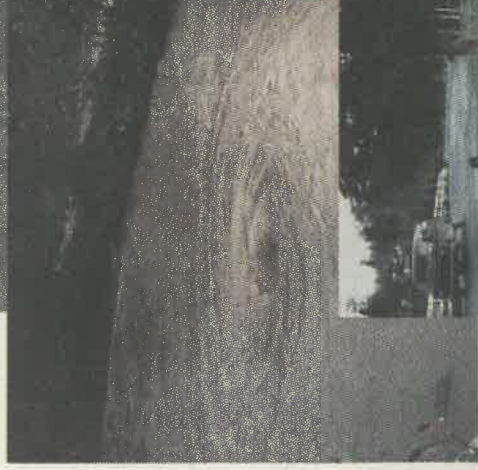


**Working  
together  
to  
address  
flooding in  
Issaquah**



**A community's  
preparedness  
is dependent  
upon each  
individual's  
level of  
preparedness.**



**ISSAQUAH  
CITY NEWS**  
Special Edition

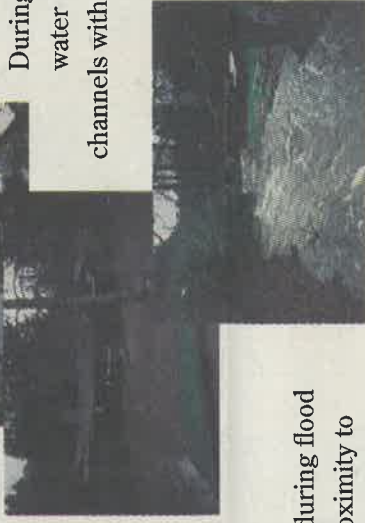
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# Working together to address flooding in Issaquah

In many areas of Issaquah, preparing for the changing seasons is more than pulling on winter jackets or raking the leaves. We live in a unique area surrounded by mountains and water. Two salmon creeks snake through our communities, filling us with pride each fall as we celebrate the return of the salmon.

For many of us, the onset of winter means preparing for flood season. High waters are a reality during this season, creating inconvenience and sometimes damage to our homes and property. We can't live without this water, and yet during flood season we don't want its proximity to affect our quality of life.

A number of factors contribute to flooding: the amount and duration of precipitation, how saturated the ground is with water and/or rain falling on snow. Snow pack in the mountains generally



does not contribute to local flooding. We can't stop the floods, but we can better prepare ourselves to handle their impacts.

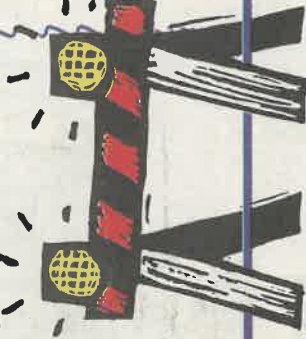
The City of Issaquah is situated in a flood plain. Floods going back 15,000 years carrying silt, sand and gravel have built the land we call home. Many of the hillsides in the Issaquah Creek basin are steep and covered with sediments deposited in the geologically recent past by ice sheets moving south from Canada.

Flooding occurs when soil on the hillsides is saturated by persistent rain, causing the surface runoff to flow rapidly to rivers and streams, rather than soaking into the ground.

We've grown as a city, in both our residential population and our businesses. As a result, much of the development near Issaquah Creek and its tributaries has contributed to a narrowing of the natural creek channel and a loss of areas that store flood water during the rainy season.

During the rainy season more water is being forced into channels with less capacity, causing the creeks to rise over their banks. Creeks are natural to our landscape and change course continually over time.

This continual fluctuation combined with development in the area has contributed to the changes in flooding locations and severity.



## Some things we've learned about flooding

Recent flooding has tested our tolerance for one another and for nature. What is predicted to happen approximately every 7 to 16 years occurred twice in four months. We all need to be better prepared. Immediately following the February 1996 flooding, the City met with affected property owners to determine just where the excessive flooding took place. In addition, a series of studies was begun that asked: how can we protect our community from this type of flooding while maintaining the health and integrity of the creeks?

- The City of Issaquah, working with RH2 Consultants, has developed a program to manage flood impacts. The following goals were set to guide development of a construction program:
- Reduce build-up of sediment and debris in the flood waters before they enter floodways within the City, to reduce deposition of sand and silt in the City as well as in Lake Sammamish.
  - Enlarge flood channel to add capacity for conveyance of flood water through the City.
  - Contain costs by avoiding the need to modify

## So you want to help out?

Maybe you aren't directly affected by flooding, but want to support the community in some way. Or, perhaps you need assistance during a flood. The City is identifying residents and businesses who need help during floods while simultaneously developing a list of potential volunteers. For more information about this program or to get involved, call the City at **557-3217**.

Here are some things you can do:

- Sign up TO help—call **557-3217**.
- Sign up FOR help—call **557-3217**.
- Look into volunteering through your local church or service organization.
- Start a local "Stream Team" group—call Josh Kahan, **557-2572**, for more information.
- If you are going to volunteer, remember to dress warmly with rubber boots, if you have them!

## Do's and Don'ts during a flood

### Do

- Report clogged storm drains and flooded roads —**391-1044**.
- Call to find out what streets are closed before heading out —City Emergency number **557-3294**.
- Keep your distance from rushing water.
- Avoid bridges if possible. Clean storm drains, if you can.

### Don't

- Make unnecessary trips.
- Go out for a canoe ride, walk or wade in flooded areas.
- Remove barricades or travel roads that have been closed.
- Dump garbage or debris anywhere in town except in designated areas.
- Drive a car through water more than half way over tires, or around signs that indicate road closures.

- bridges or relocate buildings while widening the channel.
- Contain Issaquah Creek flooding so it does not flow into Tibbetts Creek drainage basin, where culverts can handle only local flows.
- Begin projects low in the basin and proceed "up-basin."
- Work with King County to manage areas outside the City boundaries, such as the headwaters of Issaquah Creek.

# Questions and Answers

**Q** **Where does all the silt, sand and gravel go that is washed through the creek during a flood?**

**A** It travels downstream, ends up in our roadways, our backyards, fills up stream channels and enters Lake Sammamish. It can degrade fish habitat and fills up flood plains. If flood plains fill up with silt, sand and gravel there is less storage capacity for water during future flooding.

**Q** **How would we pay for the Issaquah Creek Channel Improvements?**

**A** Federal Emergency Management Agency (FEMA) Grant, debt financing package, Surface Water Management Fees.

**Q** **How is development regulated within the flood plain?**

**A** Development within the flood plains of Issaquah and Tibbetts Creeks requires special permits for construction. Since 1980 when flood plain maps were established by FEMA, the city has required a Flood Hazard

Permit for any construction within the flood plain. Today, any new development within the flood plain is also required to provide compensatory storage for floodwater displaced by any buildings or fill placed within the flood plain.

**Q** **How will the proposed construction fix flooding in my backyard?**

**A** By widening the channel for the water, it will reduce the frequency with which the water flows over the banks. The channel improvements are designed to give the water a wider area to travel through. Flooding is a natural occurrence and all efforts to manage it take into account the natural flow of the creek.

**Q** **How have we considered the fish and other wildlife who are dependent upon the creek?**

**A** The Channel Improvement program is being reviewed by a variety of agencies, including the State's Fish and Wildlife Department and the Muckleshoot Indian Tribe. We want to ensure there are no significant impacts on habitat, fish and wildlife in Issaquah Creek. The project is subject to environmental review under the State Environmental Policy Act.

**Q** **How do I know whether my property is in a Special Flood Hazard Area?**

**A** Call the City's Building Official to find out (391-1002).

**Q** **How does the flood warning system work?**

**A** The City of Issaquah has a flood warning system which gives approximately four hours of advance warning for flooding within the city limits. A stream gauge located where 252nd Avenue SE crosses Issaquah Creek is tied to City facilities through a telemetry system. When the creek reaches a certain level, an alarm sounds at the City Public Works Shop, the person on call is automatically notified and preparations begin for flood protection measures. The City also broadcasts over the government television channel (28) and on a radio station (KIRO 710 AM) to warn citizens of the impending flooding conditions.

**Q** **But I live on the hill, should I worry about flooding?**

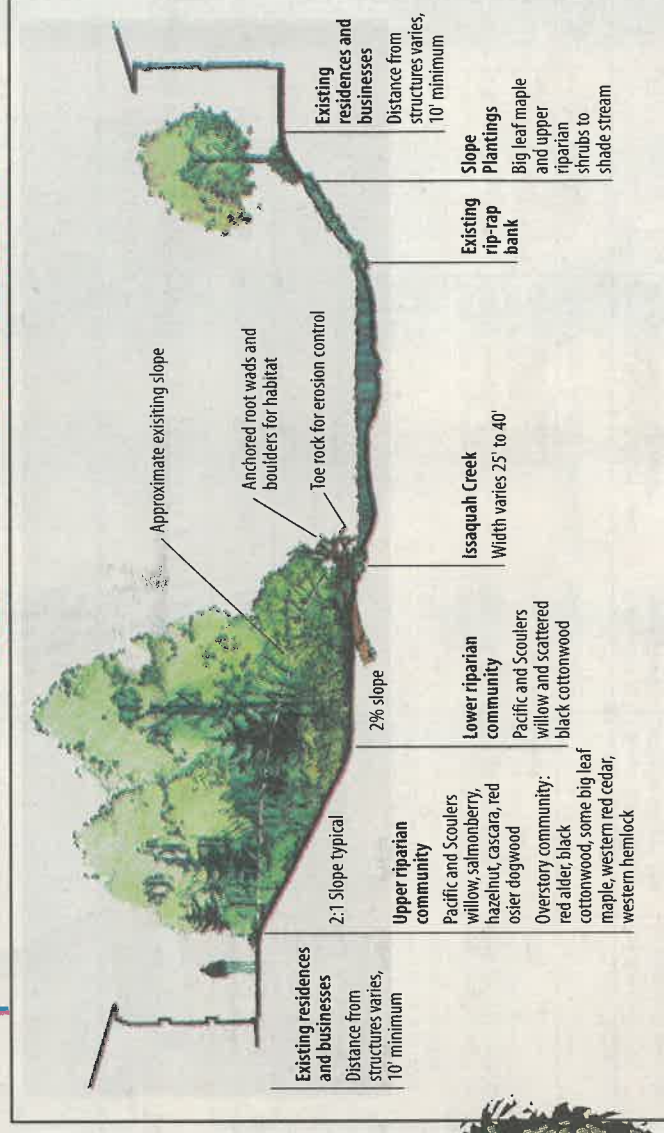
**A** Yes! Keep supplies on hand to avoid extraneous trips in your car during the flooding. Avoid getting caught in water over the roadways—you could end up being part of the problem. Flooding is a communitywide problem! Check out ideas for volunteering in the story "So you want to help out?"

## Trees in the creek— Sometimes they are a good thing... Sometimes not

Trees can play an important role in managing flooding. They stabilize banks, provide habitat for fish and create eddies that help prevent sediment from filling up the stream channel. As part of the flood management construction program trees will be placed in strategic locations to stabilize stream banks and improve fish habitat.

Trees in the creek can also be a problem. They can trap debris and reduce the water capacity of the channel. If you are not certain whether a tree is helping or hurting the water flow on Issaquah Creek, call John Minato, 391-1002 in the Building Department and have it checked out.

## Conceptual Flood Control and Habitat Enhancements



## Construction Plan

The City and RH2 Consultants have prepared the Issaquah Creek Channel Improvement Plan to mitigate flood impacts, with the first phase of the project focusing on the Gilman area. The plan is currently being reviewed by agencies and property owners in the areas targeted for improvements. Property owners are being asked to grant a temporary easement to the City so construction can begin. A FEMA grant has been applied for to cover a large share of the project costs.

# Floods happen— Individual preparedness:

## Before

1. Know if you are in a flood-prone area. Call the Building Department at **391-1002**.

2. Update your personal flood procedures including:

- have a family rendezvous location in the event you need to evacuate your home
- learn the safest route from your neighborhood home or business to high, safe ground
- make arrangements for housing in the event you need to evacuate your home
- set up your own neighborhood notification network

3. Keep emergency supplies on hand including:

- bottled water
- battery-operated radio
- extra batteries
- flashlights
- blankets
- non-electric cook stoves
- canned and other non-refrigerated foods

4. Keep all debris, grass clippings, trees, sediment, garbage, etc., out of storm drains, gutters and driveways.

5. Consider permanently raising appliances and water heaters above flood elevations.

6. Share information on preparedness and experiences with neighbors.

7. Purchase flood insurance.

## During

1. Sandbag as needed. For information on the City's sandbagging program, call Public Works at **391-1044**. (See related story, this page.)

2. Keep battery-powered radio tuned to KIRO 710. Tune to Channel 28 or call the emergency line for reports.

3. Do not drive where water is over the road.
4. Place belongings on blocks to keep them above flood waters.
5. Safely turn off gas and electricity—don't stand in water while trying to turn off electricity.

## After

1. Check for structural damage before re-entering your home. Be cautious of potential gas leaks, electrical shorts, live wires.

2. Document your losses.

3. Contact your insurance agent for flood loss claims.

4. Remove sandbags and clean up spilled sand from sandbagging.

5. Investigate options to have your house elevated to prevent future damage. Call the City of Issaquah Building Department for information, **391-1002**.

# Sandbagging— Protect those buildings

Properly filled and placed sandbags can act as a barrier to divert moving water around buildings. The City is examining the practice of sandbagging this year and expects to revise its policies. More information on that is forthcoming.



## NEED INFO?

Find out about City services, department numbers, office hours, Council and Committee meeting dates, senior cable discount, business and pet licenses, and much more—call the Info Line at **557-3294** for recorded information, or visit us on the Internet at <http://www.issaquah.com/> or <http://www.issaquah.org/>

Currently the City's flood and shoreline practices on sandbagging include the following:

- Sandbag placement locations can be subject to City approval.
- Sand and bag deliveries by the City made only if access to a property is safe.

- Removal of temporary sandbags is responsibility of citizens. The City does not collect used sandbags or the sand left on private property.

If not properly used, sandbags can create problems for your neighbors by diverting water onto a roadway or someone else's property. They should be used only to protect buildings.

Here are a few tips for using this simple, effective method to prevent or reduce flood water damage.

- Use treated burlap sacks approximately 24 inches by 14 inches (unused empty bags can be stored for many years).
- Fill sand bags two-thirds full; leave end open.
- Place sandbags close (3 to 5 feet) to buildings.
- Place filled bags lengthwise and parallel to the direction of flow, with the untied open end of the bag facing upstream.
- Open end of sandbag should be folded under the filled portion when stacking.

- Stack sandbags partially overlapping, beginning by filling in low areas to form a level foundation.


For more detailed information on sandbagging, contact the US Army Corp of Engineers at **764-3406**.

**Clip this and put it on your fridge....**

## Important Numbers

- City Emergency Information Line ..... 557-3294
- If you anticipate needing help during a flood ..... 557-3217
- If you want to volunteer ..... 557-3217
- City of Issaquah Public Works ..... 391-1044
- City of Issaquah Building Department ..... 391-1002
- City of Issaquah Community Services ..... 557-2576
- Federal Emergency Management Agency (FEMA) ..... 1-800-462-9029

# Flood Warning System for City of Issaquah

Phase	Creek conditions	City/Public Works Actions	Road Closures	Steps You Should Take	Non-impacted
1	Standby. 6 feet and rising.	Public Works Department, Police dispatch and Fire District 10 notified. Stand-by monitoring begins. Activate Channel 28. KIRO radio notified. Media notified.		Always be prepared with household flood strategy. Tune to Channel 28 and KIRO radio. Check Emergency Info Line, 557-3294.	Clean storm drains if possible. Stock supplies to avoid travel over flooded roads. Call 557-3217 and volunteer to help those impacted by flooding.
2a	Minor flooding, 7 feet and rising. High water in flood-prone areas.	Public Works Department begins flood-fighting activities. Truck route closed. Sandbag delivery started.	SW Newport Way.	Initiate household flood strategy. Stay informed through media.	Avoid getting caught in water over the roadways. Don't make unnecessary trips.
2b	7.5 feet and rising.	Record stream readings every half-hour.	Newport Bridge.		
3	Moderate flooding, 8 feet. Major flooding on Issaquah, Tibbetts and the East Fork. Flooding in most creekside areas.	Emergency Operations Center opens (interdepartmental coordination). Full flood-fighting in effect. Begin volunteer coordination. Station sandbag control person at sandbag supply.	NE Dogwood at Issaquah Creek. NW Dogwood at Issaquah Creek. Sycamore Drive SE at Issaquah Creek.	Evacuate if necessary. If not, make sure you have ample supplies. Block basement drains. Call Emergency Info Line to find out which streets are closed before heading out.	Stay home. Do not remove barricades that close roads.
4	Flood emergency, 8.5 feet or greater. Extensive flooding throughout Issaquah and Tibbetts Creek valleys.	Maximum flood-fighting effort in effect. Roads closed. Evacuations handled by Fire Department with Police Department. Contact EOC if problems arise.	Additional closures. 	Evacuate if necessary. Call Emergency Info Line.	Check Emergency Info Line before venturing out. Wait until it's safe to travel.