



Cottrell Pond Site Restoration

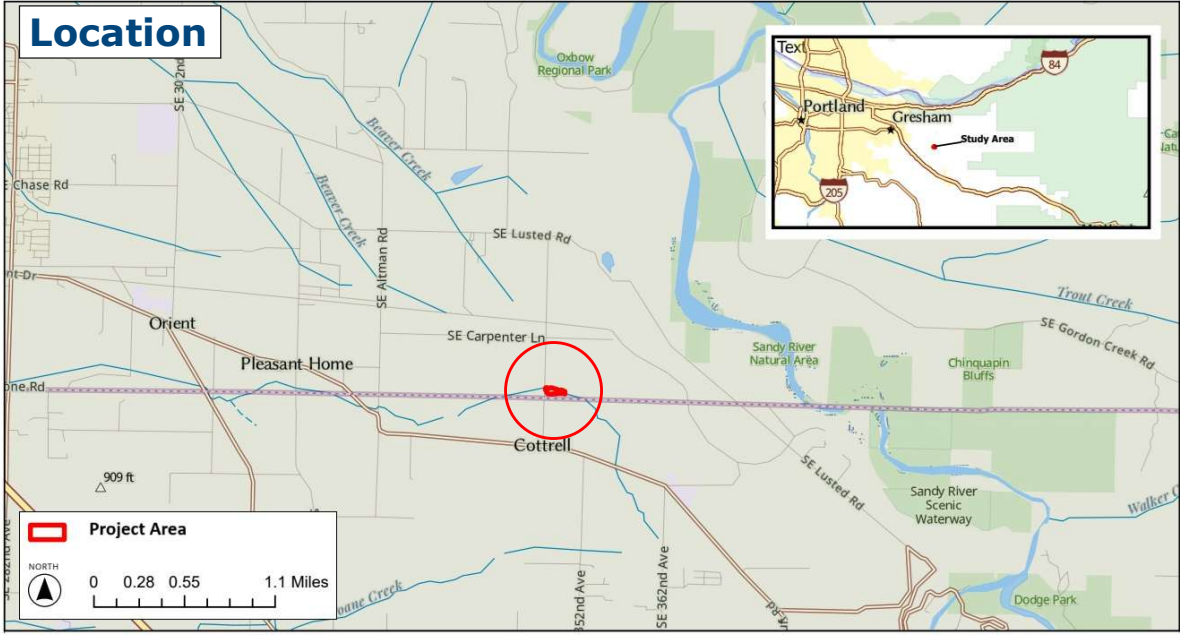
Multnomah County - Casefile T2-2025-0067
Appeals Hearing

Burke Strobel
Senior Fish Biologist
Portland Water Bureau



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Location



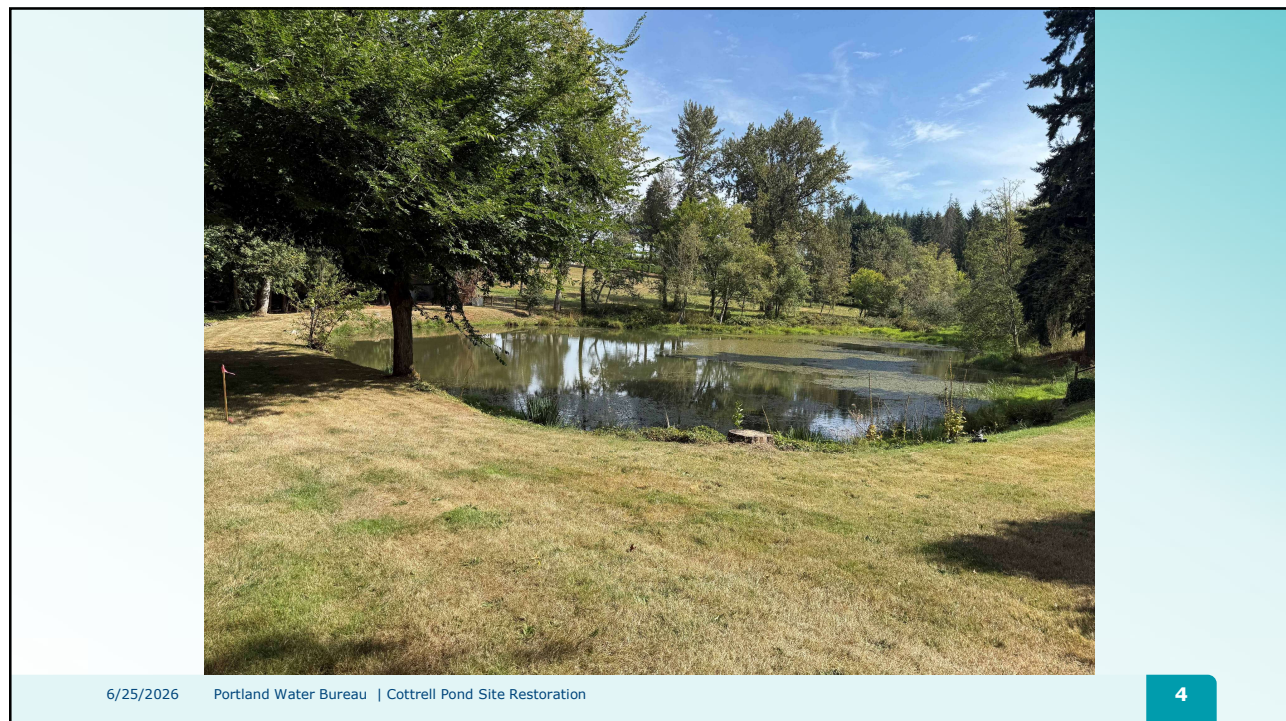
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Project Need/Existing Conditions

- The riparian corridor is in a degraded condition (15%-65% invasive and non-native species)
- Impounding dam is a barrier to fish passage
- Cottrell Pond increases Johnson Creek water temperature up to 8°C
- The site provides ecological functions that should be retained (breeding opportunities for native amphibians, limited flood water storage)

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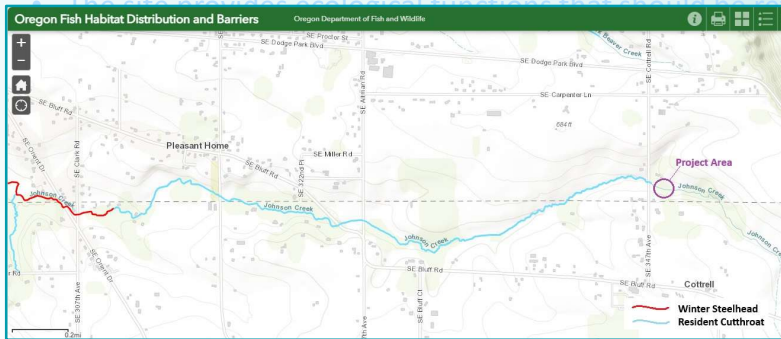
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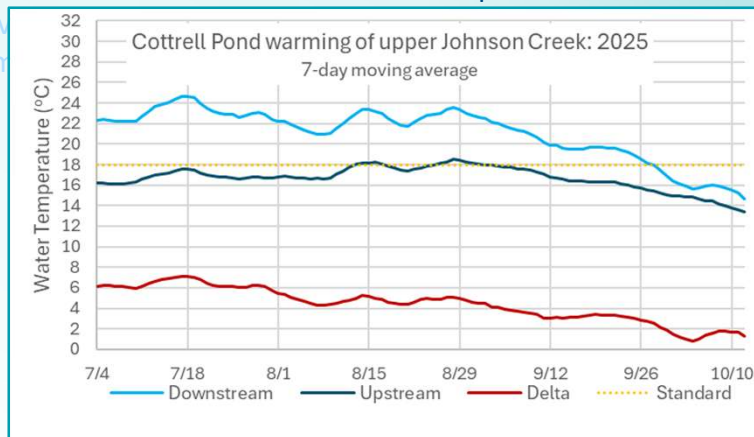
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- The riparian corridor is in a degraded condition (15%-65% invasive and non-native species)
- Impounding dam is a barrier to fish passage
- Cottrell Pond increases Johnson Creek water temperature $\sim 8^{\circ}\text{C}$
- The site provides ecological functions that should be maintained for native and non-native species



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- The riparian corridor is in a degraded condition (15%-65% invasive and non-native species)
- Impounding dam is a barrier to fish passage
- Cottrell Pond increases Johnson Creek water temperature ~8°C
- The site provides ecological functions that should be retained (breeding opportunities for native amphibians, limited flood water storage)



Red-Legged Frog



American Bullfrog

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Project History

- Cottrell Pond removal is considered a top-priority project by Johnson Creek Watershed Council to improve water quality in Johnson Creek.
- The Clackamas Partnership identified this as a priority project in their Strategic Restoration Action Plan.
- Studies by the City of Gresham and by the Oregon Department of Environmental Quality indicated the pond increased stream temperature more than any other remaining Johnson Creek pond studied.

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Project Objectives

1. Convert a “Degraded Riparian Corridor” to a “Good Riparian Corridor” condition
2. Restore fish passage through the removal of the impounding dam
3. Improve the water quality in Johnson Creek through the decrease in water surface area and residence time to significantly decrease stream temperatures
4. Retain ecological functions such as breeding opportunities for native amphibians and floodplain retention of flood waters while discouraging bullfrogs

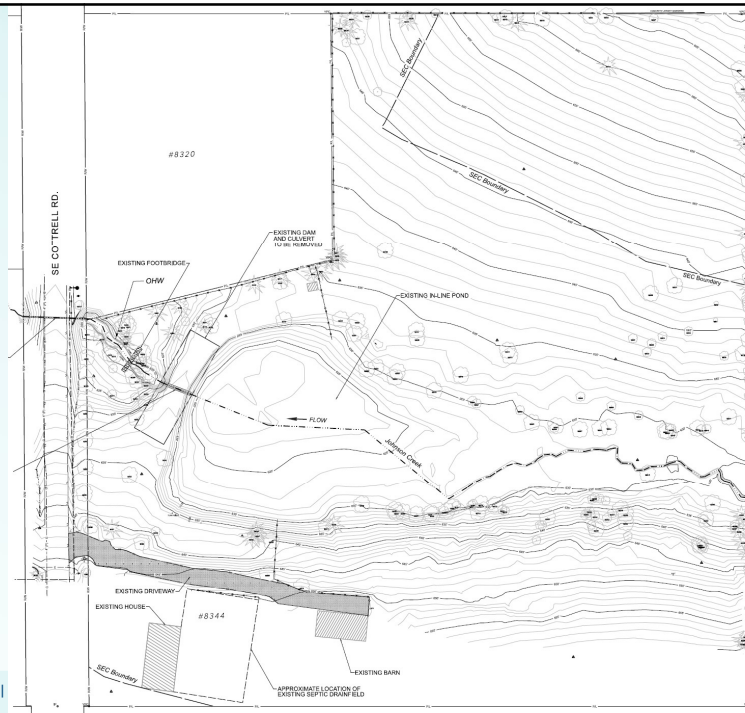
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Stream Restoration

Existing



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Stream Restoration

Proposed

- Remove dam
- Reestablish stream channel
- Seasonal ponds
- Create floodplain
- Place large wood

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Stream Restoration

Restoration Grading Area

51,200 square feet
(1.2 acres)

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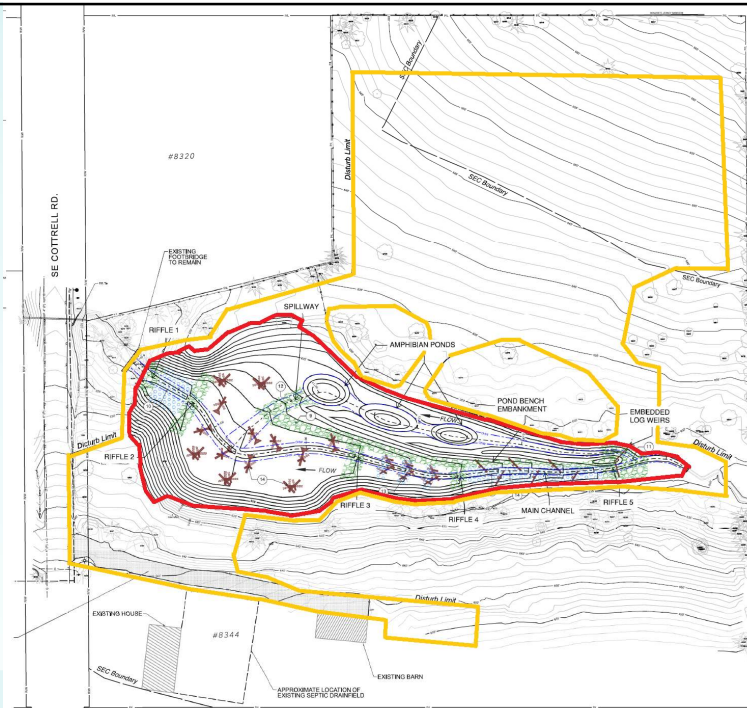
Stream Restoration

Disturbance Limits

188,900 square feet
(4.3 acres)

Disturbance within SEC-wr:

131,100 square feet
(3.0 acres)



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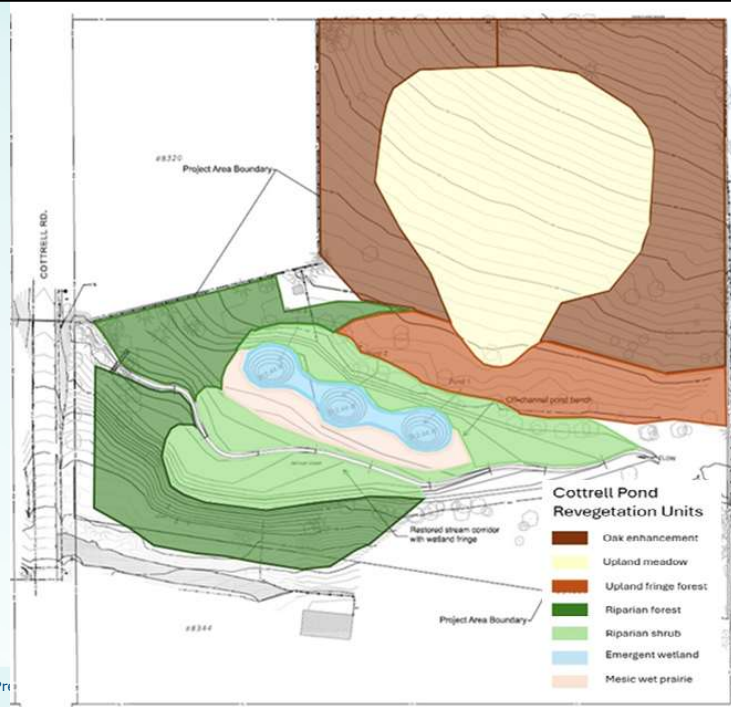
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Stream Restoration

Revegetation

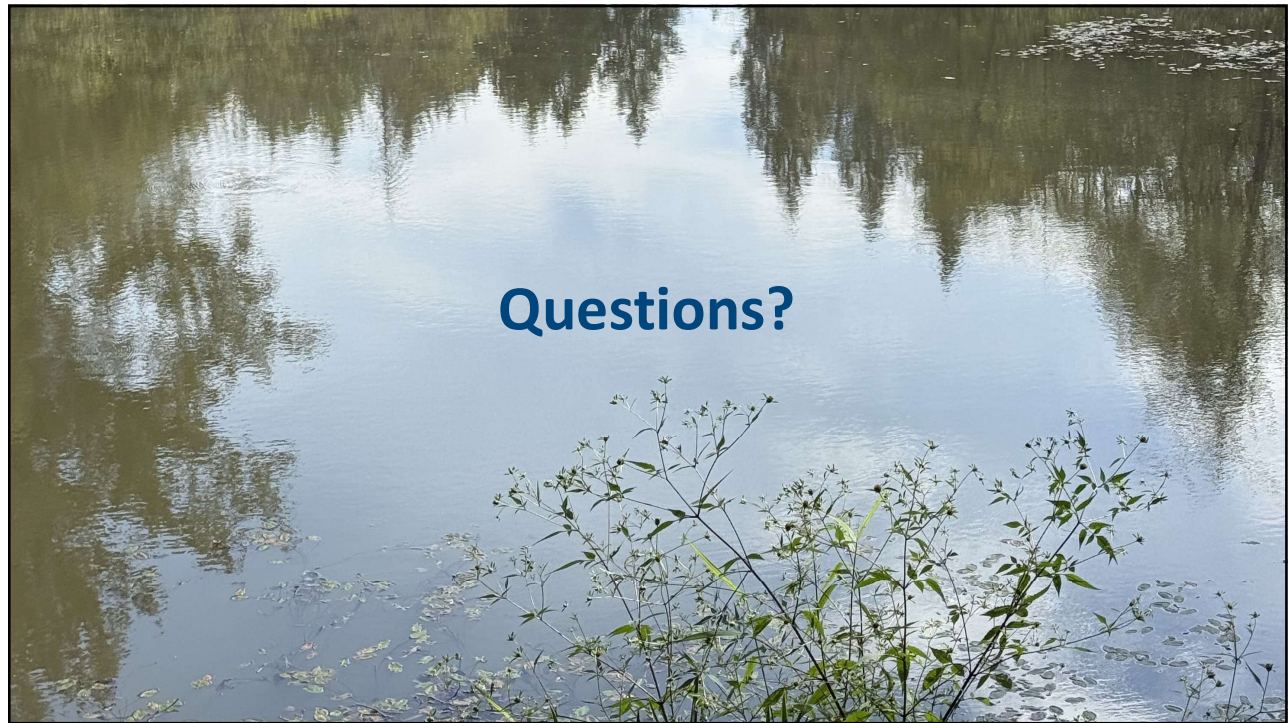
- Establish "Good Riparian Corridor" conditions and enhance upland areas
 - Replace removed trees at a 48:1 ratio
 - Plant 6,230 native herbaceous plants, 6,000 native shrubs, and 966 native trees
 - Reduce invasive plants in the SEC-wr overlay to <10%



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