

CITY OF REDMOND ADDENDUM

Introduction

This document serves as the City of Redmond's Addendum to the Deschutes County Natural Hazards Mitigation Plan (NHMP). The City's Addendum is considered part of the County's multi-jurisdictional plan, and meets the following requirements: (1) Multi-jurisdictional Plan Adoption §201.6(c)(5), (2) Multi-jurisdictional Participation §201.6(a)(3), (3) Multi-Jurisdictional Risk Assessment §201.6(c)(2) (iii), and (4) Multi-jurisdictional Mitigation Strategy §201.6(c)(3) (iv).

A description of the city specific planning and adoption process follows, along with detailed community specific action items; for detailed information see Volume IV, Appendix B. Information about the city's risk relative to the County's risk to natural hazards is documented in this addendum's Hazard Analysis and Issue Identification section. The section considers how the city's risk differs from or matches that of the County's; additional information on the Risk Assessment is provided within Volume I, Section 2 of this NHMP. The community's mitigation strategy is provided herein along with community specific action items; action items that have a city role but are identified at the County level are provided in Volume I, Section 3 and Volume IV, Appendix A.

How was the Plan Developed?

The NHMP was developed by the Deschutes County Natural Hazard Mitigation Plan steering committee, while this addendum was created by the City of Redmond steering committee. The Deschutes County Emergency Manager was designated as the NHMP's convener and will take the lead in implementing, maintaining and updating the plan. Locally, the City of Redmond convened a steering committee for the purpose of developing the city's addendum.

The local steering committee was closely involved throughout the development of the plan and served as the local oversight body for the plan's development. The local steering committee met on one occasion: April 16th, 2021 (see Appendix B for more information). Steering committee members contributed data and reviewed, and provided guidance towards the community profile, risk assessment, mitigation strategy (action items), and implementation and maintenance plan. The addendum reflects effort from the formal meeting and during subsequent informal meetings between members of the steering committee and with Central Oregon Intergovernmental Council (COIC).

An open public involvement process is essential to the development of an effective plan. In order to develop a comprehensive approach to reducing the effects of natural disasters, the planning process should include opportunities for the public, neighboring communities, local and regional agencies, as well as private and nonprofit entities to comment on the plan.¹ COIC provided a publicly accessible project webpage for the general public in order to make meeting materials and contact information available throughout the update process. In addition,

¹ Code of Federal Regulations, Chapter 44. Section 201.6, subsection (b). 2015

Deschutes County and the City of Redmond provided press releases on their websites to encourage the public to offer feedback on the plan update.

In addition, COIC administered a public opinion survey to obtain additional input from the public regarding the county’s risks, vulnerabilities, hazards history, and mitigation strategies. See Volume IV, Appendix F for more information.

Updating the mitigation plan is a requirement to gain eligibility for the Federal Emergency Management Agency’s Pre-Disaster Mitigation, Hazard Mitigation, and Flood Mitigation Assistance grant Programs. This project is funded through the Federal Emergency Management Agency’s (FEMA) FY12 Pre-Disaster Mitigation Competitive Grant Program (PDMC – PL-10-OR-2012-002).

The Redmond Addendum to the Deschutes County NHMP was adopted on [DATE] and approved by FEMA on [DATE]. The Deschutes MNHMP was approved by FEMA on [DATE], the plan is effective for Deschutes County and Redmond through [DATE].

For more information on the composition of the steering committee and the process see this NHMP’s Volume I, Acknowledgements and Executive Summary, and Volume IV, Appendix B.

Action Item Matrix

The City’s action items were first developed through a two-stage process in 2015 by the local steering committee, facilitated by Oregon Partnership for Disaster Resilience (OPDR). In 2021, the local steering committee, facilitated by COIC, updated the status of existing action items and removed one action item. In addition, there are 18 County Action Items that include Redmond as an “Affected Jurisdiction.” For additional information see the discussion near the end of this document.

The City’s actions are listed below in matrix format. For more detailed information on each action, see the action forms within Attachment 1 of this addendum. For additional information on the County actions affecting the city see Volume I, Section 3 and Volume IV, Appendix A.

Table RA-1 City of Redmond Action Items

2021 Action Item	High Priority	Mitigation Action Title	Lead Organization	Partner Organization(s)	Timeline	Status
Multihazard #1	X	Participate in emergency preparedness and disaster planning with the County, Redmond School District and other organizations to ready the City and Citizens for emergency situations.	Community Development	Internal: Police Department, Public Works, Redmond Airport External: Deschutes County Emergency Services, Redmond F & R	Long-Term	Ongoing
Earthquake #1		Examine the airport facility needs related to emergency preparedness and its regional designation in the Oregon Resiliency Plan and the Cascadia Event.	Redmond Airport	Internal: Community Development, Engineering, Public Works External: Deschutes County Community Development, Emergency Services	Ongoing	Ongoing
Flood #1		Complete a stormwater drainage study and mitigate problem areas.	Public Works	Internal: Community Development External: OWRD	Long-Term	Removed

Source: City of Redmond NHMP Steering Committee, 2021

How Will the Plan be Implemented?

The City Council will be responsible for adopting the City of Redmond addendum to the Deschutes County NHMP. This addendum designates a coordinating body and a convener to oversee the development and implementation of action items. Because the city addendum is considered part of the County plan, the city will look for opportunities to partner with the County to maintain the plan, and coordinate mitigation efforts through the implementation of action items, etc. The City’s steering committee will convene after re-adoption of the City of Sisters addendum annually with the County every fall. For more details on the meeting schedule and process, see Volume I, Section 4. The City’s Planning Manager and Public Works Director will serve as the co-conveners and will be responsible for convening the local steering committee. The convener will also remain active in the County’s planning process. The steering committee will seek to involve senior staff and decision makers throughout the duration of the five-year implementation and maintenance of the NHMP addendum.

Implementation through Existing Programs

Many of the Natural Hazards Mitigation Plan’s recommendations are consistent with the goals and objectives of the city’s existing plans and policies. Where possible, the City of Redmond will implement the NHMP’s recommended actions through existing plans and policies. Plans and policies already in existence have support from local residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, allowing them to adapt to changing conditions and needs. Implementing the NHMP’s action items through such plans and policies increases their likelihood of being supported and implemented.

The City of Redmond currently has the following plans that relate to natural hazard mitigation:

Table RA-2 Existing Plans

Jurisdiction	Document	Year
City of Redmond	Comprehensive Plan and supporting materials	2020
City of Redmond	Development Code (no mapped SFHA)*	2015
City of Redmond	Transportation Master Plan	2020
City of Redmond	Greater Redmond CWPP**	2017
City of Redmond	Wastewater Collection System	2007
City of Redmond	Wastewater Facility Plan: Redmond Water Pollution Control Facility*	2021
City of Redmond	Wastewater Facility Plan: Redmond Water System*	2021
City of Redmond	Water System Risk & Resilience Plan	2021
Redmond Municipal Airport	Airport Master Plan	2019

Source: City of Redmond | *Revision in process | **Up for revision in 2021-2022

The steering committee and the community’s leadership have the option to add or implement action items at any time. This allows the steering committee to consider mitigation strategies as new opportunities arise, such as funding for action items that may not be of the highest priority. When new actions are identified, they should be documented using an action item form (see Attachment 2). Once a proposed action form has been submitted to the convener, the action will become part of the City’s addendum.

Continued Public Participation

Keeping the public informed of the city's efforts to reduce the city's risk to future natural hazards events is important for successful plan implementation and maintenance. The city is committed to involving the public in the plan review and updated process. The City Addendum along with the County Plan will be posted online on COIC's website (<https://www.coic.org/emergency-preparedness/natural-hazard-mitigation-plans/deschutes-county-nhmp/>), as well as the County and City websites, so that the public may view the plan at any time.

In addition, natural hazards information dissemination is conducted throughout the year when opportunities present themselves via the city offices and website.

Plan Maintenance

The multi-jurisdictional Deschutes County Natural Hazards Mitigation Plan will be updated every five years in accordance with the update schedule outlined in the Disaster Mitigation Act of 2000. During the County plan update process, the city will also review and update its addendum. The convener will be responsible for convening the steering committee to address the questions outlined below.

- Are there new partners that should be brought to the table?
- Are there new local, regional, state, or federal policies influencing natural hazards that should be addressed?
- Has the community successfully implemented any mitigation activities since the plan was last updated?
- Have new issues or problems related to hazards been identified in the community?
- Are the actions still appropriate given current resources?
- Have there been any changes in development patterns that could influence the effects of hazards?
- Have there been any significant changes in the community's demographics that could influence the effects of hazards?
- Are there new studies or data available that would enhance the risk assessment?
- Has the community been affected by any disasters? Did the plan accurately address the impacts of this event?

These questions will help the steering committee determine what components of the mitigation plan need updating. The steering committee will be responsible for updating any deficiencies found in the plan.

The remainder of this addendum includes three sections:

1. Community Profile and Asset Identification,
2. Hazard Identification and Risk Assessment, and
3. Mitigation Strategy.

COMMUNITY PROFILE ASSET IDENTIFICATION

This section provides city specific asset identification. For information on the characteristics of Redmond, in terms of geography, environment, population, demographics, employment and economics, as well as housing and transportation see Volume IV, Appendix C, *Community Profile*. Many of these community characteristics can affect how natural hazards impact communities and how communities choose to plan for natural hazard mitigation. Considering the city specific assets during the planning process can assist in identifying appropriate measures for natural hazard mitigation.

We live in a place with a varied geography and communities. We would like to recognize and acknowledge the indigenous land of the Confederated Tribes of Warm Springs, Molalla, Paiute, Klamath, Modok, Yahooskin Band of Snake Indians, and Tribes of Middle Oregon. We want to recognize the people that came before us and honor their traditions and stewardship of the land. Acknowledgement is a simple, powerful way of showing respect for Indigenous People's history and culture.

Asset Identification

The following assets were identified by the steering committee in 2015 and updated in 2021:

Critical and Essential Facilities

- Deschutes County Sheriff's Office Emergency Management has access to an inventory of critical and essential facilities.

Special Districts with Offices in Redmond

- Central Electric Cooperative – 2098 N Highway 97
- Pacific Power – 1440 SE Lake Road
- Redmond Fire & Rescue
 - Station 401 Headquarters – 341 NW Dogwood
 - Station 403 Airport – 911 SE Salmon
 - Station 404 Cline Falls – 100 SE 67th Street

Redmond School District (schools located in Redmond)

Elementary Schools:

- John Tuck – 209 NW 10th Street
- MA Lynch – 1314 SW Kalama Street
- Sage – 2790 SW Wickiup Ave
- Tom McCall – 1200 NW Upas
- Vern Patrick – 3001 SW Obsidian

Middle Schools:

- Elton Gregory – 1220 NW Upas
- Obsidian – 1334 SE Obsidian Drive

High Schools:

- Edwin Brown Education Center - 850 W Antler Avenue
- Redmond – 675 SW Rimrock Drive
- Redmond Proficiency Academy
 - 657 SW Glacier Ste 2370
 - RPA Middle SW 25th St
- Downtown - 657 Glacier Avenue
- West Campus - 2105 W Antler Avenue
- Ridgeview – 4555 SW Elkhorn Avenue

Colleges and Universities

- Central Oregon Community College – 2030 SE College Loop

Hospitals

- St. Charles Medical Center – 1253 NW Canal Boulevard

Social Service Providers

Please see <https://www.thrivecentraloregon.org/services> for a comprehensive list of resource providers throughout Central Oregon, including Sisters.

Population

Redmond’s certified population estimate as of July 1, 2020 was 32,215 people². Redmond has become a mid-sized community of over 30,000 and has grown by 6,000 residents since the 2010 Census. By the year 2032, Redmond’s population is expected to grow to over 40,000 residents and to 51,625 by 2043³. This represents an increase of almost 20,000 people in the next 20 years or approximately 1,000 new residents per year.

Land Use

The City acknowledged comprehensive plan is the “Redmond Comprehensive Plan 2040”. The Oregon Land Conservation and Development Commission first acknowledged the comprehensive plan in 1979. The City completed a major update to the comprehensive plan in December of 2020.

² Portland State University Population Research Center.

³ Coordinate Population Forecast 2018 - 2068; Deschutes County Urban Growth Boundaries & Areas Outside UGBs - Population Research Center Portland State University

The City implements the plan through: 1) 2040 Greater Redmond Area Comprehensive Plan and Zone Map, 2) creating alignment with the 33 Support Plans identified in the Comprehensive Plan 2040, and 3) Redmond Development Code (Chapter 8 of the City Code).

The Redmond Comprehensive Plan 2040 is a policy framework rooted in a factual basis that helps inform other critical planning documents and implementing tools that together serve as a coordinated, overarching strategy for the City. This approach established the structure for how the City functions and the types of services that it provides. Ultimately, the Comprehensive Plan outlines the direction that the City will take when planning for land use and making public investments.

Redmond has been chosen as a pilot community by the Department of Land Conservation and Development to enact the process that is provided in Oregon Administrative Rules 660-024-0045 to preserve large industrial lots for regional large-lot industrial needs. The area chosen for this is just south of the current Redmond UGB and south of the Deschutes County Fairgrounds. On May 7, 2015, the Central Oregon Intergovernmental Council unanimously voted to endorse the South Redmond Tract as the first site in the Regional Large Lot Industrial program. With this endorsement, the property owner, Department of State Lands, will start a UGB amendment process and request annexation into the city limits and rezoning to the Large Lot Industrial described in the Oregon Administrative Rules (OARs) above. The site is about 1,000 acres and has been successfully added to the UGB.

Redmond Parks and Recreation

City of Redmond

The City of Redmond Parks Division maintains over 26 public parks and their facilities, which includes picnic areas, trails and playgrounds. Biking, fishing and skateboarding are just some of the many activities available in Redmond's parks.

Redmond Area Park and Recreation District – RAPRD

At this time, the district's facilities include the Cascade Swim Center and CSC Park, the RAPRD Activity Center, the High Desert Sports Complex, and undeveloped parks at Majestic Ridge in Redmond and outside the city limits at Tetherow Crossing and Borden Beck Park. RAPRD offers recreational programs for the greater Redmond, Oregon community. The district offers a variety of recreation programs. These include youth and adult sports, before and after school programs, Red Cross classes, art classes, swim lessons and many others.

Economy

Redmond is one of the fastest growing cities in Deschutes County. The community has a fast growing manufacturing sector (growing 22% in employment from 2012-2015)⁴. The growing traded sector industries in Redmond include⁵:

- Bioscience;
- Aviation and Aerospace Manufacturing;

⁴ Economic Development for Central Oregon website, <https://www.edcinfo.com/>, accessed April 28, 2015.

⁵ Ibid

- Specialty manufacturing;
- Building Products Manufacturing;
- Corporate and Administrative Office Centers; and
- Food Manufacturing.

The seasonally adjusted unemployment rate for Deschutes County was 8.6% in 2020. The city adopted its first comprehensive Economics Opportunity Analysis (EOA) in 2020. The EOA included various economic policies which were incorporated into the 2040 Comprehensive Plan. Redmond works closely with Redmond Economic Development Inc. (REDI).

Cultural and Historic Resources

The sites and structures listed below (Table RA-3) represent the city’s official list of historic places compiled by the city and County, and approved by the Oregon Land Conservation and Development Commission.⁶

Table RA-3 List of Historic and Cultural Resources - City of Redmond

Historic Site/ Name	Location
Jack Elliot House	303 NW Canyon Dr.
Redmond Passenger Depot	3716 SW 21st Place
Redmond Freight Depot	778 NE 11th St
Robert (Roy) Holmes House	349 SW 12th St
J. Sidney and Lizzie Lloyed House	135 SW 6th St
John Roberts House	111 NW 8th St
East Whited Farmstead	2087 SW Helmholtz
Fred Atkinson Building	535-537 S. 6th St.
J.D. Butler Building	453 S. 6th St.
Theron Beogher Cottage	422 S.W. 13th St.
Presbyterian Community Church	641 S.W. Cascade Ave.
Ehret Brothers Store	251 S. 6th St.
B.H. & A.T. McMickle House	614 N.W. Cedar Ave.
Milton Odem House	623 S.W. 12th St.
Redmond Union High School	411 S.W. 9th St.
Lew A. Smith House	1329 S.W. Evergreen
The New Redmond Hotel	521 S. 6th St.
WWII Airport Hanger	Sisters Avenue
Roy Carpenter House	342 S.W. Canyon Dr.
C.O. Cooperative Creamery	640 S.W. Evergreen Ave.

Source: City of Redmond

⁶ Redmond Area General Plan, 1998.

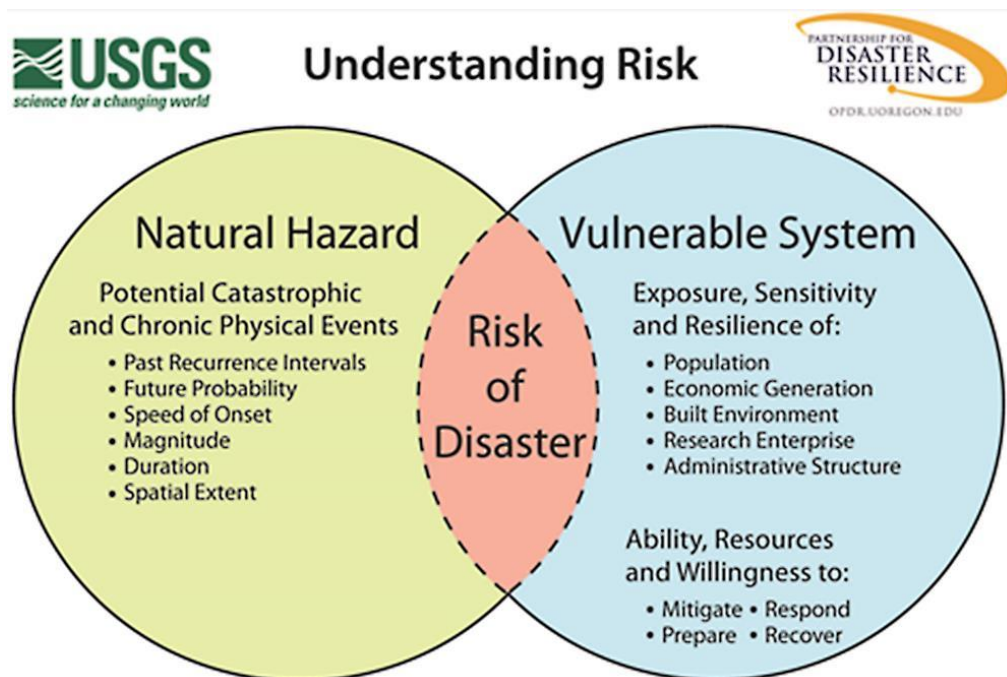
RISK ASSESSMENT

This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - Risk Assessment. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards. Assessing natural hazard risk has three phases:

- **Phase 1:** Identify hazards that can impact the jurisdiction. This includes an evaluation of potential hazard impacts – type, location, extent, etc.
- **Phase 2:** Identify important community assets and system vulnerabilities. Example vulnerabilities include people, businesses, homes, roads, historic places and drinking water sources.
- **Phase 3:** Evaluate the extent to which the identified hazards overlap with, or have an impact on, the important assets identified by the community.

The information presented below, along with hazard specific information presented elsewhere in this addendum, within the Hazard Annexes (Volume II), and community characteristics presented in the Community Profile (Appendix C), will be used as the local level rationale for the risk reduction actions identified in this addendum. The risk assessment process is graphically depicted in Figure RA-1 below. Ultimately, the goal of hazard mitigation is to reduce the area where hazards overlap vulnerable systems.

Figure RA-1 Understanding Risk



Source: Oregon Partnership for Disaster Resilience

Hazard Analysis Methodology

This NHMP utilizes a hazard analysis methodology that was first developed by FEMA circa 1983, and gradually refined by the Oregon Military Department’s Office of Emergency Management over the years.

The methodology produces scores that range from 24 (lowest possible) to 240 (highest possible). Vulnerability and probability are the two key components of the methodology. Vulnerability examines both typical and maximum credible events, and probability endeavors to reflect how physical changes in the jurisdiction and scientific research modify the historical record for each hazard. Vulnerability accounts for approximately 60% of the total score, and probability approximately 40%.

This method provides the jurisdiction with a sense of hazard priorities, or relative risk. It doesn't predict the occurrence of a particular hazard, but it does "quantify" the risk of one hazard compared with another. By doing this analysis, planning can first be focused where the risk is greatest.

In this analysis, severity ratings, and weight factors, are applied to the four categories of history, vulnerability, maximum threat (worst-case scenario), and probability as shown in the table below. See Volume I, Section 2 (Risk Assessment) for more information.

Hazard Analysis

On April 16th, 2021, the City of Redmond addendum steering committee developed their hazard vulnerability assessment (HVA), using the County’s HVA as a reference. Changes from the County’s HVA were made where appropriate to reflect distinctions in vulnerability and risk from natural hazards unique to the City of Redmond, which are discussed throughout this addendum.

Table RA-4 shows the HVA matrix for Redmond showing each hazard listed in order of rank from high to low. For local governments, conducting the hazard analysis is a useful step in planning for hazard mitigation, response, and recovery. The method provides the jurisdiction with a sense of hazard priorities, but does not predict the occurrence of a particular hazard.

Table RA-4 Hazard Analysis Matrix – City of Redmond

Hazard	History	Probability	Vulnerability	Maximum Threat	Total Threat Score	Hazard Rank	
Winter Storm	20	70	50	90	230	# 1	Top Tier
Wildfire	10	49	45	90	194	# 2	
Windstorm	16	63	20	80	179	# 3	
Volcano	2	14	50	100	166	# 4	Middle Tier
Earthquake (Cascadia)	2	7	40	100	149	# 5	
Drought	8	56	15	30	109	# 6	
Earthquake (Crustal)	2	14	5	80	101	# 7	Bottom Tier
Flood	2	7	5	10	24	# 8	
Landslide	2	7	5	10	24	# 8	

Source: City of Redmond NHMP Steering Committee, 2021.

Three chronic hazards (winter storm, wildfire and windstorm) and one catastrophic hazard (volcano) rank as the top four hazard threats to the city (Top Tier). The Cascadia earthquake,

drought, and crustal earthquake hazards comprise the next three highest ranked hazards (Middle Tier), while flood and landslide hazards comprise the lowest ranked hazards (Bottom Tier).

Table RA-5 categorizes the probability and vulnerability scores from the hazard analysis for the city and compares the results to the assessment completed by the Deschutes County NHMP Steering Committee (areas of difference are noted with **bold** text within the city ratings).

Table RA-5 Probability and Vulnerability Comparison

Hazard	Redmond		County	
	Probability	Vulnerability	Probability	Vulnerability
Drought	High	Low	High	Low
Earthquake (Cascadia)	Low	High	Low	High
Earthquake (Crustal)	Low	Moderate	Low	Low
Flood	Low	Low	High	Low
Landslide	Low	Low	Moderate	Low
Volcano	Low	High	Low	High
Wildfire	Moderate	High	High	High
Windstorm	High	Moderate	High	High
Winter Storm	High	High	High	High

Source: City of Redmond NHMP Steering Committee and Deschutes County NHMP Steering Committee, 2021.

Drought

A drought is a period of drier than normal conditions that results in water-related problems. Drought occurs in virtually every climatic zone, but its characteristics vary significantly from one region to another. Drought is a temporary condition; it differs from aridity, which is restricted to low rainfall regions and is a permanent feature of climate. The extent of drought events depends upon the degree of moisture deficiency, and the duration and size of the affected area. Typically, droughts occur as regional events and often affect more than one city and County.

The steering committee determined that the city’s probability for drought is **high** (which is the same as the County’s rating) and that their vulnerability to drought is **low** (which is the same as the County’s rating).

The city has ample high quality groundwater supplies fed by seven (7) production wells within the Deschutes regional aquifer. There are no issues with groundwater supply and the annual recharge to the aquifer is high and long-term water level trends show ample supply for expected population growth and water usage.⁷ In addition, the city maintains six (6) storage facilities totaling 13.5 million gallons, two (2) booster pump stations, one (1) transfer pump station, and one (1) pressure reducing station.⁸

For more information on the Drought Hazard (including history and extent) see the Drought Annex in Volume II.

⁷ CH2MHill, 2007. Wastewater (collection system) and Water System Master Plan. City of Redmond Oregon.

⁸ City of Redmond Website, <http://www.redmond.or.us/>, accessed April 16, 2021.

Earthquake

Oregon and the Pacific Northwest in general are susceptible to earthquakes from four sources: 1) the off-shore Cascadia Fault Zone; 2) deep intraplate events within the subducting Juan de Fuca Plate; 3) shallow crustal events within the North American Plate; and 4) earthquakes associated with volcanic activity.⁹

The areas most susceptible to ground amplification and liquefaction have young, soft alluvial sediments, found along river and stream channels. The extent of the damage to structures and injury and death to people will depend upon the type of earthquake, proximity to the epicenter and the magnitude and duration of the event.

The steering committee HVA evaluated both crustal earthquakes and a Cascadia earthquake. The steering committee determined that the city's probability of experiencing a crustal earthquake is **low** (which is the same as the County's rating) and that their vulnerability to a crustal earthquake is **low** (which is lower than the County's rating). The steering committee determined that the city's probability of experiencing a Cascadia earthquake is **low** (which is the same as the County's rating) and that their vulnerability to a Cascadia earthquake is **high** (which is the same as the County's rating).

Two-thirds of Redmond's buildings were built after 1990 and the codification of seismic codes. Redmond is not particularly susceptible to liquefaction, and is not expected to experience very strong to violent shaking in an earthquake event (see Volume II, Tables II-5 and II-6). As such, the city's vulnerability to earthquakes is reduced because of its relatively new infrastructure and buildings in combination with the particular geology of the area. However, the city considers itself to have high vulnerability to a Cascadia earthquake event due to secondary effects of the hazard, including access to transportation routes, energy resources, communications, and the need to assist with refugees of the damage that is expected west of the Cascades.

Information on specific buildings' estimated seismic resistance, determined by DOGAMI in 2007, is shown in Tables RA-6 below. The table displays the rankings of all facilities within the city's jurisdiction; each "X" represents one building within that ranking category. These scores have not been updated since 2007, but any new buildings can be assumed "low" risk given new building codes.

Of the school facilities evaluated by DOGAMI using RVS, none have very high (100% chance) collapse potential. Five (5) buildings have high (greater than 10% chance) collapse potential; however, three of these buildings are located at the former Evergreen Elementary School which is no longer used as a school facility (it is expected that these buildings will receive structural seismic upgrades and be the future home of city hall). Of the public safety facilities evaluated, none have very high (100% chance) collapse potential; however, two (2) buildings have high (greater than 10% chance) collapse potential. None of the community college buildings or the hospital are rated with High or Very High collapse potentials.

⁹ Taylor, George H. and Chris Hannan. *The Oregon Weather Book*. Corvallis, OR: Oregon State University Press. 1999

Table RA-6 Rapid Visual Survey Scores

Facility	Level of Collapse Potential			
	Low (< 1%)	Moderate (>1%)	High (>10%)	Very High (100%)
Schools				
John Tuck Elementary School (209 NW 10th St, Redmond)	X	XXXX		
MA Lynch Elementary School (1314 SW Kalama St, Redmond)		XX		
Vern Patrick Elementary School (3001 SW Obsidian, Redmond)	X			
**Deschutes Edge Charter School (1220 NW Upas, Redmond)			X	
Hugh Hartman Middle School (2105 W Antler, Redmond)	X			
Obsidian Middle School (1334 SE Obsidian Ave, Redmond)			X	
Redmond High School (675 SW Rimrock Dr, Redmond)	X	XXX		
Ridgeview High School (4555 SW Elkhorn Ave, Redmond OR 97756)	Not addressed in the 2007 survey			
Central Oregon Community College - Redmond Campus				
College Center	X			
MATL	X			
One Stop Building	X			
Public Safety				
Redmond F&R - Station 401 Headquarters (341 NW Dogwood, Redmond)	X			
Redmond F&R - Station 403 Airport (911 SE Salmon, Redmond)			X	
Hospitals				
St. Charles Medical Center - Redmond (1253 NW Canal Blvd, Redmond)		XX		

Source: DOGAMI 2007. Open File Report 0-07-02. Statewide Seismic Needs Assessment Using Rapid Visual Assessment.

The County and cities have opted to create one action item for all the facilities that have a ‘high’ or ‘very high’ rating (see Appendix A). The buildings with ‘high’ or ‘very high’ collapse potential include multiple education and public safety facilities located throughout the city, all of which can play a key role in/during disaster events or during long-term recovery.

For more information on the Earthquake Hazard (including history and extent) see the Earthquake Annex in Volume II.

Flood

Flooding results when rain and snowmelt creates water flow that exceeds the carrying capacity of rivers, streams, channels, ditches, and other watercourses. In Oregon, flooding is most common from October through April when storms from the Pacific Ocean bring intense rainfall.

Most of Oregon’s destructive natural disasters have been floods.¹⁰ Flooding can be aggravated when rain is accompanied by snowmelt and frozen ground; the spring cycle of melting snow is the most common source of flood in the region. The principal types of flood that occur in Redmond include flash floods (associated with thunderstorms) that occur frequently and may cause localized flooding that can impact development within Redmond as it did in August 2013¹¹. Redmond is the only incorporated city within Deschutes County that does not have a mapped special flood hazard area (floodplain); the Deschutes River is located west of the city. However, the city does have a canal that runs through the city as part of the Central Oregon Irrigation District’s (COID) Pilot Butte Canal (running from Bend, through Redmond to Terrebonne).

The steering committee determined that the city’s probability for flood is **low** (which is lower than the County’s rating) and that their vulnerability to flood is **low** (which is the same as the County’s rating).

National Flood Insurance Program (NFIP)

The Deschutes County Flood Insurance Rate Maps (FIRMs) were modernized in 2007 and do not include a special flood hazard area for Redmond. The table below shows that as of November 2014, Redmond has zero (0) National Flood Insurance Program (NFIP) policies in force and no paid claims. The city has never had a Community Assistance Visit (CAV) and is not a member of the Community Rating System (CRS). The community repetitive flood loss record for Redmond does not include any repetitive flood loss, or severe repetitive flood loss, buildings and has not had any repetitive loss claims.

Table RA-7 Flood Insurance Detail

Jurisdiction	Current FIRM Date	Initial FIRM Date	Total Policies	Pre-FIRM Policies	Policies by Building Type				Minus Rated A Zone
					Single Family	2 to 4 Family	Other Residential	Non-Residential	
Redmond	9/28/2007	9/28/2007	0	0	0	0	0	0	0

Jurisdiction	Insurance In Force	Total Paid Claims	Pre-FIRM Claims Paid	Substantial Damage Claims	Repetitive Loss Buildings	Severe Repetitive Loss Buildings	Total Paid Amount	CRS Class Rating	Last CAV

Source: Information supplied by the Federal Emergency Management Agency, April 2021.
 NP - Not Participating | NA - Information not Available/ Not Applicable.

For more information on the Flood Hazard (including history and extent) see the Flood Annex in Volume II.

Landslide

A landslide is any detached mass of soil, rock, or debris that falls, slides or flows down a slope or a stream channel. Landslides are classified according to the type and rate of movement and the type of materials that are transported. In a landslide, two forces are at work: 1) the driving forces that cause the material to move down slope, and 2) the friction forces and strength of

¹⁰ Taylor, George H. and Chris Hannan. *The Oregon Weather Book*. Corvallis, OR: Oregon State University Press. 1999
¹¹ “Redmond couple’s home hit by flooding” KTVZ News, accessed April 29, 2015, <http://www.ktvz.com/news/redmond-couples-home-hit-by-flooding/21678364>

materials that act to retard the movement and stabilize the slope. When the driving forces exceed the resisting forces, a landslide occurs.

The steering committee determined that the city's probability for landslide is **low** (which is lower than the County's rating) and that their vulnerability to landslide is **low** (which is the same as the County's rating).

The city has had no problems with landslides in city limits in known history and is located in a generally stable area. A few neighborhoods within the city (around the Dry Canyon) are located on steep hillsides but have not experienced problems in the past.

For more information on the Landslide Hazard (including history and extent) see the Landslide Annex in Volume II.

Volcano

The Pacific Northwest lies within the "ring of fire", an area of very active volcanic activity surrounding the Pacific Basin. Volcanic events occur regularly along the ring of fire, in part because of the movement of the Earth's tectonic plates. Volcanic events have the potential to coincide with numerous other hazards including ash fall, earthquakes, lava flows, pyroclastic flows, lahars, and debris flows, and landslides.

The steering committee determined that the city's probability for a volcanic event is **low** (which is the same as the County's rating) and that their vulnerability to a volcanic event is **high** (which is the same as the County's rating).

Were a volcanic event to occur in the Cascades region of Oregon, Redmond could be at risk for ash fall, depending on the severity of the event and the direction of the wind. Due to Redmond's proximity to the Three Sisters and Newberry Crater, in relation to other areas within eastern Oregon, the effects of a volcanic event may be more disruptive to normal business, economic activity, and health.

For more information on the Volcano Hazard (including history and extent) see the Volcano Annex in Volume II.

Wildfire

Wildfires occur in areas with large amounts of flammable vegetation that require a suppression response due to uncontrolled burning. Fire is an essential part of Oregon's ecosystem, but can also pose a serious threat to life and property particularly in the state's growing rural communities. Wildfire can be divided into three categories: interface, wildland, and firestorms. The increase in residential development in the Wildland Urban Interface areas has resulted in greater wildfire risk. Fire has historically been a natural wildland element and can sweep through vegetation that is adjacent to a combustible home. New residents in remote locations are often surprised to learn that in moving away from built-up urban areas, they have also left behind readily available fire services providing structural protection.

The steering committee determined that the city's probability for wildfire is **moderate** (which is lower than the County's rating) and that their vulnerability to wildfire is **high** (which is the same as the County's rating).

Compared to other areas within the County, Redmond has a lower risk of wildfire due, in part, to its location in relation to irrigated agricultural land. The Greater Redmond Area Community Wildfire Protection Plan (CWPP, October 2011) relies upon (1) the Oregon Department of Forestry Assessment of Risk Factors and (2) the classification ratings of individual areas under the Oregon Forestland-Urban Interface Fire Protection Act of 1997 (Senate Bill 360) to determine fire risk within the Greater Redmond Wildland-Urban Interface (WUI). According to the Senate Bill 360 ratings all Redmond WUI communities (see Attachment 3) are rated as High fire risk. According to the ODF Assessment all urban areas within the Greater Redmond WUI are rated with a Moderate probability of wildfire risk occurring (except for the urban southwest which is rated High) and Low vulnerability¹². The first priority areas for hazardous fuel treatments identified within the CWPP include the urban northwest community (the three other urban communities are listed as second priority).¹³ For more information on wildfire risk and fuels reduction projects see the Greater Redmond Area CWPP and visit the Project Wildfire website: <http://www.projectwildfire.org/>.

Table RA-8 Wildfire Communities and ODF and SB 360 Hazard Ratings

Community at Risk	Acreage	Homes	Estimated Population	ODF		SB 360	
				Probability	Vulnerability	High	Extreme
Northeast	13,797	815	2,038	Moderate	Low	97.9%	2.1%
Southeast	26,354	116	290	High	Low	100.0%	0.0%
Northwest	34,809	2,677	6,692	Moderate	Low	93.5%	6.5%
Southwest	20,388	2,437	6,092	High	Low	97.0%	3.0%
Urban Northeast	3,263	961	2,402	Moderate	Low	100.0%	0.0%
Urban Southeast	4,462	500	1,250	Moderate	Low	100.0%	0.0%
Urban Northwest	3,351	3,139	7,848	Moderate	Low	100.0%	0.0%
Urban Southwest	4,579	5,459	13,648	High	Low	100.0%	0.0%
Total	111,003	16,104	40,260	-	-	97.2%	2.8%

Source: Greater Redmond CWPP compiled Tables 1, 2, and 5

Note: Estimated population is based on Deschutes County's estimate formulated as 2.5 x the number of homes.

For more information on the Wildfire Hazard (including history and extent) see the Wildfire Annex in Volume II and the Greater Redmond CWPP.

Windstorm

Winds associated with thunderstorms are short-lived, but strong winds not associated with thunderstorms can last several hours. Although windstorms can affect the entirety of Deschutes County, they are especially dangerous in developed areas with significant tree stands and major infrastructure, especially above ground utility lines. A windstorm will frequently knock down trees and power lines, damage homes, businesses, public facilities, and create tons of storm related debris.

¹² The ODF Assessment takes into account the likelihood of a fire occurring, hazard rating, protection capability, human and economic values protected, structural vulnerability to determine the overall score. For detailed information review the CWPP available on the Project Wildfire website: <http://www.projectwildfire.org/>

¹³ Greater Redmond CWPP, 2011.

The steering committee determined that the city's probability for windstorm is **high** (which is the same as the County's rating) and that their vulnerability to windstorm is **moderate** (which is lower than the County's rating).

Historical wind events have uprooted trees, damaged roofs and windows, and damaged utility lines. Windstorms have not caused disastrous local damage but are a persistent problem. Windstorms are often associated with microbursts (thunderstorms). A primary windstorm vulnerability for the community is damage to utility lines, including fiber optics, which are key to the economic sectors of the community.

For more information on the Windstorm Hazard (including history and extent) see the Windstorm Annex in Volume II.

Winter Storm

Severe winter storms can consist of rain, freezing rain, ice, snow, cold temperatures, and wind. They originate from troughs of low pressure offshore that ride along the jet stream during fall, winter, and early spring months. Severe winter storms affecting Deschutes County typically originate in the Gulf of Alaska or in the central Pacific Ocean. These storms are most common from November through March.

The steering committee determined that the city's probability for winter storm is **high** (which is the same as the County's rating) and that their vulnerability to winter storm is **high** (which is the same as the County's rating).

Redmond is located in the high desert of Central Oregon, on the east flanks of the Cascades. Positioned at this desert-mountain interface subjects the city to often intense and unpredictable storm events. Major winter storms can and have occurred in the Redmond area, and while they typically do not cause significant damage; they are frequent and have the potential to impact economic activity. Road closures on Highway 97, or the passes to the Willamette Valley (Highways 58 and 126), due to winter weather are a common occurrence and can interrupt commuter and large truck traffic. The city budgets funds for seasonal winter storm needs, such as clearing roads.

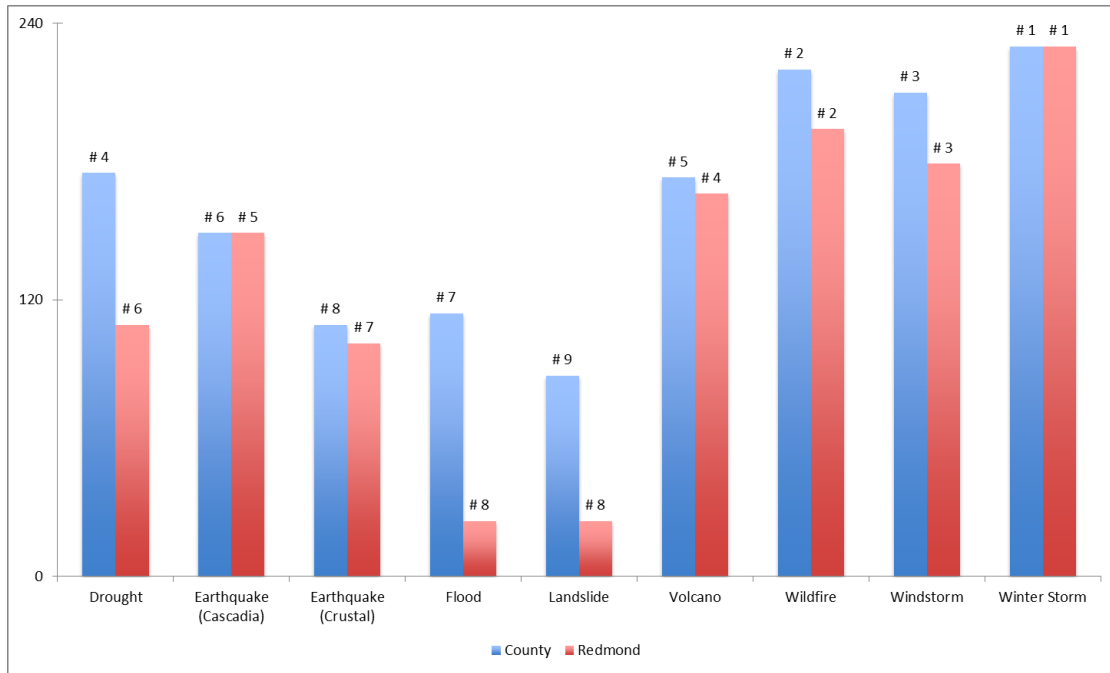
For more information on the Winter Storm Hazard (including history and extent) see the Winter Storm Annex in Volume II.

Summary

The figure below presents a summary of the hazard analysis for the City of Redmond and compares the results to the assessment completed by the Deschutes County NHMP Steering Committee.

In terms of history, probability, vulnerability, and maximum threat, the hazard analysis for the city overall rated their threat to the drought, earthquake (crustal), flood, landslide, volcano, wildfire, and windstorm hazards lower than the County while the earthquake (Cascadia) and winter storm hazards were rated the same as the County's ratings.

Figure RA-2 Overall Hazard Analysis Comparison – Redmond and Deschutes County



Source: City of Redmond NHMP Steering Committee and Deschutes County NHMP Steering Committee, 2021.

Mitigation Plan Mission

The plan mission states the purpose and defines the primary functions of Deschutes County's NHMP. It is intended to be adaptable to any future changes made to the plan and need not change unless the community's environment or priorities change.

The mission of the Deschutes County NHMP is:

To promote sound public policy designed to protect people, critical facilities, infrastructure, property, and the environment from natural hazards.

This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the County towards building a safer, more disaster resistant community.

The Redmond steering committee reviewed the 2015 NHMP plan mission statement and agreed it accurately describes the overall purpose and intent of this plan. The Steering Committee believes the concise nature of the mission statement allows for a comprehensive approach to mitigation planning.

Mitigation Plan Goals

Mitigation plan goals are more specific statements of direction that Deschutes County citizens, and public and private partners can take while working to reduce the County's risk from natural hazards. These statements of direction form a bridge between the broad mission statement and particular action items. The goals listed here serve as checkpoints as agencies and organizations begin implementing mitigation action items.

The Redmond Addendum steering committee reviewed and agreed to the 2021 Deschutes County NHMP plan goals. All the plan goals are important and are listed below in no particular order of priority. Establishing community priorities within action items neither negates nor eliminates any goals, but it establishes which action items to consider to implement first, should funding become available. Below is a list of the 2021 NHMP goals:

Goal 1 - Protect life and reduce injuries resulting from natural hazards.

Goal 2 - Minimize property damage from natural hazards.

Goal 3 - Minimize damage to critical or essential infrastructure and services from natural hazards.

Goal 4 - Enhance the ability of Deschutes County's economy to rebound quickly from the effects of natural hazard events.

Goal 5 - Minimize project impacts to the environment and utilize natural solutions to protect people and property from natural hazards.

Goal 6 - Enhance the County's capability to implement a comprehensive County wide natural hazards mitigation strategy.

Goal 7 - Motivate the "whole community" to build resilience and mitigate against the effects of natural hazards through engagement, listening, learning, information- sharing, and funding opportunities.

Goal 8 - Eliminate development within mapped hazardous areas where the risks to people and property cannot be practicably mitigated.

Goal 9 - Minimize damage to historic and cultural resources from natural hazards.

Goal 10 - Enhance communication, collaboration, and coordination among agencies at all levels of government, sovereign tribal nations, and the private sector to mitigate natural hazards.

Goal 11 - Mitigate the inequitable impacts of natural hazards by prioritizing and directing resources and investments to build resilience in the most vulnerable populations and the communities least able to respond and recover.

Goal 12 - Develop, integrate, and align natural hazards mitigation and climate adaptation efforts based on the evolving understanding of the interrelationships between climate change and climate-related natural hazard events.

Goal 13 - Reduce repetitive and severe repetitive flood losses.

Goal 14 - Minimize or eliminate potential impacts from dams posing the greatest risk to people, property, and infrastructure

(Note: although numbered the goals are not prioritized.)

Mitigation Plan Action Items

Short- and long-term action items identified through the planning process are an important part of the mitigation plan. Action items are detailed recommendations for activities that local departments, citizens and others could engage in to reduce risk. They address both multi-hazard (MH) and hazard-specific issues. Action items can be developed through a number of sources, including steering committee work sessions, stakeholder interviews, public community forums, surveys, local policies and plans, and regional risk assessments. A description of how the plan's mitigation actions were developed is provided below.

Action Item Worksheets

Each action item has a corresponding action item worksheet describing the activity, identifying the rationale for the project, identifying potential ideas for implementation, and assigning coordinating and partner organizations. The action item worksheets can assist the community in pre-packaging potential projects for grant funding. The worksheet components are described within Volume I, Section 3 (Mitigation Strategy). The City specific action item worksheets are located in Attachment 1, *Action Item Forms*.

The City is also a party to several actions described in the County NHMP; each jurisdiction listed on the County Action Item Forms as an “Affected Jurisdiction” will contribute to and work towards completion of that action as it pertains to their jurisdiction. There are 18 County Action Items that included Redmond as an “Affected Jurisdiction”. For detailed information on each County level action item form see Volume I, Section 3, *Mitigation Strategy* and Volume IV, Appendix A, *Action Item Forms*.

Action Item Development Process

Development of action items was a multi-step, iterative process that involved brainstorming, discussion, review, and revisions. Action items were developed by the steering committee and were influenced by actions identified as part of the Sustainable City Year work program. A number of actions identified by the County steering committee include the City as an affected jurisdiction; these actions are broad actions that include implementation components at both the County and city level. All actions were reviewed by the committee and revised as necessary before becoming a part of this document.

ATTACHMENT I: ACTION ITEM FORMS

Action Item Forms

The action item forms portray the overall action plan framework and identify linkages between the plan goals, partnerships (coordination and partner organizations), and actions. Table RA-9 provides a list of actions for the city. The pages that follow include individual forms for each mitigation action.

Table RA-9 Mitigation Actions

Action Item	High Priority	Timeline	Status	Related Hazards							
				Drought	Earthquake	Flood	Landslide	Volcano	Wildfire	Windstorm	Winter Storm
MH #1	X	Long-Term	Ongoing	X	X	X	X	X	X	X	X
EQ #1		Ongoing	Ongoing		X						
FL #1		Long-Term	Removed			X					

Source: City of Redmond NHMP Steering Committee

Mitigation Action: Multi-hazard #1 (What do we want to do?)		Alignment with Plan Goals:				High Priority Action Item?
Participate in emergency preparedness and disaster planning with the County, Redmond School District and other organizations to ready the City and Citizens for emergency situations.		<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> Yes
		<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 8	
		<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input type="checkbox"/> 11		
Alignment with Existing Plans/Policies:						
City/County Comprehensive Plans and Development Codes						
Rationale for Proposal (Why is this important?):						
Public awareness of external events and how to prepare for and deal with them is critical to community preparedness.						
Ideas for Implementation (How will it get done?):			Action Status Report			
The department will work with the U of O Sustainable Cities Initiative in developing a comprehensive emergency preparedness plan for the Cascadia Event. Update and conduct outreach for the City emergency operations plan.			Ongoing (added in 2015). The University of Oregon Sustainable Cities Initiative completed a short report on this (available on the City of Redmond's website).			
Champion/ Responsible Organization:		Community Development				
Internal Partners:			External Partners:			
Police Department, Public Works, Redmond Airport			Deschutes County Emergency Services, Redmond F & R			
Potential Funding Sources:			Estimated cost:		Timeline:	
Sustainable City Year - Budgeted			\$15,000		<input type="checkbox"/> Ongoing <input type="checkbox"/> Short Term (1-2 years) <input checked="" type="checkbox"/> Long-Term (3-5 years)	
Form Submitted by:		2015 NHMP Committee				
Action Item Status:		Ongoing				

Mitigation Action: Earthquake #1 (What do we want to do?)		Alignment with Plan Goals:				High Priority Action Item?
Examine the airport facility needs related to emergency preparedness and its regional designation in the Oregon Resiliency Plan and the Cascadia Event.		<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> Yes
		<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 8	
		<input type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input type="checkbox"/> 11		
Alignment with Existing Plans/Policies:						
Airport Master Plan, Comprehensive Plan, Facilities Plan						
Rationale for Proposal (Why is this important?):						
Redmond's airport serves all of central Oregon and is the site of the command center.						
Ideas for Implementation (How will it get done?):			Action Status Report			
Examine operational readiness and development of the emergency plans. Program needed expansion and key maintenance efforts.			Added in 2015. Removed from High Priority list. Continue to look for opportunities to build capacity at Redmond Airport as a regional emergency services facility.			
Champion/ Responsible Organization:		Redmond Airport				
Internal Partners:			External Partners:			
Community Development, Public Works			Deschutes County Community Development, Deschutes County Emergency Services, FEMA, OEM, Department of Homeland Security (DHS), City of Redmond			
Potential Funding Sources:			Estimated cost:		Timeline:	
Local Resources - Grants, Bonds			To be determined		<input checked="" type="checkbox"/> Ongoing <input type="checkbox"/> Short Term (1-2 years) <input type="checkbox"/> Long-Term (3-5 years)	
Form Submitted by:		2015 NHMP Committee				
Action Item Status:		Ongoing				

Mitigation Action: Flood #1 (What do we want to do?)	Alignment with Plan Goals:				High Priority Action Item?
Complete a stormwater drainage study and mitigate problem areas.	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> Yes
	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	
	<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input type="checkbox"/> 11		
Alignment with Existing Plans/Policies:					
Stormwater Master Plan					
Rationale for Proposal (Why is this important?):					
<p>Flash floods occur in Redmond and have the potential to damage structures; the most recent large event occurred in August 2013 and the event of record occurred on June 10-17, 2006. The event of record caused flooding in the streets of downtown and other parts of Redmond.</p> <p>The City does not have an extensive stormwater collection system, rather the city has used underground injection controls (dry wells) and valved interconnections between the storm and sanitary system. During large storm events street flooding is relieved by opening valves to divert stormwater to gravity sanitary sewer pipelines as allowed per the city's discharge permit for the Redmond WPCF. Other areas are relieved with the use of the city's vacuum trucks. (Redmond Wastewater (Collection System) and Water System Master Plan, 2007)</p>					
Ideas for Implementation (How will it get done?):			Action Status Report		
Update existing Stormwater Master Plan			Removed (added in 2015). Recent projects have been completed to address the localized flooding experienced downtown, at the Yew Avenue interchange and at SW Glacier and 25 th Street. Past flooding within Redmond has typically been the result of heavy, localized storm events. As problem areas are identified from these events, projects are developed and incorporated into a 5-year capital projects plan. This is an ongoing process that is managed by Stormwater Division personnel, therefore completing a Stormwater Drainage study is not necessary.		
Champion/Responsible Organization:		Public Works			
Internal Partners:			External Partners:		
Community Development, Engineering			Oregon Water Resources Department		
Potential Funding Sources:		Estimated cost:		Timeline:	
SDC's, grants, Local Resources		\$125,000		<input type="checkbox"/> Ongoing <input type="checkbox"/> Short Term (1-2 years) <input checked="" type="checkbox"/> Long-Term (3-5 years)	
Form Submitted by:	2015 NHMP Committee				
Action Item Status:	Removed				

ATTACHMENT 2: ACTION ITEM FORM TEMPLATE

Action Item: (What do we want to do?)	Alignment with Plan Goals:	High Priority Action Item?
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/>	<input type="checkbox"/> Yes
Alignment with Existing Plans/Policies:		
Rationale for Proposed Action Item (why is it important?):		
Ideas for Implementation (how will it get done?):	Action Status Report	
Potential Funding Sources:	Estimated Cost:	Timeline:
		<input type="checkbox"/> Ongoing <input type="checkbox"/> Long (6+ years) <input type="checkbox"/> Medium (2-5 years) <input type="checkbox"/> Short (0-2 years)
Coordinating/Lead Organization:		
Internal Partners:	External Partners:	
Form Submitted by:		
Action Item Status		