Private Drainage Pipe Frequently Asked Questions

3/20/2025

We appreciate all of the help that we've received from riverfront property owners along the HESCO Barrier Phase 1 route. We noted that there are a number of private drainage pipes along the route of the HESCO Barrier Phase 1 project. We want to provide riverfront homeowners that are covered by Phase 1 with information related to those drains. Also note that this guidance could also be useful to protect your house from flooding from roadside ditches and storm drains if they were to be inundated with floodwater, if you have drains that run to the road drainage system.

Does my property have drainage pipes that discharge into the Mendenhall River?

Property owners are encouraged to research their property's drainage system to identify where the inlet and outlet to the drainpipe are.

Visual inspection of the riverbank for drainpipes – Check the riverbank along your property to see if there are any drainpipes that stick out of the downslope of the riverbank.

Identifying possible starting points for drainage – Look at drain inlets such as gutter downspouts and basement drains that could possibly lead out to the river.

Pour water into drain start point and observe the suspected outlet – If unsure whether a drain inlet leads to the river, pour water down the drain and check if water leads to the suspected outlet.

Checking property records – Contact CBJ Permits at Permits@juneau.gov. They may have a copy of your property records that may show where some of the drains were located at the time of building construction or the last development of your property requiring a permit.

I have a drainpipe that discharges into the Mendenhall River, will CBJ install backflow prevention on this drainpipe?

No. It is the responsibility of the property owner to identify and prevent flood waters from entering a private drainage system. The CBJ will not be providing or installing plugs or backflow prevention on private drainage outlets as part of the HESCO barrier project. It is crucial that property owners plan well ahead of the next flood event how they will prevent flood waters from entering their drainage system.

How can I prevent flood water from backing up my drainage pipe?

Installing simple plugs or backflow prevention devices on drainage outlets is the most effective way of preventing flood waters from entering private drainage systems. Common options for this include:

PVC Plugs – Commonly in-stock at local hardware stores, PVC plugs are affixed to the end of the drainage outlet and prevent substantial amounts of water from entering or exiting a drainage system.

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Expansion Plugs - commonly available at local hardware stores – expansion plugs are inserted into the end of the drainpipe, and the expansion mechanism (typically threaded bolt or nut) is tightened to expand the plug firmly into the pipe.

Inflatable plug – Mechanical test plugs are designed with an expandable seal and can provide a more watertight plug.

Check valve – Check valves provide a more permanent, year-round option for preventing backflow. These valves will open when drain water exits the system, but close shut when flood water rises above the outlet. Check valves can be purchased locally and are easy to install

Plastic sheeting – when an outlet cannot be found, or when plugging the outlet is impractical, laying plastic sheeting over the drain inlet and weighing it down can be an effective option.

Drainage systems can vary, and homeowners are encouraged to research their properties to determine when solution is best fit for them. Whatever solution property owners pursue, it's critical to test and inspect drain plugs in advance of the next flood. Reminder – it is recommended to remove plugs after flood events to prevent backup of water that would normally flow through the pipe. Remember to plug again prior to the next flooding event.

My drain leads to a perforated pipe and does not have an outlet, how can I prevent backflow?

Perforated pipes diffuse drain water into the ground rather than outlet into the river. Perforated pipe can still be susceptible to backflow from rising ground water and steps should be taken to avoid flood waters from coming up from drain inlets. Creating a watertight seal over the drain inlet using the plastic sheeting method above can prevent these flood waters from backing up through the drain and causing damage within your home.

Another possible option is to locate the drainpipe behind the HESCO Barrier Line, disconnect the pipe, plug both sides and install impermeable fill material between the 2 disconnected ends to break the continuity of the water between the disconnected ends of the perforated pipes.

How do I protect my home from a municipal sewer back up, if I am at risk?

General options for preventing backflow of your homes sewer system during flooding events include:

- Sewer check valve – If a part of your sewer service line is exposed, or by digging up a portion of your service line, an inline sewer check valve can be installed and provides a permanent solution to sewage backflow.
- Inflatable test plug – An inline, remote inflatable test plug can be inserted into your sewer service through your building cleanout. Building cleanouts can be found within 5' of your foundation or are shown on property records

Visit the CBJ Wastewater Operations website[1] and navigate to the "Property Owner Information" tab to learn more about backflow prevention.

[1] https://juneau.org/engineering-public-works/utilities-division/wastewater-utility-division