

working for clean rivers

# Johnson Creek Oxbow Scour Repair



**Ali Young**, Project Manager

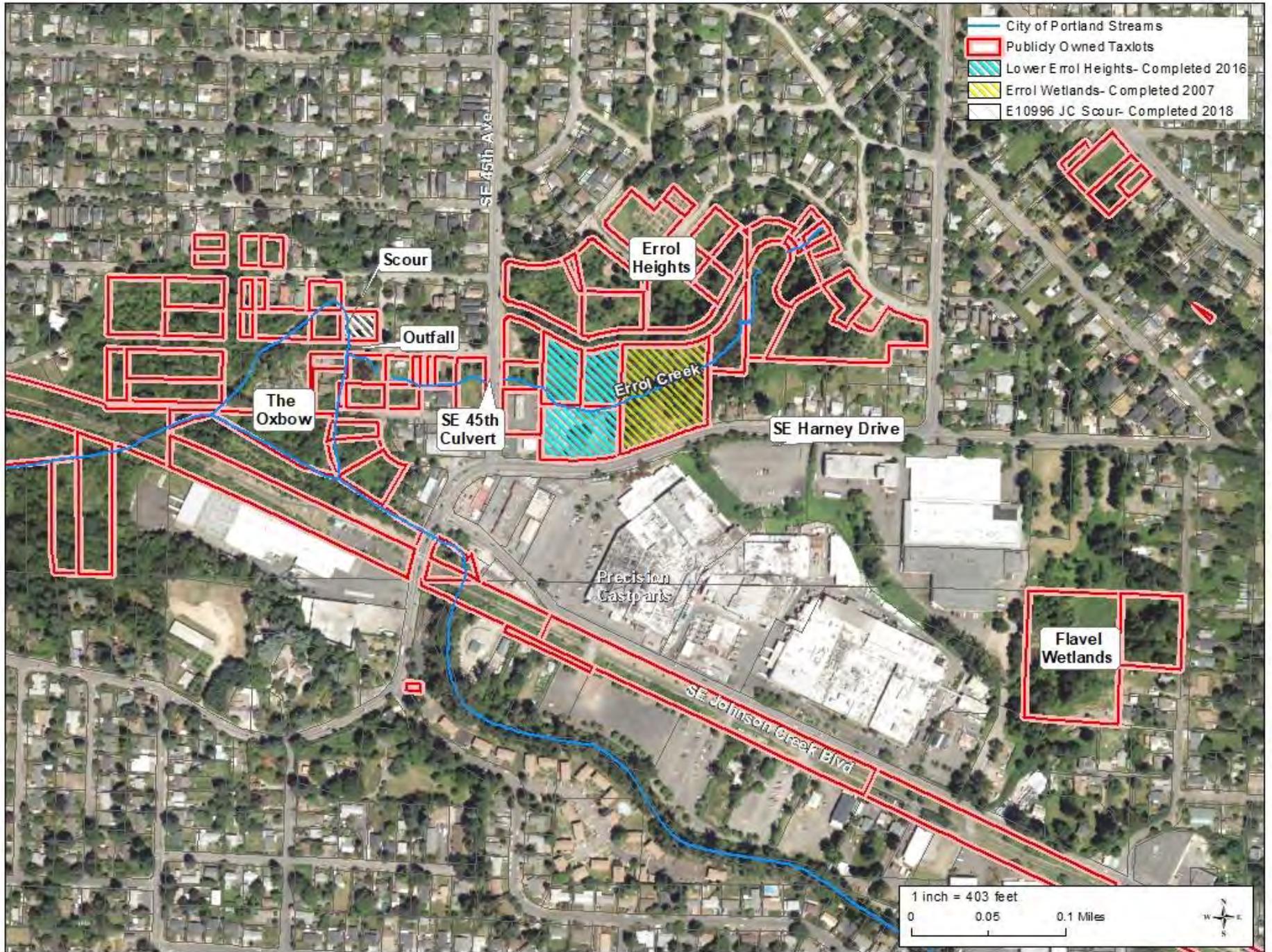
City of Portland Environmental Services

September 18, 2019



ENVIRONMENTAL SERVICES  
CITY OF PORTLAND

NICK FISH, COMMISSIONER  
MICHAEL JORDAN, DIRECTOR



- City of Portland Streams
- Publicly Owned Taxlots
- Lower Errol Heights- Completed 2016
- Errol Wetlands- Completed 2007
- E10996 JC Scour- Completed 2018

Scour

Outfall

The Oxbow

SE 45th Culvert

Errol Heights

Errol Creek

SE Harney Drive

Precision Gas parts

SE Johnson Creek Blvd

Flavel Wetlands

1 inch = 403 feet  
0 0.05 0.1 Miles





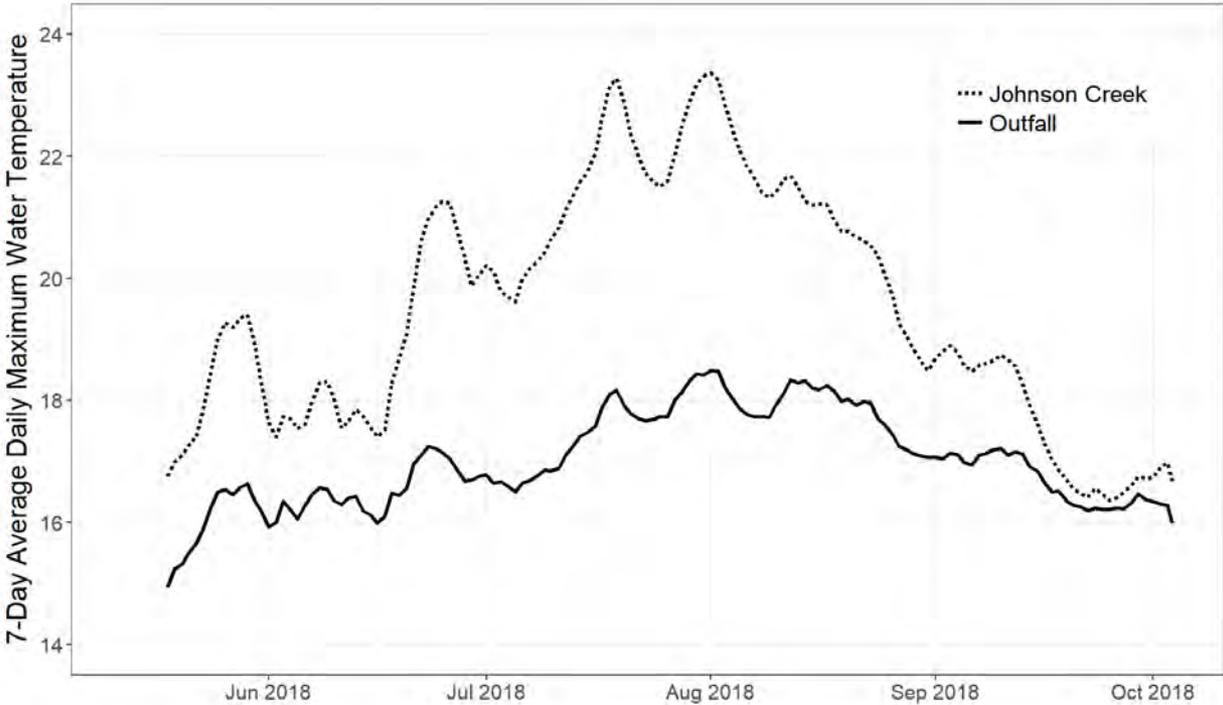
# 2013 Aerial



# 2016 Aerial



# Cold Water From Outfall



# Project Goals

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- Stabilize stream bank to protect private property, road, and stormwater outfall
- Create habitat for ESA listed salmon to escape warm water in summer and high flow in winter



December 2016



February 2017



# Pre-Construction Sediment Sampling

- Stream sediment samples collected from excavation area
- Analyzed samples for:
  - Heavy metals
  - PAHs
  - PCBS
  - Phenols
  - Pesticides
  - Petroleum Hydrocarbons
  - Phthalates
- All results were below screening level values for benthic communities (the bugs fish eat)





Figure 4:  
Johnson Creek Oxbow  
Scour Project Location  
SEF Level 2a SCR  
Proposed & Actual  
Sample Locations

**Legend**

- Actual Subsamples
- Proposed Subsamples
- Sample Transect
- Instream Excavation
- OHW
- Taxlots

1 inch = 12.5 feet

Map Created by: bethany June 18, 2018



# Pool Construction



# Post-Excavation Sediment Sampling

- Stream sediment samples collected from the excavated area
- Same analytes as pre construction
- All results were below screening level values for benthic communities (the bugs fish eat)



# Rootwads



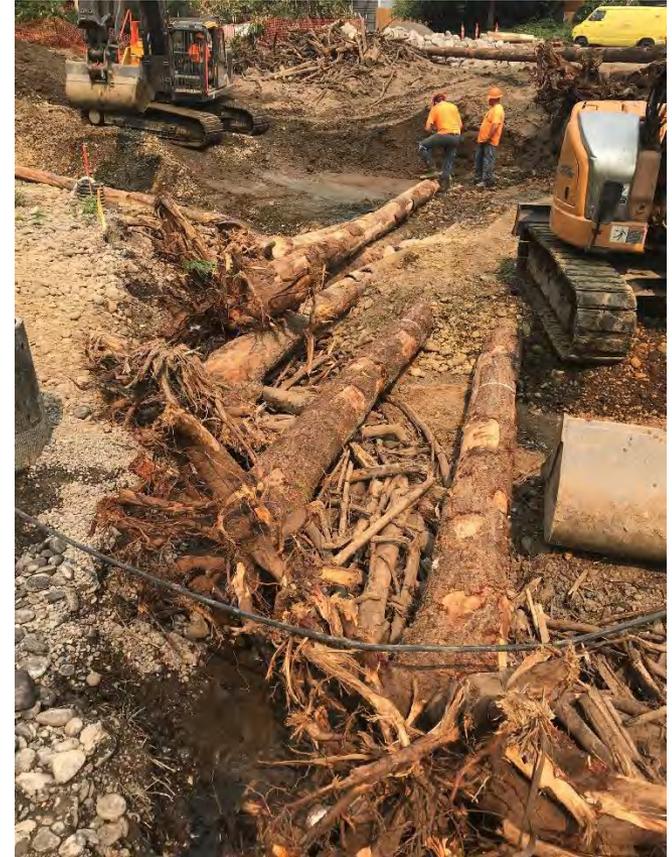
# Footer Logs Installed



# Installing Rootwads



# Rootwads Pinned and Slash Installed



# Installing Soil Lifts



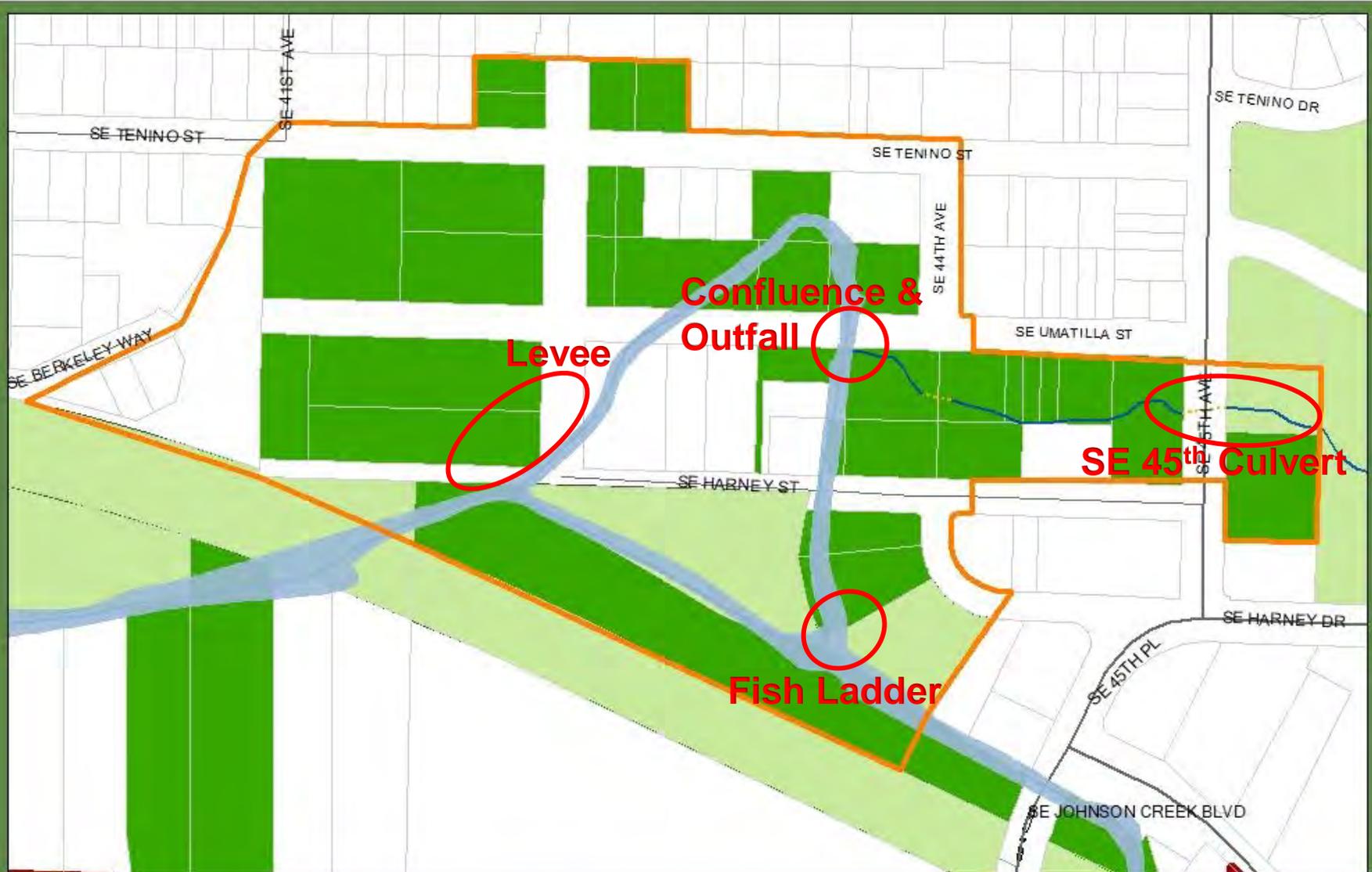
# Channel Re-watered



# Spring 2019

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**E08406 Johnson Creek Oxbow Project Areas**

**Legend**

- Oxbow project area
- City of Portland Waterbodies
- BES Taxlots
- Parks Taxlots



# Fish Ladder

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# Levee

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# Errol Creek Confluence and Outfall

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# Beaver Activity and SE 45<sup>th</sup> culvert

