

CHAPTER 17. DRAINAGE DISTRICT #4 ANNEX

17.1. HAZARD MITIGATION PLAN POINT OF CONTACT

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17.2. JURISDICTION PROFILE

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

The District oversees the maintenance of a drainage, detention and /determent infrastructure to control waste (ground/surface runoff) water and reduce flooding risk. The District's jurisdiction encompasses approximately 2,600 acres, located within Ada County, Idaho.

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

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

- **Population Served**—Garden City 10,624 (2000); Ada County area of District responsibility estimated at 4,000. ESTIMATED TOTAL: 14,624
- **Land Area Served**—2,600 acres
- **Value of Area Served**—Reference the 100-year FEMA FLOOD tables of value for structure and contents. Estimating 60% of GC (area south of the Boise River) and 10% of Unincorporated Ada County (County area south of Boise River extending just west of Banbury Golf Course) = \$3,859,718 + \$1,128,650 = ESTIMATED TOTAL of \$4,988,368.
- **Land Area Owned**—The District does not own any land outright, but does own water rights, ditch rights and easements for the ditches existing to drain water within the District boundary.
- **List of Critical Infrastructure/Equipment Owned by the District**—The District does not own any Equipment. Bridges and pipes placed in/over the ditch are owned by and are the responsibility of the entity constructing/installing the structure.

- **List of Critical Facilities Owned by the Jurisdiction**—None
- **Current and Anticipated Service Trends**—Land use designations allow for an increase in light commercial, medium residential and Special Opportunity land uses within the service area. Much of this increase will replace existing large open undeveloped land and farm tracts. The increase in land use density will increase impermeable surfaces within our service area and reduce rain water absorption. This increase in water flow will, in turn, increase demand on waste water/flood control structures. The rate of development activity in the near long term will likely be driven by the impact of the national economic downturn.
- **District Boundaries**—The District boundary includes a portion of Garden City south of the Boise River, extending approximately 4.5 miles west of Garden City limits to include an area of Ada County south of city of Eagle to Eagle Island State Park.

17.3. JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 17-1 lists all past occurrences of natural hazards within the jurisdiction.

17.4. HAZARD RISK RANKING

Table 17-2 presents the ranking of the hazards of concern.

17.5. APPLICABLE REGULATIONS AND PLANS

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

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

17.6. CLASSIFICATION IN HAZARD MITIGATION PROGRAMS

The jurisdiction's classifications under various hazard mitigation programs are presented in Table 17-3.

17.7. HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED INITIATIVES

Table 17-4 lists the initiatives that make up the jurisdiction's hazard mitigation plan. Table 17-5 identifies the priority for each initiative. Table 17-6 summarizes the mitigation initiatives by hazard of concern and the six mitigation types.

17.8. FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Additional data is needed on the following hazards to have a better understanding on risk within the planning area:

- Earthquake—NEHRP soils data as well as USGS “shake maps” for scenario events most likely to impact the planning area.
- Landslide—Soils data for landslide susceptibility Analysis.
- Wildfire—Enhanced wildfire mapping that will better support risk ranking and the measurement of risk reduction activities. Mapping similar to California’s Fire and Resource Assessment Program (FRAP).

**TABLE 17-1.
NATURAL HAZARD EVENTS**

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

TABLE 17-2. HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Flood	42
2	Severe Storm	36
3	Earthquake	24
4	Landslide	18
5	Drought	18
6	Dam Failure	18
7	Wildland Fire	6
8	Volcano (Ash Fall)	6

TABLE 17-3. COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Public Protection	N/A	N/A	N/A
Storm Ready	N/A	N/A	N/A
Firewise	N/A	N/A	N/A

TABLE 17-4. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Initiative DD4-1 —Initiate a community meeting with representatives from DD4; ACHD; HOAs and Thurman Mill Irrigation Company to discuss flooding issues in the areas of Willowdale and Pintail streets in Garden City.						
Existing	flood	01,03,08,09	ACHD	Low	HOA/ ACHD	Short Term
Initiative DD4-2 —Assist ACHD and HOAs in identifying options for reducing repeated flooding in the areas of Willowdale and Pintail streets; to include: identifying responsible parties, identifying an engineering evaluation process, researching project funding sources, and establishing timelines for completion.						
Existing	flood	01,03,09	ACHD/HOA	Low	HOA/ACHD	Short Term
Initiative DD4-3 —Home Owner Associations and ACHD select an engineering option to mitigate recurring flooding in the Willowdale and Pintail street areas of Garden City.						
Existing	flood	01,03,08,09	ACHD/HOA	Low	HOA/ACHD	Short Term

TABLE 17-4. HAZARD MITIGATION ACTION PLAN MATRIX						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Initiative DD4-4 —Provide coordination with ACHD and HOAs to ensure compliance with Chapter 29, Title 42 of the Idaho Code while performing any modifications that may impact Drainage District #4’s area of responsibility.						
Existing	flood	01,03,08,09	Drainage District #4	Low	DD4	Short Term
Initiative DD4-5 —Retrofit drain structure/system in the areas of Willowdale and Pintail streets in Garden City, Idaho in order to provide flooding relief for homeowners and ACHD.						
Existing	flood	01,03,09	ACHD/HOA	High	ACHD/HOA Grant	Short Term
Initiative DD4-6 —Complete a study of the Drainage District #4 to identify ditch capacity, restriction points, hazard areas, and District boundary.						
New	all	all	DD4	Low	DD4	Short Term
Initiative DD4-7 —Support County-wide initiatives identified in Volume 1.						
New and Existing	All Hazards	All	DD4, ACCEM	Low	District Funds	Short term Ongoing
Initiative DD4-8 —Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Volume 1.						
New & Existing	All Hazards	All	ACCEM, DD4	Low	ACCEM, DD4, FEMA Mitigation Grant Funding for 5-year update	Short-Term, Ongoing

TABLE 17-5. MITIGATION STRATEGY PRIORITY SCHEDULE							
Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority ^a
DD4-1	4	High	Low	Yes	No	Yes	High
DD4-2	3	High	Low	Yes	No	Yes	High
DD4-3	4	High	Medium	Yes	Yes	Yes	High
DD4-4	4	High	Low	Yes	No	Yes	High
DD4-5	3	High	High	Yes	Yes	No	High
DD4-6	10	High	Medium	Yes	Yes	Yes	Medium
DD4-7	10	High	Low	Yes	No	Yes	High
DD4-8	10	High	Low	Yes	Yes	Yes	High

a. See Section 1.3 for definitions of high, medium and low priorities.

**TABLE 17-6.
ANALYSIS OF MITIGATION INITIATIVES**

Hazard Type	Initiative Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	8		7		7	
Drought	8		7		7	
Flooding	1, 2, 3, 4, 6, 8	3, 5	1, 2, 3, 4, 6, 7	5, 6	7	5
Earthquakes	8		7		7	
Landslide	6, 8	6	1, 6, 7		7	
Severe Weather	6, 8	5, 6	1, 6, 7	5, 6	7	5
Volcano Ash	8				7	
Wildfire	8				7	

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