

# Are You Prepared for a Flood?

The City of Corvallis annually updates this brochure as a reminder of the dangers related to heavy rainfall and the damage that can be caused when a flood occurs. We hope you will find information in this brochure that will help you.



WINTER 2012

## Is Your Property Within the 100-Year Floodplain?

The first step in protecting yourself and your property is to determine what the potential is for your property to flood.

In 1985, the Federal Emergency Management Agency (FEMA) completed a 100-year floodplain mapping of streams and rivers in Corvallis. These maps were updated by FEMA on June 2, 2011. The Flood Insurance Rate Maps (FIRM) are used by FEMA in administering its National Flood Insurance Program.

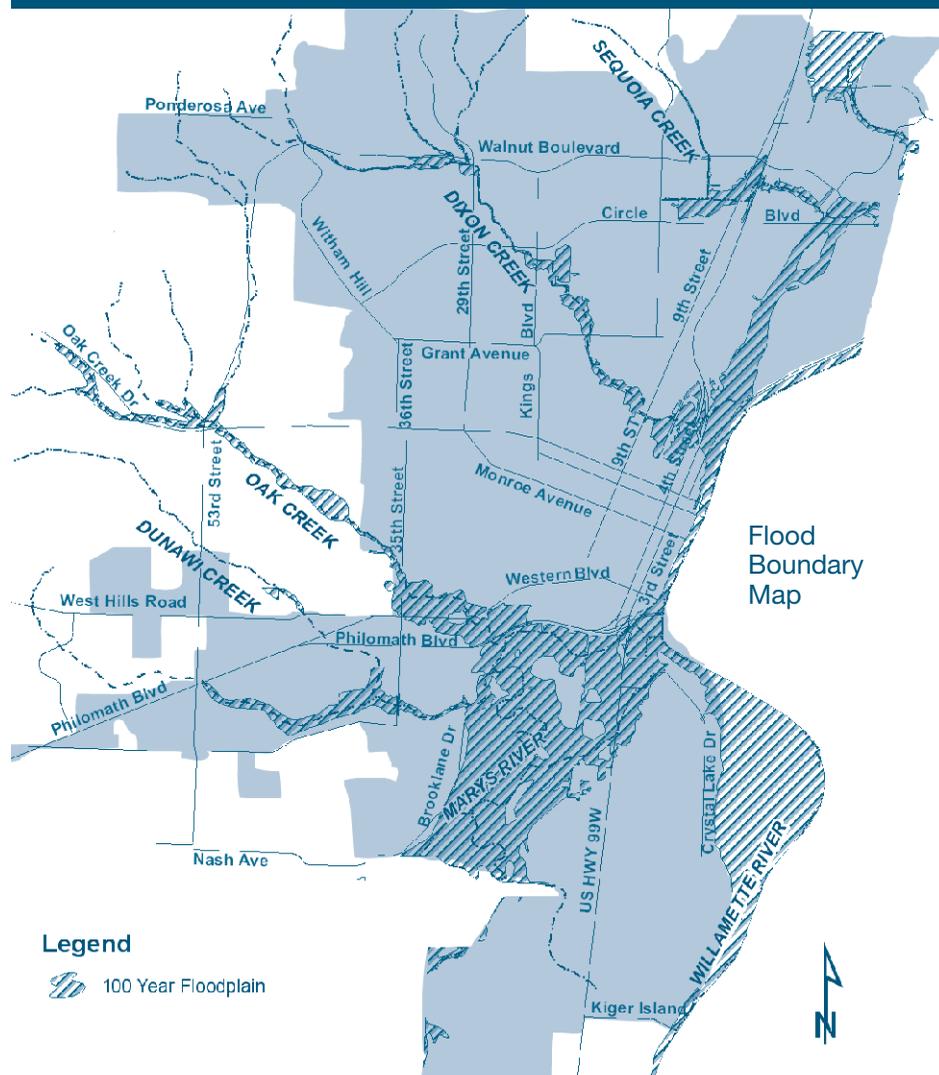
The map to the right shows the 100-year flood areas, which typically follow the creeks within our community. As you can see, the central and southern portions of the city have larger areas of floodplain than the northern portions, due mainly to elevation and because the Marys River runs through this area.

A chain reaction occurs when river levels rise above normal. This causes the water flow from streams to slow considerably and, as a result, the water levels in the streams start to rise. During heavy rains, high or overflowing streams can actually force water back through the catch basins onto city streets.

The City has been proactively upgrading the storm water collection system through flood mitigation and stream restoration projects to alleviate traditional problem areas along Dunawi and Sequoia Creeks, as well as the Marys River.

For more information on the 100-year floodplain, contact the City of Corvallis Development Services Division, located in City Hall at 501 SW Madison Avenue, or call **541-766-6929**. This information is available to property owners, lenders and real estate and insurance agents.

To see more detail, go online at [www.corvallisoregon.gov/cd](http://www.corvallisoregon.gov/cd), click on Planning Division, FEMA Flood Map Revisions.



### Legend

 100 Year Floodplain

## Want more information?

If your property is within the Corvallis city limits, floodplain maps are available at either the Corvallis-Benton County Public Library Reference Desk or through the Development Services Division located on the lower floor of City Hall. If your property is outside the Corvallis city limits, contact the Benton County Development Department at **541-766-6819**.

If you find that your property is located within a floodplain area, the Development Services Division can provide you with information, such as the potential depth of flooding in your area and a completed FEMA elevation certificate, if one is available for your property.

If your property is within the 100-year floodplain, it is subject to special development requirements. Chapters 2.11 and 4.5 of the City's Land Development Code contains most of these requirements. With limited exception, substantial improvements (50% of the building's market value) must meet the same flood protection construction requirements as new buildings. In addition, new National Flood Insurance Program (NFIP) regulations require a floodplain development permit for all proposed construction and other development within the 100-year floodplain. Contact the Development Services Division at **541-766-6929** for more information.

For information on other flood protection assistance, such as building retrofitting, contact a professional contractor, architect or engineer. You can also review publications available at the Corvallis-Benton County Public Library.



## Flood Insurance

Since standard homeowners insurance doesn't cover flooding, it's important to have protection from floods associated with heavy rains, thunderstorms and other conditions that impact our area. If you don't have flood insurance, talk to your insurance agent. Because Corvallis participates in the National Flood Insurance Program, you can purchase a separate flood insurance policy backed by the federal government. This insurance is available to properties within the Corvallis city limits.

Flood insurance can protect two types of insurable property: building and contents.

### Building coverage includes:

- The insured building and its foundation
- The electrical and plumbing system
- Central air conditioning equipment, furnaces and water heaters
- Refrigerators, cooking stoves, and built-in appliances
- Permanently installed carpeting over unfinished flooring

### Contents coverage includes:

- Clothing, furniture, and electronic equipment
- Curtains
- Portable and window air conditioners
- Portable microwaves and dishwashers
- Carpeting that is not already included in property coverage
- Clothing washers and dryers

Some people purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Flood insurance for buildings within flood areas is mandatory for federal financing from agencies such as the Department of Veterans Affairs, Federal Housing Administration, Small Business Administration, Federal Deposit Insurance Corporation, Fannie Mae, and Freddie Mac. Usually, these policies cover the building structure and not the contents. In many instances, more damage occurs to furniture and contents than to the structure, so look into your insurance policy and make sure you have appropriate coverage.

Even if the last flood missed you, or you have done some flood-proofing, the next flood could be worse. Don't wait for the next flood to buy insurance protection, there is a 30-day waiting period before National Flood Insurance Program coverage takes effect. Contact your insurance agent for more information on rates and coverage.



## National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) to help provide a means for property owners to financially protect themselves. The NFIP provides federally backed flood insurance to communities that enact and enforce floodplain

regulations. To be eligible for this flood insurance policy, a property must be in a community that participates in the NFIP. Corvallis does participate in the program and has an adopted floodplain management ordinance to regulate development in flood hazard areas. The objective of the ordinance is to ensure that such development will not aggravate existing flooding conditions and that new buildings will be protected from flood damage.

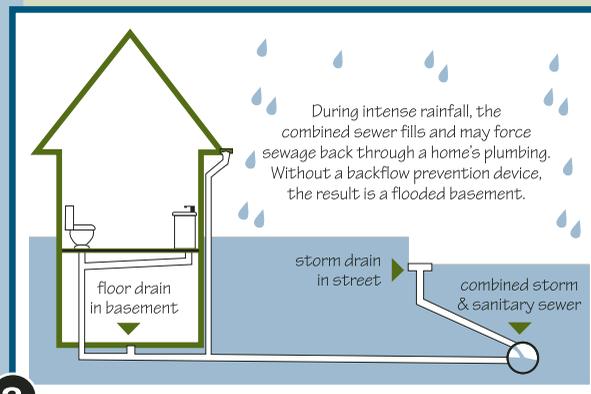
Another part of the NFIP, the Community Rating System (CRS), offers an incentive to communities to do more than just regulate construction of new buildings to minimum national standards. Under the CRS, flood insurance premiums are lowered for communities that actively pursue programs to reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, help insurance agents obtain flood data, and help people obtain flood insurance.

There are 10 CRS classes: Class 1 requires the most credit points and gives the greatest premium reduction; Class 10 receives no premium reduction. Corvallis has a CRS rating of 6 which helps our citizens receive a 20 % discount on flood insurance rates. To maintain this rating, we must recertify or re-verify that we perform the activities that are being credited by the CRS. Recertification is an annual activity that includes progress reports on identified activities. The re-verification takes place every few years and is conducted through a verification visit to the community.

Corvallis will continue to pursue credit for our local actions to improve flood insurance premiums for our community. To learn more about this storm water/flood management program, contact the Development Services Division, City Hall, or call **541-766-6929**.

## Wastewater Backflow Prevention

Most of the time, the City's sewer pipes have adequate capacity to carry wastewater to the treatment plant. But during heavy, extended raining periods when the ground water is high, the capacity of some sections of the sewer system is exceeded. Ground water or surface water will enter older sewer pipes through cracks and, added to the wastewater flow, will exceed the space available in the pipe. When these conditions occur the water has to go somewhere. If it can't flow down the main pipe, it will back up into the service line and, possibly, all the way into your basement. A simple device in your sewer line, if properly maintained, can prevent wastewater from backing up into your basement. A one-way valve is installed in your line to allow wastewater to flow out, but it swings shut when wastewater tries to flow back in. The



City of Corvallis Public Works Department has a program that may assist homeowners with the cost of installing backflow devices on their sewer lines. Backflow devices are designed to prevent wastewater from backing up into the sewer service line and into basements from the main trunk line.

### How Does the Program Work?

**Your house must have a basement** and must be located in an area of the city subject to periodic basement flooding. Public Works Department staff can tell you if your home is in one of these areas. Call them at **541-766-6916** to find out if you are eligible for this program. Get the necessary City construction permits before any work is done. Call Development Services at **541-766-6929** for details. Hire a licensed plumbing contractor. You must show proof that you received project cost estimates from two different licensed contractors and hired the contractor with the lowest estimated cost to do the job. When the project is done, pay the contractor. Then send the Public Works Department copies of the two cost estimates and the final invoice from the contractor. You are responsible for the first \$100 of installation costs. After that, the City will reimburse you for up to \$1500 of the remaining costs. Once the copies have been received and approved, a check will be sent to you in about 45 days. The backflow prevention device belongs to you, and you are responsible for continued maintenance and repair. Ask your plumbing contractor for maintenance instructions.

### Who is Responsible?

**You!** The City's insurance company generally does not approve payment on claims for damages caused by sewer back-ups due to excessive wet weather conditions. The City assumes no liability should the backflow device fail to prevent basement flooding. For more information contact the Public Works Department at 541-766-6916.

## Flood Warnings

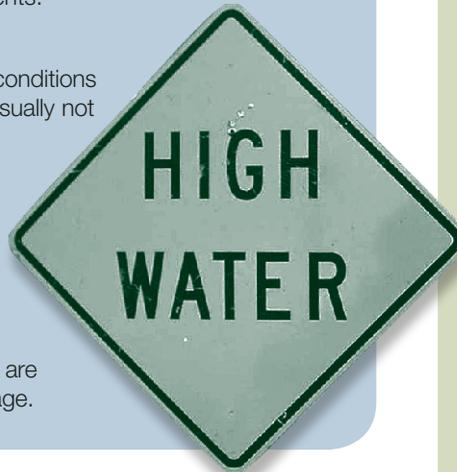
...and watches are issued by the National Weather Service and can alert communities to the threat of hazardous weather conditions. Forecasts, advisories, watches, and warnings from the National Weather Service may be broadcast on local radio and television stations, the National Weather Service web site at [www.wrh.noaa.gov/Portland/](http://www.wrh.noaa.gov/Portland/), or NOAA Weather Radio, which broadcasts forecasts and warnings 24 hours a day. Other local radio and television stations carry Emergency Alert System (EAS) broadcasts as well during an event. Tune your radio to 550 AM KOAC or to cable TV channel 29 for announcements and updates about flood events.

### What do the designations mean?

**Advisories** are issued for less serious weather conditions that cause inconvenience. Life and property are usually not at risk if caution is exercised.

**Watches** mean that conditions are favorable for the development of hazardous weather. Flood watches are issued 12-72 hours in advance of an event where flooding is not certain, but possible.

**Warnings** mean that hazardous weather is occurring or is very likely to occur, conditions that pose a threat to life and property. Flood warnings are issued when a river is expected to reach flood stage.



## Flood Response Plan

The City of Corvallis developed a Flood Response Plan to establish the actions that would be taken to respond to a flood event. The plan is only a guide for dealing with emergency situations; each event is unique.

### Plan priorities were broken down into six categories:

1. Maintain the operation of streets, streams, storm and wastewater sewers to the extent possible, in order to protect the health and safety of the citizens of the community.
2. Provide flood-fighting activities on City property to protect public health, safety of facilities, and the public's investment.
3. Prevent or mitigate life-threatening situations by working with Police and Fire personnel on evacuations, street closures, sandbagging, etc.
4. Provide public information to assist citizens in planning individualized flood response.
5. Provide flood-fighting assistance to private property owners to limit loss of life or property.
6. Provide flood-fighting assistance to other government agencies as appropriate to minimize loss of public and private property.

**Flood response operations will normally be implemented in phases. The phase of operation will depend on the severity of conditions and may not necessarily be implemented in numerical order. The following is a description of each of the four phases.**

**Phase 1:** Heavy rain over a short duration; the storm system does not keep up with water flow, and localized flooding of streets is occurring in low-lying areas.

**Phase 2:** Heavy rain over a longer duration; localized flooding of streets; streams and drainageways at capacity with some flooding occurring.

**Phase 3:** Very heavy rains over a long duration; widespread flooding is occurring along streets, drainageways and adjacent private property.

**Phase 4:** Sustained heavy rain throughout the mid-valley region over a long duration; local flooding is occurring and the Willamette River is anticipated to crest above flood stage.



## Flood Preparation

### Before a Flood:

#### To prepare for a flood, you should:

- Elevate your furnace, water heater, and electric panel if susceptible to flooding.
- Install backflow devices in sewer traps to prevent floodwater from backing up into the drains of your home.
- Seal the walls in your basement with waterproofing compounds to avoid seepage.

### During a Flood:

#### If a flood is likely in your area, you should:

- Listen to the radio or television for information.
- Develop and maintain an emergency preparedness kit that will get you through the first 72 hours of an event. Emergency supplies should be gathered in a portable and flood/rodent-proof container with food, water, safety and hygiene supplies for all family members and pets.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

#### If you have to leave your home, even if only running to the grocery store, remember these tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.

#### If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

### After a Flood:

#### The following are guidelines for the period following a flood:

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines, and report them to the power company.
- Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations. Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

## Availability of Sand Bags

Depending on the severity of a rainfall event, the City may place sand and empty bags at various locations around the community. Locations will be determined by the type of event. During a heavy rain event, you can call 541-766-6916, 541-754-1772, or go to [corvallisoregon.gov/sandbags](http://corvallisoregon.gov/sandbags) to find out where sand and empty bags are located. City residents can use these supplies to protect their property. Be sure to bring a shovel with you to fill the bags with sand. During a heavy rain event you can also find the latest information on streets with localized flooding or streets that have been closed due to high water by visiting the City's Website at [www.corvallisoregon.gov](http://www.corvallisoregon.gov).

## Did you know street side leaf pile collection ends on December 21?

After the 21st, please place leaves in your yard debris cart for weekly collection by Allied Waste. Leaves piled on the street after the 21st will not be picked up and may create street flooding by clogging storm drains. You can help reduce local street flooding by keeping catch basin grates free of leaves and debris. If a catch basin in your neighborhood is covered by leaves, take a moment to rake the leaves off and away from the grate. Don't lift the grate or reach into the catch basin. If raking the leaves off the top doesn't unplug the catch basin, please call Public Works at **541-766-6916**.



## Erosion Prevention and Sedimentation Control Program

The City of Corvallis' Erosion Prevention and Sediment Control program has been developed to comply with a number of federal, State and City regulations and citizen concerns to minimize the impact of public and private construction activities on local waterways, streets, and adjacent properties.

The City currently has authority to enforce erosion prevention and sediment control through the Uniform Building Code and the City's erosion prevention and sediment control ordinance. The ordinance requires an erosion prevention and sediment control permit for any ground-disturbing activity affecting 2,000 square feet or greater, cumulatively, throughout the duration of a development.

To learn more about this program or for more information on floodplain development permit requirements for construction, reconstruction, rehabilitation, addition, or other improvements, contact the Development Services Division at **541-766-6929** or go online to **www.corvallisoregon.gov** and click on Departments, Community Development, Development Services, Erosion Prevention and Sediment Control.



## Reference Numbers and Internet Addresses

### Government Agencies:

**City of Corvallis, Public Works Department**  
541-766-6916

**City of Albany, Public Works Department**  
541-917-7600

**Benton County, Public Works Department**  
541-766-6821

**Benton County Emergency Management**  
541-766-6864

**Corvallis Police Office**  
541-766-6911

**Benton County Sheriff's Department**  
541-766-6858

**Linn County Sheriff's Department**  
800-884-3911

**Local State Police Office**  
541-967-2026

### Road Information:

*(for street closures due to flooding)*

**City of Corvallis (recorded message)**  
541-754-1772

**City of Albany (weekdays 8am – 5pm)**  
541-917-7600

**Benton County Road Closures**  
541-766-6821

**Linn County Road Department**  
541-967-3919

**Oregon Department of Transportation**  
511 or 800-977-6368

**Weather Information:**  
National Weather Service 541-688-9041

**Forecasts & Warning:**  
[www.wrh.noaa.gov/Portland/](http://www.wrh.noaa.gov/Portland/)

**Road & Travel Information:**  
<http://www.tripcheck.com>

**Recovery Information:**  
<http://www.fema.gov>

## Help Keep Streams Flowing Free

**Don't place debris of any kind in an urban stream.**

The primary function of the stream is to remove stormwater to help control flooding. Another important function is to provide natural green space that enhances the quality of your neighborhood and provides fish and wildlife habitat. Both of these functions require a clear, unobstructed, and undamaged drainageway.

The City of Corvallis Public Works Department regularly maintains the urban streams and piped storm drains. Your assistance will help us with those efforts:

- Don't throw anything into ditches, channels or streams. Even grass clippings and branches can accumulate and block drainage. Every piece of garbage can contribute to conditions that could lead to flooding.
- Don't build structures close to or over streams.
- Don't remove rocks, live or dead trees, or logs from urban streams.
- Don't cut or prune plants or trees that are growing within the boundaries of an urban stream.

As a side note, always check with the City's Development Services Division at **541-766-6929** before you build on, alter, or regrade your property, especially if any work is close to an urban stream. An approved permit is generally required.

If you have any questions, concerns, or observe others dumping debris in or removing trees or vegetation from urban drainageways within the city limits, contact the Public Works Department at **541-766-6916**.



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