Personal health

Storage capacity limits at a federal flood-control dam in the upper Green River Valley means that residents and businesses located in the cities of Auburn, Kent, Tukwila and Renton face a higher risk of flooding now than at any time in the past four and a half decades.

Flooding poses significant risks to the health of Green River Valley residents. This information is being provided to keep you and your safe and healthy before, during and after a flood event.

Are flood waters contaminated?
Yes, flood waters can be contaminated from a variety of sources including: oils, pesticides and fertilizers from road and agricultural runoff, hazardous materials such as fuel and chemicals, and biological contaminants from fecal material, wastewater and overflow from sewer and septic systems.

If my vegetable garden was flooded should I harvest any winter root crops?
It is not advisable to use root crops that have been flooded since flood water contaminants are likely present on these products.

I have an oil furnace in my home/business – is my fuel oil tank at risk?
After a flood, there are many possible health risks to a community, including those created by water and soil contamination that results from dislodged or leaking home heating oil or fuel tanks. This contamination can also cause environmental impacts and add damage to equipment and building structures, making clean up after the flood more difficult. To minimize risk, properly secure home heating oil tanks.

When flooding or extremely high groundwater conditions occur, underground fuel storage tank systems may be affected or damaged by flooding in several ways:

- Empty or very low fuel could cause tanks to float out of the ground
- Water and debris can cause damage to the electrical components of fuel tank systems
- Loose fittings above the tanks could cause water to enter the tanks and displace the fuel
- Groundwater pressure can put stress on underground piping potentially causing it to be dislodged or damaged.

How can I protect my fuel oil tank?
Keep the tank one-third to two-thirds full of fuel. This will add weight to the tank so it is less likely to float out of the ground. Do not fill the tank full. At least one-third of the tank should be empty to allow for potential flood water that may enter the tank through fittings; this will lessen the likelihood of fuel being released into the flood water.

Secure all the openings on top of the tank. Make sure the fill caps are in good condition and fastened securely.

If you have an above ground fuel oil tank, flooding may cause the tank to shift on its stand causing fuel lines to kink or weaken, or there may be loosened or damaged fittings and filters.

For more information, visit:
http://www.scemd.org/Library/DisasterMitigation/Flood/ProtectPropFloodHeatingOilTank.pdf

If your home oil heat system has been converted to another energy source and the old oil tank has not been properly decommissioned and/or removed, this work should be done before the flood season begins.

If you have questions about the integrity of your tank, fuel lines, tank stand, or the fuel, or need assistance in returning an affected tank back into service, contact your fuel supplier. For more information on home heating oil tanks, visit: http://www.ecy.wa.gov/pubs/rtc92117.pdf

For more information on flood prevention for underground storage fuel tanks, visit:
http://www.ecy.wa.gov/biblio/0909190.html

My property is connected to public sewer. Will flooding affect my sewer service?
Flooding can cause sewage from sanitary sewer lines to back up into homes and businesses through plumbing drain pipes, and even into nearby properties that may not actually be flooded. These backups can cause damage that is difficult to repair and can create health hazards.

Sewer backflow valves are available to block drain pipes temporarily, and prevent reverse flow of sewage in the lines. These are available in a variety of designs and should be installed by a licensed plumber or contractor who will ensure the work is done correctly with the appropriate permits and according to local codes.

Will my septic system work after being flooded?
Flooding can damage a private septic system and increases the possibility of sewage contaminating surface waters or drinking water sources and limits the system's capacity to treat and properly dispose of wastewater from your home.
For a list of steps that can be taken to prepare a septic system see:
http://www.nesc.wvu.edu/pdf/WW/publications/pipline/PL_SU06.pdf

How can I protect my well from flooding contamination?
Proper well construction will help protect your well against contamination. A licensed well-drilling contractor can inspect your well and suggest improvements. For additional information on improvements that can help protect your, visit:
http://www.fema.gov/library/file?type=publishedFile&file=how2026_wells.pdf&fileid=721c6a00-0d5c-11dd-aeb1-001185636a87

Do I need to test my well after the flood?

Yes. Surface water is always contaminated by bacteria. Any well that has been submerged beneath floodwaters or high groundwater tables (for wellheads located below ground in well pits) definitely needs to be tested. It is advisable for all rural well owners to consider having their well water tested for coliform bacteria and nitrate. Even if a well has not been submerged, saturated soil profiles from flooding increases the risks of pollutants entering shallow wells and groundwater.

Fuel and other chemical releases and spills are common during flood events. If your water smells like fuel or chemicals, contact your local or state health department to request a chemical analysis of your water before using it. Use bottled water or some other safe supply of water until you know the water is safe.

How can I get my private well tested?
There are several options you can choose from. Perhaps the quickest and most economical choice is to take the sample yourself. For a bacteriological test you can visit a health department office, pick up a sample water bottle, take the sample according to the directions provided, and return it. In approximately two weeks you will receive a report of the lab's findings.

The Washington State Department of Health Public Health Labs (DOH) does and offers a similar do-it-yourself service. Call the DOH Public Health Lab at 206-418-5492 for directions on how to take your own nitrate samples.

You can also contact a private laboratory and request that they perform your water tests. Check your phone directory under "Laboratories," and make sure the lab is state-certified for bacteriological and nitrate testing. Contact DOH at 206-205-4394 and we will send you a list of certified private labs.

Where can I get more information about the process of cleaning up and disinfecting a flooded well?
Contact the Health Department:
Black River Environmental Health
900 Oakesdale Ave. SW, Suite 100
Renton, WA 98057
206-296-4932

Do I need to get a tetanus shot if I've been involved in flood recovery?
Assisting with sandbagging or other flood-related activities does not automatically mean you need a tetanus shot, as long as you have had a tetanus shot within the last 10 years. You are strongly encouraged to get a tetanus shot if it has been 10 years or more since your last booster.

If you get a puncture wound or a wound becomes infected and you are not up to date on your tetanus immunization, contact your healthcare provider immediately.

Are animals a hazard during a flood situation?
- Avoid wild or stray animals and biting or stinging insects.
- Call local authorities to handle animals.

• Get rid of dead animals, according to local guidelines, as soon as you can.
• For more information, contact your local animal shelter, a veterinarian, or the Humane Society for advice on dealing with pets or stray or wild animals after an emergency.

Are food and drinking water safe after an emergency?
• Food may not be safe to eat during and after an emergency.
• Water may not be safe for drinking, cleaning, bathing or cooking after an emergency, because it can become contaminated with bacteria, sewage, agricultural or industrial waste, chemicals, and other substances that can cause illness or death.
• Local authorities will tell you if water is safe to drink or to use for cooking or bathing. Follow local instructions to use bottled water or to boil or disinfect water for cooking, cleaning, or bathing.

For more information, see “Keep Food and Water Safe after a Natural Disaster or Power Outage:” http://www.kingcounty.gov/healthservices/health/preparedness/disaster.aspx

When should I wash my hands?
• Always wash your hands with soap and boiled or disinfected water before preparing or eating food, after toilet use, after participating in cleanup activities, and after handling articles contaminated with floodwater or sewage. Wash children's hands frequently, especially before meals.
• Disinfect water for washing by mixing 1/8 teaspoon of household bleach per one gallon of water. Let it stand for 30 minutes. If the water is cloudy, use a solution of 1/4 teaspoon of household bleach per one gallon of water.
• If water isn't available, use alcohol-based products made for washing hands.

For more tips on washing your hands, see “Hand Hygiene after a Disaster” (www.bt.cdc.gov/disasters/handhygiene.asp).