



Public Works Department

117 N Molalla Avenue

PO Box 248

Molalla, Oregon 97038

Phone: (503) 829-6855

Fax: (503) 829-3676

February 14, 2019

Mike Pinney, PE, Sr. Environmental Engineer

Oregon DEQ – Northwest Region

700 NE Multnomah St, Suite 600

Portland, OR 97232

RE: 2019 ANNUAL INFLOW & INFILTRATION REPORT

This report provides an annual summary of some of the more important I/I reduction actions the City of Molalla has taken for the 2019 calendar year, in accordance with City's Inflow and Infiltration Assessment and Reduction Plan and NPDES Permit No. 101514.

In 2019 the City replaced the entire sewer line on Fenton Ave (1209 linear feet, in two phases), cleaned 9727 linear feet, repaired 4 mainline I/I leaks, replaced 4 sewer laterals, and reduced I/I at the WWTP measurably by over 30% during dry weather flows.

The City continued significant investment in its Wastewater Treatment Plant operations, including removal of Biosolids, and reducing the amount of both Chlorine and Vitamin C needed to treat water via process improvements. Operators also experimented with a new formula of aluminum chlorohydrate coagulant (ACH) that contains less aluminum.

Please feel free to contact me (503) 759-0220 if you have any questions.

Regards,

Andy Peters

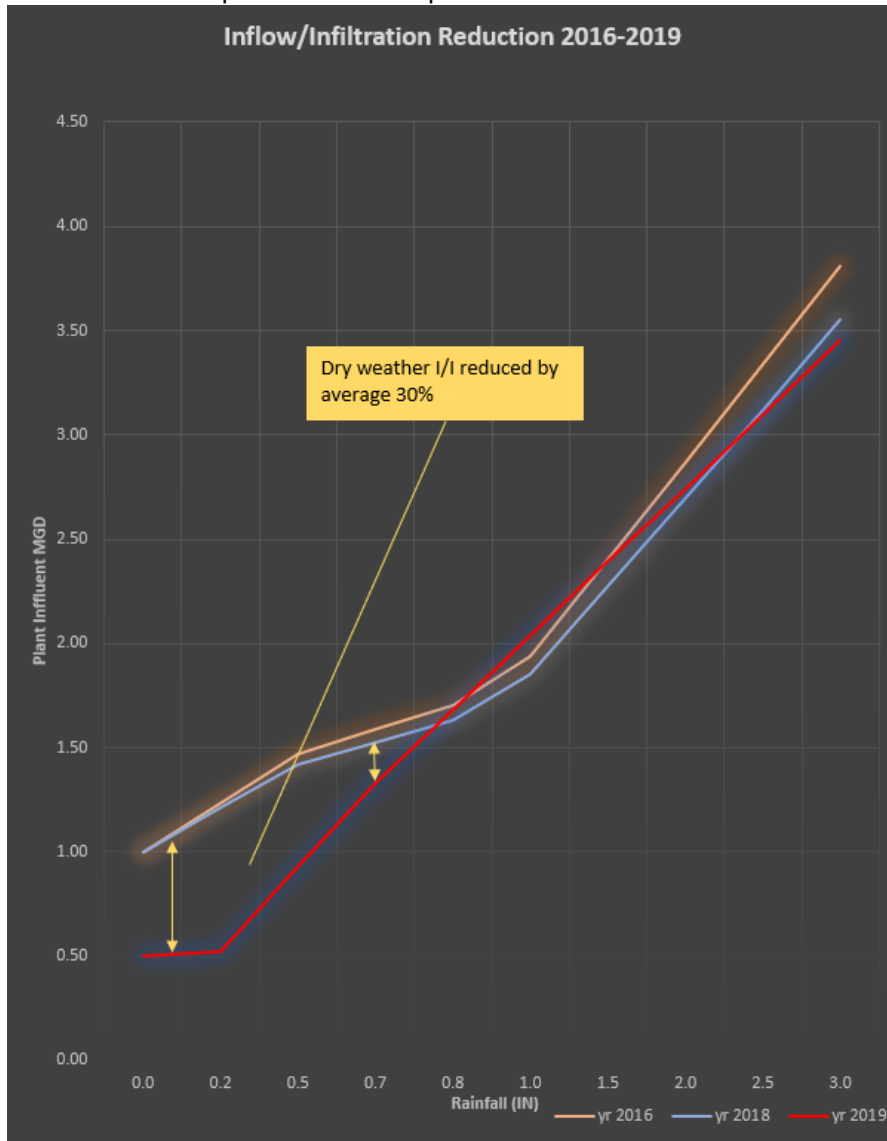
Operations Supervisor

Cc: Gerald Fisher, Public Works Director

Dan Huff, City Manager

Project/Task	Description & Information
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Measuring Success	I/I reduction efforts made by the City of Molalla in 2018 resulted in a 6.9% reduction in wet weather I/I (during a 2.8in rainfall event), but 2019 could only be compared for wet weather improvement by extrapolation because the max day rain event never exceeded .78 inches. However, the dry weather flows as reported on the DMRs show a clear improvement in I/I from the work done in 2019. It is possible, however, that lower groundwater levels occurred due to lower annual rainfall, accounting for an indeterminant portion of this improvement.
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Manhole Inspections and Grouting	Public Works continued Manhole inspections, following up by grouting several leaky manholes during 2019, including those near 1441 W Main (WO# 7953), and at the end of Glory Lane (WO# 8453).
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System Assessment	The cycle of system assessment ended in 2017 with the City's Smoke Testing, and the comprehensive Flow Poking assessment in 2018. Efforts in 2019 centered on analyzing TV results and actively digging up leaks, as described in the remainder of this report.
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Sewer Line Cleaning	Sewer CMOM Cleaning in 2019 was conducted as follows:
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WO# 7826; Problem Sewers and Dead-End Mains (NW quadrant)

- Industrial Way DONE 11/13
- Storey Dr DONE 11/13
- Andrian DONE 11/13
- Kalugin DONE 11/13
- The Bypass line at Lynn Ln DONE 11/13
- Toliver & Leroy DONE 11/13
- Trinity DONE 11/13
- Wedgewood DONE 11/13
- Kae Ct DONE 11/13
- W. Heintz
- Carol Ct DONE 11/13
- West Lane DONE 11/13
- Ridings DONE 11/13
- Prince DONE 11/13
- Dixon DONE 11/13

Total: 4437LF

WO# 7494; Problem Sewers and Dead-End Mains (SE quadrant)
South of Molalla Ave, East of the Union Pacific RR Tracks.

- E. 3rd-- Done
- Eckart, the Moose Lodge--Done
- Hood St DONE 11/13
- Hood Ct DONE 11/13
- S. Cole--Done
- E 8th--Done
- Mathias Ct--Done

Total: 2045LF

WO# 7493; Problem Sewers and Dead-End Mains (SW quadrant)
South of Molalla Ave, West of the Union Pacific RR Tracks,
and South of the 15-inch concrete line that runs from Molalla Ave directly
to the WWTP

- Fountain Valley Center (off Industrial Way) DONE 11/13
- Commercial -- Done

Total: 600LF

WO# 7313; Clean and maintain Problem Laterals - fall

- Peterkin's downtown (low flows cause backups)
- 1318 Meadowlark Pl (fighting roots under sidewalk)

Wyatt and I flushed Peterkins 9/16 CF Devin and I TV and rodded clean out. It looks

like that the main cause is coming from the tree roots in the front yard. Customer had mentioned that her and her husband were under the impression that the city was going to take care of the issue and remove the tree from front yard.

UPDATE: Andy coordinated with the property owner to remove the tree. 1318 can come

Off the problem lateral list in 2020.

Total: 395LF

WO# 7164; Problem Sewers and Dead-End Mains (NE quadrant)

North of Molalla Ave, East of the Union Pacific RR Tracks.

- Thunderbird
- Glory
- Bronco
- Miller
- Faurie
- E Christopher
- W Christopher
- Affaltor

Total: 2250LF

E Christopher and W Christopher completed, bronco glory and thunderbird complete jj cf 8/29/19

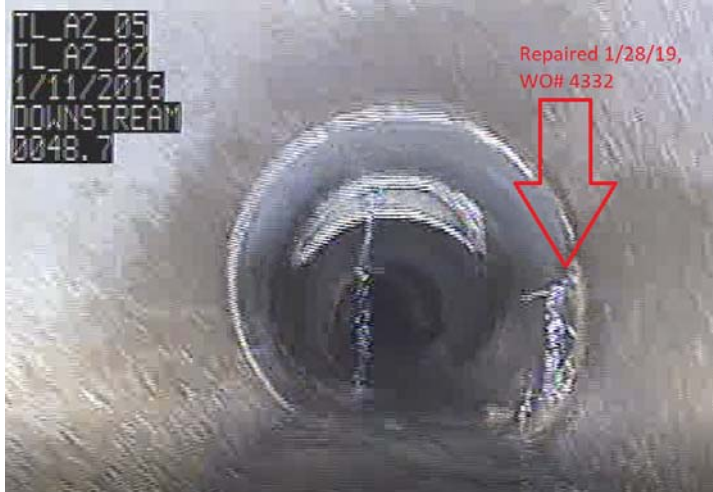
Total Sewer Cleaning 2019: 9727 LF

CCTV
Inspections and
Repairs

The I/I issues below were reported as “discovered” in the 2018 annual I/I report, when City GIS staff performed a comprehensive review of all CCTV (which was further reported in the 2017 Annual I/I Report). The status of these projects, most of them completed in 2019, are reported below. We are therefore able to document the multi-year effort nature of our management systems.

TL_A2_2 – TL_A2_5 – E 7th ST

- Heavy infiltration at pipe joints 50’ from TL_A2_5
- STATUS: ~~RELEASED ON WO# 4332, Jan 2019~~ COMPLETE



TL_A1_4 – EOL CO – E 8th ST

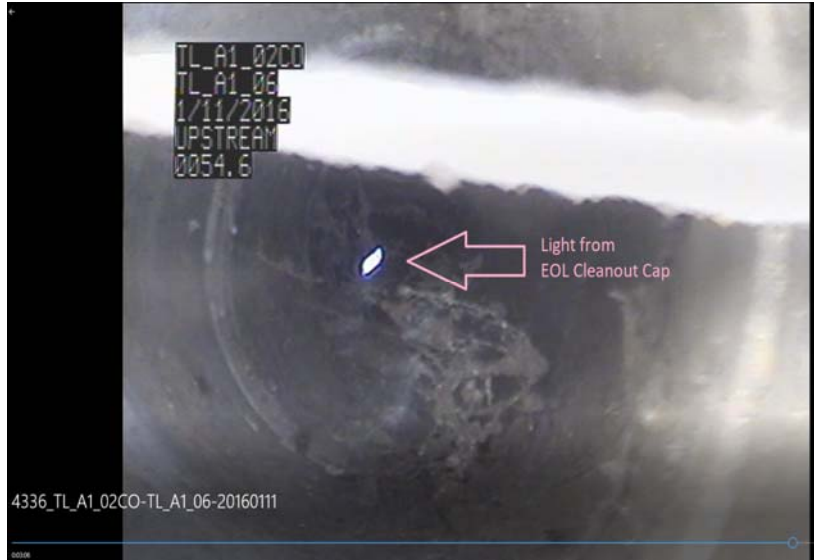
- Heavy infiltration at pipe joint 5.6' from TL_A1_4
- STATUS: ~~RELEASED ON WO# 4334, March 2019~~

-Rescheduled for 2020



TL_A1_6 – EOL CO – E 8th ST

- Infiltration from bottom 49.6' from TL_A1_6
- STATUS: ~~RELEASED ON WO# 4335, May 2019~~
- mistake on Video Inspection report. The issue here is light coming from the end of line cleanout cap. Rescheduled for 2020.



BC_A3_10 – BC_A3_17 – Sweigle Ave

- Bad joint at 53' from BC_A3_10
- STATUS: ~~RELEASED ON WO# 4337, July 2019~~ COMPLETE



TL_B_20 – TL_B_21 – Fenton Ave

- I&I from joint runners at 32' and 173' from TL_B_20
- Heavy I&I from lateral leakage @ 218' from TL_B_20
- STATUS: ~~ON MASTER-PLAN CIP~~ COMPLETE

BC_A3_2 – EOL CO: – Metzler Ave NOTE: Wrong MH #s on report but this is the correct report

- Replace EOL Cleanout – minor I&I
- STATUS: ON MASTER-PLAN CIP

TL_B_5 - TL_B_2 – Patrol ST

- Heavy infiltration at 256' and 277' from TL_B_2
- STATUS: ~~ON MASTER-PLAN CIP~~ COMPLETED DESIGN IN 2019. PROJECT SCHEDULED FOR SUMMER 2020.

In addition, Utility Crews replaced the following 4 laterals during 2019

- WO#8497 101 Shirley St
- WO#8046 515 Kennel
- WO#7472 114 Robbins
- WO#4809 811 N Molalla



I/I Budget

In Fiscal Year 2019-2020, the City budgeted a total of \$189,500 for infiltration and inflow repairs. The City is on track to expend all of the funds on repairs before the end of the fiscal year.

I/I Projects

In 2019 the City replaced the entire sewer line on Fenton Ave (1209 linear feet, in two phases). Some images of construction are shown here.

Material Inspections:



Sewerline bypassing, preparing for mainline replacement:



New mains, manholes, and troughs:



New laterals installed:



Mandrel Test and TV all new lines



Pressure testing at manholes:



Paving:



Paving