FLOOD WARNING AND RESPONSE PLAN

2022 Update

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The Flood Hazard

The City of Albany is subject to flooding from several different sources which include:

1. The Willamette River, Calapooia River, Oak Creek, Periwinkle Creek, Cox Creek, Burkhart Creek, Truax Creek, and the Santiam-Albany Canal.
2. Local storm water drainage.

Flooding on streams and rivers in Albany generally results from large winter storms from the Pacific. Often the heavy rainfall comes at the same time as snow-melt runoff. These large winter storms often cause simultaneous flooding on all rivers and streams in an affected area. Historically, most major floods in Albany have occurred in the months of December, January, and February, although flooding in other months is possible.

Flood records for the City of Albany indicate there is no regular pattern in which floods occur. Heavy rains that saturate the ground and fill the rivers and creeks coupled with warming weather that melts heavy snow in the mountains and foothills create the major flooding that Albany has seen over the last 150 years. The last major floods took place in 1964 and 1996. Before these floods, major events occurred in 1943 and 1945 and are the only examples of flooding to have occurred within a three-year period. These floods took place before the dams were built on the rivers upstream of the city.

Local Flooding

Flood damage may occur in areas outside the 100-year floodplain and away from riverine flooding conditions. Local flooding problems are caused by blocked culverts, shallow ditches, or locally intense rainfall. In the terms of the National Flood Insurance Program, these are areas of one percent annual chance sheet-flow flooding where average depths are less than one foot, or areas of one percent annual chance stream flooding where the contributing drainage area is less than one square mile.

Riverine Flooding

Willamette River: The Willamette River Basin has 13 major tributaries and drains approximately 12,000 square miles, almost one-eighth of Oregon's total area. It is the 10th largest river in the continental United States. The river originates at the confluence of the Middle and Coast Forks just upstream from Eugene and flows 187 miles before entering the Columbia River downstream from Portland. At Eugene, the river emerges from the foothills and meanders for many miles over a flat, extensive floodplain up to five miles wide, with numerous secondary changes, sloughs, and oxbow lakes. Upstream from Oregon City, the river flows through a breach in a low range of hills and then drops approximately 50 feet at Willamette Falls.

Calapooia River: The Calapooia River originates in the Cascade Mountains and flows northwest for about 75 miles before joining the Willamette River at Albany. The basin is long and narrow in shape and encompasses 374 square miles. Elevations in the basin range from about 200 feet above mean sea level at Albany to almost 5,200 feet above mean sea level on Tidbits Mountain. The stream gradient is about three feet per mile. The only major tributary to the river is Oak Creek.

At one time, the Calapooia River provided extensive hydropower to many of the mills that were built in towns and villages along its 75 miles. Mills in Brownsville and Albany are but two examples. Today the river is less used because of the vegetation growing over the riverbanks and difficulty gaining access due to private property. In and around Albany, the river still causes flooding problems because of back-up when the Willamette River rises, and in low-lying areas found next to the river.

Santiam River: The Santiam River flows into the Willamette River in Marion County approximately seven miles downstream from Albany. At a location approximately ten miles upstream, where the North and South Santiam converge, the City of Albany and the City of Millersburg have constructed a drinking water intake and treatment plant for joint municipal use. This is the second treatment plant for the City of Albany, and the first for the City of Millersburg. For both cities, this plant is the primary treatment plant.

Dams Upstream of the City of Albany

The US Army Corps of Engineers (ACOE) operates and maintains 13 reservoirs in the Willamette Basin. These federal reservoirs in the middle and upper Willamette Basin were built in the late 1930s, principally for flood control. Flooding has always been an issue. Prior to the construction of dams upriver, flooding of the Albany area was quite significant, but the dams have reduced the threat. The following is a description of the dams upstream of the City of Albany. All of these dams are considered Potential High Hazard Dams because the impact of a dam failure from the Willamette, McKenzie, or Santiam Rivers could impact a number of structures within the community.

Willamette and McKenzie Rivers Dams:

Hills Creek Dam, Middle Fork of the Willamette River: This dam is located 40 miles southeast of Eugene and 26.5 miles upstream from Lookout Point Dam on the Middle Fork of the Willamette River. The dam was constructed between 1956 and 1961. It is an earth and gravel embankment 304 feet high and 2,235 feet long. Flood flows from a catastrophic failure of Hills Creek Dam would follow the Middle Fork Willamette River channel, breach Lookout Point and Dexter Dams and continue to the main stem Willamette River, eventually affecting the City of Albany.

Lookout Point Dam, Middle Fork of the Willamette River: Lookout Point Dam is located 22 miles upstream of Eugene on the Middle Fork of the Willamette River. The dam was constructed between 1948 and 1954. It consists of an earth fill embankment section, a concrete spillway section, and a concrete right abutment. The maximum height of the dam is 295 feet, with a length of 3,262 feet. A possible cause of failure of this dam would be breaching due to flood flows from failure of Hills Creek Dam, upstream of Lookout Point. Flood flows from a catastrophic failure of Lookout Point Dam would follow the Middle Fork Willamette River channel, breach Dexter Dam and continue to the confluence with the main stem Willamette River, eventually affecting the City of Albany.

Dexter Dam, Middle Fork of the Willamette River: Dexter Dam is located 20 miles upstream of Eugene on the Middle Fork of the Willamette River. The dam was constructed in 1955. The dam consists of an earth fill embankment and is 117 feet high. Flood flows from a catastrophic failure of Dexter Dam would follow the Middle Fork Willamette River channel, continue to the confluence with the main stem Willamette River, and eventually affect the City of Albany.

Cougar Dam, South McKenzie River: Located on the South Fork of the McKenzie River, Cougar Dam is about 42 air miles east of Eugene. Construction of the dam occurred between 1956 and 1964. Cougar Dam is a rock fill embankment about 1,500 feet long and a maximum of 452 feet high. Flood flows from a catastrophic failure of the Cougar Dam would follow the South Fork of the McKenzie River into the McKenzie River channel and on into the Willamette River. Flooded area would include a small portion of Albany.

Blue River Reservoir McKenzie River: Blue River Reservoir is an artificial impoundment about six miles long. The reservoir is about one mile north of Oregon Route 126 in the Willamette National Forest about 45 miles east of Eugene. It was built by the United States Army Corps of Engineers in 1968 about two miles from the mouth of the Blue River on the McKenzie River. It was

built for flood control and irrigation. The Reservoir is 6.4 miles long, average depth is 91 feet with a water volume of 105,000,000 cubic meters. If the reservoir were to fail, there would be little or no impact to the City of Albany.

Dorena Reservoir, Willamette River: Dorena reservoir on the Row River in Lane County is located six miles east of Cottage Grove. The reservoir was competed in 1949 by the United States Army Corps of Engineers. The reservoir is used primarily for flood control. Average depth is 42 feet; maximum depth is 97 feet, and volume is 95,700 cubic meters. During the summer months, a failure would have no impact on the City of Albany; during the winter months, water would get to the flood stage, 25 feet on the Willamette River.

Fern Ridge Dam, Willamette River: This dam was completed in 1942 by the United States Corp of Engineers. It provides flood control, irrigation, recreation, navigation, and improved downstream water quality. A dam failure from Fern Ridge would have little impact on the City of Albany.

Santiam River Dams:

Green Peter Dam, Middle Santiam River: Green Peter Dam is located on the Middle Santiam River about eight miles northeast of Foster Dam. Dam construction was completed in 1967. The dam is a concrete gravity structure with a height of 327 feet and a crest length of 1,517 feet. Flood flows from a catastrophic failure of Green Peter Dam would follow the Middle Santiam River channel, breach Foster Dam, and continue to the confluence with the South Santiam River. The flood would then continue down the Oak Creek and Burkhart Creek channels. The main flow would go down the South Santiam to the main stem of the Santiam River and would affect the outskirts of Albany.

Foster Dam, South Santiam River: This dam is located at Foster, two miles below the junction of the Middle and South Santiam rivers, and eight miles below Green Peter Dam. Construction of the dam was completed in 1967. The dam is a rock fill embankment with a concrete spillway. The embankment is 126 feet high and 4,800 feet long. A possible cause of failure of this dam would be breaching due to flood flows from a failure of Green Peter Dam, eight miles upstream. Flood flows from a catastrophic failure of Foster Dam would follow the South Santiam River channel about to the town of Jefferson. Flood waters would also branch off from the main flow and follow Oak Creek and Burkhart Creek channels to the outskirts of Albany.

Detroit Dam, North Santiam River: Detroit Dam is a concrete gravity dam on the North Santiam River between Linn and Marion County. It is located in the Cascades, about five miles west of the City of Detroit. It was constructed between 1949 and 1953 by the United States Army Corps of Engineers. The dam created 400-foot deep Detroit Lake, more than 9 miles long and 32 miles of shoreline. The dam was authorized for the purposes of flood control, power generation, navigation, and irrigation. The dam is 463 feet high and 1,523 feet in length. Total capacity of the dam is 561,000,000 cubic meters. Failure of Detroit Dam would likely take out Big Cliff Dam, and water from the failure would impact the northeast portion of Albany mostly in the Knox Butte area.

Big Cliff Dam, North Santiam River: A concrete gravity dam on the North Santiam River, this dam spans the Linn and Marion County border in the Oregon Cascades. It was constructed between 1949 and 1953 at the same time as Detroit Dam. Big Cliff is 2.7 miles river distance below Detroit Dam. The dam's primary functions are flood control, power generation, irrigation, fish habitat, and water quality improvement and creation. The dam is 191 feet high and 280 feet long, and its elevation crest is 1,212 feet high. Its total capacity is 7,960,000 cubic meters. If Big Cliff Dam fails only, it will have little or no impact on the City of Albany.

Location of Dams in the Willamette Basin

Impacts of Flooding

Quantitative flood hazard data is included in the flood insurance study (FIS). Standard hydrologic and hydraulic study methods were used to determine the flood hazard data contained in the FIS. Flood events of a magnitude expected to occur once on average every 10-, 50-, 100-, and 500-year period were studied for each of Albany's rivers and creeks. The data in the table below were computed for the Willamette River at the river gauge under the Ellsworth Street Bridge.

Flood Hazard Data for the Willamette River at the Ellsworth Street Bridge

Flood Frequency (years)	Discharge (cfs)	Elevation NGVD 1929 (feet)	Elevation NAVD 1988 (feet)
10	117,000	195.9	199.3
50	172,000	200.1	203.5
100	200,000	202.2	205.6
500	272,000	206.0	209.4

Source: Flood Insurance Study, City of Albany, Oregon (2010)

Stream discharge is the volume of water flowing down the river and is typically measured in cubic feet of water per second (cfs). The flood elevation data are from the flood profile graph in the FIS. The U.S. Army Corps of Engineers operates eight flood control storage projects upstream from Albany on major tributaries of the Willamette River. These dams control runoff from approximately one-half of the drainage area upstream from Albany. The influence of these dams was taken into account when calculating the river discharge figures above.

The expected impacts from flooding and a description of flood events in the City of Albany is addressed in detail in the Flood hazard section of the Natural Hazard Mitigation Plan; this report is incorporated here by reference.

Flood Response Levels

The City of Albany experiences different levels of flooding. Unlike other hazards, it can be predicted where a flood will go. The City prepared a flood stage forecast map that shows the different areas covered by the different flood levels.

Four flood response levels are used. The levels and the impact of flood at each level are shown in the table below. Flood level impacts and street closures are also included in Attachments G and K. Flood stage forecast maps that show the different areas impacted by floods are included in Attachment H, Flood Assessment Maps.

Flood Response Levels/1988 Datum

	Yellow	Orange	Red	Purple	Black
	Action Stage	**Flood Stage**	**Moderate Stage**	**Major Stage**	**Severe Stage**
Stage*	**21.6**	**25**	**30**	**32**	**34**
Elevation:	192.16	195.56	200.56	202.56	204.56
Frequency	N/A	15	7	1	1
Streets to be closed	1	4	10	13	13

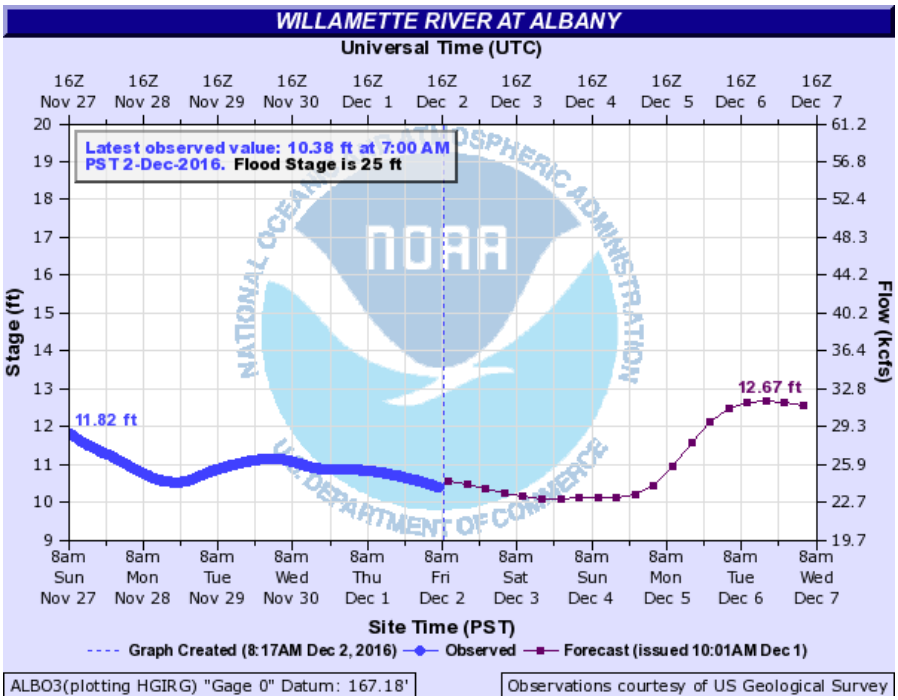
*Dam elevation readings provided by the Army Corp of Engineers have been converted from NAVD 1988 to NGVD 1929 to provide consistency throughout plan. The difference between 1988 and 1929 for Linn County is 3.38 feet. This amount was subtracted from the Corps figures. The National Weather Service Advanced Hydrologic Prediction chart for the Willamette River at Albany uses NGVD 1929 for its figures. All figures are NAVD 1988

It should be noted that these levels are based on the elevation of flooding at the City of Albany gage. The City of Albany gage is used by the U.S. Geological Survey for recording river levels and by the National Weather Service for reporting predicted flood levels.

In a major flood (i.e. 100-year flood event) 459 main structures are estimated to be impacted by a flood; however, if accessory and minor structures are included, a total of approximately 992 structures could be impacted. All of these structures are covered by the flood threat recognition system, flood emergency warnings, and flood response operations actions.

Flood Threat Recognition

The City of Albany has a manual flood threat recognition system. The City of Albany is advised of a pending flood threat in two ways. First, if it is raining and conditions look like the rivers could rise, staff checks the status of the City of Albany gage on the Weather Services' website. This is a public site and a link to it is provided on the City's internet Emergency Management website. The graphic below shows what the site looks like.



When the Willamette River is expected to rise, the Weather Service will issue a flood crest stage and time prediction for the Albany gage similar to the Weather Wire statement seen on a different page. Sometimes a prediction can be made up to two days in advance of the flood crest prediction. That prediction will also be posted on the gage's website.

The second way the city is advised of a flood threat is through the NOAA Weather Radio. The System issues all National Weather Service storm and flood watches and warnings. A radio is located in the Emergency Program Manager's office.

The National Weather Service issues notices to the public using two levels of notification on the Weather Radio:

> Watch: conditions are right for flooding, thunderstorms, tornados, or winter storms.
>
> Warning: a flood, tornado, etc. has started or has been observed. A "Warning" is also issued based on the river gage predictions.

The Emergency Manager will call the Emergency Management Coordinator (Fire Chief) and City Manager and advise them of the notice. If it appears the event will have an impact on the city, the Natural Hazard Preparedness Team will be assembled to determine what action the City will take to respond and what information will be provided to the public and its city employees.

The next steps taken are based on the flood level as noted on the details for each office and the impact of flooding on homes, other properties, critical facilities, and streets as detailed in Attachments G, H, and K.

Dam Failure Recognition

The Army Corps of Engineers is responsible for the management of the dams in the Willamette Basin. They are required to have an emergency plan for each dam that includes the notification of counties and cities downstream of each dam. The Corp has implemented a third-party mass communications system called REACT to notify County and City Emergency Managers should an

emergency occur at one of its dams. Each organization can have several members of its organization who will receive these notifications during an emergency.

Notification lists are updated two times per year minimum. At least quarterly communication checks are made between the dam operator and emergency officials. Each of the dams has downstream river level monitoring available at the Control Rooms. These do not feed outside the Corps. However, there are USGS gaging stations downstream of all of the dams between the dams and downstream communities. This information is directly available to emergency managers via the USGS.

Emergency Warning Dissemination

If the Weather Service issues a watch or a warning related to heavy storms that will flood streets and affect the entire community, then the procedures outlined in the City of Albany Preparedness Team Procedures are followed.

The Emergency Manager will call the Fire Chief and advise them of the notice. If it appears the event will have an impact on the city, the Natural Hazard Preparedness Team will be assembled to determine what action the City will take to respond and what information will be provided to the public and its city employees.

The next steps taken are based on the flood level as noted on the details for each office and the impact of flooding on homes, other properties, critical facilities, and streets as detailed in Attachments G, H, and K.

The City disseminates emergency warning information in several ways. This includes Albany Alert, IPAWS, Linn-Benton Alert, social media sites and if necessary, by going door-to-door. Flood warning messages are included in Attachment C.

The City of Albany also has a procedures manual in the event of severe weather. Refer to the Severe Weather Alert Procedures in Attachment F.

Flood Response Operations

The City of Albany has a response plan called the Emergency Operations Plan which was last updated in 2023. The Basic Plan Section is reviewed each year by the City's Emergency Manager. The completed plan is reviewed and updated each fifth year by the Emergency Manager and each department that has a responsibility outlined in the plan. The City's Emergency Operations Plan is an all-hazard plan that describes how the City of Albany will organize and respond to emergencies and disasters in the community. It is the goal of the City of Albany that response to such conditions is conducted in the most organized, efficient, and effective manner possible.

The City coordinates with both Linn and Benton County Emergency Management to ensure response, support, and communications are shared with these responders if the need should arise.

The City also has an Emergency Preparedness Team Procedures and team. When specific trigger points are met for a specific disaster, the team will meet to coordinate City response to the event and determine the message it will send to its employees and the public.

The following information describes the flood response duties of each City department at each flood response level.

Emergency Manager/Safety Officer

Primary areas of responsibility:

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	Check gage on the website to verify the predicted flood level	Manager		0.5 hour
	Notify Emergency Management Coordinator	Manager		0.5 hour
	Advice City Manager, PIO	Manager		0.5 hour
Yellow	Check gage on the website to verify the predicted flood level	Manager		0.5 hour
	Notify the Preparedness Team of potential meeting	Manager		0.5 hour
	Participate in National Weather Briefings to maintain awareness of potential situation	Manager		1.0 hour
Orange	Do all lower-level activities	Manager		
	Continue monitoring of river and creeks throughout the city	Manager		1.0 hour
	Continue to participate in any briefings from the weather service	Manager		1.0 hour
	Update the Emergency Coordinator of the latest information	Manager		0.5 hour
	Update the Preparedness Team on status of river situation	Manager		1.5 hours
Red	Do all lower-level activities	Manager		
	Once EOC is open assimilate into the Command and General staffing	Manager		2.0 hours
Purple	Do all lower-level activities	Manager		
Black	Do all lower-level activities	Manager		

Year Round Duties

- Update contact lists by January 1st of each year
  - Key City Personnel
  - Critical facilities
  - County and state emergency management contacts
  - Neighboring communities' emergency management contacts
  - Disaster resource list
  - People/places needing special or advanced warning
- Draft/maintain EOC procedures, covering
  - Personnel assignments
  - Opening procedures
  - Access control

    - Logistical support during operations
    - Emergency power
    - Alternate site when EOC threatened or damaged
- Develop/maintain inventory of materials needed to operate the EOC
    - Maps
    - Radios that can talk to each other
    - Telephones
    - Copy machine
    - Computers with internet access
    - Television with cable access
    - Tables and chairs
    - Food, water, and dining supplies
    - Sleeping arrangements
- Review/revise mutual aid agreements with other communities
- Test all equipment not used regularly
- Conduct a drill or exercise of the flood response plan

Post-Flood duties

- Assemble damage assessment reports
- Conduct after-action debriefing
- Draft after-action report

EOC Director

Primary areas of responsibility: To manage the EOC once it has been activated. To ensure the EOC Command and General staff has adequate personnel to ensure smooth operations during a 24 hour period and that the appropriate reports are developed and sent to the correct personnel and agencies. The Director will establish the EOC priorities to ensure all command and general staff are working together and cooperatively.

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	No action until EOC open			
Yellow	Not action until EOC open			
Orange	No action until EOC open			
Red	Open EOC if impact of flood will be wide spread	Call in command & general EOC staff		2.0 hours
	Establish EOC priorities	Planning section		0.5 hour
	Determine the extent of damage to the community	Damage assessment group		3.0 hours
	Determine impact to City facilities	Reports from departments to the damage assessment group		5.0 hours
	Determine public information needs	Work with the PIO group to determine information sent to the public		1.5 hours
	Receive reports on road closures	Damage assessment group		3.0 hours
	Communicate with City Manager on impacts to community	Director		0.5 hour
Purple	Do all lower-level activities			
	Ensure EOC staffing is adequate on a 24-hour basis	Director, Command & General Staff		1.5 hours
	Ensure Coordination with outside agencies	Director, Liaison Officer		2.0 hours
	Ensure a shelter is being set up within the city	Director, Shelter Branch, Red Cross		6.0 hours
Black	Do all lower-level activities			

Year Round Duties

- Ensure EOC procedures are updated and current:
  - Personnel assignments
  - Opening procedures
  - Access control
  - Logistical support during operations
  - Emergency power
  - Alternate site when EOC threatened or damaged
- Ensure inventory of materials needed to operate the EOC are updated and current:
  - Maps
  - Radios
  - Telephones
  - Computers with Internet access
  - Television with cable access
  - Tables and chairs
  - Food, water, and dining supplies
  - Sleeping arrangements
- Review/revise mutual aid agreements with other communities
- Make sure all equipment not used regularly is tested on a yearly basis
- Conduct a drill or exercise of the flood response plan, or one for a similar hazard, annually

Post-Flood Duties

- Initiate damage assessment operations
- Conduct after-action debriefing

Fire Department

Primary area of responsibility: Warning, search and rescue, firefighting, ambulance service, water rescue

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	No action until EOC open			
Yellow	Public Notification	JIC	Social media, radio, TV, Albany Alerts, LB Alert	1.0 hour
	Planning Meeting	Chief Officers	Meeting Location	1.5 hours
	Staffing Adjustments – Station 14 Priority	Additional 2 personnel		1.0 hour
	Notify Staff of Pending Emergency	1 Person		1.0 hour
	Communication with Neighboring Fire Jurisdictions	Fire Chief/Assistant Chief	Phone	1.0 hour
	Open DOC	AC, BC		1.5 hours
	Assign Water Branch Director	Water Team Personnel		1.0 hour
	Equip Stations for Long-term Staff Needs	Logistics Officer		2.0 hours
	Field Observations/Windshield Reports	Emergency Crews		3.0 hours
	Close gates on Byrant and Marion	1 Person		1.5 hours
	Identify Objectives/Evaluate Throughout Process			3.0 hours
Orange	Operational Meeting	C & G		1.5 hours
	Invoke Water Rescue Plan	Water Rescue Personnel		2.0 hours
	Evacuation and Temporary Housing Planning	TBD	Transportation Evacuation Plan	5.0 hours
	Assign Family Liaison	1 Person	Phone and employee roster	2.0 hours
Red	Address fire protection and security of islands			5.0 hours
Purple	Activate Hazardous Materials Team	HazMat 5		3.0 hours
Black	Do all lower-level activities			

Year-Round Duties

- Test equipment
- Develop/maintain list of people who need help evacuating or special help during a fire or other emergency
- Participate in the annual drill/exercise

Post-Flood Duties

- Participate in the after-action debriefing

Boat Supplies Checklist

- In the boat:
  - Oars
  - Motor
  - Gasoline
  - Flashlight/lantern
  - Rope
  - Radio
  - Life Jackets
- In the pickup truck:
  - Radio
  - Stokes Basket
  - Long spine board
  - Medical kit
- On each firefighter
  - Flotation device
  - Cell phone
  - Hip boots

Police Department

Primary areas of responsibility: Crime Prevention, Traffic Control, Assist in Evacuation.

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	No action until EOC open			
Yellow	Check in to the EOC	Chief	Radio, Telephone	0.5 hour
Orange	Do all lower-level activities			
	Assign area cars to monitor their respective areas and identify local flooding or high-water issues.	4 one-person patrol units	Standard patrol equipment including life vest and throw rope	1.5 hours
	Notify PW of impassable streets for barricades	Dispatch	Phone	1.5 hours
Red	Do all lower-level activities			
	Assign patrols to areas that should be evacuated: North Albany (1 unit)	1 one-person patrol unit	Standard patrol equipment including life vest and throw rope	1.0 hour
Purple	Do all lower-level activities			
	Assign a patrol unit to North Albany Fire Station 14 to respond to areas difficult to reach from the bridge	1 one-person patrol unit	Standard patrol equipment including life vest and throw rope	1.0 hour
Black	Do all lower-level activities			
	Prepare for potential Hwy 20 closure and traffic control	2 one-person patrol units	Standard patrol equipment including life vest and throw rope	1.5 hours

Year-Round Duties

- Test equipment
- Participate in the annual drill/exercise

Post-Flood Duties

- Participate in the after-action debriefing

Public Works Operations

Primary areas of responsibility: Closing off flooded streets, protecting critical facilities, clean up, non-building damage assessment. Protecting public infrastructure.

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	Track weather forecasts	PW Ops Supervisors		0.5 hour
Yellow	Do all lower-level activities			
	Monitor river gages/ predictions	PW Ops Director		0.5 hour
	Attend Natural Hazard Team meeting	PW Ops Director		1.5 hours
	Check inventory of sand and sandbags; order more if necessary	Trans. Supt.	Sand, sandbags	1.5 hours
	Ensure trucks/generators are fueled	Tech. Svcs. Mgr.	Service trucks, portable generators/ Diesel, Unleaded fuel	2.0 hours
	Identify staff available after hours	PW Ops Supervisors		2.0 hours
	Add extra admin staff as necessary for phone call volume	PW Admin. Mgr.		1.5 hours
	Update PIO and website	PW Ops Director		1.5 hours
	Close/barricade roads as required	Trans. Supt.	Barricades, signs	3.0 hours
	Check Canal flows and adjust control structures as necessary	PW Canal Lead		2.0 hours
	Begin FEMA documentation process if necessary	PW Ops Director		2.0 hours
Orange	Do all lower-level activities			
	Create 24-hour shift schedule	PW Ops Director		2.0 hours
	Set up DOC	PW Ops Director		2.5 hours
	Check Canal elevations at key points	PW Canal Lead		2.5 hours
	Check WRF effluent manholes for stability	WRF Supervisor		3.5 hours
	Review and implement TWG effluent valve procedures	WRF Supervisor		1.5 hours
	Monitor Lift Stations	Tech. Svcs. Mgr.		5.0 hours
	Sandbag Burkhart Creek Lift Station	Tech. Svcs. Mgr.	Sandbags, service trucks	5.0 hours
	Monitor river elevation at RWPS	Water Treatment Supervisor		2.0 hours
	Monitor flooding at NA LS	Tech. Svcs. Mgr.		1.5 hours
	Monitor flooding at WRF	WRF Supervisor		1.5 hours

	Monitor Calapooia River level at hydropower generator	PW Canal Lead		1.0 hour
	Close access to TWG	WRF Supervisor		1.5 hours

	Action	Staff	Equipment & Supplies	Time Duration
Red	Do all lower-level activities			
	Sandbag NW LS Wet Well	Tech. Svcs. Mgr.	Sandbags	3.0 hours
	Sandbag IPS	WRF Supervisor	Sandbags	3.0 hours
	Sandbag chlorine storage building	WRF Supervisor	Sandbags	3.0 hours
	Sandbag blower building	WRF Supervisor	Sandbags	3.0 hours
	Sandbag headworks building	WRF Supervisor	Sandbags	3.0 hours
	Sandbag Canal low points	PW Canal Lead	Sandbags	3.0 hours
	Sandbag Wah Chang LS	Tech. Svcs. Mgr.	Sandbags	5.0 hours
	Evacuate key equipment at WRF near floodwaters	WRF Supervisor	Service Trucks	2.5 hours
	Consider closing WRF/evacuating	PW Ops Director		2.0 hours
Purple	Do all lower-level activities			
	Sandbag Oak Creek LS	Tech. Svcs. Mgr.		5.0 hours
	Monitor Calapooia River at Vine WTP	Water Treatment Supervisor		1.5 hours
	Identify high elevation locations for Operations equipment storage	PW Ops Director		2.5 hours
	Evacuate WRF	WRF Supervisor		2.5 hours
Black	Do all lower-level activities			
	Evacuate Ops yard	PW Ops Director		3.0 hours

Post-Flood Duties

- Inspect roads and bridges after flooding to ensure they can be used and clear debris from streets
- Check streets, treatment plants, lift stations, and other department property for damage
- Initiate cleanup operations-
  - Contact garbage haulers and Pick up sandbags, barricades
- Participate in the after-action debriefing
- Continue tracking for FEMA documentation purposes

Public Works Engineering

Primary areas of responsibility: Damage Assessment

Flood Response Duties				
Flood Threat	**Action**	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	Monitor USGS and NOAA websites for river level			1.0 hour
Yellow	Do all lower-level activities			
	Check in with Operations	Director, Supervisors, Manger		1.0 hour
	Engineering Rep attend Natural Hazard Mitigation Team Mtg.	Director		1.5 hours
Orange	Do all lower-level activities			
	Participate in activating EOC if necessary	Director, Supervisors, Mangers		2.0 hours
	Identify staff for 24-hour operations if needed	Director, Supervisors, Mangers		2.0 hours
Red	Do all lower-level activities			
Purple	Do all lower-level activities			
Black	Do all lower-level activities			

Year-Round Duties

- Inspect channels, ditches, and culverts per SOP, report problems to Public Works
- Maintain/update flood stage forecast map
- Participate in the annual drill/exercise

Post-Flood Duties

- Implement the *Post-Flood Mitigation Procedures*
- Mark high water lines on telephone poles
- Provide advice on clean up, rebuilding rules to PIO
- Assess building damage
- Participate in the after-action debriefing

Community Development

Primary areas of responsibility: Flood data, damage assessment.

Flood Response Duties				
Flood Threat	**Action**	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	No action until EOC open			
Yellow	Check in to the EOC	Floodplain Manager	Computer, Telephone	1.5 hours
	Check website to monitor gage every two hours	Floodplain Manager	Computer/Internet Access	1.0 hour
	Assist PIO with Flood Warning Messages	Floodplain Manager	Computer/Internet Access	2.0 hours
	Provide maps of threatened areas	Floodplain Manager	Maps	2.5 hours
Orange	Do all lower-level activities			
Red	Do all lower-level activities			
Purple	Do all lower-level activities			
Black	Do all lower-level activities			

Year-Round Duties

- Maintain/update flood stage forecast map
- Participate in the annual drill/exercise

Post-Flood Duties

- Set up call in number for the public to report damaged buildings.
- Take pictures to document flooded areas.
- Mark high water lines on telephone poles
- Provide advice on clean up, rebuilding rules to PIO
- Assess building damage
- Participate in the after-action debriefing
- Send out public information regarding post flood messages

Public Information Officer

Primary areas of responsibility: public information

Flood Response Duties				
	Action	**Staff**	**Equipment &**	**Time**

			Supplies	Duration
Any	No action until EOC open			
Yellow	Check in at EOC	PIO	Laptop Phone	1.5 hours
	Issue advisories on expected flood threat; evacuation; safety precautions	PIO, social media writer	Laptop phone	1.5 hours
	Conduct news briefings as needed	PIO, EOC director, mayor,	Podium PA system Backdrop	3.0 hours
Orange	All lower-level activities	PIO, social media writer, media monitor	Phones, laptops	
	Add shelter and other health and safety messages	PIO, social media writer	Laptops, phones	5.0 hours
	News briefings as needed			5.0 hours
Red	All lower-level activities	PIO team		
	Plan for second shift and ongoing staff rotations	PIO team		2.5 hours
Purple	All lower-level activities			
Black	All lower-level activities			

Year-Round Duties

- Participate in the annual drill/exercise
- Maintain and update media contact data

Post-Flood Duties

- Implement the *Post-Flood Mitigation Procedures*
- Issue information on clean up and sources of repair assistance
- Collect documentation on the flood, including newspaper articles and photographs
- Participate in the after-action debriefing

Parks & Recreation Department

Primary areas of responsibility: sheltering, emergency food, immediate recovery assistant

Flood Response Duties				
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Any	Prepare Bryant and Bowman Park for flooding (close)	Park Maintenance		1.0 hour
Yellow	Do all lower-level activities	Director and Staff		
	Check in to the EOC	Director		1.5 hours
	Prepare Equipment for use during flood	Park Maintenance	Tools, Vehicles, radios, Buses/trolley/ vehicles/Fuel	1.5 hours
	Verify availability of food and supplies for EOC	Parks EOC staff	Food/Portable toilets/water etc.	2.5 hours
	Verify availability of bus drivers for possible flood transport.	Parks EOC Staff		2.5 hours
	Prepare Montieth Park for water	Park Maintenance		1.5 hours
	Close Takena Landing at entrance gate	Park Maintenance		1.5 hours
Orange	Do all lower-level activities	Director and Staff		
	Prepare needed food and supplies for EOC and staff in field if additional flooding is anticipated.	Parks EOC Staff		5.0 hours
	If Cox Creek is an issue, prepare park maintenance shop and equipment for water. Possibly move operation and equipment out of the flood area	Park Maintenance		5.0 hours
	Consult with other sections to provide needed transportation for evacuations	Parks EOC Staff	Wheelchair equipment vehicles and others ready for transport	5.0 hours
	Action	**Staff**	**Equipment & Supplies**	**Time Duration**
Red	Do all lower-level activities	Director and staff		
	Close Senior Center and prepare facility for possible water	Director and staff		3.0 hours
	Park Maintenance becomes a division of Public Works until emergency is past.	Park Maintenance		2.0 hours
	Provide Security for EOC and other City facilities as needed	Parks EOC Staff		5.0 hours
	Divide staffing in order to provide 24-hour staffing at EOC	Parks EOC Staff		3.0 hours
	Consult with section that provides public shelter – assist as needed.	Parks EOC Staff		5.0 hours
	Provide meals and other services to a now active EOC	Parks EOC Staff		4.0 hours

	Meet needs as they come up – Focus is on EOC and staff in the field	Parks EOC Staff		3.0 hours
Purple	Do all lower-level activities	Director and Staff		
	Prepare supplies/food etc. for an event that might last a week or more at the EOC	Parks EOC Staff		4.0 hours
Black	Do all lower-level activities	Director and Staff		
	Prepare supplies/Food Etc. for an event that might last a month or more at the EOC	Parks EOC Staff		4.0 hours

Year-Round Duties

- Maintain contacts with shelter owners and managers
- Participate in the annual drill/exercise

Post-Flood Duties

- Participate in the after-action debriefing

Attachment A: Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials ATC Applied Technology Council
B/CA	benefit/cost analysis
BFE	Base Flood Elevation
BLM	Bureau of Land Management
BSSC	Building Seismic Safety Council
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CRS	Community Rating System
CVO	Cascade Volcano Observatory (USGS)
EOC	Emergency Operations Center
EDA	Economic Development Administration
EPA	Environmental Protection Agency
ER	Emergency Relief
EWP	Emergency Watershed Protection (NRCS Program)
FAS	Federal Aid System
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance (FEMA Program)
FTE	Full Time Equivalent
GIS	Geographic Information System
GNS	Institute of Geological and Nuclear Sciences (International)
GSA	General Services Administration
HAZUS	Hazards U.S.
HMGP	Hazard Mitigation Grant Program
HMST	Hazard Mitigation Survey Team
HUD	Housing and Urban Development (United State, Department of)
IBHS	Institute of Business and Home Safety
IHMT	Interagency Hazard Mitigation Team
NCDC	National Climate Data Center
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHMP	Natural Hazard Mitigation Plan (also known as “409 plan”)
NIBS	National Institute of Building Sciences
NIFC	National Interagency Fire Center
NMFS	National Marine Fisheries Service

NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Services
NWS	National Weather Service
PIO	Public Information Officer
SBA	Small Business Administration
TDR	Transfer of Development Rights
UGB	Urban Growth Boundary
URM	Unreinforced Masonry
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFA	United States Fire Administration
USGS	United States Geological Survey

Definitions

"100-year" flood means a flooding condition which has a one percent chance of occurring each year. The 100-year flood level is used as the base planning level for floodplain management in the National Flood Insurance Program. See "base flood elevation" and "National Flood Insurance Program" below.

"409 Plan" means the state natural hazards mitigation plan that was called for by Section 409 of the Stafford Act. This requirement has been superseded by Section 322 of the Stafford Act as created by the Disaster Mitigation Act of 2000.

Base flood elevation, for National Flood Insurance Program purposes, most often means the flood having a one percent chance of being equaled or exceeded in any given year. It is also referred to as the "100-year" flood. The base flood elevation is the elevation (normally feet above mean sea level) that the base flood is expected to reach. For certain critical and essential facilities, the base flood elevation is determined from the 500-year flood.

Disaster Mitigation Act of 2000 (DMA2K) amended the Stafford Act, making both sweeping and minor changes and additions to it, including: establishing a national program for pre-disaster mitigation; streamlining the administration of disaster relief; changing FEMA's post-disaster programs for individuals and families, including creating the Individuals and Households Program; establishing minimum standards for public and private structures; requiring local and state natural hazards mitigation plans that meet a FEMA standard (Section 322); revising - in part - FEMA funding for the repair, restoration, and replacement of damaged facilities (Section 406); revising FEMA's participation in the costs of WUI fire suppression through an expanded and renamed Fire Management Assistance Grant Program (Section 420); removing the requirement for post-disaster IHMT or HMST meetings and reports (see Part IV, Appendices 1 and 10 of this plan); and other amendments.

Disaster Resistant Community is a concept whereby individuals, businesses, private nonprofit organizations, and government work in partnership by preparing in advance and taking actions to reduce the impact of natural hazards that will likely occur. In Oregon the key initiative towards disaster resistant community is *Partners for Disaster Resistance and Resilience*.

Floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. These areas, if left undisturbed, act to store excess flood water.

Floodplain Administrator The person designated by the governing body in a flood-prone community who is responsible for making floodplain determinations for construction sites, issuing building permits for floodplain construction, ensuring compliance, and other floodplain management activities.

Floodway The river channel and the portion of the floodplain carrying most of the flood flow. Floodways are usually the area where water velocities and forces are the greatest and most destructive. The NFIP definition of floodway is "the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot." NFIP regulations, adopted in local ordinances, require that floodways be kept open so that flood flows are not obstructed or diverted onto other properties.

Goal 7 of the statewide land use planning program calls for local comprehensive plans to include inventories, policies, and implementing measures to guide development in hazard areas thereby reducing losses from flooding, landslides, earthquakes, tsunamis, coastal erosion, and wildfires.

State Interagency Hazard Mitigation Team means that team of state agency officials whom, in 1997, former Governor Kitzhaber directed the Office of Emergency Management to make a permanent body and establish regular meeting dates to understand losses arising from natural hazards and coordinate recommended strategies to mitigate loss of life, property, and natural resources.

Hazard is any situation that has the potential of causing damage to people, property, or the environment.

Hazard mitigation means "any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards." (44 CFR 201.2)

Hazard Mitigation Grant Program means "the program authorized under Section 404 of the Stafford Act... and implemented at 44 CFR Part 206, Subpart N, which authorizes funding for certain mitigation measures identified through the evaluation of natural hazards conducted under Section 322 of the Stafford Act." (44 CFR 201.2)

High risk sites are specific landslide locations determined by the State Forester within high-risk areas. A high-risk site may include but is not limited to slopes greater than 65 percent; steep headwalls; highly dissected land formations; areas exhibiting frequent high intensity rainfall periods; faulting; slumps; slides; or debris avalanches. (OAR 629-600-100[28])

Major disaster Any natural catastrophe which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance to supplement efforts and available resources of states, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby. (44 CFR 206.2)

National Flood Insurance Program means the program run by the federal government to improve floodplain management, to reduce flood-related disaster costs, and to provide low-cost flood insurance for residents of flood-prone communities.

Natural Hazards Mitigation Plan means a plan resulting from a risk assessment of the nature and extent of vulnerability to the effects of natural hazards present in a geographic area and actions needed to minimize future vulnerability to those hazards, especially a plan developed and adopted which meets the requirements of 44 CFR Part 201.

Public Assistance is that part of the disaster assistance program in which FEMA supplements efforts and available resources of state and local governments to restore public facilities or services. Public Assistance includes emergency assistance, debris removal, community disaster loans, and the permanent repair, restoration, or replacement of public and private nonprofit facilities damaged or destroyed by a major disaster and is further described under Section 406 of the Stafford Act.

Stafford Act means the Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL 93-288, as amended by PL 100-707 and by PL 106-390, the Disaster Mitigation Act of 2000).

State Hazard Mitigation Officer is the official representative of state government who is the primary point of contact with FEMA, other federal agencies, and local governments in mitigation planning and implementation of mitigation programs and activities required under the Stafford Act. In Oregon, this person is on the staff of the Office of Emergency Management.

Vulnerability is the susceptibility of life, property, or the environment to damage if a hazard manifests to potential.

Attachment B: Additional Documents

The following documents are needed for a successful flood response operation. However, they are not flood specific and should be prepared and maintained to ensure the City is ready for all types of emergencies. Except where otherwise noted, they are the responsibility of the Emergency Manager.

- Contact Lists:
    - Key City Personnel
        - City of Albany has an Emergency Notification List that is used to contact key personnel. This document is updated as needed.
    - Flood-Prone Critical Facilities (4)
        - North Albany Middle School – Luke Chicquaye -541- 801-4696
        - North Albany Elementary School – Luke Chicquaye -541- 801-4696
        - Fairmont School – Luke Chicquaye -541- 801-4696
        - City of Albany Wastewater Facility – Kristin Preston 541-917-7635 or after 5 pm or on weekends 541-967-2394
    - Shelters
        - American Red Cross Cascades Region – Emergency Duty Officer – 1-888-680-1455
    - County and state emergency management contacts
        - State of Oregon Emergency Management - Executive Duty Officer –1-800-452-0311
        - Linn County Emergency Management – Ric Lentz –561-281-8625
        - Benton County Emergency Management – Brian Lee 541-231-0224

Disaster Resource list

- EOC procedures
    - EOC procedures are found in the City of Albany Emergency Operations Plan dated September 2023 within the basic plan. Sections within this plan cover such things as:
        - Personnel assignments
        - Opening procedures
        - Access control
        - Logistical support during operations
        - Emergency power
        - Alternate site when EOC threatened or damaged
        - Inventory of materials needed to operate the EOC
- Mutual aid agreements:
    - Public Works – They operate under the Oregon Public Works Emergency Response Cooperative Assistance Agreement for mutual aid with other public works departments.
    - Fire Department – They have some mutual aid agreements, but all coordination of departments is handled by the Linn or Benton Fire Defense Boards and dispatched according to predetermined assignments.
    - Police Department – Has no formal mutual aid agreements between departments, but rather uses a state law that allows mutual aid between departments.

Attachment C: Flood Warning Messages

Flood Stage

- **25 feet Flood Stage**
  - The Willamette River at Albany is expected to reach flood stage (25 feet) on _____. No road closures are expected at or around the river at this time. Be aware of your surroundings as you drive and report any water over the road to Albany Public Works at _____.
  - The Willamette River continues to rise. Road closures include _____. A link to the City of Albany website is included to provide up to date street closures. Do not drive through water on the road.
  - Additional flooding from the Willamette River has caused more road closures. Please check (website) for a complete list. Do not drive through standing or flowing water on roads.
  - Before floodwaters hit, develop an evacuation plan for all members of your household that includes a meeting place and an escape route out of the floodplain and away from floodwaters.
  - Sandbags are available at Public Works Operations, 405 Davidson Street NE.
  - In an emergency, call 911.
- **30 feet Moderate Stage**
  - The Willamette River is expected to rise to 30 feet on _____. Road closures include _____. A link to the City of Albany website is included to provide up to date street closures. Do not drive through standing or flowing water on roads.
  - Additional flooding from the Willamette River has caused more road closures. Please check (website) for a complete list. Do not drive through standing or flowing water on roads.
  - Be aware of your surroundings as you drive and report any water over the road to Albany Public Works at _____.
  - Shut off gas and electricity and move valuable items to higher levels.
  - Get to higher ground and avoid areas subject to flooding.
  - If you need a shelter to stay at, one will be open at _____ (give name and location).
  - Do not walk through flowing water and do not drive through a flooded area.
  - Stay away from power lines and electrical wires.
  - Sandbags are available at Public Works Operations, 405 Davidson Street NE.
  - Report debris blockages by calling Public Works at 541-917-7600.
  - In an emergency, call 911.

- **32 feet Major Stage**
    - The Willamette River is expected to rise to 32 feet on _____. Road closures include _____. A link to the City of Albany website is included to provide up to date street closures. Do not drive through standing or flowing water on roads.
    - *[All other lower flood stage messages apply.]*
- **34 feet Severe Stage**
    - The Willamette River is expected to rise to 34 feet on _____. Road closures include _____. A link to the City of Albany website is included to provide up to date street closures. Do not drive through standing or flowing water on roads.
    - *[All other lower flood stage messages apply.]*

Dam Failure Inundation

- The_____Dam has broken and water is moving toward Albany. The first water should arrive by _____ and peak at _____. Water should stay within the Willamette River floodway and cause only minor damage, though debris will be carried in the flow and that may cause other damage. Information will be updated as quickly as possible.
- The _____Dam has broken. Water is expected to reach Albany at_____ and continue to rise for some time. Impact will be severe. Get to higher ground and avoid areas subject to flooding.
- Stay informed by _____
- Do not walk through flowing water and do not drive through a flooded area.
- Stay away from power lines and electrical wires.
- In an emergency, call 911.

Messages after the Flood

As the floodwaters start to go back down, many people will be anxious to return home and inspect the damage.

Remember a few key points about returning to a flooded building:

1. **Flood Damage:** Call the City at _____ to report flood damaged buildings.
2. **Look before you step:** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.
3. **Be alert for gas leaks:** Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flames unless you know that the gas has been turned off and the area has been ventilated. Don't turn the gas back on yourself; call Northwest Natural to do it.
4. **Look out for animals:** Small animals that have been flooded out of their homes may seek shelter in yours.
5. **Flood Insurance:** If your home has suffered flood damage, call your insurance agent to file a claim.

Important Information about Repairing a Damaged Building:

6. Get a building permit for repairs. Substantially damaged properties may need to be mitigated when repaired. Before you remove, alter, or replace any of the following items, you MUST obtain a building permit: the roof, walls, siding, wallboard, plaster, insulation, paneling, cabinets, flooring, electrical system, plumbing, heating, and air conditioning.
7. The permit office will conduct a complimentary inspection of the damage to your building. This inspection will help you identify what needs to be repaired. It will also identify if a permit is needed and if your building could be substantially damaged. There is no cost for this inspection, and it must be done before you begin your repairs or reconstruction.
8. You may proceed with clean-up activities and temporary emergency repairs without a permit. These repairs include:
    - Removing and disposing of damaged contents, carpeting, wallboard, insulation, etc.
    - Hosing, scrubbing, or cleaning floors, walls, ductwork, etc.
    - Covering holes in the roof, walls, and windows to prevent the weather from inflicting further damage.
    - Removing sagging ceilings, shoring up broken foundations, and other actions to make the building safe to enter.
9. To prevent possible opportunists from taking advantage of the current situation, any contracted work must be done by a firm licensed to work in the City of Albany. Furthermore, residents are cautioned and warned not to sign blank contracts or allow work or alterations not authorized by the Albany Community Development Department.
10. For more information, contact the Community Development Dept. at 541-917-7553.

Attachment D: Flood Prone Critical Facilities

Of particular importance during flood events are critical facilities located in flood hazard areas. A critical facility is defined as a facility that needs to be operable during a flood, or for which even a slight chance of flooding might pose unacceptable risk to health and safety. Critical facilities include schools, nursing homes, hospitals, police, fire and other emergency responders, and installations that produce, use, or store hazardous materials.

Based on this definition, there are four critical facilities that are on property in the floodplain; however, only a portion of these properties are within the special flood hazard area and most of the buildings are located outside of the floodplain boundary. These include:

1) Public Works Operations and Wastewater Treatment Plant (310 Waverly Drive NE)

2) North Albany Elementary School (815 E. Thornton Lake Drive NW)

3) North Albany Middle School (1205 North Albany Road NW). During the 1996 flood event, no City of Albany public building was directly affected by the flooding.

4) Fairmont School (1005 NW Springhill Drive)

Contact information can be found in the City of Albany Severe Weather Alert Procedures (see Attachment F).

Attachment E: Flood Stage Elevations and Dams by Rivers

		Elevation	1988 Datum	1929 Datum
Action Stage	Yellow	21.60	191.56	188.18
Flood Stage	Orange	25.00	195.56	192.18
Moderate Stage	Red	30.00	200.56	197.18
Major Stage	Purple	32.00	202.56	199.18
Severe Stage	Black	34.00	204.56	201.18

McKenzie River	**Elevation**	**Elevation**
• **Blue River – No Impact**	**1988 Datum**	**1929 Datum**
○ Normal High Peak	184.10	180.72
○ Maximum Peak	187.80	184.42
Willamette River		
• **Cottage Grove – No Impact**		
○ Normal High Peak	179.00	175.62
○ Maximum Peak	187.60	184.22
• **Dexter – No Impact**		
○ Normal High Peak	166.70	
○ Maximum Peak	No Maximum Peak	
• **Fern Ridge – No Impact**		
○ Normal High Peak	180.60	177.22
○ Maximum Peak	182.60	179.22
• **Fall Creek – No Impact**		
○ Normal High Peak	188.90 (21.72)	185.52
○ Maximum Peak	191.70 (24.52)	188.32
• **Cougar - McKenzie**		
○ Normal High Peak	190.80 (23.62)	187.42
○ Maximum Peak	193.10 (25.92)	189.72
• **Dorena - Willamette**		
○ Normal High Peak	185.60 (18.42)	182.22
○ Maximum Peak	196.60 (29.42)	193.22
• **Hills Creek - Willamette**		
○ Normal High Peak	203.90 (36.72)	200.52
○ Maximum Peak	204.30 (37.12)	200.92
• **Look Out Point - Willamette**		
○ Normal High Peak	199.60 (32.42)	196.22
○ Maximum Peak	207.60 (40.42)	204.22

Attachment F: Severe Weather Alert Procedures

I. PURPOSE

To have a system in place to alert and warn our citizens of an imminent disaster and to raise awareness of what programs at the city, county, and state level exist to provide better protection to their families and property.

II. SITUATION AND ASSUMPTION

A. Situation

1. The City of Albany is vulnerable to many hazards which threaten public health, and the safety of public and private property.
2. During an emergency, the City will need most of its employees to stay on the job and assist in responding to emergencies and recovering from the disaster.
3. Affective preparedness and response to emergency situations will help to minimize injury to the citizens and damage to property.
4. Having a plan to educate the public and their families on how to deal with emergencies will enhance the City's ability to provide better response during emergencies.
5. Understanding what programs are available at the local, state, and federal level will provide an opportunity for citizens to make better decisions about what protection they need to provide themselves.

B. Assumption

1. During a major emergency the City of Albany will not have enough first responders to provide services to all those in need.
2. Employees who know their families are safe are more likely to be willing to stay and work during an emergency.
3. Individuals who have an emergency family plan, a home emergency kit, and exercise their plan have a better chance of surviving major disasters and can provide assistance to their neighbors.
4. Understanding programs that can provide better protection to your family and property will help people in the recovery phase of emergency management.

III. CONCEPT OF OPERATIONS

A. General

The citizens of Albany are at risk to several natural hazards having to do with severe weather. Flood, snow, ice, and severe winds are the most common. This plan will outline the procedures which will be followed should it come to the attention of the City's Emergency Management that a major event will affect the City.

B. Phases of Emergency Management

1. Preparedness

The City of Albany will provide its employees and its citizen with preparedness information on a regular basis. It is expected that citizens and employees understand the importance for them and their families to have emergency plans and be prepared to care for themselves for up to fourteen days after an emergency.

2. Notification

   In a severe weather event prior notification of the event can be expected. The City of Albany is set up to received notifications from EWARN, a part of NOAA's National Weather Service. When an emergency notification is sent out by the National Weather Service, key members of the City Emergency Management Team receive these announcements either by email, text, or both and then distribute the announcements through the City's email system to the Emergency Preparedness Group.

3. Response

   The City of Albany will respond to all emergencies in accordance to its Emergency Operations Procedures. During the event the City will provide updated information about the City's response to its citizens and employees.

4. Recovery

   The City of Albany Emergency Management will inform its citizens when the City has transitioned into the recovery phase of emergency management. This phase of operations will be the rebuilding phase and will generally be accomplished, depending on the size of the event, through the cooperation and coordination of local, state, and federal organizations. Through the City's information dissemination plan, citizens, public agencies, private companies, and non-profit organizations will be informed and updated on steps the City is or will be taking to get its services back to full operations and what benefits the above-mentioned organizations might be eligible for. A successful recovery program is contingent on the citizens and their families having a working plan and emergency kit that will get them thought the first three to seven days of the event.

C. Procedure for receiving notifications.

1. The City has specific individuals in emergency management and the fire department who will receive alerts from the National Weather Service through either EWAN or INWS – interactive NWS or both on all natural hazards that could have an impact on the City. Most of these announcements will pertain to flooding, wind, and ice or snow events. The following procedure will be followed when a warning is received:

   - Notification of a pending event will be sent from the National Weather Service to the individuals identified in the city. This notice will be evaluated at the time it is received to determine its impact on the city.
   - If it is determined the event will have a significant impact on the City, the Emergency Preparedness Group will be notified so they may begin discussions at the department level about appropriate actions they may want to be considering. For flood, snow, ice and windstorms, specific trigger points have been established. When they are met, the City's Emergency Preparedness Team will be activated, and their purpose or responsibilities for preparedness messages and response coordination will be discussed.
     - For wind, ice, and snow events that will impact all of the community, the City will follow Functional Annex: FA 1. Emergency Services Appendix A. The announcement to the community will be citywide and pertain to recommendations on the strength of the event and what they can do to be prepared.

- For flooding events, Functional Annex: FA 1. Emergency Services Appendix A will be used to make announcements to the community, but only after an evaluation of the impact of the flood has been made by emergency management. The City will use the National Weather Service's Advanced Hydrologic Predication Service to determine the potential extent of the flooding in the community as well as visual observations that will be made by Police, Fire, and Public Works personnel in the field. Once it has been determined what the impact most likely will be, the following procedures will be taken:
  - Identify the areas that may be impacted by the flood now or in future.
  - Determine the number of buildings within this impact area that could be affected.
  - Develop a public announcement for both the community and those specific impact areas.
  - The following critical facilities have been identified as being within the 100-year flood plain and will be contacted by phone to make sure the facilities are aware of a flooding situation.
    - North Albany Middle School – Luke Chicquaye -541- 801-4696
    - North Albany Elementary School – Luke Chicquaye -541-801-4696
    - Fairmont School – Luke Chicquaye -541- 801-4696
    - City of Albany Waste Water Facility – Jeff Kinney 541-917-7628 or 541-917-7600 or 541-967-2394 after 5 and on weekends
  - Continue to evaluate the Advanced Hydrologic Predictions provided by the National Weather Services to determine the impact on the community and the actions that will need to be taken.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. General

1. The City of Albany has a system in place to alert its citizens of natural hazard events prior to that event having an impact on the city. The City also provides six emergency weather radios to specific critical facilities to receive early notification of weather events such as flooding, snow storms, ice storms, and wind storms.

B. Assignments

1. Emergency Management

Will be responsible to receive warnings from the National Weather service, interpret their immediate impact to the city and determine what additional action will need to be taken. If it is deemed necessary, emergency management will notify key City department heads and managers of an impending event so that they can take the appropriate preparedness and pre-response action. If it is determined that a portion or all of the community will be impacted by

the event, emergency management will take the necessary action to notify that portion of the community that will be impacted.

2. Department Heads

When department heads have been advised from Emergency Management that an event may impact the city, they will notify the appropriate managers and supervisors within their department to implement their emergency plans at the level appropriate for the event. In cases where it appears several departments may have a response action during the event and it might have a significant impact on the city, Emergency Management might consider opening the EOC at the appropriate level to deal with the response and recovery of the event.

3. City Manager's Office/PIO

If it determined an event may have an impact on the community, the City Public Information Officer, in coordination with the City Emergency Preparedness Team, will develop and release notices appropriate to notify the community and its employees of the event.

Forms of communications may include news releases through flash alert, radio, newspaper stations, community members, Linn Benton Alert, Twitter, Facebook, and Albany Alerts.

V. DIRECTION AND CONTROL

A. General

All direction and control will be as outlined in the City of Albany Emergency Operations Plan or according to specific department operation plans.

VI. ADMINISTRATION AND SUPPORT

A. General

All records of actions taken by the EOC, departments, or field Incident Commanders will be collected and reviewed. On EOC activations at Level II or III, a hot wash will be conducted, and an after-action report will be completed. On Level I activations, a hot wash will be conducted before the EOC is closed but no after-action report will be generated.

VII. APPENDIX DEVELOPMENT AND MAINTENANCE

The Emergency Management Coordinator is responsible for the development and maintenance of this plan. They will include other individuals within the City to ensure this Appendix is updated on a regular basis and all departments understand their responsibility.

All Standard Operating Procedures will be developed and maintained by the appropriate department to ensure that the requirements set forth in this Appendix are effectively met.

This procedure will be tested at least once a year or an actual event where this procedure is used will constitute a test of the procedure if the event is logged in Attachment #1 below.

Attachment #1			
Event	Notification Process Implementation Date and Time	Distribution Process Date and Time	Comments Test or Actual Event
Flood			
Wind			
Snow			
Ice			

Attachment G: Flood Level Impacts

Attachment H: Flood Assessment Maps

Attachment I: North Albany Flood Assessment Maps

Attachment J: Dam Failure Flood Inundation Assessment Maps

Attachment K: Flood Level Street Closures

Map Zones	Yellow (21.6 ft.)	Orange (25 ft.)	Red (30 ft.)	Purple (32 ft.)	Black (34 ft.)
Total Closures	1	3	6	3	0
Running Total		4	10	13	13
Zone 1					
Zone 2			**NW Quarry Road**	NW Quarry Road	NW Quarry Road
			Springhill Drive near Hickory	Springhill Drive near Hickory	Springhill Drive near Hickory
			NE North Nebergall Loop	NE North Nebergall Loop	NE North Nebergall Loop
			NE South Nebergall Loop	NE South Nebergall Loop	NE South Nebergall Loop
			NE 13th Avenue	NE 13th Avenue	NE 13th Avenue
Zone 3			**NE Waverly Dr near PW Operations**	NE Waverly Dr near PW Operations	NE Waverly Dr near PW Operations
				Front Ave. btwn. Harrison & Cleveland St.	Front Ave between Harrison & Cleveland St.
				Front Ave. at Sherman St.	Front Ave at Sherman St.
				Linn Ave. btwn. Columbus & Burkhart St.	Linn Ave between Columbus & Burkhart St.
Zone 4					
Zone 5					
Zone 6					
Zone 7					
Outside the city	**Bryant Drive**	Bryant Drive	Bryant Drive	Bryant Drive	Bryant Drive
		Spring Hill Road	Spring Hill Road	Spring Hill Road	Spring Hill Road
		Bryant Way SW	Bryant Way SW	Bryant Way SW	Bryant Way SW
		Lochner Road	Lochner Road	Lochner Road	Lochner Road