Apr 4th, 4:15 PM - 4:30 PM

Hydrologic and habitat assessment in False Bay Creek watershed, San Juan county, Washington

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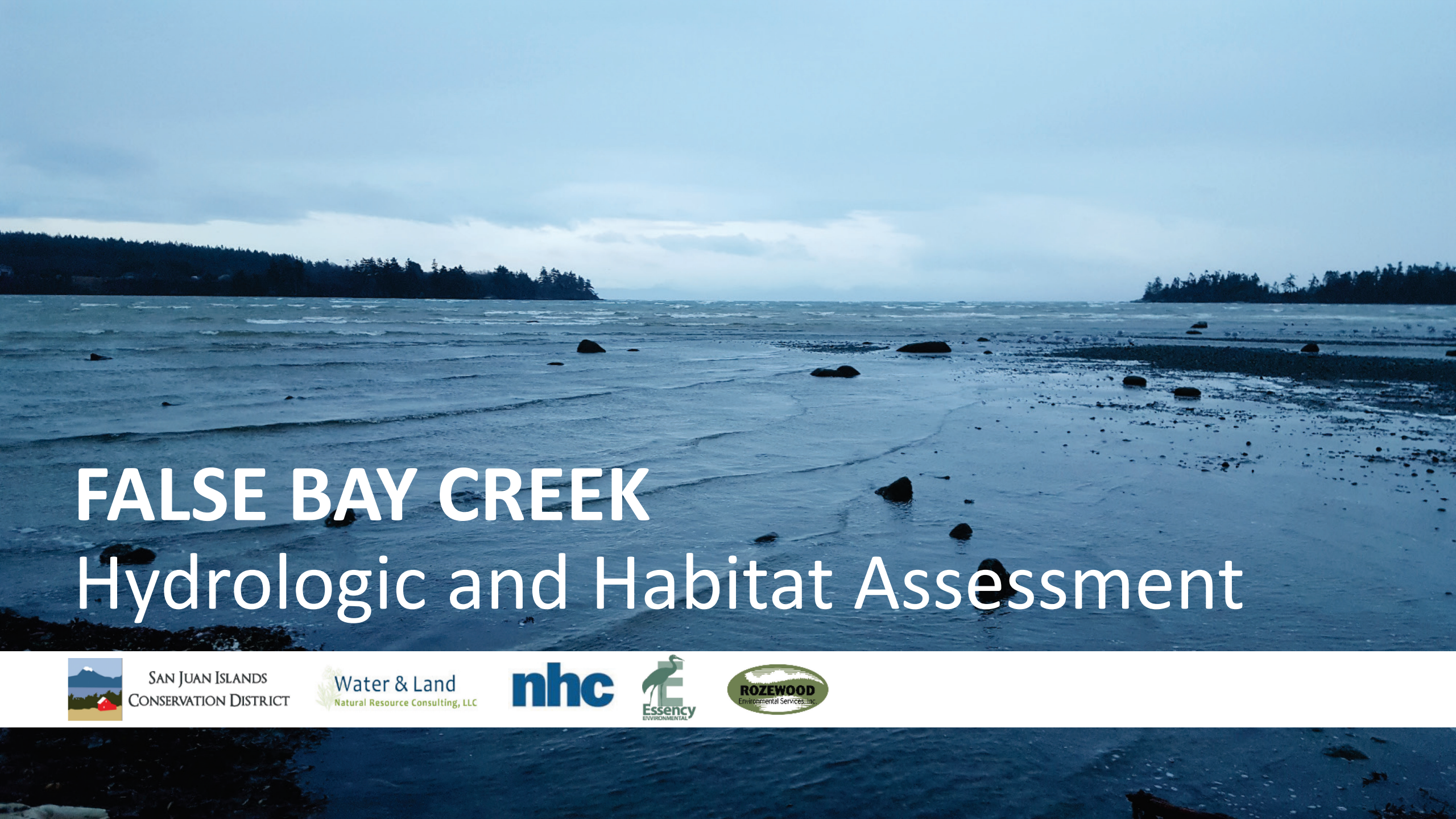
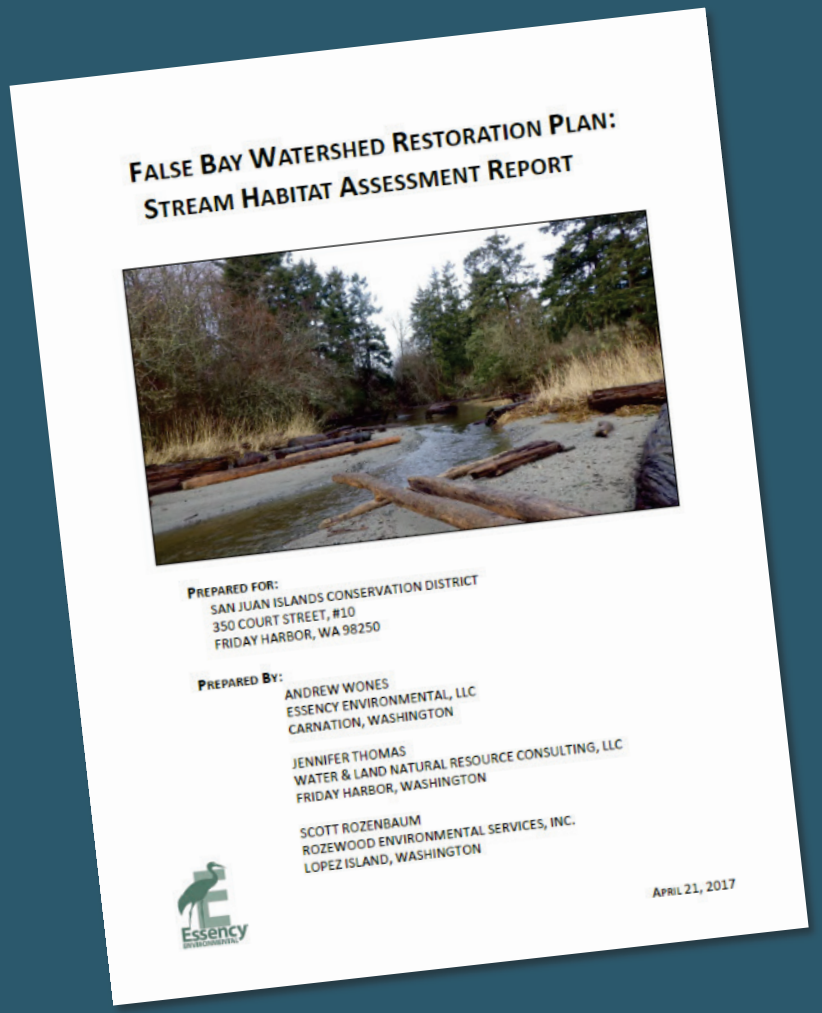


FALSE BAY CREEK
Hydrologic and Habitat Assessment

San Juan Islands Conservation District | Water & Land Natural Resource Consulting, LLC | nhc | Essency Environmental | Rozewood Environmental Services, Inc

VICINITY MAP



False Bay Watershed Restoration Plan: Stream Habitat Assessment Report

Prepared for:
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April 21, 2017

PROJECT GOALS

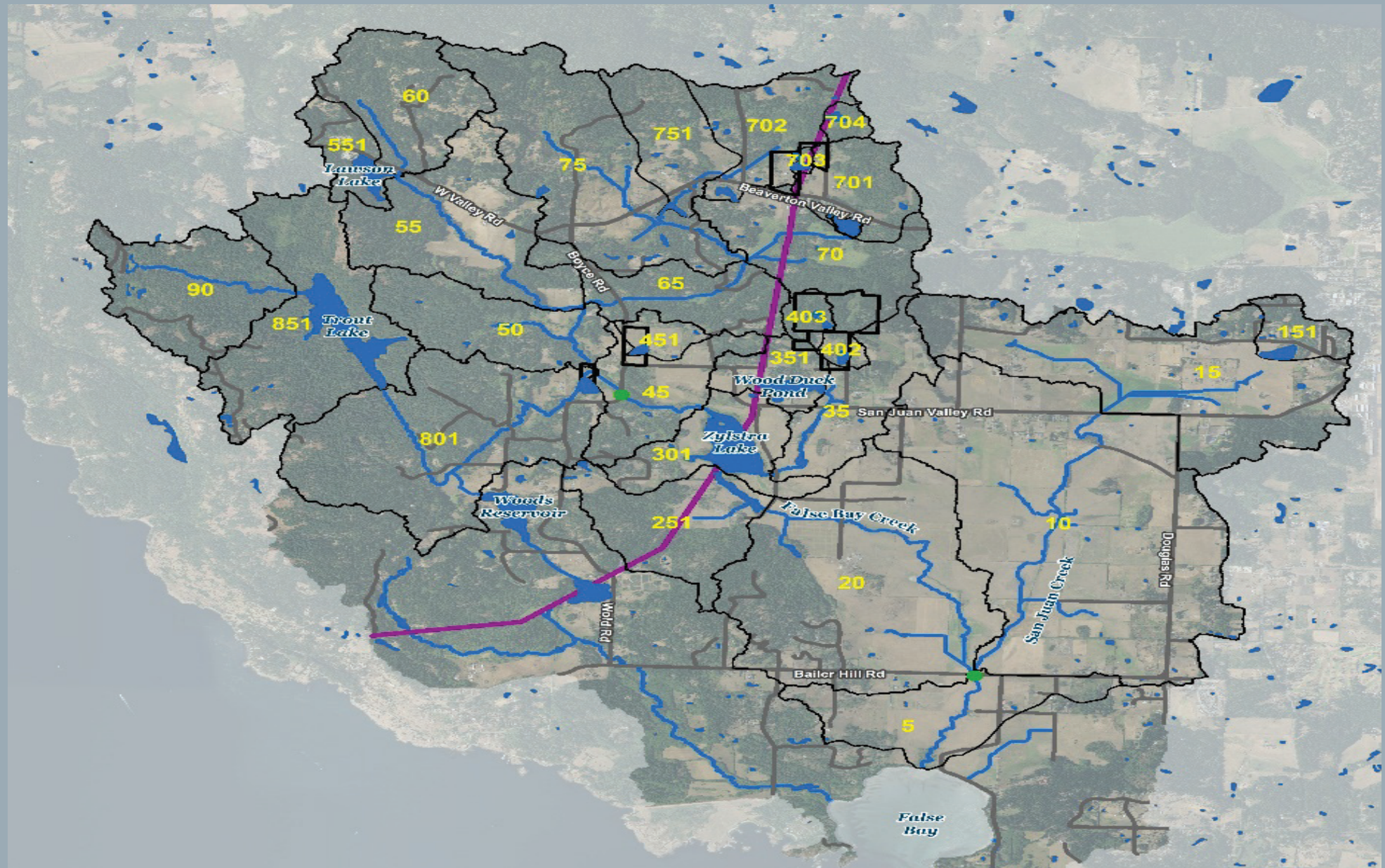
Assess Hydrology of System – NHC – Hydrologic Assessment

- Model Bathymetry of major impoundments
- Develop HSPF model for watershed
- Model Historic Flow
- Model Existing Conditions
- Model Alternative Flows

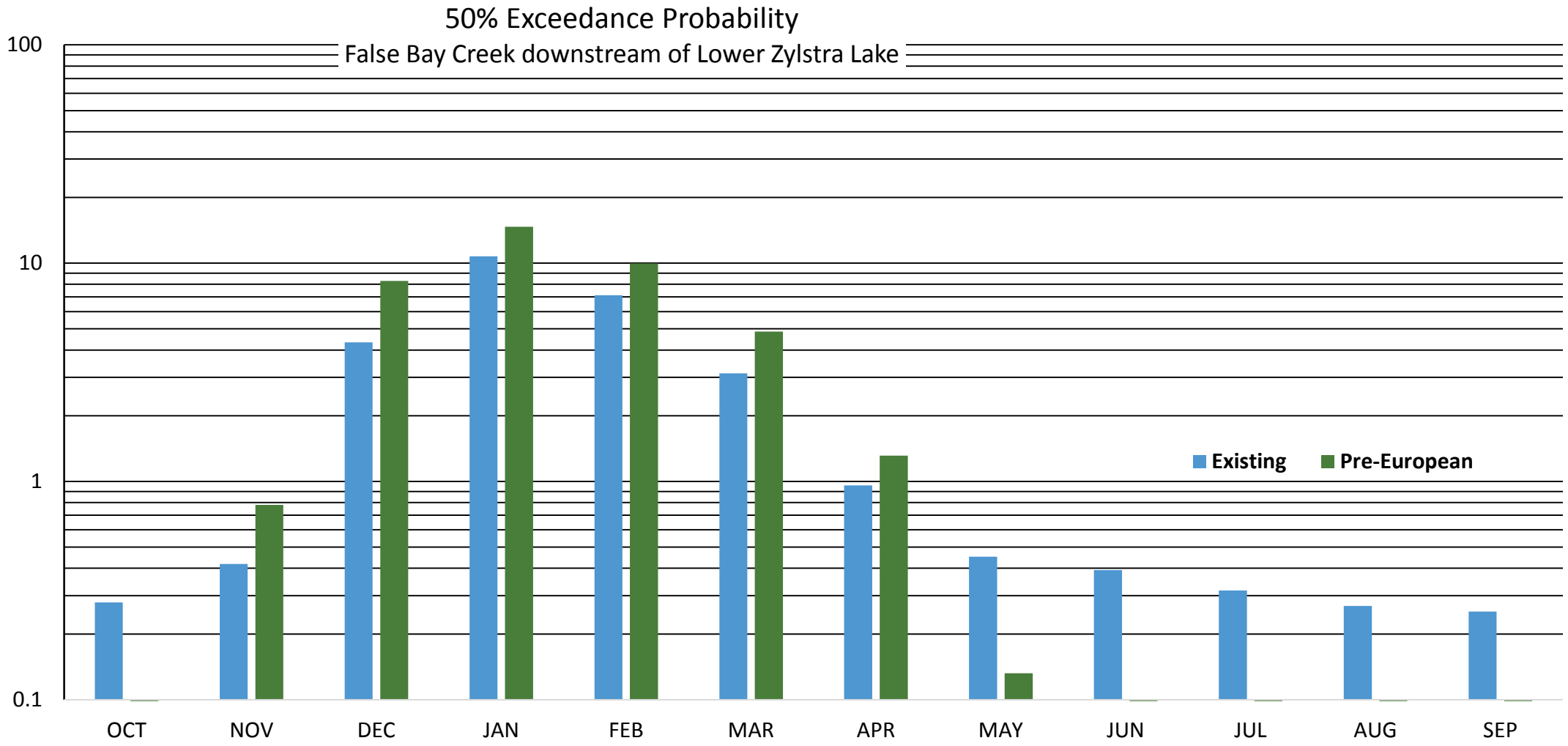
Stream Habitat Assessment – Essency, Water & Land, Rozewood

- ID Salmonid Habitat Limiting Factors
- Assess stream reaches (SVAP2)
- Prioritize restoration actions

HSPF Model of Basin



RESULTS: Model Historic and Current Flows



Stream Habitat Assessment

San Juan Islands Conservation District | Water & Land Natural Resource Consulting, LLC | nhc | Essency Environmental | Rozewood Environmental Services, Inc.

ID Management Strategies

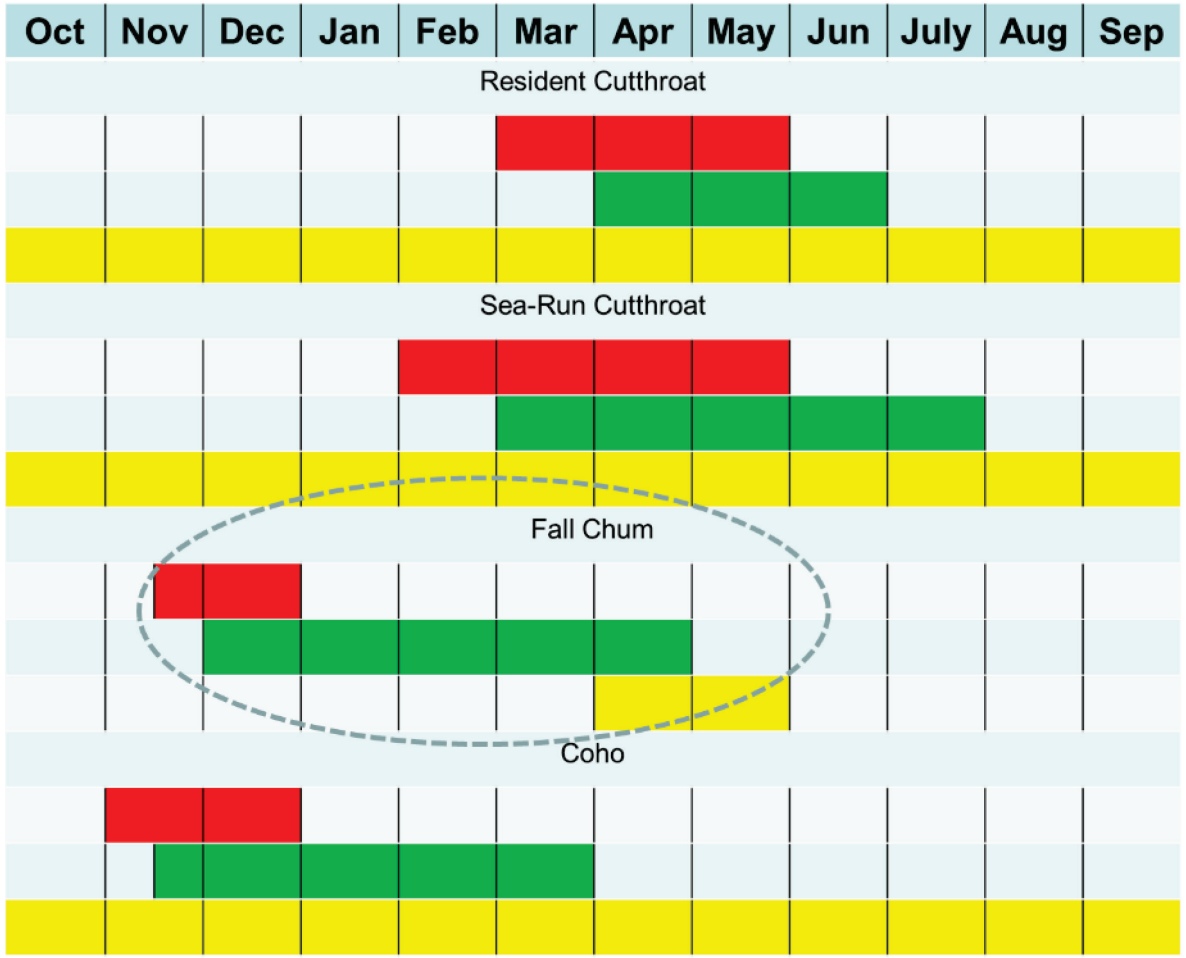
- Modifying existing flow
- Riparian plantings
- Channel restoration

Used Stream Visual Assessment Protocol 2 (SVAP2)

Assessed 2.6 miles of False Bay Creek (9 reaches)

Assessed San Juan Valley Creek (6 reaches)

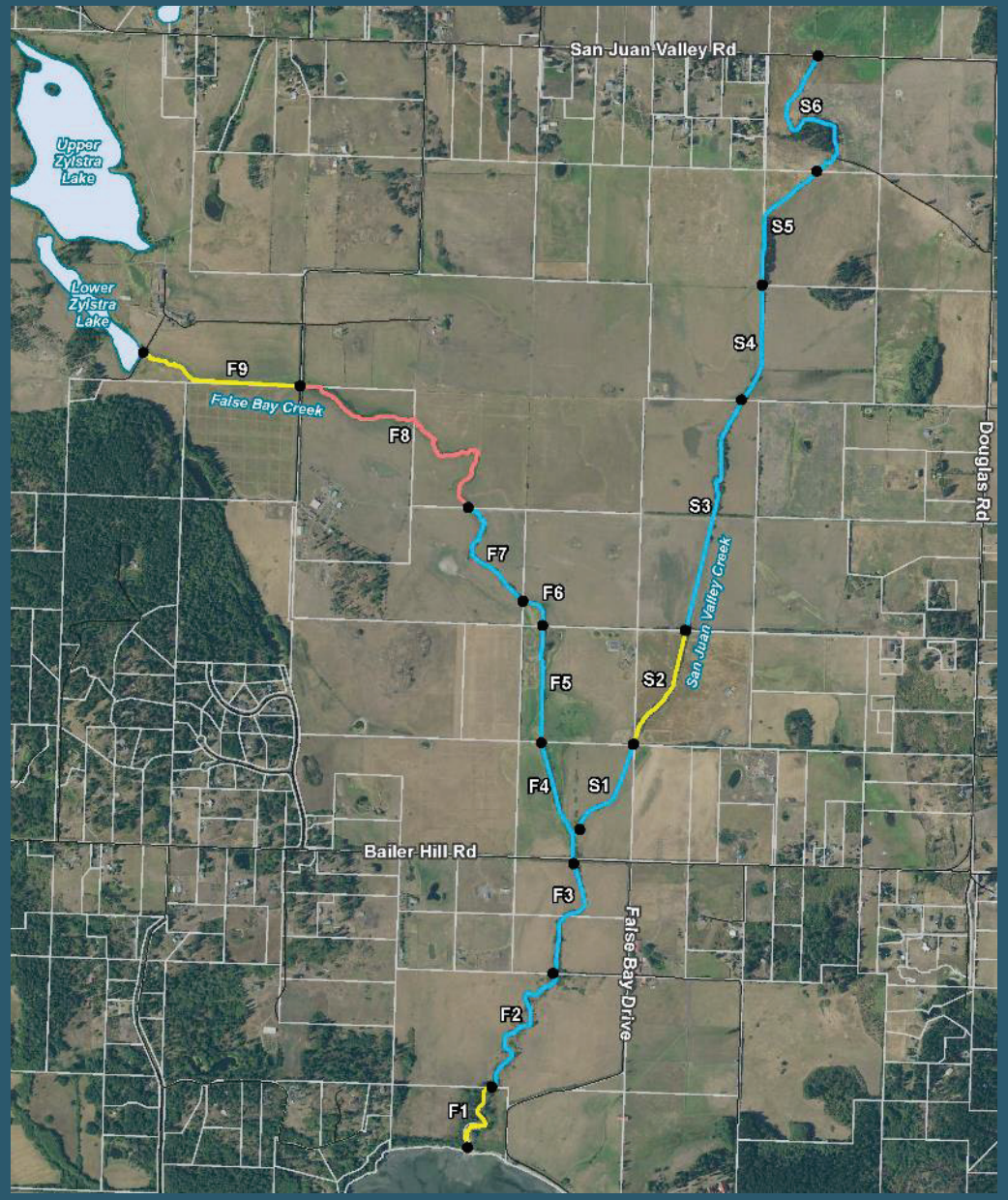
Life History Stages for Salmonid Species



Even assuming a reconfigured, narrower False Bay Creek, management of existing or modified reservoirs would not have sufficient storage to meet instream flow requirements (depth and velocity) for salmon.

Spawning
Incubation
Rearing

REACH F9—Representative Conditions



Legend

- Reach Breaks

Stream Assessment

- Highest Scoring Reaches
- No Access/Not Surveyed
- Fair to Poor Scoring Reaches

SCALE - 1:18,000

N

0 750 1,500 3,000 Feet

Coordinate System: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 FEET

Job: 2001759 | *Date: 07-Feb-2017*

REPRESENTATIVE REACHES—Upstream of Bailer Hill

REPRESENTATIVE REACHES—The Mouth

RECOMMENDATIONS

For all reaches:

- Fence livestock out of stream
- Plant riparian zone
- Work to connect existing functional corridors
- SJICD has a grant to fence off reaches just above the mouth, to plant riparian zone, provide cattle crossing
- Lands upstream: SJPT-owned lands – riparian zone will be fenced and planted.

Conclusions:

- Insufficient flows to support life history stages for target salmonid species
- Significant gains can be attained for riparian habitat structure and fx by fencing out livestock and replanting stream corridor.
- Work to create connected corridors from mouth upstream.