

Incident Annex 5. Flood

Use this checklist, as applicable, in conjunction with other flood plans on file with Coos County Emergency Management.

Coordinating Department/Agency: Coos County Emergency Management office; Coos County Road Department

Cooperating Departments/Agencies:

| Flood Incident Checklist (excludes Dam Failures) | | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Phase of Activity | Action Items | Supplemental Information |
| PRE-INCIDENT | <input type="checkbox"/> Continue to maintain and revise applicable response plans pertaining to flood events, including the Coos County EOP and supporting procedures/plans such as other Flood plans. | |
| | <input type="checkbox"/> Coordinate county preparedness activities, seeking understanding of interactions with participating agencies for flooding scenarios. | |
| | <input type="checkbox"/> Have personnel participate in necessary training and exercises relative to flood events. | |
| | <input type="checkbox"/> Ensure that Public Works and other response partners' physical and personnel resource lists and resources (e.g., heavy equipment, sand bags) are current. Test and maintain response and communications equipment and after-hours personnel contact information. Keep a stock of necessary response supplies. | |
| | <input type="checkbox"/> Ensure emergency contact lists are updated and establish a pre-event duty roster allowing for 24/7 operational support to the county EOC. | |
| | <input type="checkbox"/> Contact supporting emergency response agencies to review and determine if major developments have arisen that could adversely affect response operations (e.g., personnel shortages, loss of equipment, etc.). | |
| | <input type="checkbox"/> Annually review and update the Coos County EOP and agency/departmental SOPs as needed. | |
| | <input type="checkbox"/> Review and revise extent of flood-prone areas. | <i>Coos County Natural Hazards Mitigation Plan</i> |
| | <input type="checkbox"/> Familiarize staff with requirements for requesting state and federal disaster assistance. | <i>Oregon OEM, Stafford Act, FEMA guidance</i> |
| | <input type="checkbox"/> Identify and review local contractor lists to see who may provide support specific to flood response. Make initial contact with providers to verify availability. | |

| Phase of Activity | Action Items | Supplemental Information |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| | <input type="checkbox"/> Review, revise, and, where necessary, establish mutual aid agreements with other jurisdictional agencies and private contractors relative to flood response. | |
| RESPONSE | <input type="checkbox"/> EOC Director (Manager), Coos County EM Program Manager, IC, and Section Chiefs will provide overall guidance for the deployment of resources. | |
| | <input type="checkbox"/> Activate mutual aid agreements. | |
| | <input type="checkbox"/> Activate the county EOC (if approved) and implement appropriate staffing plans. Contact appropriate private partners to assign liaisons to the EOC for coordination of specific response activities. | |
| | <input type="checkbox"/> Estimate emergency staffing levels and request personnel support, including specialized staff such as engineers, building inspectors, heavy equipment operators, and/or environmental remediation contractors. | |
| | <input type="checkbox"/> Develop and initiate shift rotation plans, including briefing of replacements during shift changes. | |
| | <input type="checkbox"/> Submit request for emergency declaration, as applicable. | <i>Section 1 of Coos County EOP Basic Plan</i> |
| | <input type="checkbox"/> Coordinate the evacuation of the affected area, if necessary. Evacuation activities will be coordinated among multiple ESFs. | <i>ESF 5, ESF 6, ESF 13, and ESF 15</i> |
| | <input type="checkbox"/> Support Search and Rescue operations by coordinating resource requests outside of the jurisdiction. | <i>ESF 9</i> |
| | <input type="checkbox"/> Request American Red Cross to activate sheltering plans and open/staff shelters if needed. | <i>ESF 6</i> |
| | <input type="checkbox"/> Establish a Joint Information Center (JIC) or coordinate with JIC(s) established by other jurisdictions. Staff JIC(s) with appropriate PIO(s) as required. | <i>ESF 15</i> |
| | <input type="checkbox"/> Record all EOC activities, completion of personnel tasks, and incoming and outgoing messages. These should be documented in EOC logbooks. | <i>Existing ICS and EOC forms</i> |
| | <input type="checkbox"/> Begin damage assessments in coordination with county agencies/departments and local jurisdiction damage assessment experts. | <i>ESFs 1, 3, 12, and 14; Support Annex on Damage Assessment and Disaster Recovery</i> |
| <input type="checkbox"/> Assist with the coordination of public works-type activities, such as debris removal from: <ul style="list-style-type: none"> - Storm drains - Bridge viaducts - Main arterial routes | <i>ESF 3</i> | |

| Phase of Activity | Action Items | Supplemental Information |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| | <ul style="list-style-type: none"> - Public rights-of-way - Other structures, as needed | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Contact local contractors for support if necessary. Establish contact with private-sector partners. | <i>Existing contact lists at EOC</i> |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Provide law enforcement to affected areas (curfew enforcement, road closures, security, etc.). | <i>ESF 13</i> |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Collect and chronologically file records and bills generated during the incident to ensure timely submittal of documents for reimbursement. | |
| RECOVERY/DEMOBILIZATION | <ul style="list-style-type: none"> <input type="checkbox"/> Monitor secondary hazards associated with floods (e.g., landslides, contamination, damage to bridges/roads, impacts to utility lines/facilities) and maintain on-call personnel to support potential response to these types of hazards. | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Deactivate/demobilize the county EOC. Deactivate mutual aid resources as soon as possible. | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Activate and implement applicable mitigation plans, community recovery procedures, and continuity of operations/government plans until normal daily operations can be restored. | <i>ESF 5 and ESF 14</i> |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Implement revisions to the county EOP and supporting documents based on lessons learned and best practices adopted during response. | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Offer recommendations to county agencies/departments and others for improvements in planning, zoning, and building code ordinances. | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Participate in After Action Reports and critiques. Submit valuable success stories and/or lessons learned to the Lessons Learned Information Sharing website (www.llis.gov). | |

Flood Appendix

1. Purpose

The purpose of this appendix is to provide a framework of coordination between agencies to help ensure the safety of life and property during a flood event in the unincorporated areas of Coos County.

It defines roles, responsibilities, and organizational relationships of government and private agencies in response to a flood event.

2. Situation and Assumptions

2.1 Situation

- Several rivers run through the county and each as the potential to flood, damaging property and infrastructure.
 - a) The County has a history of slow-rise flooding along the Coos, Millicoma, Coquille Rivers and their tributaries. The Coquille River has a North, East, Middle, and South fork.
 - b) The possibility of a life threatening flood event is medium.
- The average annual precipitation for the County is 60 inches.
 - a) The majority of the precipitation occurs from November through May. Historically the majority of past flooding has occurred in December, January, and February.
 - b) Snowfall occurs only every five to ten years, with accumulation on the ground for only a short duration and depths seldom exceeding two to three inches.
- Soils in and around the county are silt loams, clay, and sand on nearly level ground to steep slopes and mountains.
 - a) Drainage characteristics of the soil are poor in the level areas and improve on sloping terrain.
- The soil can reach a high level of saturation in a short period of time depending on the time of year, reducing its ability to hold tree roots.
- The County is a participant in the National Flood Insurance Program (NFIP) and conducts its land development in accordance with the guidelines established by that program.

2.2 Assumptions

- Flood watches and flood warnings issued by the National Weather Service utilizing the operational river gauges placed on Cooper Bridge, Spruce Street Bridge both in Myrtle Point and on the Coquille near Coquille will provide enough notice of a potential flood event that some actions can be taken in advance of the flood to protect property, resources, and infrastructure.

- Without the ability to monitor the water flow through the river gauges on the Coquille River established by the National Weather Service and assistance through the State Water Resources Department of the Coquille River through the three river gauges, flooding would greatly impact the southern portion of the County would affect agricultural products and livestock as well as those residents along the rivers edge.
- Assistance through mutual aid agreements may be necessary.
- Resource assistance may be necessary through local and private contractors.
- Stabilization of emergency conditions must be met before restoration takes place.

3. Concept of Operations

3.1 General

- Depending on the severity of flooding, response activities may be handled as part of day-to-day activities or may require the activation of Emergency Operation Center (EOC).
- Immediate actions should be centered on the preservation of life and property, as well as the continuation of existing services.

3.2 Communications

3.2.1 Notification of Watches, Warning, and Advisories

- The National Weather Service (NWS) is the agency with primary responsibility for issuing watches, warnings, and advisory messages associated with floods.
- Flood watches and warnings will be when rainfall and/or snowmelt will be enough to cause rivers to overflow their banks.
 - a) *Flood Watch* or *Flood Forecast* – Rainfall (or expected rainfall) is heavy enough to cause rivers to overflow their banks.
 - b) *Flood Warning* – Flooding is occurring or is likely to occur.
- Advisories will also be issued by the NWS when forecasted rain intensities are heavy enough to cause street flooding.
- Watches and warnings will indicate the expected severity of flooding (minor, moderate, or major), the affected bodies of water, and the expected crest of flood waters (height and when it is expected to occur).
- Watches and warnings are distributed to the public by the media (radio and TV) and are also available through computer Web sites and services.

- In addition to the media, Coos County Dispatch through the Sheriff Office will receive them over the Law Enforcement Data System (LEDS).
- Each department is responsible for passing the applicable information on to their staff.

3.2.2 Public Information (Also see External Affairs Annex)

- In addition to the watches and warnings issued by the NWS, press releases may need to be developed to tell the public what areas of the County are expected to be impacted and to provide them instructions on the appropriate actions they should take.
- Special plans may need to be implemented to reach areas of impact that may be without power and telephone service.
- An information phone bank should be established by utilizing Human Resources to locate county staff to assist by answering and placing calls regarding the event needs to the impacted public, especially during recovery, to help advise people on the appropriate course of action when returning to and or cleaning up their flooded homes and businesses.
- The County Public Health Department will be responsible for providing public information related to public health issues.

3.3 Response

- Flood Watch and Flood Forecast Issued
 - a) Monitor weather advisories and forecasts.
 - b) Prepare necessary resources (fuel vehicles and equipment, inventory signs, and barriers, etc.)
- Flood Warning Issued – Flooding has not started.
 - a) Review work assignments and shift schedules.
 - b) Initiate flood fight activities in areas expected to flood (sandbag threatened facilities, turn off threatened utilities.)
 - c) pre-position resources in forecasted affected area (pumps, road barricades and signs, sandbags, sand piles.)
 - d) Determine if any areas will need to be evacuated, and coordinate potential shelter needs with the Red Cross.
 - e) Monitor weather forecasts and advisories.
- Flood Warning In Effect – Flooding is occurring.
 - a) Activate the EOC, if flooding is severe.
 - b) Call in off-duty employees as needed to staff the EOC.
 - c) Clear roads and culverts where possible. Erect barricades and establish detour routes around flooded areas.

- d) Initiate sandbagging / flood-fighting activities if feasible.
- e) Evacuate population at risk and establish security for evacuated areas.
- f) Open evacuation assembly areas and shelters in cooperation with the American Red Cross.
- g) Assist with search and rescue operations as needed.
- h) Conduct initial damage assessment and maintain a list of damages to private and public property.
- i) Call out private contractors as needed.
- j) Issue press releases with public safety information.
- k) Make a declaration of a “local emergency” if circumstances dictate.

3.4 Evacuation

Refer to the evacuation annex of the County EOP.

3.5 Sanitation and Health

- Contamination of potable water supplies and the disruption of sanitary services are major concerns during flood events. Alternate sources for both needs to be considered prior to the arrival of floodwaters.
- Often floods cause the deaths of numerous domestic animals and some wildlife. Means of disposing of the carcasses needs to be developed and implemented.
- County Health will be responsible for providing public information related to public health issues and will also be responsible for implementing any type of public immunization program.

3.6 Recovery

- Conduct a thorough damage assessment. Make a declaration of an “emergency” if circumstances dictate.
- Evaluate the conditions of evacuated areas and determine if/when they are safe enough for residence to return.
- Repair damages (roadways, public facilities, parks, etc.)
- Participate in after-action reports and evaluations. Make necessary changes in the plans and procedures.
- Develop a final cost analysis of all response and recovery activities.
- Request disaster assistance as appropriate.

3.7 Debris Removal

Refer to the Debris Management Support Annex

4. Duties and Responsibilities

4.1 General

- The Road Department will be the lead agency for flood events in the county.
 - a) The Road Department may request the activation of the EOC depending on the scope of the incident.
- Routine operations will be handled by individual departmental standard operating procedures.
- Depending on the severity of flooding, response activities may be handled as part of the day-to-day activities or may require the activation of the county EOC.

4.2 Specific Duties and Responsibilities

4.2.1 Road Department

- Coordinate emergency public works activities.
- Initiate mutual aid agreements, if necessary.
- Identify local contractors who may provide backup support.
- Review status and location of equipment, fuel, and sand and gravel for use during and after the flood.
 - a) Ensure all vehicles are refueled/topped off, and remind all county departments to do the same.
 - b) Verify all emergency generators have fuel and are operational.
 - c) Establish the “do it yourself” sandbag site(s).
 - d) Ensure lighted barricades are operational and available, if needed.
- Coordinate with Emergency Management, Law Enforcement, and Fire in identifying any areas that may need to be evacuated.
- Review the county roads system to identify road likely to be affected.
 - a) Develop alternate traffic routes and determine barricade and signage needs.
 - b) Determine priorities for maintenance and clean-up of affected roadways.
- Assume Incident Command.
- Maintain debris removal from county roads, public rights of way and in and around those structures where public safety and/or health are endangered.
- Assist utilities in essential emergency repairs.

- Assist other public safety agencies in search and rescue, evacuation, site area security, and other pertinent response functions as time and manpower permit.

4.2.2 Law Enforcement

- Keep patrol units informed of the event.
- Determine if additional resources will be needed to assist with road closures/detours, evacuations, security of evacuated areas, and search and rescue.
- Assist other public safety agencies in search and rescue, evacuation, site area security, and other pertinent response functions as time and manpower permit.
- Coordinate mutual aid assistance in those areas pertaining to law enforcement.

4.2.3 Emergency Management

- Monitor weather forecasts, watches, warnings, advisories, and pass the information on to the city EM's and other county departments.
- Facilitate/coordinate with the BOC, County Counsel, Law Enforcement, Fire, and Road Department of evacuation plans, if needed, for any projected affected areas.
- Keep cities advised through the EM's of actions being taken by the county.

4.2.4 Public Health

Public Health will provide information to small water systems about safety of water supplies; will assist in monitoring the safety of food sources, and water and sewage systems, by working in coordination with the Department of Environmental Quality, the State Public Health Drinking Water Program, and the Oregon Department of Agriculture, and the Oregon Department of Fish and Wildlife.

4.2.5 Damage Assessment Group

Refer to the Damage Assessment Support Annex and Appendices.

5. Appendix Development and Maintenance

The Emergency Management Office along with the County Road Department and Sheriff's Office is responsible for ensuring that this appendix is updated and revised per the EOP review schedule or as necessary.

6. Sections

Section 1: County Roads South impacted by flood

Section 2: County Roads North impacted by flood

Section 3: Flood Statement Sample

**HIGH WATER SIGN LOCATIONS
SOUTH ZONE**

10 A Fishtrap Road

Jct. With Hwy. 42, Jct. with Fat Elk Road & across from Dement Park.

146 Arago-Fishtrap Road

Jct with Fishtrap, 50 feet south of Arago Valley Lane, across from store, & jct with Lampa Lane

5A & 5B North Bank

2.2-mile marker and 2.7- mile marker. Also 16.9 mile marker and 16.8 mile marker

208 A Beaverhill Lane

2/10 of a mile West of North Bank Lane

29 Beach Loop

1/10 mile and 3/10 mile, 1.5-mile marker and 1.7-mile marker.

31 Finely Loop

Jct. with Glen Aiken and Jct. with Hwy. 42

83 Dement Crk Road

2/10 mile from Hwy. 242 and 4/10 mile.

20 Old Broadbent Road

100 yards from Lampa jct. , 4.5-mile marker and 4.7- mile marker.

156 Old Dike Road

50 yards off hwy. 42. Across from River road

2A Lee Valley Road

3.7- mile marker and 4.1- mile marker

24 G Gravelford Lane

50 feet East of Summerlin Road and 3.6- mile marker

12 North Fork Lane

8/10 mile marker and 1.1- mile marker

19 Catching Crk. Road

100 yards from road # 20 & 1.5 mile marker

1 G Sitkum Ln.

50 feet passed the end of the bridge at Brummit Crk. Jct.

13 G McKinley

At the end of Hervey Bridge

**HIGH WATER SIGN LOCATIONS
NORTH ZONE**

127 C Coos Head Loop

jct with 127 B & 100 yards north of county park

59 Fairview-Sumner lane

100 feet East of S. Sumner road & 50 yards East of Sumner store.

53 Old Wagon Rd.

6 mile marker & jct. with Catching slough.

23 Catching Slough

7/10 mile marker, 2.3 mile marker, 2.4 mile marker, 4.9 mile marker & 6.5 mile marker.

130 Anderson

about 1/10 of a mile in from the city portion

52 Shinglehouse

between Red Dike and Fruitdale

57 Coos-Sumner

Jct. with Hwy. 101

45 East Bay Rd.

Near Echo Springs Rd and near the 3.5 mile marker

27 Kentuck

Jct. with East Bay Rd.

Coos County Sheriff's Office – Emergency Management
Potential Flood, Preparedness Information

With the recent accumulated rainfall in Coos County, sufficient amounts are affecting the Coquille River this week. Hydrologists with the National Weather Service in Medford issued a flood warning for the South Fork of the Coquille River. The current forecast is for the river to crest _____(above, below, at) flood stage. It is projected to reach a level of _____feet at _____(time) this _____ (evening, afternoon, morning). This is _____feet (below, above) the established flood stage of 38 feet.

The flood warning indicates that actions need to be taken soon or immediately to protect yourself, your property, and your livestock through evacuation or elevation. With the ground now saturated, local residents living along the river(s) should prepare for future changes in the river as our wet weather season continues.

Even below flood stage for most rivers, the river may still overflow the banks in some locations causing minor problems in the areas between Myrtle Point and the rural communities. These problems will increase only as the levels rise to reach or exceed flood levels.

As is typical of our winter weather, water has already begun collecting in low lying fields, and as the river rises, a few roadways may be blocked by flood water. Motorists should use caution when traveling along Arago Cutoff Road, Old Broadbent Road, Catching Creek Road, Stringtown Road, some sections of Lampa Lane, Fishtrap Road, Arago-Fishtrap Road, and Fat Elk Road, and perhaps along Highway 42s in the Riverton area.

Recreational boaters may also find the boat launches along the Coquille River hazardous or not accessible.

Travelers should be cautioned not to attempt to drive through any water that crosses these roadways. It often gets significantly deeper quickly and can fill engines stalling your vehicle. These flood waters are often surprisingly swift moving and can wash substrate away under the pavement, undermining the road surfaces. The floods often carry along logs and other debris that can damage your vehicle or cause injury.

Most local residents are familiar with the nature of our annual flooding, but if you are new to the area and believe you might be affected by the rising waters, check with neighbors that are familiar with the flood patterns in your immediate area. Move your livestock out of summer pastures to higher ground now. Make plans to stay in town if the rivers rise, especially if there is anyone in your family with a serious health condition that might require emergency medical attention. The higher water may delay the response of emergency service providers. Another alternative is to stock extra food and supplies in case your family is stranded at home. The high waters typically recede quickly; we usually experience no more than a few days when river depths exceed flood levels.