

FLOOD NEWS from BENTON COUNTY

At Your Service...Every Day since 1847



December 1, 2011

Benton County, Oregon

A few steps now will prevent damage later

Maintaining the flow capacity in streams which cross county properties requires cooperation and assistance to prevent flooding and bank erosion. Benton County regulates the floodplain to protect the lives and property of county residents, while also affording property owners the ability to obtain floodplain insurance.

A number of important measures will help us all protect our valuable water resources and natural environment.

Recognize that floodplains provide natural beneficial functions that help reduce flooding. Floodplains are a natural component of the Benton County environment. When flooding spreads across the floodplain, its energy is dissipated which results in lower flood flows downstream,

reduced stream bank and channel erosion, increased sediment deposition, and improved groundwater recharge.

Locally, open space areas as **Jackson-Frazier Wetland**, a large portion of **Finley Wildlife Refuge** and the newly established **Luckiamute State Natural Area** are valued for their scenic and wildlife habitat amenities, as well as their ability to provide flood storage and reduce flood velocities. Additionally, much of the land along the Willamette River is well suited for farming due to its location within a floodplain. Poorly planned floodplain development can lead to stream bank erosion, property loss, downstream flooding and degrading water quality.

Never dump or throw anything into ditches or streams. A plugged channel cannot carry water and, when it rains, the excess water must go somewhere. Trash and vegetation dumped or accumulated in a stream degrades the stream's water quality and its ability to receive water. Every piece of trash debris contributes to flooding. It is important to keep waterways clear of debris at all times to ensure clear flow and cleaner water.

You can report observations of debris dumping or activity that may damage streams, drainages or rivers to Benton County Community Development Department by calling 541-766-6819.

Remove debris, trash and loose branches. Keep banks clear of debris to help maintain unobstructed water flow in stream channels.

Do not remove vegetation that is actively growing on a stream bank. Streamside vegetation

is strictly regulated by local, state and federal rules. Before removing growing streamside vegetation, contact Benton County Community Development Department at 541-766-6819 and the Department of State Lands at 503-378-3805. You also can report clearing of live vegetation or trees from stream banks to Benton County Community Development.

Obtain a floodplain development permit and/or building permit if required. To minimize damage to structures during flood events the county requires all new floodplain construction to be anchored against movement by floodwaters, resistant to flood forces, constructed with flood-resistant materials and flood-proofed or elevated so that the first floor of living space is at least **18 inches** above the elevation of the 100-year flood.

All new and replacement heat pumps, air conditioning units, water heaters, furnaces and other equipment serving structures located in a designated floodplain must be elevated at least **12 inches** above the Base Flood Elevation (BFE) or designed to prevent water from entering or accumulating within the components during conditions of flooding. **If you will be installing any of these items**, remind your contractor to contact the Benton County Community Development Department and request verification of the location of the floodplain in relation to your project so it can be completed without the added cost of elevating after the fact.

Floodplain construction standards apply to all new structures, substantial improvements of existing structures, and repair or replacement of structures have

been declared substantially damaged.

The county defines a *substantial improvement* as any repair, reconstruction or improvement of a structure with a cost equaling or exceeding 50% of the actual cash value of the structure.

A *substantially damaged* structure has sustained damage of any origin whereby the cost of restoring it would equal or exceed 50% of the market value of the structure before the damage occurred. For example, if a house in the floodplain is flooded, catches on fire or is damaged by an earthquake such that the cost of repairs is more than 50% of the value of the building before the damage, then the entire house must be brought into compliance with current floodplain regulations.

Most other types of development within the floodplain such as grading, cut and fill, installation of riprap and other bank stabilization techniques and fences also require a floodplain development permit. County staff is available to schedule site visits and review flood, drainage and other related issues. Contact the Development Department prior to undertaking any development activity within the floodplain.

Reduce risk of damage to homes. Rather than wait for a code requirement to force changes, you can act now to protect your property from flooding. There are practical and cost effective methods for reducing or eliminating the risk of flooding to property owners whose homes have experienced previous flood damage or potential future damage. Such techniques include the following:

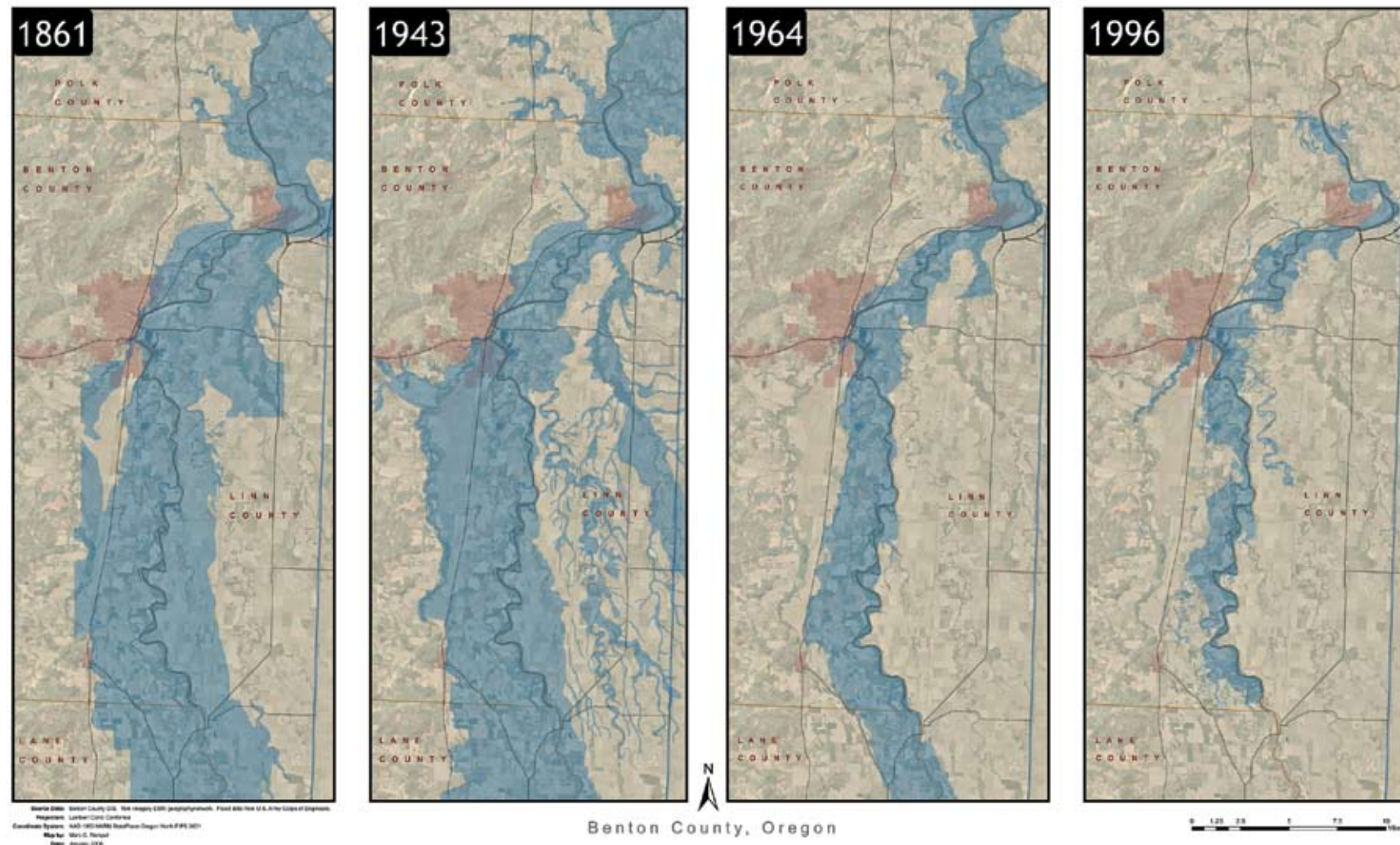
- Elevating or relocating the structure to higher ground;

- Wet flood proofing to modify the structure so that water can flow through it during a flood event;
- Relocating and/or protecting utilities that are susceptible to flooding;
- Relocating contents susceptible to flooding;
- Dry flood proofing to make the building walls and floor watertight; and
- Constructing floodwalls or berms between the structure and flood waters.

Remember that you will need to obtain permit approval for this type of work. During times of flooding, homes that have not been retrofitted can be protected during emergencies by installing sandbags.



Historic Willamette River Floods



Several factors influence local flooding

In Benton County a combination of factors create seasonal flooding conditions. Flooding occurs when climate or weather patterns, geology and hydrology combine to create conditions where river and stream waters flow outside of their main channel, over-spilling the banks. Development in the county also causes displacement of acreage that has historically functioned as flood storage.

Benton County's climate consists of mild, wet winters and warm, dry summers, with an average temperature in the Willamette River Valley

ranging from 34°F in January to 81°F in July. Precipitation varies over the county, depending on elevation and location.

Flooding most commonly occurs between the months of November and March when storms from the Pacific, only 45 miles away, bring intense and sustained rainfall to the area. This condition often results in simultaneous flooding of all streams. The Willamette Valley receives approximately 37 inches of rain on average each year. Larger floods result from heavy rains, which continue over the course of several days, coupled

with snowmelt at a time when the soil is near saturation from previous rains. Frozen topsoil also contributes to the frequency of floods.

The types of flooding that affect Benton County are primarily riverine and urban. **Riverine flooding** is the over-bank flooding of rivers and streams, the natural process of which adds sediment and nutrients to fertile floodplain areas. **Urban flooding** can result from the conversion of land from fields or woodlands to parking lots and roads, decreasing its ability to absorb rainfall.

When it rains, it pours ... and you're in a floodplain

This information is being distributed to property owners whom our records indicate own property within the Federal Emergency Management Agency (FEMA) designated floodplain in Benton County.

Flooding can cause significant property damage and poses a threat to life and safety.

The following information is provided to increase flood hazard awareness and provide information about steps that can be taken to minimize the risk of injury and property damage in the event of a flood. If you have questions or would like additional information, please refer to the "Contact Information" section.

You are receiving this mailing because, although your home or outbuilding may not actually be in the floodplain, some portion of your property is located in or near a floodplain.

Benton County has approximately 57,000 acres of land located within its floodplains and nearly 8,700 individual parcels that

are partially or entirely located within a floodplain.

Benton County is committed to continued participation in the National Flood Insurance Program (NFIP) on behalf of its citizens. Since 2007 Benton County has maintained a Class 6 floodplain management rating, resulting in a **20% discount on flood insurance premiums for properties located in a floodplain** and a 10% discount for properties located outside of a floodplain. These discounts are automatically applied each time a policy is renewed or a new policy is established. Benton County is one of only four communities - along with the City of Albany, Marion County and Tillamook County - to maintain Class 6 ratings. Statewide only two government agencies - the City of Portland and Clackamas County - have lower ratings, both at Class 5.

Because standard property insurance does not cover flood damage, all eligible property owners are encouraged to purchase flood insurance.

Flood Advisories, Watches and Warnings

Watches and Warnings are issued by the National Weather Service and can alert communities to the threat of conditions that are favorable to hazardous weather. Forecasts, advisories, watches and warnings may be obtained via local radio (550 AM KOAC) and television stations, the National Weather Service website at www.weather.gov/portland or via NOAA Weather Radio that broadcasts forecasts and warnings 24 hours a day.

Advisories are issued for less serious weather conditions that may cause inconvenience, but life and property are usually not at risk if caution is exercised.

A **Watch** means that conditions are favorable for the development of hazardous weather. Flood watches are issued 12 to 72 hours in advance of an event where conditions are favorable for flooding, but flooding is not certain. In other words, the risk for dangerous weather has increased significantly, but its location and/or timing are still uncertain. Due to this uncertainty,

watches cover general areas. A watch may be upgraded to a warning, downgraded to an advisory or cancelled.

Warnings mean hazardous weather is occurring, imminent or has a very high probability of occurrence. Flood warnings are issued when a river is expected to reach flood stage. Warnings are issued for weather conditions that pose a threat to life and property. Warnings may be extended in time or area coverage or cancelled.

More flood terminology

Bankfull: the point at which the river level has reached the top of its bank. For some rivers this may not be well defined.

Crest: the point at which the river is at its greatest flow or height.

Flood Stage: the level at which the flooding begins to create damage to property.

Flow: the volume of water flowing in the river, measured in cubic feet per second. River levels for our area may be monitored at www.nwrjfc.noaa.gov

Floodplain Safety is a Benton County Priority

Benton County's National Flood Insurance Program (NFIP) Class 6 rating is established through ongoing and proactive participation in the NFIP's Community Rating System. It has taken a team effort to accomplish this in Benton County, and many county departments are working together to make sure community members have access to lower flood insurance rates.

"Benton County has been proactive with voluntary participation in the Community Rating System and residents are now seeing financial benefits," Commissioner Linda Modrell said. "The teamwork among our departments has helped create a holistic approach to floodplain management that both saves residents money on their flood insurance premiums and improves their disaster resilience."

The county has been participating in this program since 2002, and FEMA has noted 14 ongoing activities coordinated by the Benton County Community Development, Public Works, and Emergency Management Search and Rescue departments that contribute to the improved status. Ongoing activities include:

- Having a certified floodplain manager available to answer questions about floodplain development and review floodplain development permits;
- Providing flood protection and hazard disclosure information to members of the public;
- Providing outreach information to residents in flood prone areas;
- Maintenance of flood data information;
- Improved floodplain management and development standards;
- Preservation of open space in the floodplain; and
- Continued maintenance of a flood warning program.

Benton County is constantly working on ways to make floodplain information more useful and accessible to our customers. If you have any suggestions, please submit them to the Benton County Community Development Department.

The Cost of Flooding

It only takes 2 inches of water to put you knee-deep in debt. Find out how much a flood could cost you at www.floodsmart.gov/deep. The interactive website shows how much a flood to your home could cost, inch by inch.

Flooding and the Endangered Species Act

Development activities in the floodplain of stream reaches identified as essential salmon habitat may require review by the National Marine Fisheries Service (NMFS) to determine compliance with the Endangered Species Act. The State of Oregon and Benton County are working to clarify and streamline this requirement; more information will be available in the future.

Floodplain information is available

In most cases the county can determine the floodplain information listed below for a particular property. In some cases, it may be necessary to hire a licensed land surveyor, engineer or architect to make the following determinations:

- Whether the property is located within the Special Flood Hazard Area;
- Flood Insurance Rate Map (FIRM) zone for property;
- Base flood elevation for property, if available;
- Elevation certificates for specific buildings, if available; and
- Whether the property is located within a designated floodway.

For more information, contact the Benton County Development Department at 541-766-6819.

Information at your fingertips

The following types of flood information are available to you on the Emergency Services website at www.co.benton.or.us/sheriff/ems/hazard.php:

- Flood and Hazard Maps;
- Emergency Preparedness;
- Benton County Hazard Analysis;
- Business Continuity/Hazard Specific Planning; and
- Benton County Natural Hazard Mitigation Plan Information.

Floods are the number one natural disaster in the United States.

Benton County
408 SW Monroe Ave Suite 111
Corvallis, OR 97333

US Rating
Permit number
232
Corvallis, OR

New Maps Mean Better Flood Preparation

Revised Flood Insurance Rate Maps – Effective June 2, 2011

The long-awaited adoption of the revised Flood Insurance Rate Maps for Benton County took effect on June 2, 2011. The maps are available at the Benton County Community Development Department and online at www.msc.fema.gov. Although the new geospatially referenced maps may still contain some inaccuracies, they are a significant improvement over the previous paper maps produced in 1986 and are the result of improved information about topography and geographic features.

As a result of the new maps taking effect, many county residents have received letters from their mortgage companies requiring documentation of flood insurance within 45 days. In some cases the portion of the property that is in the floodplain does not contain any structures; in this case you may be eligible to apply for a free Letter of Map Amendment-Out As Shown (LOMA-OAS) to document that your structures are located outside the floodplain. Contact the Benton County Planning Division to obtain instructions for completing a LOMA-OAS application or if you have not yet received a letter from your mortgage company to determine your options in case you do receive a letter.

Revised Floodplain Development Regulations – Adopted June 2, 2011

As you may remember, Benton County held several public hearings regarding the proposed floodplain revisions during the latter part of 2009. Upon recommendation of the Planning Commission, the Board of Commissioners reviewed the changes and adopted the revised regulations on June 2, 2011.

Because we know it has been a while since the changes to the floodplain development code were first proposed, following is a list of the adopted changes that are most likely to affect you:

- All new and substantially improved/damaged dwellings and accessory structures constructed in the floodplain will be required to have the first habitable floor elevated 18 inches above Base Flood Elevation;
- All electrical, mechanical, heating, ventilation, plumbing and other equipment servicing a structure in the floodplain will

- be required to be elevated 12 inches above Base Flood Elevation;
- Specifications regarding maximum height and venting requirements for below-grade crawlspaces in the floodplain;
- Additional criteria for replacing existing structures in the floodplain;
- Prohibiting new primary structures in the floodplain unless no other option exists; and
- Provisions for in-stream work in a designated floodway for stream habitat restoration purposes.

For more information, including the full text of the adopted amendments, visit www.co.benton.or.us/cd/planning/code and click on the link for Chapter 83.

North Albany Floodplain Study – In Progress

The City of Albany recently retained a consultant to study the floodplain in North Albany. The study was initiated because the Federal Emergency Management Agency (FEMA) floodplain maps for the area appeared to be inaccurate. The North Albany Floodplain Study identified significant differences between the FEMA floodplain maps and what the consultant determined. In summary, the study confirmed the existence of an unmapped floodway and identified significant differences in the land areas that would be flooded and the depths of flooding. Although the study is complete, it has not yet been reviewed and approved by FEMA.

The city of Albany is available to discuss the consultant's findings and other related topics, with North Albany residents. The city held an open house on Nov. 8, 2011. For information about the floodplain study, please visit the North Albany Floodplain Study website at <http://www.cityofalbany.net/publicworks/engineering/floodplain/index.php>. On the website you can learn more about floodplains in general, the North Albany Floodplain Study results (text and maps), floodplain insurance, view aerial photos of past flood events and review some anticipated questions and answers. The website was developed to provide immediate answers to anticipated questions.

If you have more specific questions or would like site specific information on the study results after reviewing the website, please contact Jeff Blaine at 541-917-7676 or jeff.blaine@cityofalbany.net.

Linn-Benton Alert ... Local reverse 911!

Linn-Benton ALERT Emergency Notification System



<http://www.co.benton.or.us/sherriff>
<http://www.linnsheriff.org>

Don't be caught off guard if a flood or other emergency happens in your neighborhood. Everyone who lives or has interest in Benton or Linn counties can sign up for a notification system that warns of emergencies and provides critical life-safety instructions. The address-based system sends alerts to Zip codes in Linn and Benton counties, zeroing in on specific neighborhoods where the information can keep people safe. Residents – as well as those

who have properties and loved ones in the area – can subscribe to receive these messages, with options to select and prioritize multiple phone, email, text and TTY devices. You indicate how you want to receive emergency information alerts by registering in the online database. For more information or to sign up, just go online to the Benton County Sheriff's Office website at <http://www.co.benton.or.us/sherriff/index.php>.

In a high-risk area, your home is more than twice as likely to be damaged by a flood than by fire.

Road & Weather Info Know Before You Go

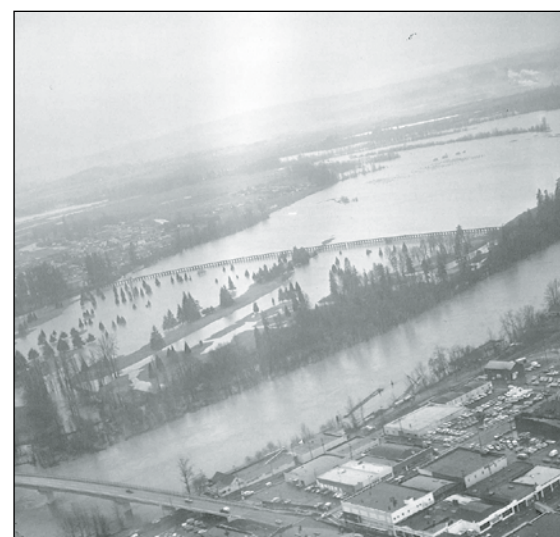
Oregon Department of Transportation "Trip Check" www.tripcheck.com or dial 511 from your cell phone. In Benton County, call 541-757-4211.

National Oceanic and Atmospheric Administration www.weather.gov/portland

National Weather Service Hydrologic Prediction <http://water.weather.gov/ahps>

National Weather Service, OSU Weather Forecasts and Warnings www.ocs.orst.edu

Benton County Road Closures, 541-766-6821 or www.co.benton.or.us/pw



Albany, looking Northeast. (Photo courtesy of Washington State Historical Society.)

Contact Information

Benton County on the web: www.co.benton.or.us

Federal Emergency Management Agency (FEMA) 425-487-4600, www.fema.gov/nfip

Benton County Planning Division, 541-766-6819, www.co.benton.or.us/cd/planning/

Benton County Emergency Management, 541-766-6864, www.co.benton.or.us/sherriff/ems/hazard

Department of State Lands (DSL), 503-378-3805, <http://statelands.dsl.state.or.us>

Corvallis-Benton County Public Library, 541-766-6793, www.thebestlibrary.net

Oregon Department of Fish and Wildlife, 503-872-5268, www.dfw.state.or.us

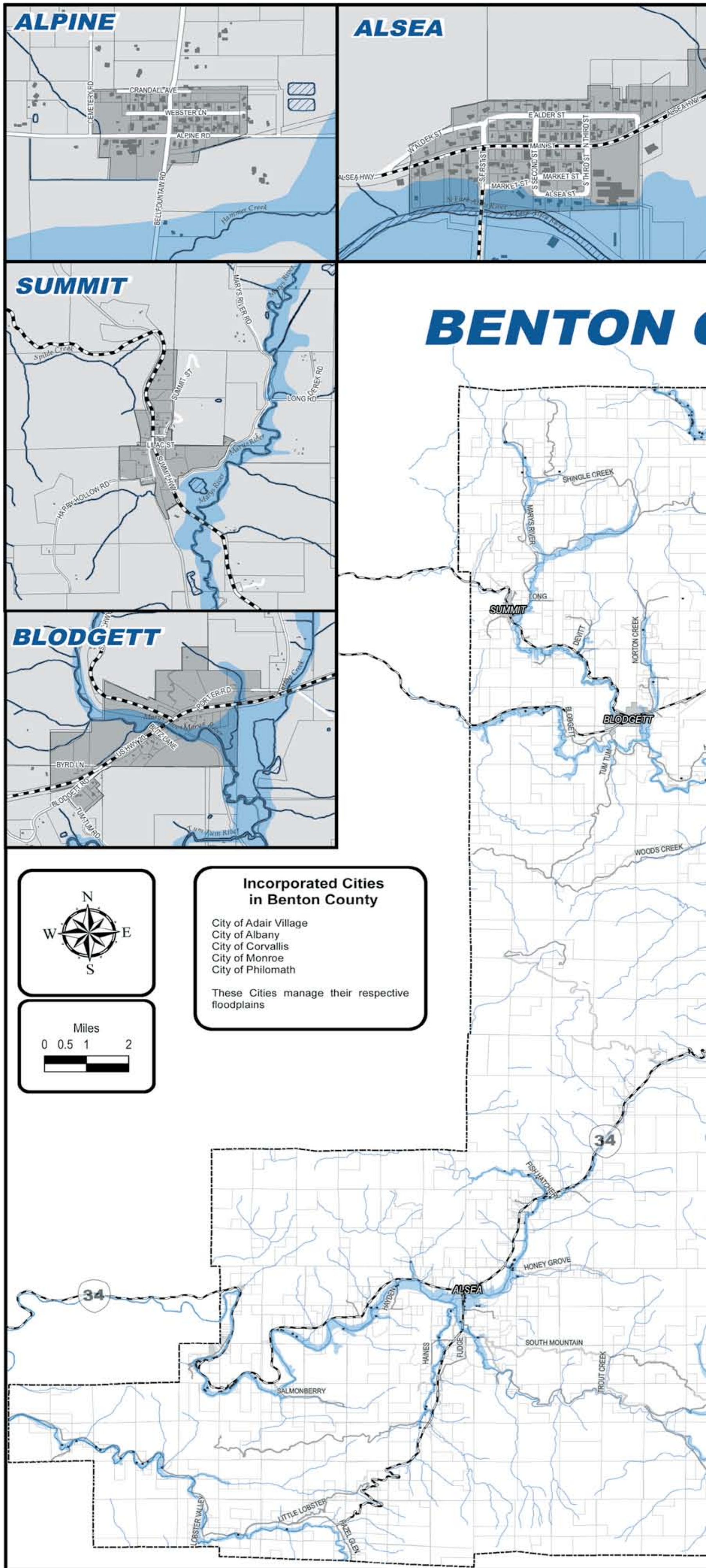
Oregon Department of Forestry, 503-945-7200, www.odf.state.or.us

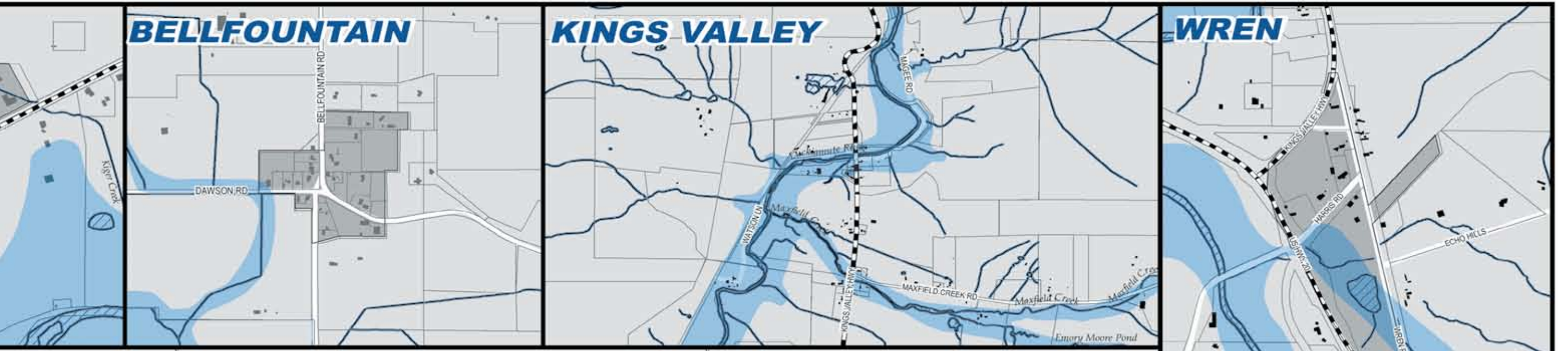
National Marine Fisheries Service (NMFS), 206-526-6150, www.nmfs.noaa.gov

U.S. Army Corps of Engineers, 503-808-4510, www.nwp.usace.army.mil

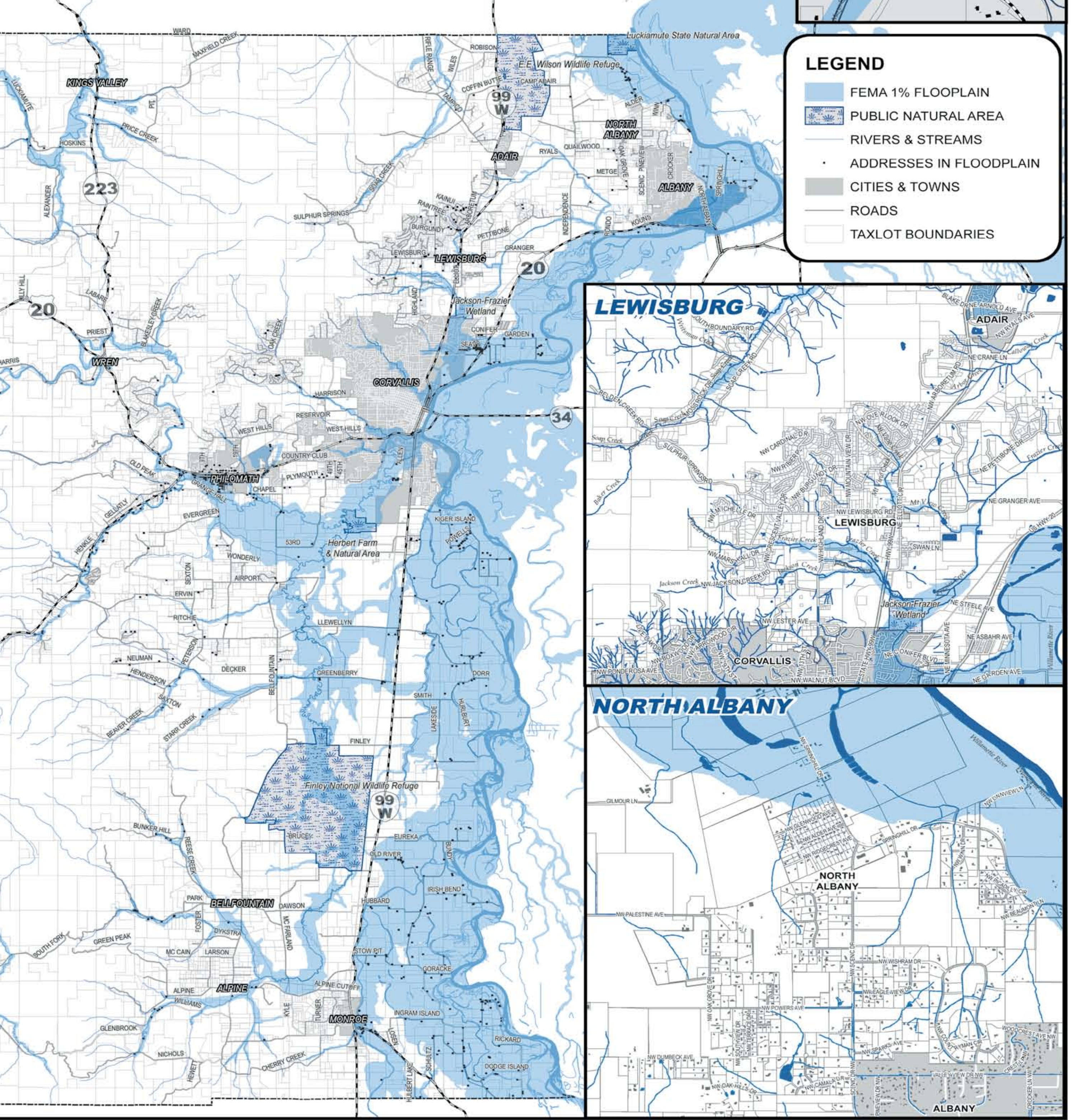


Mary's River at Avery Park.





COUNTY FLOOD MAP - 2011



Benton County Rivers & Streams

Benton County features several large rivers and smaller tributaries or streams, which are susceptible to annual flooding.

Rivers:

- Willamette River
- Marys River
- Luckiamute River
- Alsea River
- N. Fork Alsea River
- Long Tom River
- Tumtum River

Streams:

- Beaver Creek
- Bummer Creek
- Dunawi (Squaw) Creek
- Greasy Creek
- Frazier Creek
- Jackson Creek
- Lobster Creek
- Maxfield Creek
- Mountain View Creek
- Muddy Creek
- Newton Creek
- Oak Creek
- Reese Creek
- Soap Creek
- Stewart Slough
- Woods Creek

Protecting Stream Corridors

Benton County's Comprehensive Plan, developed with input from rural residents, includes a specific local policy goal to "inventory and adopt a protection program for significant riparian areas" to support the vital natural functions these areas provide.

Riparian areas, or stream corridors, naturally stabilize streambanks, improve water quality by filtering pollutants, provide food and habitat for wildlife, create shade to cool water for fish, and support fish habitat by adding large, woody debris to streams.

Oregon Department of Environmental Quality rules for the Willamette River require counties and cities to implement plans to improve water quality. Government and academic scientists (including at Oregon State University) determined the Willamette River was impaired with excessive bacteria, mercury and temperatures that negatively affect fish species such as salmon, steelhead and cutthroat trout that require colder water temperatures.

To address local goals and state requirements, Benton County Community Development has embarked on a grant-funded project to develop a riparian protection program. Monthly public meetings with stakeholders began in November 2009. An inventory of priority riparian areas has been completed following state guidelines and stakeholder input. The inventory includes updated mapping stream channel locations, field assessments and synthesis of water resources data.

Over the next several months, staff members will finalize a proposed program for riparian corridor protection that will include voluntary, educational and regulatory elements. Affected property owners will be notified and public information meetings will be scheduled in advance of public hearings. Staff recommendations will be based on extensive public outreach and input over the last two years from 14 community meetings, 20 advisory group meetings and small group meetings with streamside landowners.

Examples of public input that has been incorporated include allowing flexibility in how property owners manage their riparian areas, raising awareness of the importance of streamside resources, connecting residents with information about best management practices and funding opportunities and building a code that leads with outreach and education.

To learn more about the project, or to review riparian-related technical and funding resources and more visit www.co.benton.or.us/cd/riparian or contact the Benton County Water Projects Coordinator at 541-766-6085.

What should I do if an evacuation is ordered?

- Evacuate the flood hazard area in times of impending flood or when advised to do so by authorities.
- Turn off all electric circuits at the fuse panel or disconnect switches. If this is not possible, turn off or disconnect all electrical appliances. Shut off water services and gas valves in your home.
- Be prepared in advance with a detailed checklist – warning of an impending flood may provide little time for preparation prior to evacuation.

Would your business survive a flood? Of all businesses that close their doors during a flood, 25% never reopen.

Flood Safety, step by step

Before a Flood

• **Find out if your property is in a flood-prone area.** Contact your local office of community development or emergency management for assistance.

- Albany Community Development, 541-917-7551
- Benton County Community Development, 541-766-6819
- Corvallis Community Development, 541-766-6981
- Philomath Planning Office, 541-929-6148
- Benton County Emergency Management, 541-766-6864
- Linn County Emergency Management, 541-967-3950

• **Purchase flood insurance to protect your property.** If you live in the floodplain you are eligible to purchase NFIP flood insurance. In some cases you may be required to carry flood insurance. Contact your insurance company or agent – or call the NFIP at 1-800-638-6620 (TDD# 1-800-447-9487) for more information.

• **Develop and maintain a 7-day emergency preparedness kit.** Keep emergency supplies gathered in a portable, flood- and rodent-proof container with food, potable water and safety and hygiene supplies for all family

members. For more information on creating a family emergency/disaster kit, visit www.co.benton.or.us/sheriff/emsl "Emergency Preparedness."

• **Prepare an evacuation plan.** Before the floodwaters arrive, develop a household evacuation plan that includes a designated meeting place outside as well as an escape route out of the floodplain and away from floodwaters.

• **Remember to consider your pets and other animals in your evacuation plan.** Most evacuation shelters do not accept pets so you will need to make other arrangements for your animals.

• **Know how and under what circumstances to turn off utilities.** Keep appropriate tools, including an adjustable wrench, where they will be readily accessible when they are needed.

During a Flood

• **Listen for flooding announcements and information.** Tune your radio to 550 AM KOAC or the local Cable TV channel for announcements and updates about flood events. Many other local radio and television stations carry Emergency Alert System (EAS) broadcasts as well.

• **Avoid areas that are subject to flooding.**

Check with local authorities (for example, public works or department of transportation) to determine affected areas, road closures and/or high water warnings. For information regarding county roads, contact the County Public Works Department at 541-766-6821. The Oregon Department of Transportation provides road condition information with live cameras on the Internet at www.tripcheck.com.

• **Do not walk through flowing water.** Drowning is the number one cause of flood deaths, most of which occur during flash floods. Currents can be deceptive; 6 inches of moving water can knock you off your feet. If you walk in standing water, use a pole or stick to ensure that the ground is still there.

• **Turn around, don't drown.** More people drown in their cars than anywhere else, and even a few inches of water can stall or wash away a car. Never drive through flooded roadways or around barriers; the road or bridge may be washed out, or the water may conceal another hazard.

• **Stay away from power lines and electrical wires.** The second most common flood killer is electrocution. Electrical current can travel through water. Report downed power lines to the power company or local authorities immediately.

• **Shut off gas and electricity and move valuable property upstairs.** Some appliances, such as television sets, keep electrical charge even after they have been unplugged. Don't use appliances or motors that have gotten wet unless they have been taken apart, cleaned and dried.

After a Flood

• **Look before you step.** After a flood the ground and floors may be covered with debris, including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.

• **Be alert for gas leaks.** Use a flashlight to inspect for damage. Don't use smoke or candles, lanterns or open flames unless you know that the gas has been turned off and the area has been ventilated.

• **Clean everything that got wet.** Floodwaters pick up sewage and chemicals from roads, farms, factories and storage buildings. Spoiled food, flooded cosmetics and medicine can be health hazards. When in doubt, throw them out.

• **Look out for animals.** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or a stick to poke and turn things over and scare away small animals.

National Flood Insurance

Benton County participates in the National Flood Insurance Program (NFIP). Federally-backed flood insurance for all structures is available through the NFIP, whether or not the structures are located within the 100-year floodplain, also referred to as the Special Flood Hazard Area (SFHA).

Damage from flood water to a structure is one of the most likely claims a homeowner is expected to file. During the life of a 30-year mortgage there is a 26% chance of experiencing a 100-year flood and a 96% chance of experiencing a 10-year flood. Compare these odds with the 1% to 2% chance of the same structure catching fire during the same 30-year mortgage period.

Following the purchase of flood insurance, NFIP imposes a 30-day waiting period, so residents should purchase insurance before the onset of the rainy season to ensure coverage during the flooding season.

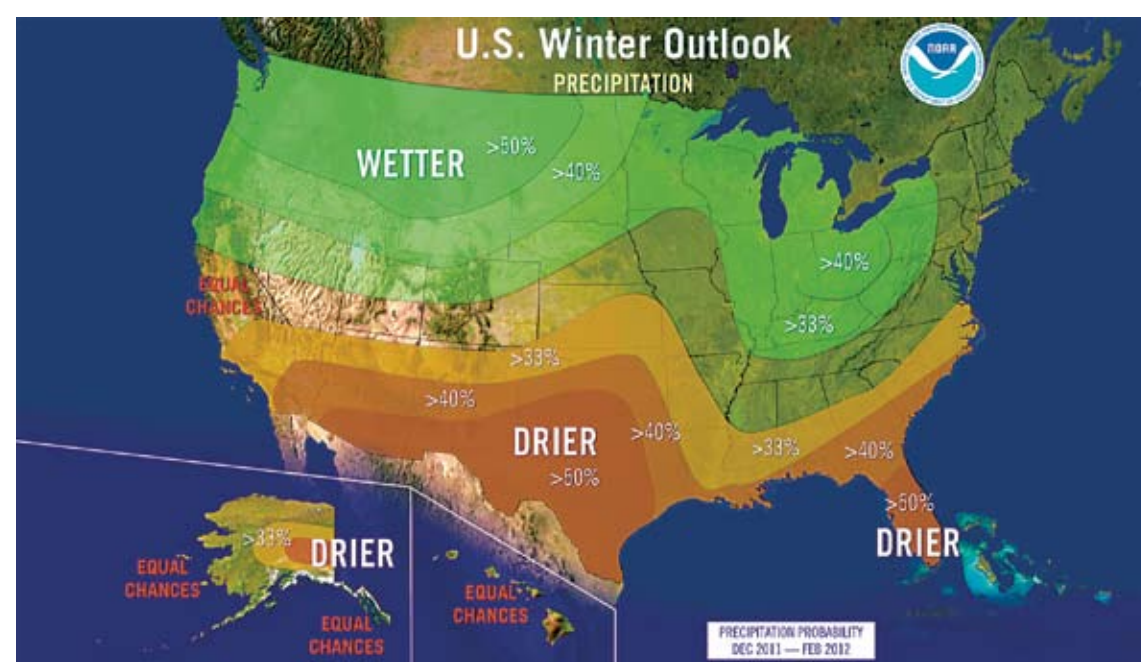
NFIP membership – and its availability to county residents – requires the county to manage its floodplain to meet or exceed standards set by FEMA. NFIP insures residential buildings with two types of coverage: structural and contents. *Structural coverage* includes walls, floors, insulation, furnace and other items permanently attached to the structure. *Contents coverage* may be purchased separately to cover the contents of an insurable building. Flood insurance also pays a portion of the costs of actions taken to prevent flood damage.

Federal financial assistance requires the purchase of flood insurance for buildings located within the Special Flood Hazard Area (SFHA) – a requirement that affects

nearly all mortgages financed through commercial lending institutions. This mandatory requirement stipulates that structural coverage be purchased equal to the amount of the loan, or other financial assistance, or for the maximum amount available, which is currently \$250,000 for a single-family residence.

While the mandatory flood insurance purchase requirement has been in effect for many years, not all lending institutions previously required flood insurance. Today most institutions require the purchase of flood insurance and some are reviewing all mortgage loans to determine whether flood insurance is required or should have been required in the past. Upon refinancing a loan, nearly all lending institutions will enforce the flood insurance requirement. It is the lender's responsibility to check the Flood Insurance Rate Map (FIRM) to determine whether a structure is within the SFHA.

The mandatory flood insurance requirement does not apply to loans or financial assistance for items that are not eligible for flood insurance coverage. Items such as vehicles, business expenses, landscaping and vacant lots are examples of ineligible insurables. The requirement also does not apply to loans for structures not located in a SFHA, even though a portion of the lot may be within a SFHA. Individuals with property located in the SFHA who received disaster assistance after September 23, 1994, for flood losses to real or personal property must purchase and maintain flood insurance coverage or future disaster assistance will be denied.



La Niña is back again

The Pacific Northwest is likely to be colder and wetter than average from December through February, according to the annual Winter Outlook document released this fall by NOAA. For the second winter in a row, La Niña will influence weather patterns across the country but, as usual, it's not the only climate factor at play. The "wild card" is the lesser-known and less predictable Arctic Oscillation that could produce dramatic short-term swings in temperatures this winter.

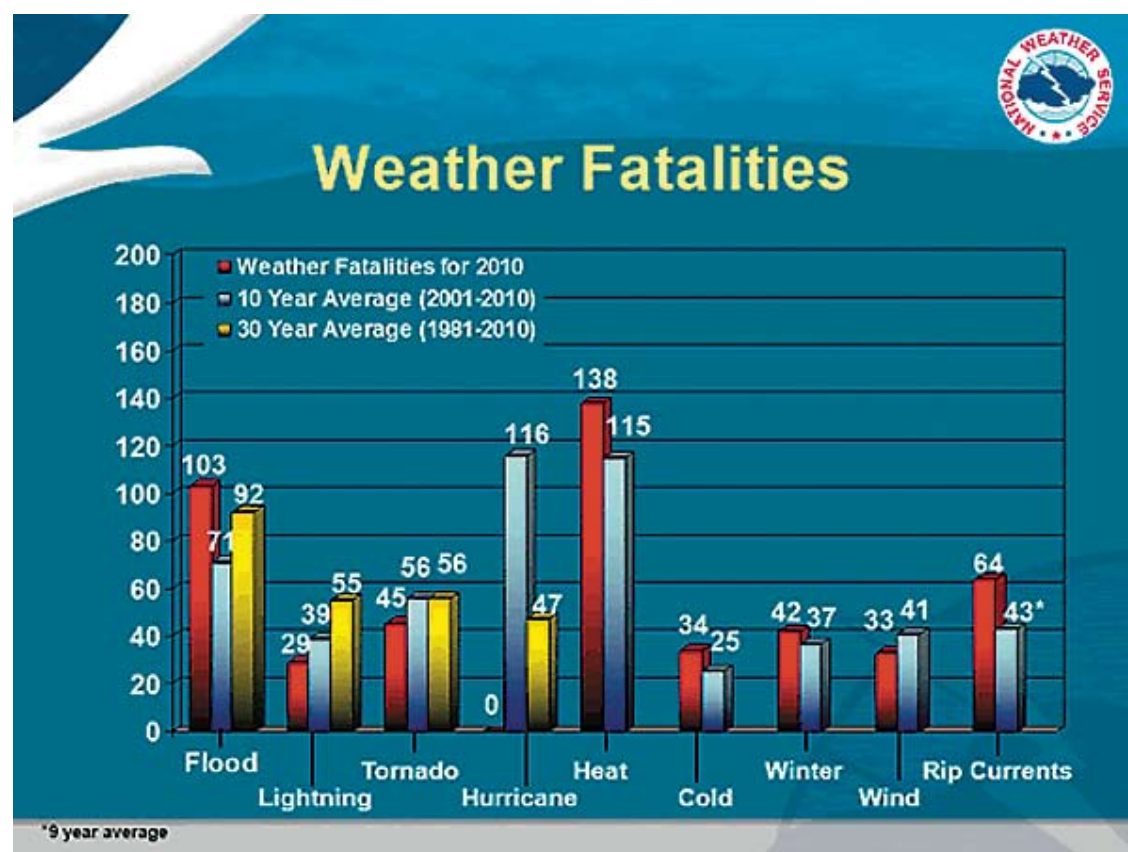
The Arctic Oscillation is always present and fluctuates between positive and negative phases. The negative phase of the Arctic Oscillation pushes cold air into the U.S. from Canada. The Arctic Oscillation went strongly negative at times the last two winters, causing outbreaks of cold and snowy conditions in the U.S. such as the "Snowmageddon" storm of 2009. Strong Arctic Oscillation episodes typically last a few weeks and are difficult to predict more than one to two weeks in advance.

NOAA expects La Niña, which returned in August, to gradually strengthen and continue through the upcoming winter. It is associated

with cooler than normal water temperatures in the tropical Pacific Ocean and influences weather worldwide. In the Pacific Northwest, that can mean below-average temperatures and increased mountain snow during the winter. Though this is good for replenishing water sources and wintertime recreation, it may set the stage for flooding in the spring.

It is important to be prepared for inclement weather by tracking forecasts, to the extent possible, and ensuring adequate supplies and planning to address storm and cold weather-related issues. For more information about preparing for winter storms and flooding, those interested can go online to <http://www.co.benton.or.us/sheriff/emsl/hazard.php>.

Nearly 25% of flood insurance claims come from moderate- to low-risk areas.



2011 Major Disaster Declarations in Oregon

Often when people think of disasters, they envision news helicopters overhead and extensive loss of life and property damage, but disasters can take on many forms. There is evidence just in the past year in Oregon of how seemingly small events can have massive impacts on people.

Major disaster declarations were issued in Oregon in 2011 for the following events:

- **A severe winter storm**, which lasted from Jan. 13 through 21, rattled Clackamas, Clatsop, Crook, Douglas, Lincoln and Tillamook counties with flooding, mudslides, landslides and debris flows. Gov. John Kitzhaber's request that President Barack Obama declare a disaster in those counties

was granted, allowing federal grants to cover 75% of eligible damages and costs as a result of the storms. State and federal damage assessments estimated \$7 million in damage across the state as a result of the rain, freezing rain and snow from that event.

• **Even more recently a 6-foot tsunami wave** generated by the devastating Sendai earthquake battered the coastline in Curry County, causing millions of dollars in damage on March 11. The disaster declaration there helped garner funds to begin clean-up efforts and repair an estimated \$13 million to \$30 million damages in the harbor in Brookings.



Stahlbusch, looking toward downtown Corvallis. (Photo courtesy of Washington State Historical Society)

Flooding History (recorded in feet)

STAGES	Willamette at Corvallis	Willamette at Albany	Luckiamute at Suver	Long Tom at Monroe	Marys at Philomath
Bank Full	16.0	21.8	25.0	8.4	16.3
Flood Stage	20.0	25.0	27.0	N/A	20.0
Major Flood	26.0	32.0	27.0	9.0	20.2
Historic Peak	28.8, 12/29/1945	41.0, 12/4/1861	34.5, 12/22/1964	N/A	20.9, 1/4/1974
Feb. 1996	23.5	30.0	32.9	N/A	20.8

For many county residents, the flooding that occurred in 1996 is the most memorable significant flood event that they have experienced. While the '96 flooding affected and inconvenienced the entire region, 13 prior flood events far exceeded the velocity and volume of water associated with the 1996 flooding:

December 1861, January 1881, February 1890, January 1901, January 1903, February 1907, November 1909, January 1923, February 1927, January 1943, December 1945, January 1948, and December 1964.