



Molalla's Wastewater Improvements

Molalla's I&I Hunters!

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Molalla's sewer pipelines are aging – most are over 60 years old. As they get older, they leak, allowing groundwater and stormwater to enter the sewers and mix with the wastewater in the pipes. This problem is referred to as **inflow and infiltration (I&I)**.

Molalla's I&I Hunt

It all begins on a dark and rainy night. Why at night? In the middle of the night very little wastewater is being produced because most of us are asleep, so flows in the sewer system are mainly because of I&I. Recent rains are important because rain is where I&I comes from!

Here's an example of an I&I hunt from the City's recent I&I Flow Mapping Report (available on the City's website).



1 First – find the flows

The first step is to check manholes along the larger sewer lines to find where flows are coming in. In this hunt, flows were coming into a manhole on Main Street.

2 The chase is on!

Once found, the flows are “chased” through upstream pipes to find where I&I is coming in. The hunters checked three upstream manholes and found all three had the same flows. On the study maps, pipes are color coded – in this case, the green color means flows are between 10 and 15 gallons a minute.

What does that mean? There were no sources of I&I between those manholes.

4 Fix it time

Once the hunters have found the source of the problem, City staff and contractors move in – disconnecting old stormwater pipes, repairing leaks in manholes, and repairing or replacing leaking pipelines.

Molalla is hunting down and addressing sources of I&I

Molalla is well on its way to eliminating major sources of I&I. Less I&I means less wastewater to be treated – saving the City money on needed improvements at the wastewater treatment plant.

What has Molalla completed so far?

I&I flow mapping complete



Where I&I problems were found, a video camera will be used inside the pipe to find out what needs to be fixed.

58 leaking manholes sealed



Work is continuing through next year and will include all manholes with major leaks and some with moderate leaks.

42 cleanouts sealed, with 65 more in process



Cleanouts are access points for maintenance of sewer lines. When they're left open, stormwater can easily get into the sewer.

4 repairs complete



Including three laterals and one stormwater cross connection, with three more cross connections being repaired this year.

3 Pay dirt!

The flows are “chased” all the way back to their source. In this case it's leaking pipes and cross connections with the stormwater system at the site of the old high school.