

# 8

## **Hazard-Specific Annex – Dam Failure (Scoggins Dam)**

Approved (April 10, 2015)

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## 1 Purpose

The purpose of the Scoggins Dam Hazard-Specific Annex is to establish procedures for warning, evacuating, and sheltering persons who would be endangered in the event of the failure of Scoggins Dam. It also addresses similar emergency response actions which might be required in the event of flooding caused by emergency releases from Scoggins Dam.

## 2 Situation and Assumptions

### 2.1 Situation

- Scoggins Dam and its reservoir, Henry Hagg Lake, are located on Scoggins Creek approximately eight miles south of Forest Grove. The dam is a 151-foot-high, zoned earth fill structure that is 2,700 feet long at the crest and contains 4 million cubic yards of material. Normal capacity of Henry Hagg Lake is 53,640 acre-feet, with a water surface elevation of 303.50 feet or “full pool”. However, inundation mapping is based on a total release in excess of 62,000 acre feet.<sup>1</sup> The actual volume of water behind Scoggins Dam will vary throughout the year with the highest volumes of water being expected from late spring through early summer.
- Recent studies of Scoggins Dam indicate it is located on an inactive seismic fault and is in an area that could be affected by a Cascadia Subduction Zone earthquake event. For further information on the earthquake hazard, see the Washington County Hazard Vulnerability Analysis.
- Were Scoggins Dam to suffer a catastrophic failure, human lives and property in the flood pathway would be endangered. This danger would be relative to the amount of water stored behind the dam at the time of the failure.<sup>2</sup>
- The U.S. Bureau of Reclamation (BOR) has developed inundation area maps showing the extent of flooding and expected flood wave arrival times following a failure of the dam to help inform planning efforts. Detailed maps can be viewed at Washington County Emergency Management and / or in the Washington County Emergency Operation Center (EOC), if activated. A general map of the affected area is included in Tab 1.
- The inundation areas are estimates only and actual time and water depths will vary greatly depending on the time of year, the depth of water behind the dam

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<sup>1</sup> One acre foot equals 325,851.4 gallons

<sup>2</sup> Map “*Scoggins Dam Existing Condition Sunny Day Failure Scenario*”, United States Bureau of Reclamation, Denver Technical Services Center, 2005.

at the time of dam failure, the Tualatin River depth, and debris and other obstructions in the river.

- The inundation area includes unincorporated areas of Washington County and Clackamas County as well as several cities in both counties, most notably Gaston, Forest Grove, Cornelius, Hillsboro, Tigard, Tualatin, Rivergrove, King City, and West Linn.
- An estimated population of 5,600 people live in the identified catastrophic failure inundation area.
- The BOR constructed and retains ownership of Scoggins Dam. By agreement with the BOR, Tualatin Valley Irrigation District (TVID) assumed responsibility for operation and maintenance of the dam facilities in 1983.
- TVID monitors and controls the amount of water stored behind the dam according to BOR regulations. These regulations provide safety for those below the dam and maximize water storage capacity for use throughout the year.
- Washington County Facilities and Parks Services Division is responsible for managing and maintaining Hagg Lake Park located above the dam.
- The Washington County Sheriff's Office has a part-time Marine Patrol for Hagg Lake generally patrolling the lake from mid-March through the end of September.
- Gaston Fire has a contract to provide response to the Hagg Lake area with Washington County and also provides marine response.

## **2.2 Assumptions**

- Certain conditions might develop at Scoggins Dam that would require the warning and evacuation of the “population at risk” – specifically those people located within the dam failure inundation area downstream from the dam.
- Numerous circumstances can impact the ability to provide adequate notification of an emergency or failure.
  - Not all dam failure scenarios allow ample warning, e.g., a Cascadia Subduction Zone earthquake may cause the dam to fail rapidly, before authorities have time to issue a warning.
  - Proximity to the dam will affect the timeliness of warnings in relation to the timing of impacts. Employees at the Stimson Lumber mill and residents of the lower Scoggins Valley might have only moments to get to high ground, while those further downstream may have several hours based on their distance from the dam and the anticipated speed of the flood.

- If a dam failure is caused by a major earthquake, damage to the public telephone system, both landline and cellular, and the Internet may hinder efforts to warn those in the path of the flood.
  - Damage to bridges and roads, as well as other issues created by a major earthquake could also complicate efforts to notify and/or evacuate the public.
  - A significant earthquake may cause such damage to the entire county that local response resources will be overwhelmed leaving very little response capability to deal with a potential dam failure.
- Sufficient local resources will be available to conduct the basic operations outlined in this annex. This assumption may not be valid if a dam emergency is associated with a significant earthquake.
  - Once an evacuation order is given, many evacuees will seek shelter with relatives or friends, or arrange other accommodations. Others will need emergency shelter provided for them.
  - Most evacuees will be able to self-evacuate out of the inundation area, while others will need evacuation assistance.

### **3 Concept of Operations**

#### **3.1 Definitions**

- Assembly Areas – Specifically designated locations where people needing emergency shelter may be directed prior to the establishment of shelter sites. These locations must be of sufficient size to accommodate large numbers of evacuees.
- Congregation Points – Neighborhood collection points for evacuees who need transportation to take them to an assembly area and/or shelter.

#### **3.2 General**

- The failure of Scoggins Dam or an emergency drawdown of Henry Hagg Lake to mitigate dam failure would constitute a National Incident Management System (NIMS) Type II incident. Such an incident will:
  1. Require the centralization of departments' and agencies' incident management and coordination activities in the form of Incident Command Posts (ICP), Department Operation Centers (DOC) and Emergency Operation Centers (EOC).
  2. Require community-wide warning and public instructions.

3. Require implementation of large-scale protective measures such as evacuation, temporary sheltering and mass care operations, possibly for an extended duration. (See the Population Protection Annex, the Shelter, Care and Temporary Housing Annex, and the Emergency Transportation Annex.)
4. Require extended assistance from other local response agencies and/or contractors, as well as assistance from state and/or federal agencies.
5. Require that resource management, information management, command management, and policy coordination be addressed at the County EOC level.

### 3.3 Initial Notifications

- The BOR is responsible for maintaining a Scoggins Dam Emergency Action Plan (EAP) which is intended to save lives and reduce property damage in the event of flooding caused by large releases from or failure of Scoggins Dam.
- The EAP defines four unique emergency classifications for dam events:
  - Alert – An unusual but non-emergency event requiring further analysis.
  - Response Level I – The first, and least serious, of three response levels that TVID will declare after analyzing a potentially threatening event. An event in this category may be perceived as an emergency or may be of general interest to the public, but does not pose a hazard, either at the dam or to downstream populations at risk when observed.
  - Response Level II – The second of three response levels TVID will declare after analyzing a potentially threatening event. Response Level II means that an event has occurred or is likely to occur that will actually threaten the structure and/or areas downstream from the dam if the event continues and/or intensifies and that populations at risk should prepare to leave predetermined inundation areas for higher ground and safe shelter
  - Response Level III – The third, and most serious, response level TVID will declare after analyzing potentially threatening events. Response Level III indicates that life-threatening floodwaters, as a result of high operational releases or dam failure, present imminent danger to the public located downstream from the dam. Declaration of Response Level III should prompt local officials to immediately evacuate populations at risk.
- The EAP assigns responsibility to TVID to provide timely notifications to local authorities of developing conditions as they occur.
  - Notifications of all Response Levels should be made to:
    - Stimson Lumber



- Washington County 9-1-1 (WCCCA)
- National Weather Service – Portland Office
- BOR Bend Field Office Manager, or if unable to reach, Pacific Northwest Regional Office (PNRO) Facilities Operations and Maintenance (O&M)
- Oregon Water Resources District 18 Watermaster
- Clean Water Services
- Upon receiving notification from TVID, the Bend Field Office Manager will attempt to notify:
  - Washington County Emergency Management (WCEM)
  - Clackamas County 9-1-1 Dispatch (CCOM)
  - Clean Water Services
- Upon receiving notification from TVID, Washington County 9-1-1 (WCCCA) will attempt to immediately notify:
  - Gaston Rural Fire Protection District
  - Forest Grove Fire Department
  - Cornelius Fire Department
  - Washington County Fire District 2
  - Hillsboro Fire Department
  - Tualatin Valley Fire and Rescue (TVF&R)
  - Washington County Sheriff's Office (WCSO)
  - Washington County Department of Land Use and Transportation (DLUT)
  - WCEM
  - Hillsboro Emergency Management
  - Beaverton Emergency Management
  - Tigard Emergency Management
  - Tualatin Valley Fire and Rescue Emergency Management
  - Oregon Emergency Management (OEM)
  - Oregon Department of Transportation
- Upon receiving notification from WCCCA, WCEM will attempt to immediately notify:
  - WCSO, DLUT, County Facilities, and the County Administrator's Office (CAO)
  - Washington County EOC responders
  - Local emergency managers not previously notified
  - Gaston Public Works
  - Joint Water Commission

- Clackamas County Emergency Management
- Oregon Emergency Response System (OERS)
- Portland and Western Railroad
- Portland General Electric (PGE)
- Amateur Radio Emergency Services (ARES)
- Oregon Department of Transportation
- U.S. Fish and Wildlife Service

### 3.4 Response Actions

The following describes actions to be considered for all response levels depending on the situation. Since the inundation zone crosses numerous jurisdictional boundaries, many of which overlap, the county will activate its EOC and coordinate the countywide response. Local jurisdictions within the flood inundation zone need to be ready to protect their citizens through emergency notification, establishing command structures, and organizing and conducting evacuations. **An Incident Commander (IC) at any level has decision-making authority to take action described in this annex as the responsibility of an IC. When multiple ICs are operating concurrently, each should coordinate those actions with the other ICs.**

#### 3.4.1 Establish Command

- Due to the length of the Tualatin River and the extent of the impact area from a catastrophic failure of Scoggins Dam, the inundation area has been divided into two emergency evacuation/planning zones. The zones are defined as specific segments of dam failure flood inundation areas downstream from Scoggins Dam that:
  - Define the potential area of impact
  - Allow response personnel to prioritize evacuation activities based on the population at risk in proximity to the dam in terms of distance downstream and in flood wave arrival times.
- The two emergency evacuation/planning zones are designated as:
  - Upper River – The area protected by Gaston Fire, Forest Grove Fire, Cornelius Fire, Hillsboro Fire and Washington County Fire District #2 (from the dam to Roy Rogers Road).
  - Lower River – The area protected by TVF&R, from Roy Rogers Road to the Willamette River.
- Upper River Response: Forest Grove Fire and Police and the WCSO will establish Unified Command in the Forest Grove EOC at the Forest Grove Fire Station if available. Gaston Fire will likely be impacted by the event and unable to send a representative to participate in Unified Command at the Forest Grove Fire Station. However, communication will be maintained between the Forest Grove EOC and Gaston Fire to coordinate response actions. Consideration should be made for setting up Gaston as a Branch

under the Forest Grove EOC. As the incident moves into recovery operations, Gaston Fire may set-up an ICP on the south side of the impact area. The city of Hillsboro will endeavor to establish an EOC or DOC and send a liaison to the Forest Grove EOC to assist with and coordinate emergency notifications and evacuations.

- Lower River Response. The inundation area maps reveal that it will take more than 20 hours for Scoggins Dam failure flood waters to reach the lower river area. The lower river scenario for a Scoggins Dam failure is very similar to the scenario for a major flood of the Tualatin River; heights and timing of flood waters are similar. Consequently, for this part of the river, TVF&R will coordinate with affected cities within its service area and with the Washington and Clackamas County EOCs and deal with a Scoggins Dam failure in the same fashion as a major flood of that section of the river.
- The Washington County EOC will be activated for Response Level II and III incidents and may be activated for Response Level I incidents, depending on the needs of the community.
- UC/IC at each EOC or ICP should establish communication with each other, local jurisdictions and the Tualatin Valley Irrigation District.
- The operational components of the remainder of this plan deal primarily with the upper river response.

#### 3.4.2 Alert and Warning (of the General Public)

- Efforts should be made to prioritize notifications to those who are likely to be inundated by flood wave waters first.
- Warnings should include specific information about the risk, the actions that should be taken, and the possible risks of non-compliance. Several methods for the dissemination of public information are available and identified below. For a more complete discussion of this function, see the *Alert and Warning Annex to the EOP*.
  - Community Notification System (reverse 9-1-1)
  - Emergency Alert System (EAS)
  - Wireless Emergency Alert System (WEA)
  - Media bulletins through local broadcast outlets
  - Mobile public address systems such as police vehicles, fire apparatus, and possibly public works vehicles so equipped
  - Social media
- Due to the need for immediate notification of people in the inundation area closest to the dam, a pre-scripted warning message is available in Tab 2 of this annex.
- Alert and warning of some populations may require special consideration.

### 3.4.3 Evacuation and Exclusion

#### 3.4.3.1 Considerations

When considering the need for evacuation, first priority should be placed on those areas closest to the dam. The inundation maps give a rough timeline for water to advance after a dam failure. While evacuation is one option to consider, there are certain limitations that may pose greater problems.

- Evacuation takes time and may be complicated by available resources and the condition of evacuation routes due to time of day, weather, type of event triggering the evacuation (e.g., earthquake), and rising flood waters. Even in a Level I incident, the potential for escalation to Level II or III requires that planning begin immediately for a possible mandatory evacuation.
- The inundation area is primarily Scoggins Creek and the downstream areas of the Tualatin River; however, inundation will also result from backwater flooding of the Tualatin River and its tributary streams.
- An evacuation will require many resources and support from multiple agencies to achieve. Consider that:
  - Evacuation may be necessary even if individuals don't live in the inundation zone as ingress/egress from their property may be blocked by flood waters or damaged roads and bridges.
  - Transportation resources and other physical assistance may be needed.
  - Assembly areas may be needed to direct people to prior to the establishment of shelter sites.
  - Shelters may need to be established to house and feed evacuees.
  - Animals may need to be evacuated.
  - Clear and concise information will need to be provided to the public about:
    - Who needs to evacuate.
    - Evacuation timeframe.
    - What routes to use.
    - Location of assembly areas and/or shelters.
    - The need to avoid high water.
- Potential evacuation routes, their capacities, and vulnerability to the hazards that exist at the time of the dam failure may need to be identified.

- People who are above the dam at the time of an incident should be directed to go to higher ground rather than evacuate along Scoggins Valley Road.
- Traffic may need to be re-routed to minimize congestion as people evacuate affected portions of Washington County.
- Roads may need to be blocked at restricted area control points to keep people from intentionally, or inadvertently, entering the inundation zone.
- Similarly, if resources allow, during any warning phase, resources should be pre-positioned near bridges to be ready to close them immediately should signs of damage or failure be exhibited.
- Rail traffic may need to be halted (by the P&W Railroad).
- When determining the "time needed for evacuation" consider these time factors:
  - Time from receipt of initial notification of a dam failure to the decision to evacuate.
  - Time needed to alert and instruct the public.
  - Time needed to mobilize the population once warned.
  - Time required for evacuees to leave the hazard area using the designated evacuation routes with consideration for overcoming obstacles related to earthquake losses, damage, and debris.
- Weather Conditions
  - If ambient or forecasted conditions present a hazard (e.g., extreme cold or heat, ice, rain) evacuees may need assistance, including:
    - Shelter from the elements.
    - Evacuation routes cleared of obstacles/hazards (e.g., debris, snow, ice).

#### 3.4.3.2 Inundation Area

- The following is an abbreviated list of major structures and populated areas downstream from the dam in the expected inundation area during a full pool/quick release scenario. Additional facilities may also be impacted.
  - From Scoggins Dam to the confluence with the Tualatin River:
    - Scoggins Valley Road
    - Stimson Lumber Company mill
    - Patton Valley Road

- Oregon Highway 47
- Old Highway 47
- PGE Substation
- Portland and Western Railroad
- City of Gaston (northeastern portion)
- Numerous county roads
- From the confluence with the Tualatin River to the Willamette River:
  - Rural homes and farm lands along the river
  - Wapato Lake National Wildlife Refuge
  - Spring Hill Road
  - Dilley (southeastern outskirts)
  - Forest Grove (southern outskirts)
  - Forest Grove National Guard Armory
  - Joseph Gale Elementary School
  - Clean Water Services Forest Grove Wastewater Treatment Facility
  - Fern Hill Road
  - S. 10<sup>th</sup> Avenue (Golf Course Road) in Cornelius
  - Cornelius (southern outskirts)
  - Emmaus Christian School
  - Cornelius Public Works
  - Jackson Bottom area south of Hillsboro
  - Clean Water Services Hillsboro Wastewater Treatment Facility
  - Clean Water Services Offices (will become an island)
  - Oregon Highway 219
  - Minter Bridge Road
  - Forest Hills and Meriwether golf courses
  - Rood Bridge Road
  - Beaverton Creek lowlands upstream to the Orenco area

- River Road and other county roads
- Oregon Highway 10 at Farmington (Harris Bridge)
- Oregon Highway 210 at Scholls (Scholls Bridge)
- Community of Scholls
- Schamberg Bridge crossing at Roy Rogers Road
- Tualatin River National Wildlife Refuge
- Parts of the City of King City
- Oregon Highway 99 crossing
- City of Tualatin (business district)
- Parts of the City of Tigard, including Cook Park
- Interstate Highways I-5 and I-205 crossings
- City of Rivergrove (riverfront)
- City of Lake Oswego
- Lake Oswego Corporation Canal Headgate
- Borland Road crossing
- City of West Linn

#### **3.4.3.3 Evacuation Response**

- Evacuation response should be designated according to the following levels and based on consultation with TVID.
  - Evacuation Level 1 – A Level 1 Evacuation means “Be Ready” for potential evacuation. Residents should be aware of the danger that exists in their area, and monitor local media outlets for information. Residents with special needs or those with pets or livestock should make preparations and begin making precautionary movement.
  - Evacuation Level 2 – A Level 2 Evacuation means “Be Set” to evacuate. This level indicates a significant danger to the area, and residents should either be told to voluntarily relocate to a shelter or with family/friends outside the affected area, or if choosing to remain, to be ready at a moment’s notice.
  - Evacuation Level 3 – A Level 3 Evacuation means “Go” Evacuate NOW. Danger to the area is current or imminent, and people should leave immediately. Residents should not delay leaving to gather belongings or make efforts to protect their home.

- If a Level 1, 2 or 3 evacuation is implemented resources should be deployed first to areas with the highest and earliest risk. Even in the unlikely event of a sudden catastrophic failure of the dam, initial flood wave waters will take several hours to travel from Henry Hagg Lake to the Willamette River, so focusing resources on those areas that will be inundated early will provide the biggest benefit.
- Direct evacuees to assembly areas. When considering sites for assembly areas, the following criteria should be considered: sites that have sufficient parking, access, and/or open space such as schools, churches, the county fairgrounds, or parks.
- The evacuation of some populations may require special coordination and logistical support.
  - Vulnerable populations within the county which may need assistance during evacuations include:
    - Senior citizens
    - People with functional needs
    - Students in public and private schools
    - People with pets
    - Transient and homeless people
  - While most facilities with vulnerable populations, including schools, are required to have evacuation plans in place, most do not, or are unable to carry them out without assistance from first responders. Public safety officials may be required to facilitate or initiate the evacuation internal to the facility.

### 3.5 Public Instructions and Information

- A crucial component of population protection actions is the ability to warn the public at risk, give them clear instructions on the appropriate protective actions to take, and inform them of the possible risks of non-compliance.
- Once Unified Command has determined that evacuation is needed, a warning and instructional message must be issued to the public.
- For evacuation announcement and evacuation notification procedure templates see Tabs 2, 3, and 4 of this annex.

### 3.6 Sheltering

- Emergency shelter locations will be determined at the time of the event since the most likely cause of a dam failure, an earthquake, will also likely cause significant damage to potential shelter sites. Shelter activation will be



coordinated by Washington County Emergency Management or the Washington County EOC in conjunction with the American Red Cross. For further information on shelter activation, see the Shelter, Care and Emergency Housing Annex to the EOP.

### 3.7 Short-Term Recovery

- Consider the needs of those isolated above the dam at the time of the event that were unable to evacuate.
- Conduct hazard/damage assessments to determine if additional or new hazards exist prior to allowing evacuees to return. Isolate, mark, or mitigate the hazards as appropriate. This assessment should include inspection of any water, gas, and sanitation lines.
- Provide traffic control and access control (i.e., returning evacuees only) for the return.
- Initiate return of evacuees when and where possible.
  - Re-occupation of a previously flooded area may require the same consideration, coordination, and control undertaken in the original evacuation.
  - Unified Command will make the re-entry decision after the flood waters have subsided and the evacuated area has been inspected by fire, public works, law enforcement personnel and/or utility work crews for safety.
  - Determine if return will be temporary (i.e., long enough to check on damages and get additional personal items, or just during daylight hours) or full return.
- Conduct inspections of buildings that were flooded and tag according to fitness for occupancy.
- Additional re-entry considerations include:
  - Determine the number of persons in shelters who will have to be transported back to their homes.
  - If homes have been damaged, determine the interim and long-term housing requirements.
  - Inform the public of proper re-entry actions, particularly cautions they should take with regard to reactivating utilities, use of appliances that came in contact with water, and any other health related issues.

## 4 Assignment of Responsibilities

Responsibilities can change depending on the level of emergency operations activated for a specific event and the resources available.

### 4.1 BOR / TVID

- The BOR EAP guides dam operating personnel and BOR field and regional office personnel in identifying, monitoring, responding to, and/or mitigating problems involving dam failure, potential dam failure, large inflows and releases, and other serious conditions.
- The EAP assigns responsibility to TVID for:
  - The onsite monitoring of conditions at Scoggins Dam;
  - Providing timely and accurate notifications to Washington County 911 and others during emergency situations at the dam; and
  - Providing subsequent notification to local authorities to assist them in making timely and accurate decisions regarding their warning and evacuation responsibilities, accompanied by appropriate emergency public information.

### 4.2 Washington County Board of Commissioners

- Declare an emergency to order mandatory evacuations, if necessary.
- Authorize other emergency actions.
- Request support from the state.
- Authorize re-entry if mandatory evacuations were ordered.

### 4.3 Washington County Emergency Management

- Receive warnings from WCCCA.
- Make notifications per identified list (See Section 3.2)
- Activate the Washington County EOC.

### 4.4 Washington County Sheriff's Office

- With Forest Grove Fire and Police:
  - Establish Unified Command (UC) at the Forest Grove Fire Station
  - Determine the extent of the area to be evacuated and implement an evacuation plan.

- With Forest Grove Fire and Police and WCCCA, activate appropriate alert and warning systems (i.e. EAS, Community Notification System (CNS), Wireless Emergency Alert (WEA), press releases, social media, and mobile public address equipment).
- Stage and brief personnel who have been assigned to conduct evacuation operations, including mutual aid resources.
- Evacuate Hagg Lake if time and resources allow.
- Assist, as needed, with traffic control.
- Assist, as needed and as time and resources allow, in local notifications (e.g., mobile public address equipment).
- Assist, as needed and as resources allow, in evacuating special needs populations.
- Implement actions to provide security for and control access to evacuated areas.
- Provide security for key facilities as resources allow.
- Provide security for shelter and mass care operations as resources allow.

#### **4.5 Washington County Department of Land Use and Transportation**

- Activate the DOC in support of operations.
- Assist with determining the appropriate evacuation and detour routes.
- Assist with traffic control by providing barricades and/or personnel.
- During any warning phase, pre-position resources near bridges to monitor and be ready to close them immediately should signs of damage or failure be exhibited.
- Provide signage to designate evacuation and detour routes.
- Maintain clear evacuation routes by removing debris and other obstructions.
- Provide public information on road closures.
- Conduct post-incident road and bridge inspections.
- Conduct post-incident inspections of flooded structures.
- If resources allow, assign a representative from the DLUT DOC to the Forest Grove EOC.

#### **4.6 Washington County Facilities and Parks Division**

- Close and evacuate Hagg Lake Park as time and resources allow.

#### **4.7 Washington County EOC**

- Support ICPs and other EOCs and, if needed, make the decision to effect an evacuation.
- Support ICPs and other EOCs with development of an evacuation plan including routes, assembly areas, and shelters. (Operations and Planning Sections)
- Support ICPs and other EOCs with the acquisition and deployment of mutual aid and other resources needed to conduct evacuation, transportation, traffic management, and security operations. (Operations, Planning, and Logistics Sections)
- Assume responsibility with the Red Cross for coordinating, supporting, and managing shelter operations. (Operations Section)
- Ensure the state Office of Emergency Management is notified of the emergency, so it can make proper notifications and keep officials apprised of the situation. (Operations Section)
- Answer questions pertaining to evacuation and other subjects through activation of the County Public Inquiry Center. (Logistics Section)
- After the emergency has ended, coordinate the following activities with the Forest Grove EOC:
  - Advise the public and the media of the termination of the evacuation directive and the lifting of the security perimeter (as appropriate).
  - Provide the information necessary to facilitate an orderly return to the evacuated area including any special constraints, conditions, or health and safety concerns for return.

#### **4.8 WCCCA**

- Receive initial notification from TVID/BOR.
- Make emergency notifications as per identified list (See Section 3.2).
- Activate the EAS, CNS, and /or WEA to alert the public as requested by the IC/UC.

#### **4.9 Forest Grove Fire and Police**

- With WCSO

- Establish UC at the Forest Grove Fire Station.
- Determine the extent of the area to be evacuated and implement an evacuation plan.
- Provide alert and warning to residents of the city in the inundation area via mobile public address systems, if possible.

#### **4.10 Cornelius Fire and Police**

- Implement the evacuation plan.
- Provide alert and warning to residents of the city in the inundation area via mobile public address systems, if possible.

#### **4.11 Forest Grove EOC**

- Upper River Command: Forest Grove Fire, Forest Grove Police, and the WCSO will endeavor to establish UC at the Forest Grove Fire Station, if available. The EOC should consider the following:
  - Develop an evacuation plan including the extent of the area to be evacuated.
  - Activate appropriate alert and warning system(s) through WCCCA (i.e., EAS, CNS, and WEA) and press releases, social media, and direct implementation of the evacuation plan.
  - Determine and map the area affected by the evacuation order or directive. Identify special needs facilities, evacuation routes, security perimeters, congregation points, assembly areas, and shelters.
  - Direct life-saving operations as needed.
  - Develop and implement a strategy for securing the evacuation area and establishing access controls to restrict entry.
  - Designate neighborhood congregation points for evacuees who need transportation to assembly areas and/or shelters. Request specialized transportation resources.
  - Arrange transportation for groups or individuals requiring assistance or special considerations to evacuate (such as residents of adult living facilities, physically challenged people, and/or children in schools).
  - Document and track resources assigned to the evacuation activities including personnel, transportation vehicles and facilities.
  - Coordinate with the Portland National Weather Service and the Northwest River Forecast Center on flood-related information and forecasts during response and recovery operations.

- Utilize templates in Tabs 2, 3, and 4 and the procedures described in the Alert and Warning Annex to the EOP to provide the public and media with information on:
  - The reason for the evacuation.
  - The location of assembly areas and/or shelters, if activated.
  - Areas affected by the evacuation directives.
  - Evacuation routes and modes of transportation for evacuees unable to provide their own.
  - Possible results of failure to evacuate or to follow procedures.
  - If known, how long the incident is expected to last.
  - How to tap into new information as the situation progresses.
- After the emergency event has ended, coordinate the following activities with the Washington County EOC:
  - Advise the public and the media of the termination of the evacuation directive and the lifting of the security perimeter (as appropriate).
  - Provide the information necessary to facilitate an orderly return to the evacuated area including any special constraints, conditions, or health and safety concerns for return.

#### **4.12 Gaston Fire**

- Coordinate with Upper River Command at the Forest Grove EOC to determine the extent of the area to be evacuated and implement an evacuation plan.
- Provide alert and warning to residents of the city and fire protection area in the inundation area via mobile public address systems, if possible.
- Activate and operate an ICP if communications with Upper River Command are lost.

#### **4.13 Hillsboro Fire and Police**

- Coordinate notification and evacuation efforts with the Forest Grove EOC.
- Implement evacuation plan.
- Send liaison to Forest Grove EOC.

#### **4.14 Tualatin Valley Fire and Rescue**

- Coordinate with affected city EOCs in TVF&R district as needed.

- Coordinate actions with the Washington County and Clackamas County EOCs.

#### **4.15 Tualatin Police**

- Provide alert and warning to city residents.
- Support evacuation or other protective actions.

#### **4.16 Tigard Police**

- Provide alert and warning to city residents.
- Support evacuation or other protective actions.

#### **4.17 Washington County Fire Defense Board**

- Send FDB representative to the County EOC.

#### **4.18 American Red Cross**

- Coordinate the location and operation of emergency shelters, as needed.

### **5 Direction and Control**

- The designated Incident Commanders will normally be responsible for issuing the notice to the public to evacuate a hazard area.
  - In situations where rapid evacuation is critical to the continued health and safety of the population, the on-scene senior official may advise the public in the immediate vicinity to evacuate.

### **6 Annex Development and Maintenance**

- Washington County Emergency Management is responsible for maintaining this annex.
- This annex will be updated according to the schedule outlined in the Basic Plan.

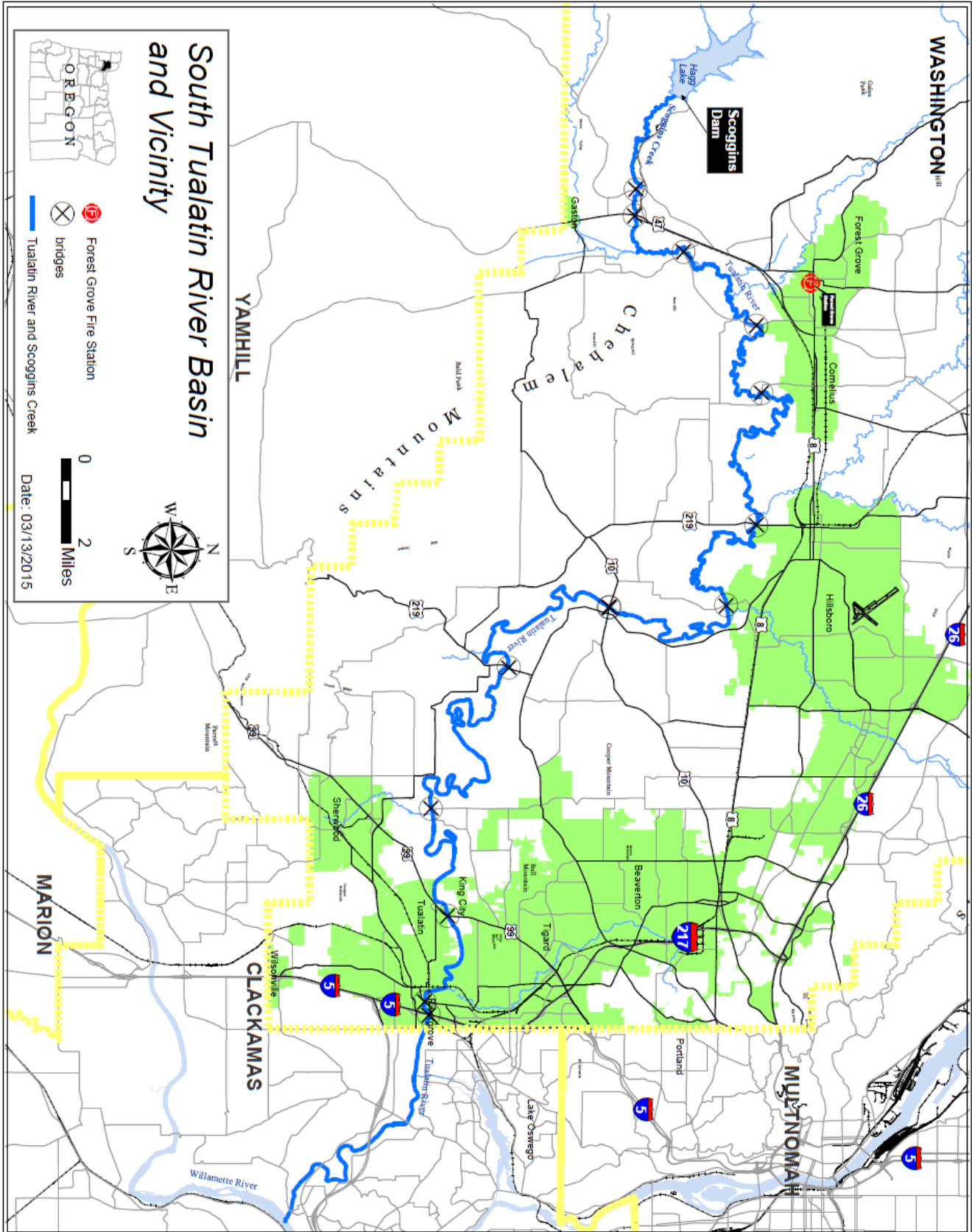
### **7 References**

- Bureau of Reclamation Emergency Action Plan for Scoggins Dam, August 1999 and draft update to the plan dated January 2015
- Bureau of Reclamation Upper Tualatin River Flood Plan
- Population Protection Annex to the EOP
- Shelter, Care and Temporary Housing Annex to the EOP

- Transportation Annex to the EOP
- Alert and Warning Annex to the EOP
- Final Approved Oregon Evacuation Levels Document (June, 2014) found in the Oregon Emergency Operations Plan Support Annex (SA) F-Evacuation, Part 5 Supporting Plans and Procedures Section.



Tab 1 – South Tualatin River Basin and Vicinity Map  
Hazard-Specific Annex Page 8-24



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## Tab 2 - Evacuation Announcement for a Failure or Imminent Failure of Scoggins Dam

### Template [*Fill in the italicized areas as required*]

Public Safety officials for Washington County have announced that there has been a catastrophic failure of Scoggins Dam. This situation can be dangerous due to fast moving flood waters. Persons in the following areas are requested to evacuate immediately: [*To be determined at the time of the incident and filled in here*].

**DO NOT DELAY:** Leave the area immediately. Listen for Emergency Alert System (EAS) radio messages or other radio announcements on your portable or car radio as you leave, and follow the message instructions.

The following roads have been designated as primary evacuation routes: [*To be determined at the time of the incident and filled in here, (suggested evacuation routes are: Highway 47 away from Scoggins Creek and the Tualatin River, Highway 219, Highway 10, and Scholls Ferry Road)*]. It is important you take routes away from Scoggins Creek and the Tualatin River. Avoid tributaries to the Tualatin River near their confluence with the Tualatin River. Drive or walk toward the evacuation route in your area. If possible, emergency personnel will be along those routes to assist you. Do not remain in the area. If you need transportation or special assistance, call [*To be determined at time of the incident - identify contact point or phone number*].

Emergency responders are taking action to close roads and limit access to the area. Following evacuation orders will protect you and your family. You will be notified as soon as it is possible to return. Law enforcement officials will attempt to secure the evacuated area as resources allow.

Public safety officials will keep you informed of the situation through this station. If you have additional questions please contact the Washington County Public Inquiry Center at [*To be determined at the time of the incident and filled in here*]. For further information, stay tuned to this station or the Emergency Alert Station, KOPB-FM, 91.5, or visit the County website.

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## Tab 3 – Short Message of Evacuation Announcement for a Failure or Imminent Failure of Scoggins Dam

### Template [*Fill in the italicized areas as required*]

Public Safety officials for Washington County have announced that there has been a catastrophic failure of Scoggins Dam.

Persons in the following areas are requested to evacuate immediately: [*To be determined at the time of the incident and filled in here*].

Move uphill and away from Scoggins Creek and the Tualatin River. The primary evacuation routes are: [*To be determined at the time of the incident and filled in here, (suggested evacuation routes are: Highway 47 away from Scoggins Creek and the Tualatin River, Highway 219, Highway 10, and Scholls Ferry Road)*].

If you need transportation or special assistance, call [*To be determined at time of the incident - identify contact point or phone number*].

Emergency responders are taking action to close roads and limit access to the area.

For further information, stay tuned to this station or the Emergency Alert Station: KOPB-FM, 91.5.

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## Tab 4 - Evacuation Notification Procedures

These procedures cover mobile public address processes. This method may be conducted singly, in combination, or in conjunction with use of the EAS, Community Notification System (CNS), and/or Wireless Emergency Alerts (WEA).

### A. Mobile Public Address

#### 1. General

- Mobile public address is resource-intensive and able to convey only a limited amount of information to a localized audience and there is no means to verify that residents have received and understood the information.
- It is most effective if used in combination with the EAS, CNS, and WEA.

#### 2. Operations Section Personnel Supervising the Evacuation

- Provide a briefing and assignment to those conducting the evacuation warning.
- Provide information on the number of personnel assisting in the evacuation.
- Provide a prepared statement which includes:
  - Type of incident, expected duration, and available time to evacuate.
  - Actions to be taken by the public.
  - Consequences of not following the actions.
  - Evacuation routes.
  - Assembly areas and shelter locations.
  - Neighborhood congregation point for those needing transportation.
  - TV/Radio station(s) with more public information.

#### 3. Operations Section Personnel Conducting the Evacuation

- Repeat the prepared statement at each intersection and at least once mid-block, depending on the length of the block.
- Report areas covered to supervisor.

#### 4. Reporting Instructions for Operations Section Supervisors

Upon receiving information collected by field units, inform the Operations Section Chief and the Planning Section (if activated).

**B. EAS, CNS, and WEA** - See the Alert and Warning Annex to the EOP.