# Hidden Lake Dam Removal and Boeing Creek Restoration Project Updates

October 2, 2017

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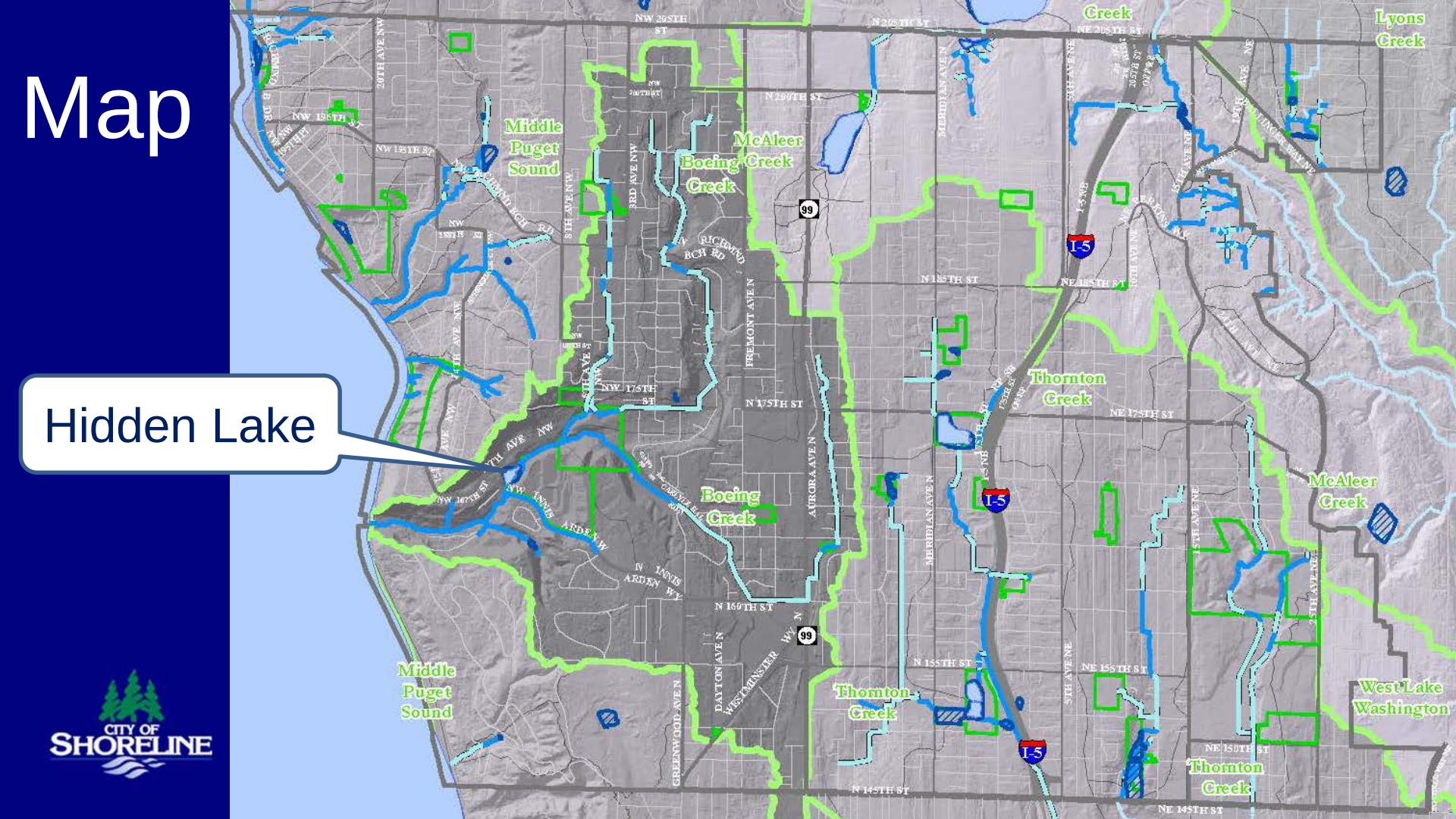
# Overview

- Background
- Project Updates
- Updated Staff Recommendation
- Discussion

# Map

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# Hidden Lake Current Status

- Last sediment removal in 2013
- Lake expected to fill with sediment by 2020 to 2025
- “No action” not viable due to flood risk

# Background

Brief history of Hidden Lake and dam

- Early 20th century private fishing pond origin
- 1996 re-established by King County
- Sedimentation issues
- 2014 Feasibility Study
- 2016 Alternatives Analysis

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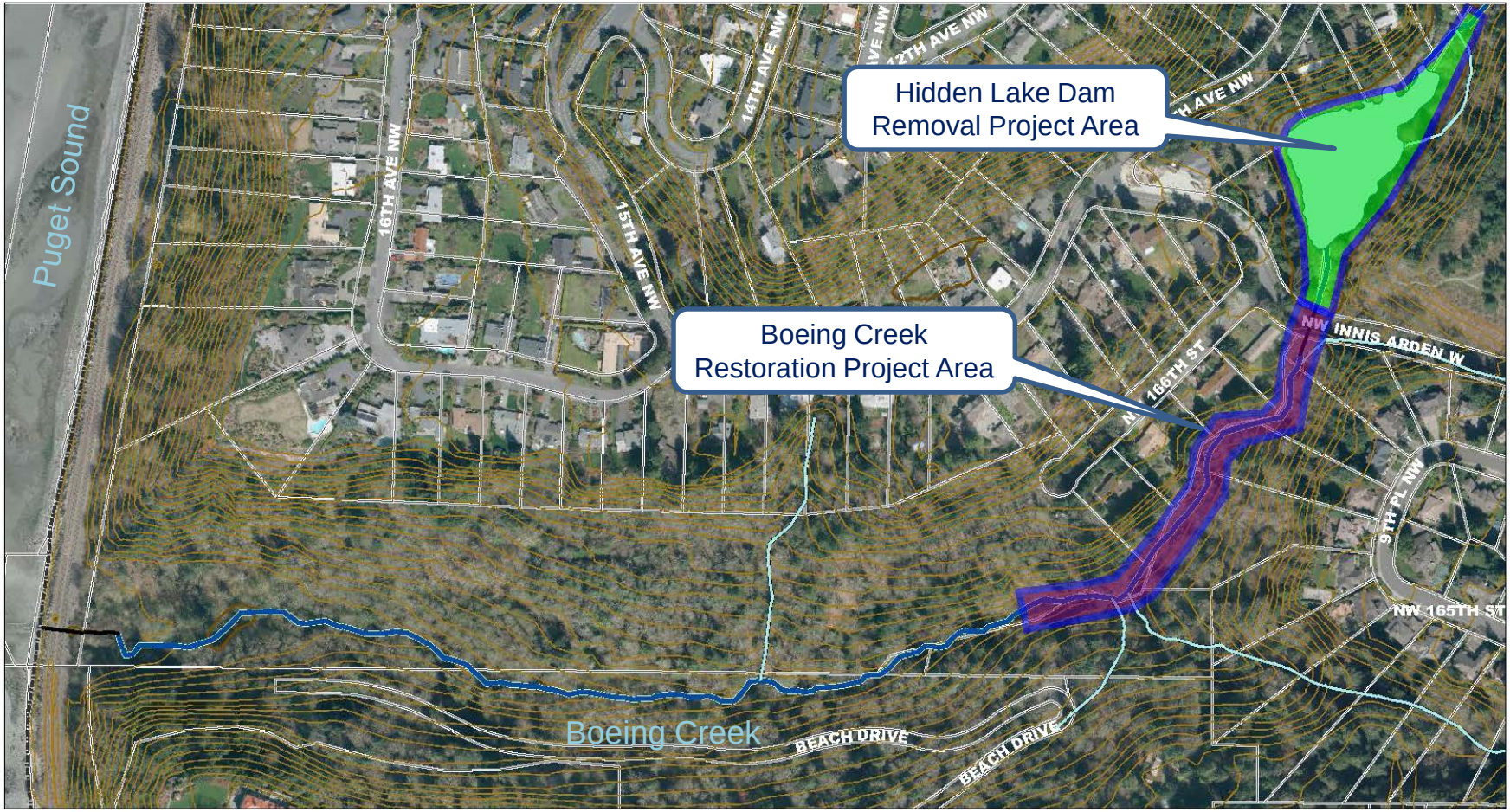
# Background

Priority tasks after May 2016 selection of Alternative 4:

- Further develop Alternative 4 concepts, especially for downstream areas
- Pursue grants
- Monitor Hidden Lake sedimentation
- Collect Boeing Creek flow data

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**HIDDEN LAKE DAM REMOVAL AND BOEING CREEK RESTORATION PROJECT AREAS**

0 250 500 1,000 Feet

N W E S

# Updates

**Since May 2016 (last Council discussion):**

- Boeing Creek streamflow gaging
- Hidden Lake sediment monitoring
- Nearshore Habitat Gains Analysis
- Grants
- Lower Boeing Creek Fish Passage Concept
- Surface Water Master Plan Update

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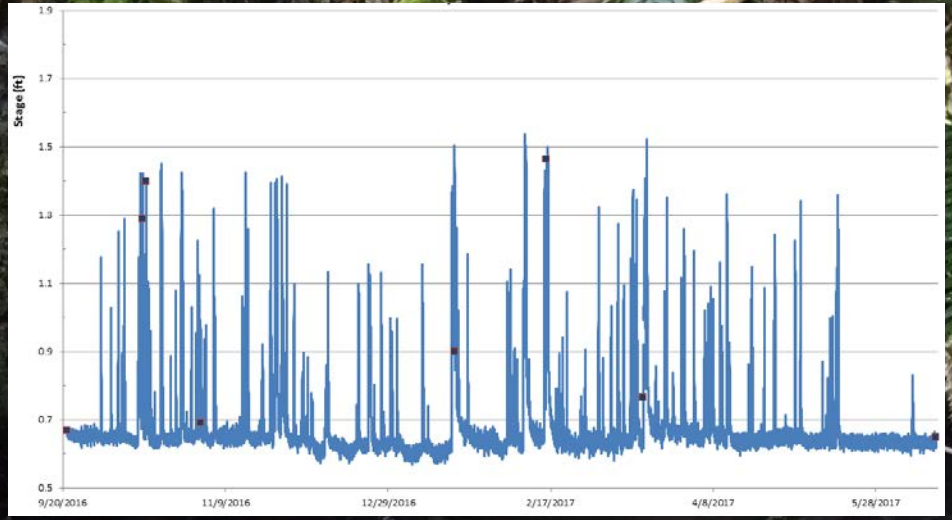


# Boeing Creek Streamflow gaging


# Hidden Lake sediment monitoring

Lake Washington/Cedar/Sammamish Watershed (WRIA 8)
Chinook Salmon Conservation Plan
10-year Update

## WRIA 8 Salmon Habitat Project List
### Puget Sound Nearshore

| Boeing Creek Mouth and Delta Restoration | | | Description | Opportunities, Constraints, and other Considerations | Applicable Strategies |
|---|---|---|---|---|---|
| Project Number | PS-24 | | Restoration of Boeing Creek mouth and delta, to occur in concert with removal of Hidden Lake Dam and other upstream improvements that will facilitate increased downstream sediment transport. Proposed upstream dam removal will provide sediment nourishment benefits to Boeing Creek mouth and delta. Explore possibility to remove existing culvert at railroad to enhance nearshore process. | Allowing sediment to move through the system is the easiest and cheapest way to get beach nourishment along the nearshore, thereby restoring this creek's mouth and delta habitats. It is not necessary to remove fish passage barriers upstream of the creek mouth to enable greater sediment transport to the nearshore, since those barriers do not trap sediment. Habitat and fish passage conditions are good in the lower ~ 1000 feet of Boeing Creek, but the culvert crossing of the railroad right |  Creek Mouths  Nearshore |
| Four-Year Work Plan? | Project Location | | | | |
| No | Shoreline | | | | |
| Estimated Project Costs | | | | | |
| Acquisition | Restoration | Total | | | |
| | | | | | |

# Nearshore Habitat Gains Analysis

# Grant applications


(Funding unlikely)


$300,000 for design

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# Lower Boeing Creek Fish Passage Concept


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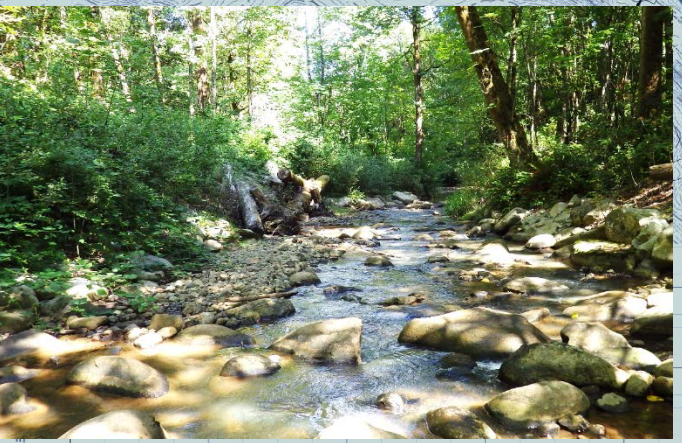
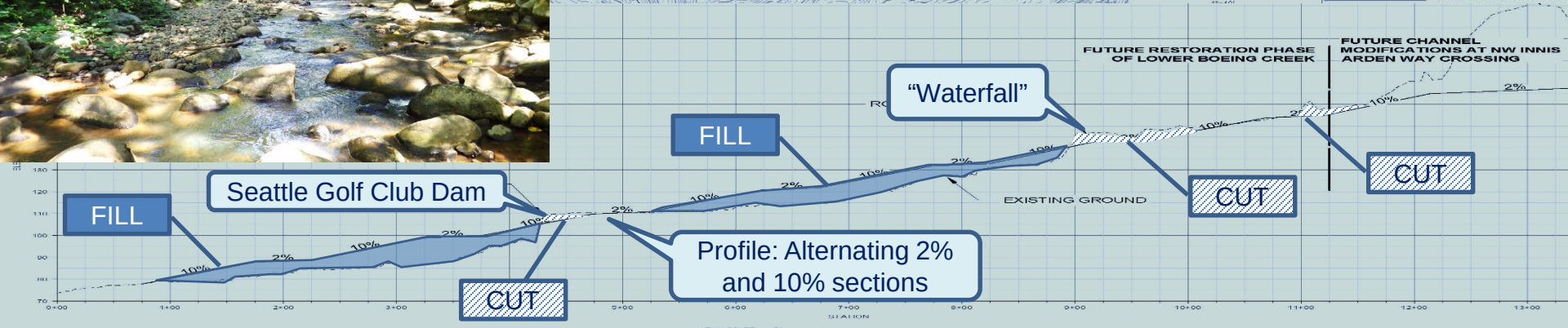
# Lower Boeing Creek Fish Passage Concept






Existing
Proposed roughened channel

# Lower Boeing Creek Fish Passage Concept

**Results:**

- $6,000,000+ cost
- Unprecedented length and steepness
- Risks – construction and maintenance
- Impacts to critical areas
- Unclear benefits to habitat, fish

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# Surface Water Master Plan Update

- Prioritizations for 40 CIP projects
  - Hidden Lake Dam Removal – ranked #5
  - Boeing Creek Restoration – ranked #22
- 2018-2023 proposed 6-year CIP funding
  - Hidden Lake Dam Removal: $2,270,877
  - Boeing Creek Restoration: $56,275

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# Updated Staff Recommendation

Necessary to account for:

- Costs, risks, uncertainties of Boeing Creek Restoration concept
- Ongoing need to remove Hidden Lake Dam
- Long-term need to replace NW Innis Arden Way culverts
- Resource availability and limitations

# Updated Staff Recommendation

Hidden Lake Dam Removal Project:

- Proceed as scheduled
- Include replacement of NW Innis Arden Way culverts in design phase

# Updated Staff Recommendation

Boeing Creek Restoration Project:

- Discontinue further development of project concepts
- Share results of analysis with lower Boeing Creek stakeholders

# Next Steps

- 2017: finish NW Innis Arden Way culvert replacement concepts
- 2018-2019: Design and permitting
- 2020: Hidden Lake Dam Removal
- Ongoing: Monitor Hidden Lake sedimentation and Boeing Creek flows, pursue grants

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# Questions?

Painting of Boeing Creek in Shoreview Park by artist and Shoreline resident Paul Lewing