policies are in force in your jurisdiction?[a] ***What is the insurance in force?*** $25,245,100 ***What is the premium in force?*** $53,249	80
How many total loss claims have been filed in your jurisdiction?[a] ***What were the total payments for losses?*** $0	0

a. According to FEMA statistics as of March 31, 2022

Table 7-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	1600176870	N/A
DUNS #	Yes	788973753	N/A
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
Tsunami Ready	No	N/A	N/A

7.5 INTEGRATION REVIEW

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

7.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **City of Star Comprehensive Plan—**The 2021 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.

7.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- 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 hazard and risk data will inform the EOP.

- City of Star Continuity of Operation Plan (COOP)—This plan has not been developed, but the Multi-Hazard Mitigation Plan hazard and risk data will inform the COOP.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

7.6 RISK ASSESSMENT

7.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 7-10 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 7-10. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4534	1/20/2020 - ongoing	N/A
Flooding	DR-4342	March 29 – June 15, 2017	Public Assistance Countywide: $4,493,792
Hail	N/A	3/21/2016	One-inch hail
Hail	N/A	5/26/2015	Hail up to 1.5 inches at Floating Feather Road and Pollard Lane
Severe Wind	N/A	3/29/2009	$33,000 (countywide)
Severe Wind	N/A	4/27/1995	$50,000 (countywide)
Borah Peak M7.3 Earthquake	N/A	1988	-
Flooding	N/A	6/1983	$147,000 (countywide)
Hebgen Lake M7.5 Earthquake	N/A	1959	-
Flooding	N/A	1943	Unknown

7.6.2 Hazard Risk Ranking

Table 7-11 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 7-11. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Extreme Weather	33	High
2	Dam/Canal Failure	18	Medium
3	Flood	18	Medium
4	Earthquake	16	Medium
5	Landslide	12	Low
6	Wildfire	12	Low
7	Drought	9	Low
8	Volcano	6	Low

7.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

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

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

7.7 STATUS OF PREVIOUS PLAN ACTIONS

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

Table 7-12. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Action S-1—Consider participation in the Community Rating System ***Comment:*** *Still pending consideration.*			✓	S-9
Action S-2—Integrate Multi-Hazard Mitigation Plan into City of Star Comprehensive Plan ***Comment:*** *Once adopted it will be in the new update of the comprehensive plan adopted by council resolution*	✓			
Action S-3—Consider appropriate higher regulatory standards that prevent or reduce risk to the built environment from the known hazards of concern. ***Comment:*** *May 4, 2021 – Title 10 of the Star City Code*	✓			
Action 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. ***Comment:*** *No properties have been identified yet.*			✓	S-1

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update: Check if Yes	Carried Over to Plan Update: Action # in Update
Action 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.			✓	S-10
Comment: *Working with FCD 10 to identify and make improvements.*				
Action 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 & Water District will aid in planning for all hazards.			✓	S-7
Comment: *Need to review and edit the 2014 EOP as needed per AAR's from exercises and real world events.*				
Action 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.			✓	S-8
Comment: *Carry over. Will address when staff time is available.*				
Action S-8—Support County-wide Initiatives Identified in Volume 1 of the Multi-Hazard Mitigation Plan			✓	
Comment: *Ongoing*				
Action S-9—Actively Participate in the Plan Maintenance Protocols Outlines in Volume 1 of the Multi-Hazard Mitigation Plan			✓	S-3
Comment: *Ongoing*				
Action 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.			✓	S-4
Comment: *May 5, 2021 – Title 10 of the Star City Code*				
Action S-11—Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach.			✓	S-11
Comment: *Ongoing effort in partnership with Star Joint Fire District.*				

7.8 HAZARD MITIGATION ACTION PLAN

Table 7-13 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 7-14 identifies the priority for each action. Table 7-15 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 7-13. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action S-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire					
Existing	3, 8, 9	Star Building Department	N/A	High	HMGP, BRIC, FMA	Short-term
Action S-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community.						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire, Drought					
New & Existing	2, 5, 6	Planning	N/A	Low	Staff Time, General Funds	Ongoing
Action S-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire, Drought, Volcano					
New & Existing	1, 2, 6, 7, 8, 9, 10	City of Star	N/A	Low	Staff Time, General Funds	Short-term
Action S-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts.						
Hazards Mitigated:	Flood					
New & Existing	1, 2, 4, 5, 6, 8	Planning	N/A	Low	Staff Time, General Funds	Ongoing
Action S-5—Coordinate with community stakeholders in both the public and private sectors to identify and pursue adaptive capacity strategies that could improve community resilience in relation to future climate conditions.						
Hazards Mitigated:	Drought, Flood, Extreme Weather, Wildfire					
New & Existing	2, 3, 4, 6, 9, 10	Public Works	N/A	Low	Staff Time, General Funds	Short-term
Action S-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power.						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire					
Existing	1, 3, 10	Public Works	N/A	High	HMGP, BRIC	Short-term
Action S-7— Develop a Joint Emergency Operation Plan with the City of Star, Star Sewer and Water District, 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 and Water District and Star Joint Fire Protection District will aid in planning for all hazards. (Coordinates with Star Sewer and Water District Action SSW-4 and Star Joint Fire Protection District SFD-5)						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire, Drought, Volcano					
New & Existing	All	City of Star	SSW District, Star Joint Fire Protection District	Low	City Funds, District Funds, HMGP	Short-term
Action S-8— 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.						
Hazards Mitigated:	Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire, Drought, Volcano					
New & Existing	All	City of Star	N/A	Medium	City Funds, HMGP	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline[a]
Action S-9— Consider feasibility of participation in the Community Rating System						
Hazards Mitigated: Flood						
New & Existing	1, 2, 4, 5, 6, 7, 8, 9	City of Star	N/A	Low	General Fund, Surface Water Utility Fund	Short-term
Action S-10— 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. (Coordinates with Flood Control District #10 Action FCD10-16)						
Hazards Mitigated: Flood, Severe Weather, Dam/Canal Failure						
New & Existing	1, 2, 9, 10	City of Star	FCD#10	Medium	HMGP, FCD #10, City of Star CIP Funding	Long-term
Action S-11— Increase GIS capacity by providing training for existing staff or hiring staff to support GIS needs.						
Hazards Mitigated: Extreme Weather, Dam/Canal Failure, Flood, Earthquake, Landslide, Wildfire, Drought, Volcano						
New & Existing	1, 2, 7	City of Star	N/A	Medium	City Funds	Short-term
Action S-12— Provide fire safety, fire prevention and Firewise education to neighborhoods, schools and community via the internet, social media and direct public outreach. (Coordinates with Star Joint Fire Protection District Action SFD-6)						
Hazards Mitigated: Wildfire						
New & Existing	8, 9	City of Star	Star Joint Fire Protection District	Low	City Funds, District Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 7-14. Mitigation Action Priority

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

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

Table 7-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building[b]
High-Risk Hazards								
Extreme Weather	S-2	S-1			S-6, 7, 8	S-10	S-5	S-2, 3, 5, 7, 8, 10, 11
Medium-Risk Hazards								
Dam/Canal Failure	S-2	S-1			S-6, 7, 8	S-10		S-2, 3, 7, 8, 10, 11
Flood	S-2, 4, 9	S-1, 9	S-4		S-6, 7, 8	S-10	S-5	S-2, 3, 4, 5, 7, 8, 9, 10, 11
Earthquake	S-2	S-1			S-6, 7, 8			S-2, 3, 7, 8, 11
Low-Risk Hazards								
Landslide	S-2	S-1			S-6, 7, 8		S-5	S-2, 3, 5, 7, 8, 11
Wildfire	S-2	S-1	S-12		S-6, 7, 8			S-2, 3, 7, 8, 11
Drought	S-2				S-7, 8		S-5	S-2, 3, 5, 7, 8, 11
Volcano					S-7, 8			S-3, 7, 8, 11

a. See the introduction to this volume for explanation of mitigation types.
b. In addition to the community capacity building actions listed in this table, this jurisdiction is expanding its financial capabilities through its participation in and adoption of this hazard mitigation plan, which establishes grant-funding eligibility.

7.9 PUBLIC OUTREACH

Table 7-16 lists public outreach activities for this jurisdiction.

Table 7-16. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
South of the River Plan community involvement	April, 2021	200+ at one event
Continually of adoption of ordinances and annexations	ongoing	500+
New updates to the Comprehensive Plan - mailing to 6,443 households & commercial businesses (2.9 factor)	June 2022 - planned	approximately 18,000 people reach
Monthly newsletter to all rooftops and PO boxes within zip code utilizing Star Courier and email blasts, social media interactions	Ongoing	1800 email addresses

7.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **2017 Ada County Multi-Hazard Mitigation Plan** – The previous HMP was reviewed to update this annex.
- **City of Star Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

- **City of Star Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

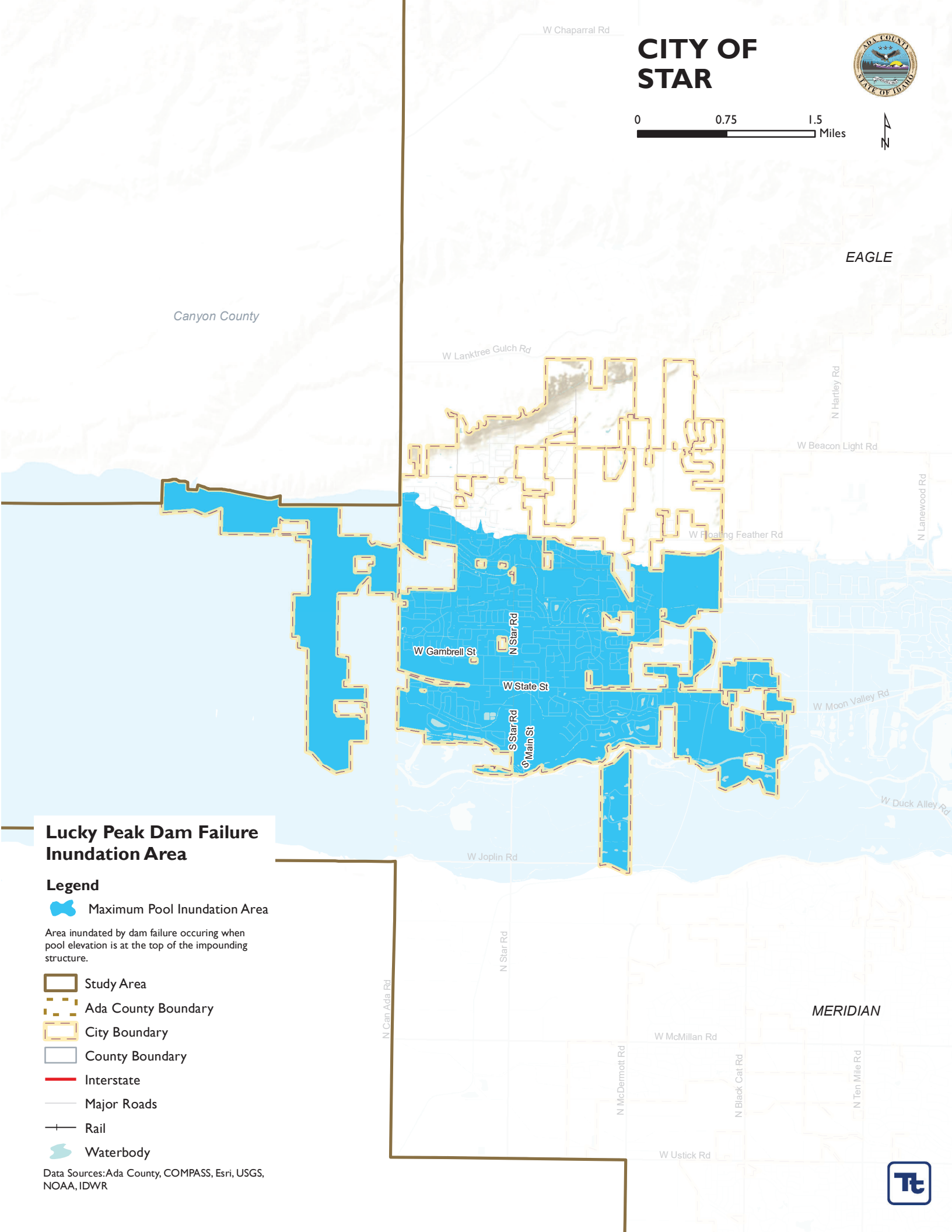
The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

CITY OF STAR

0 0.75 1.5 Miles

N



Lucky Peak Dam Failure Inundation Area

Legend

Maximum Pool Inundation Area

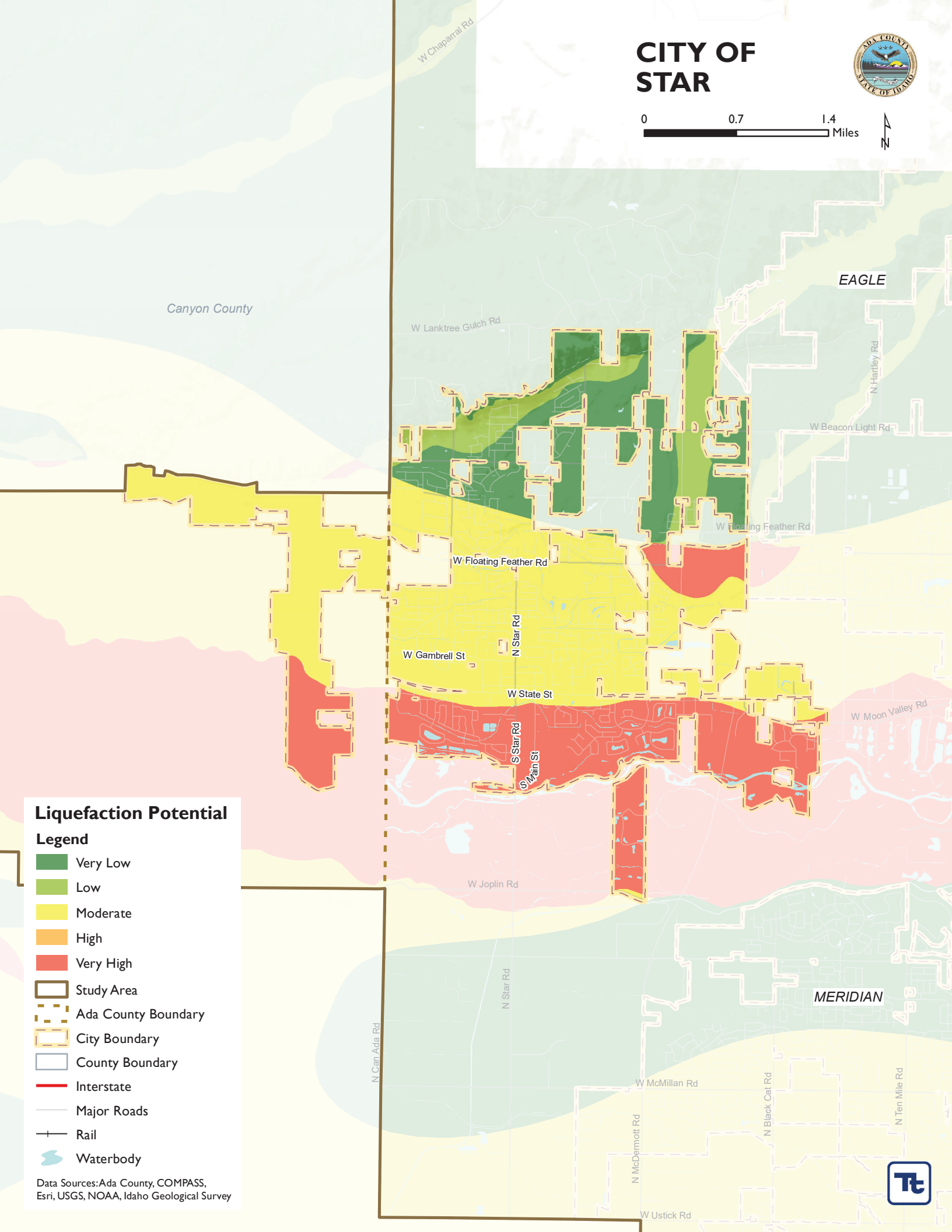
Area inundated by dam failure occuring when pool elevation is at the top of the impounding structure.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, IDWR

CITY OF STAR

0 0.7 1.4 Miles



Liquefaction Potential

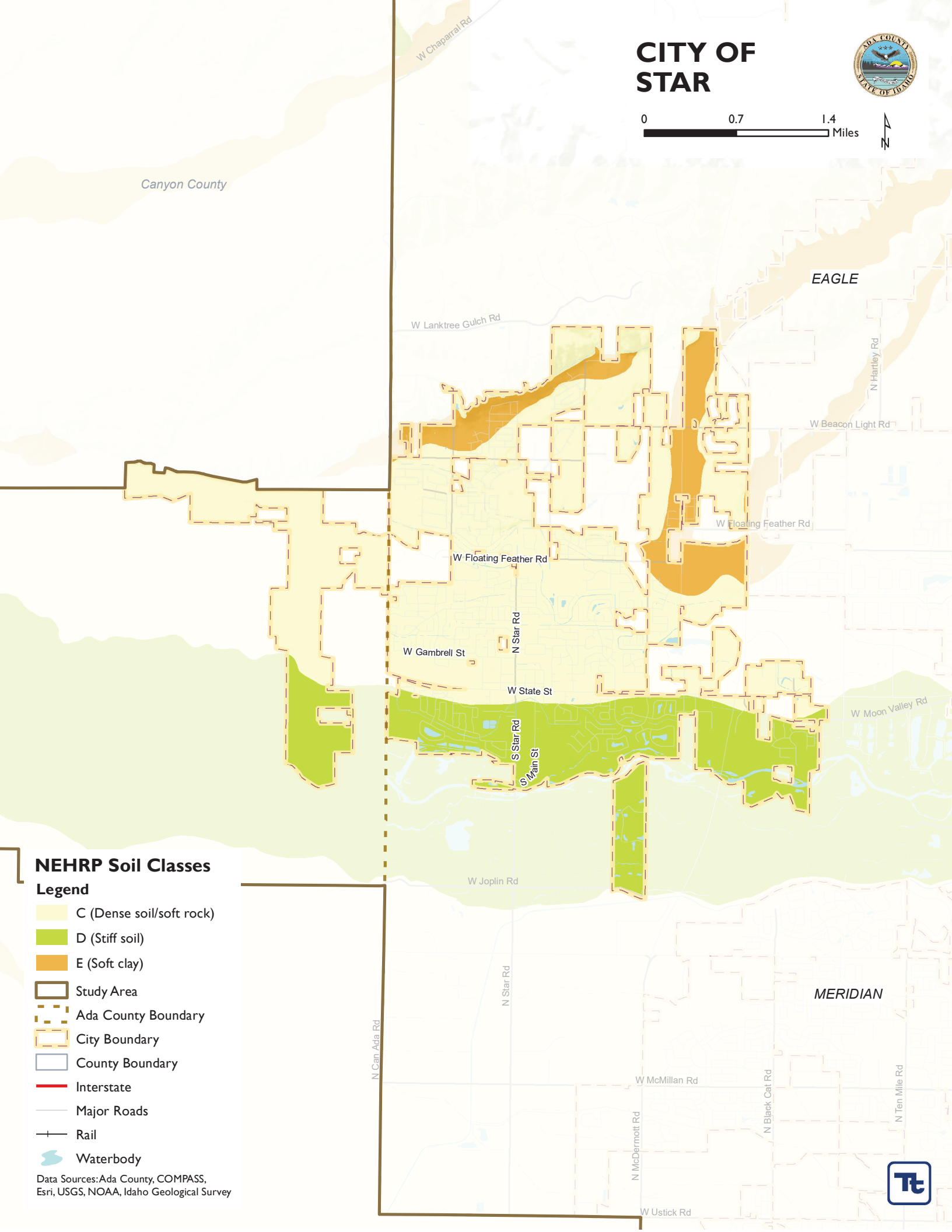
Legend

- Very Low
- Low
- Moderate
- High
- Very High
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey

CITY OF STAR

0 0.7 1.4 Miles

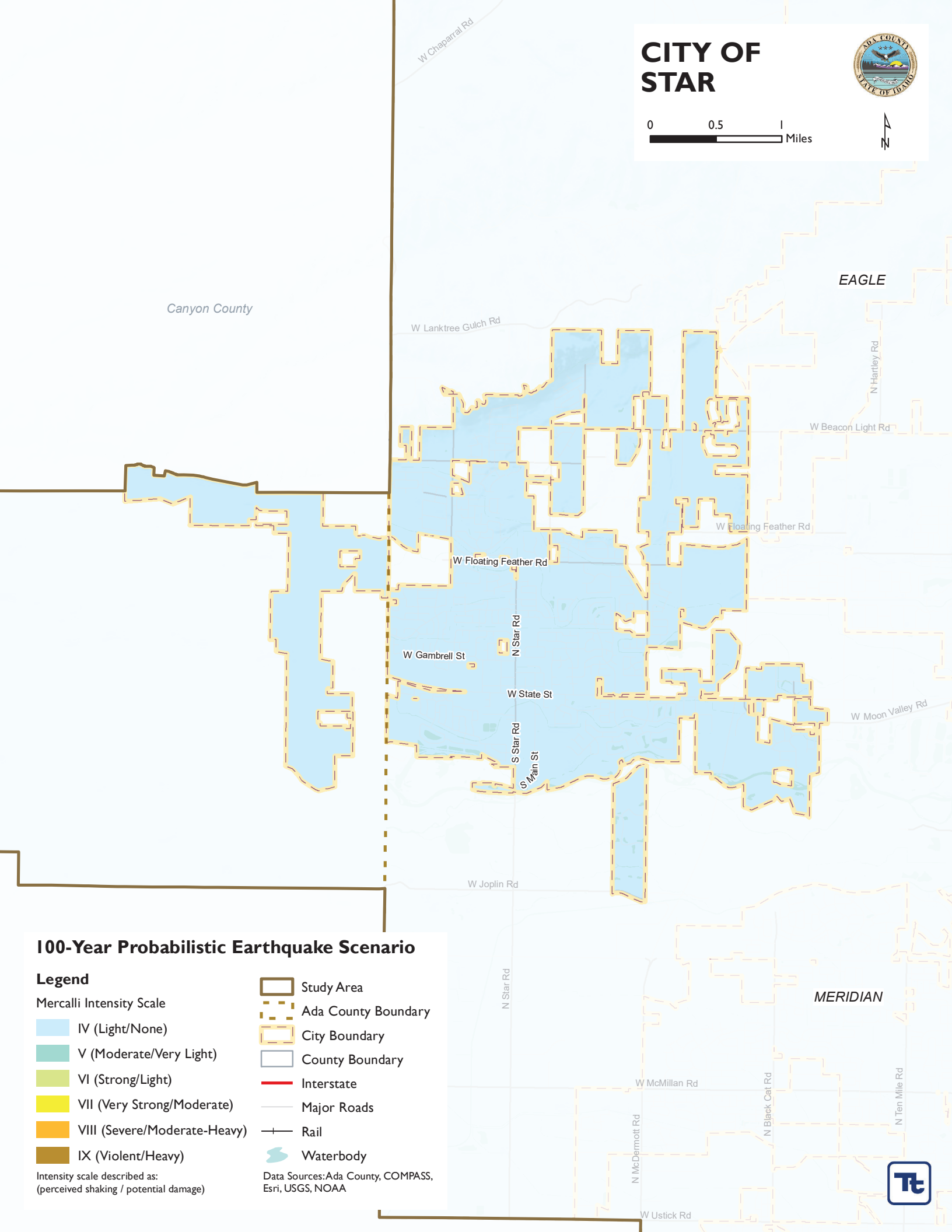


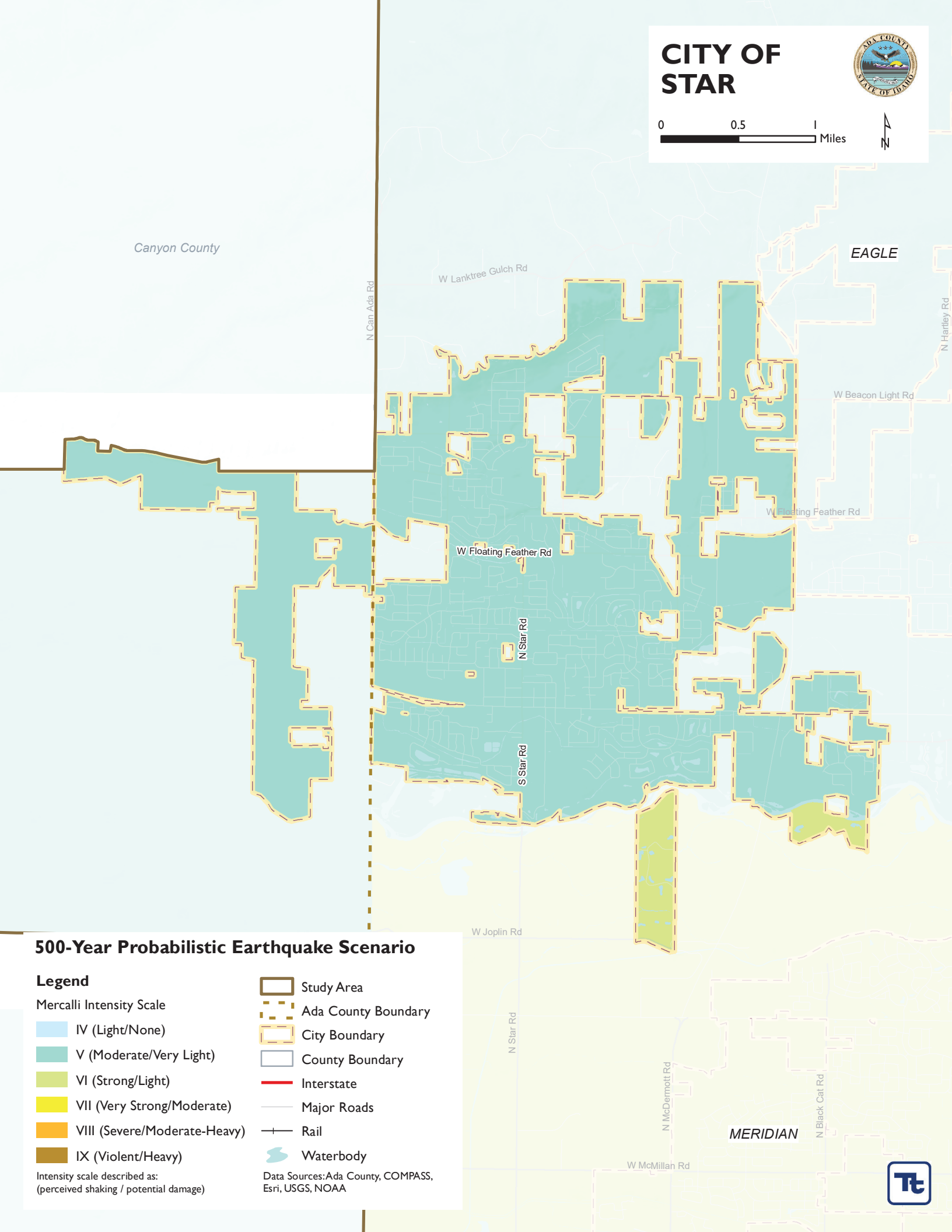
NEHRP Soil Classes

Legend

- C (Dense soil/soft rock)
- D (Stiff soil)
- E (Soft clay)
- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, Idaho Geological Survey


CITY OF STAR
0
0.5
1
Miles
N
W Chaparral Rd
Canyon County
EAGLE
W Lanktree Gulch Rd
N Hartley Rd
W Beacon Light Rd
W Floating Feather Rd
W Floating Feather Rd
N Star Rd
W Gambrell St
W State St
W Moon Valley Rd
S Star Rd
S Main St
W Joplin Rd
N Star Rd
MERIDIAN
W McMillan Rd
N Black Cat Rd
N Ten Mile Rd
N McDermott Rd
W Ustick Rd
100-Year Probabilistic Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA



500-Year Probabilistic Earthquake Scenario

Legend

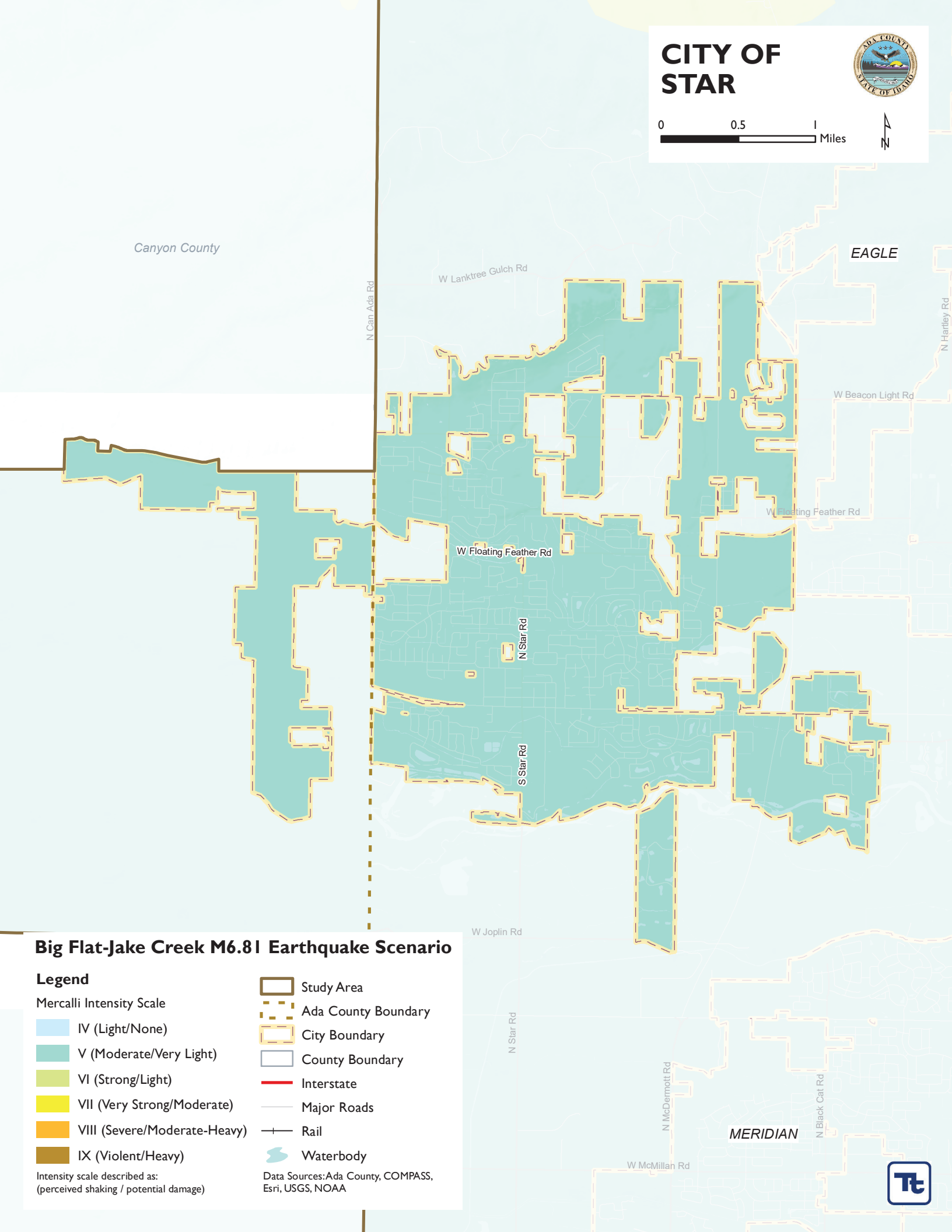
Mercalli Intensity Scale

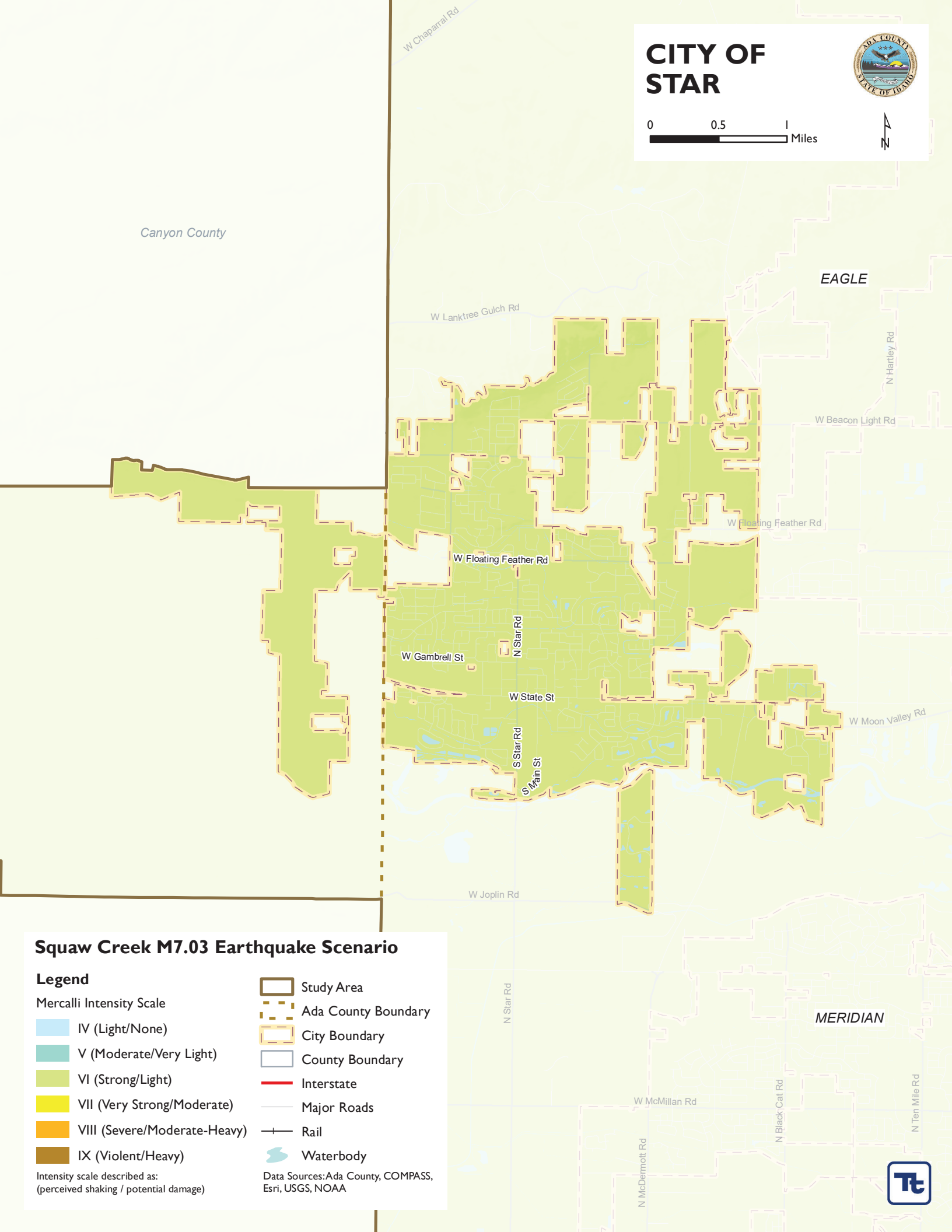
- IV (Light/None)
- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- IX (Violent/Heavy)

Intensity scale described as:
(perceived shaking / potential damage)

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

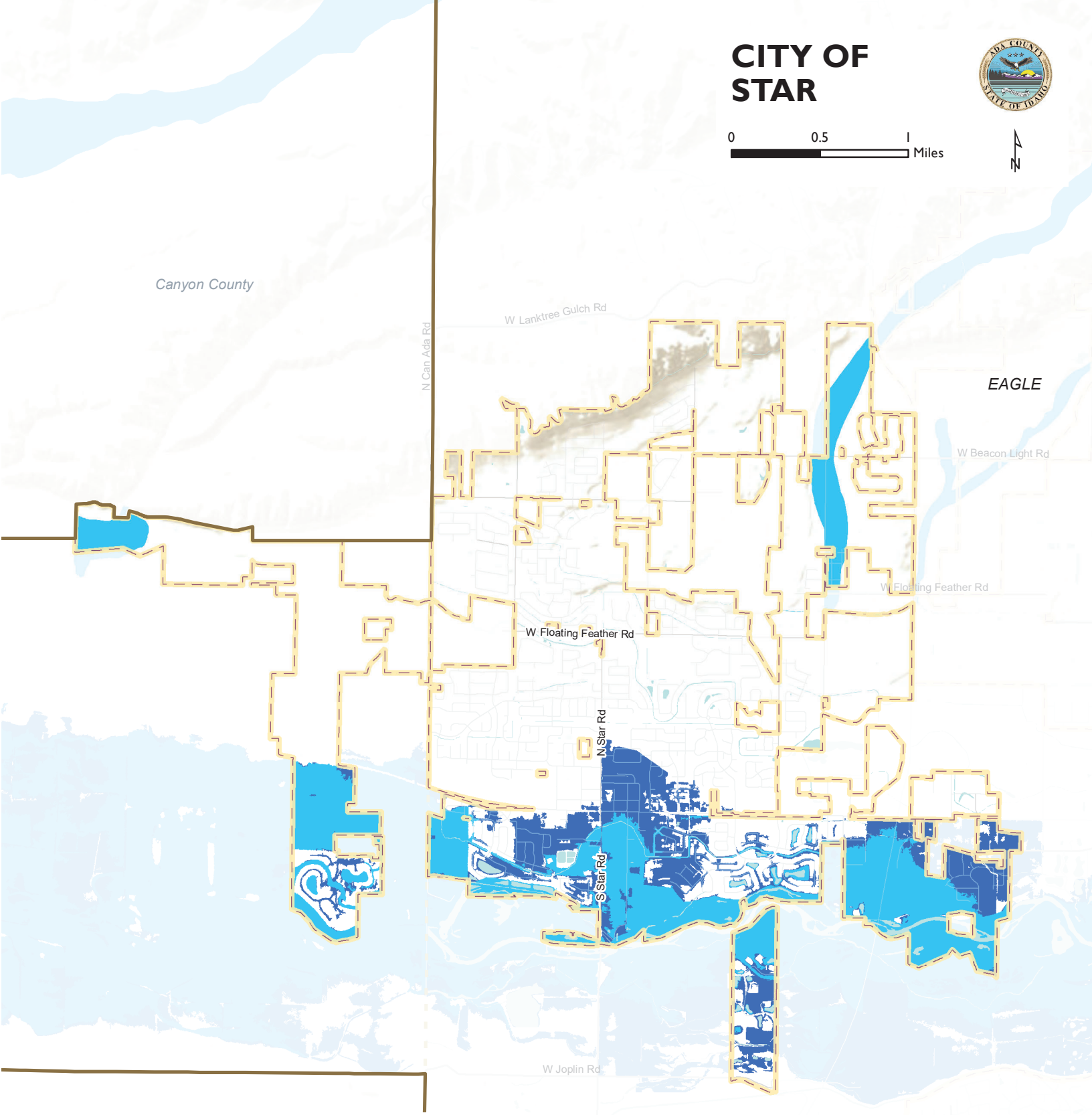
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF STAR
0
0.5
1
Miles
N
Canyon County
EAGLE
W Lanktree Gulch Rd
N Can Ada Rd
N Hartley Rd
W Beacon Light Rd
W Floating Feather Rd
W Floating Feather Rd
N Star Rd
S Star Rd
W Joplin Rd
N Star Rd
N McDermott Rd
N Black Cat Rd
MERIDIAN
W McMillan Rd
Big Flat-Jake Creek M6.81 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF STAR
0
0.5
1
Miles
N
Canyon County
EAGLE
MERIDIAN
W Chaparral Rd
W Lanktree Gulch Rd
N Hartley Rd
W Beacon Light Rd
W Floating Feather Rd
W Floating Feather Rd
N Star Rd
W Gambrell St
W State St
W Moon Valley Rd
S Star Rd
S Main St
W Joplin Rd
N Star Rd
W McMillan Rd
N Black Cat Rd
N Ten Mile Rd
N McDermott Rd
Squaw Creek M7.03 Earthquake Scenario
Legend
Mercalli Intensity Scale
IV (Light/None)
V (Moderate/Very Light)
VI (Strong/Light)
VII (Very Strong/Moderate)
VIII (Severe/Moderate-Heavy)
IX (Violent/Heavy)
Intensity scale described as:
(perceived shaking / potential damage)
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA

CITY OF STAR

0 0.5 1 Miles



FEMA Flood Hazard Areas

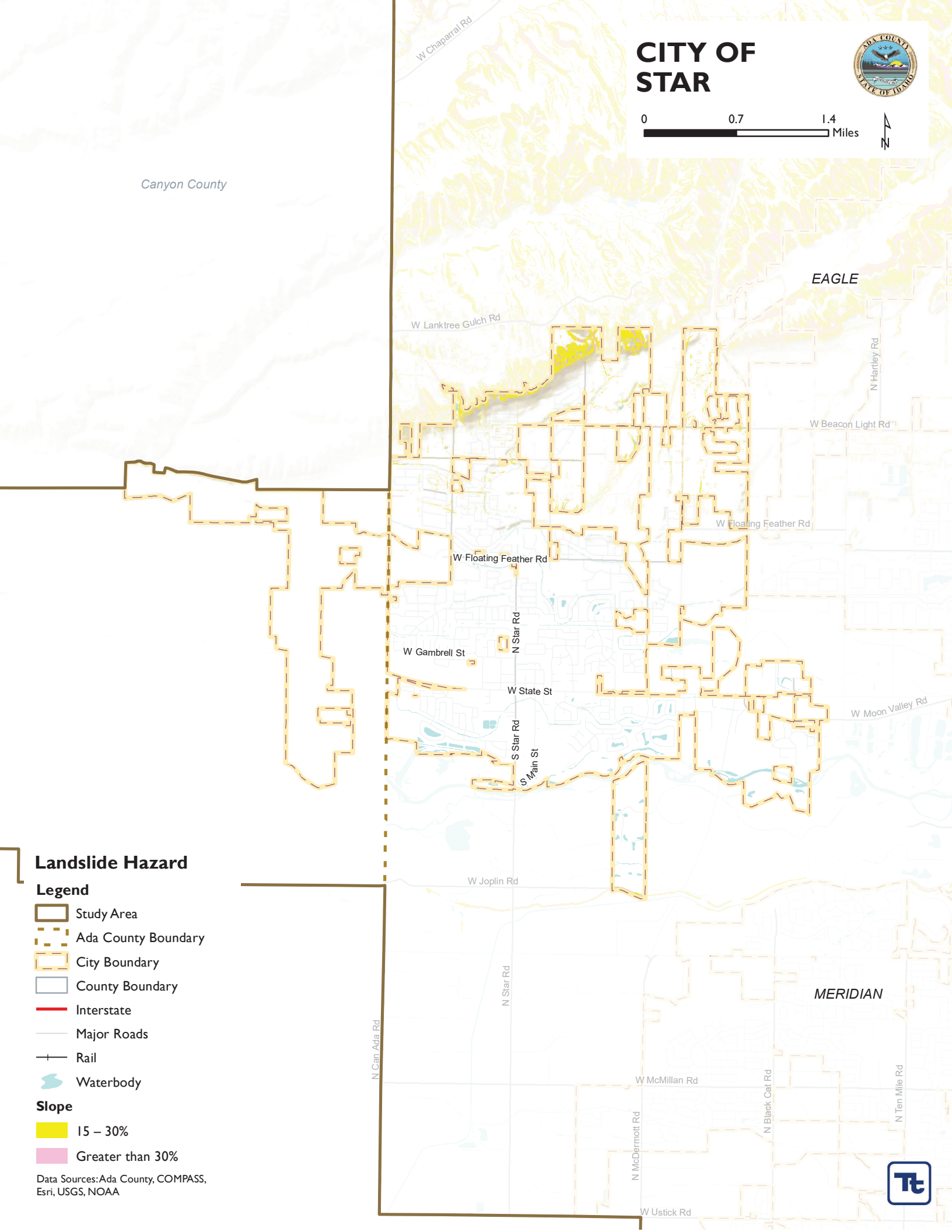
Flood Boundary

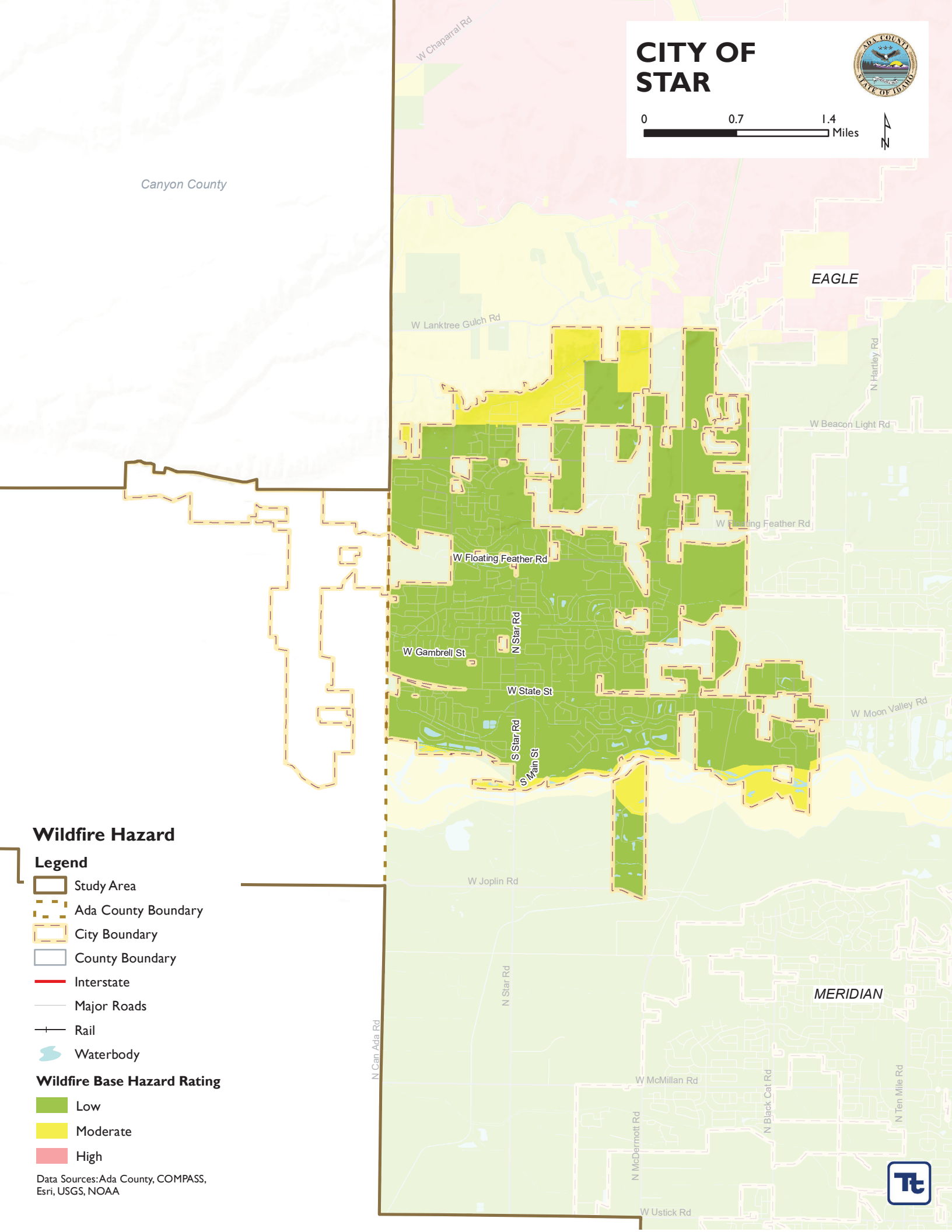
- 1% Annual Chance (100 Year)
- 0.2% Annual Chance (500 Year)

Flood Hazard Areas as depicted on FEMA DFIRM. This map is a combination of effective and preliminary DFIRM boundaries.

- Study Area
- Ada County Boundary
- City Boundary
- County Boundary
- Interstate
- Major Roads
- Rail
- Waterbody

Data Sources: Ada County, COMPASS, Esri, USGS, NOAA, FEMA


CITY OF STAR
0
0.7
1.4
Miles
N
Canyon County
EAGLE
MERIDIAN
W Chaparral Rd
W Lanktree Gulch Rd
N Hartley Rd
W Beacon Light Rd
W Floating Feather Rd
W Floating Feather Rd
W Gambrell St
N Star Rd
W State St
S Star Rd
S Main St
W Moon Valley Rd
W Joplin Rd
N Star Rd
N Can Ada Rd
W McMillan Rd
N Black Cat Rd
N Ten Mile Rd
N McDermott Rd
W Ustick Rd
Landslide Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Slope
15 – 30%
Greater than 30%
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA


CITY OF STAR
0
0.7
1.4
Miles
N
Canyon County
EAGLE
MERIDIAN
W Chaparral Rd
W Lanktree Gulch Rd
N Hartley Rd
W Beacon Light Rd
W Floating Feather Rd
W Gambrell St
N Star Rd
W State St
S Star Rd
S Main St
W Moon Valley Rd
W Joplin Rd
N Can Ada Rd
W McMillan Rd
N McDermott Rd
N Black Cat Rd
N Ten Mile Rd
W Ustick Rd
Wildfire Hazard
Legend
Study Area
Ada County Boundary
City Boundary
County Boundary
Interstate
Major Roads
Rail
Waterbody
Wildfire Base Hazard Rating
Low
Moderate
High
Data Sources: Ada County, COMPASS, Esri, USGS, NOAA