11. EAGLE SEWER DISTRICT

11.1 MULTI-HAZARD MITIGATION PLAN POINT OF CONTACT

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11.2 JURISDICTION PROFILE

11.2.1 Overview

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

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

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

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

11.2.2 Service Area and Trends

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

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

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

11.2.3 Assets

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

Table 11-1. Special Purpose District Assets

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

11.3 PLANNING AND REGULATORY CAPABILITIES

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

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

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

11.4 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

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

Table 11-2. Fiscal Capability

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

Table 11-3. Administrative and Technical Capability

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

11.5 EDUCATION AND OUTREACH CAPABILITIES

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

Table 11-4. Education and Outreach

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

11.6 INTEGRATION WITH OTHER PLANNING INITIATIVES

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

11.6.1 Existing Integration

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

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

11.6.2 Opportunities for Future Integration

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

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

11.7 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

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

Table 11-5. Natural Hazard Events

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

11.8 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities to the jurisdiction include:

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

11.9 HAZARD RISK RANKING

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

Table 11-6. Hazard Risk Ranking

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

11.10 STATUS OF PREVIOUS PLAN INITIATIVES

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

Table 11-7. Status of Previous Action Plan

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

11.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

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

Table 11-8. Hazard Mitigation Action Plan Matrix

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

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

Table 11-9. Mitigation Strategy Priority Schedule

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

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

Table 11-10. Analysis of Mitigation Actions

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

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