

I-90 Snoqualime East Pre-Construction Stream and Fish Monitoring

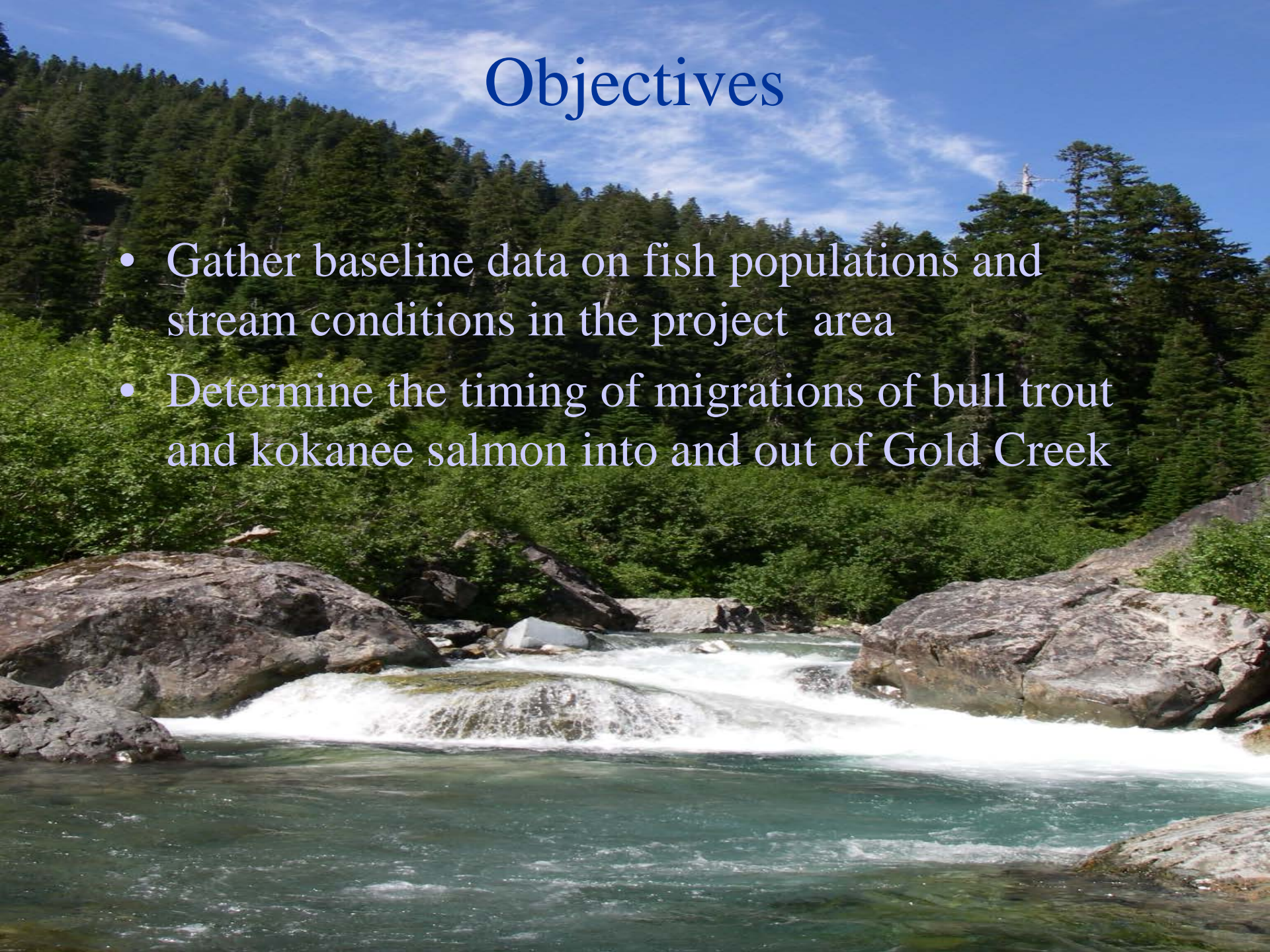
Paul W. James, Principal Investigator
Andrew Puls, Graduate Student
Brooklyn Hudson and Jordan Tsubota, Undergraduate Students
Department of Biological Sciences
Central Washington University

And

Matt Blank, Western Transportation Institute, Montana State
University

Objectives

- Gather baseline data on fish populations and stream conditions in the project area
- Determine the timing of migrations of bull trout and kokanee salmon into and out of Gold Creek



Focal Species

Bull Trout



Kokanee Salmon



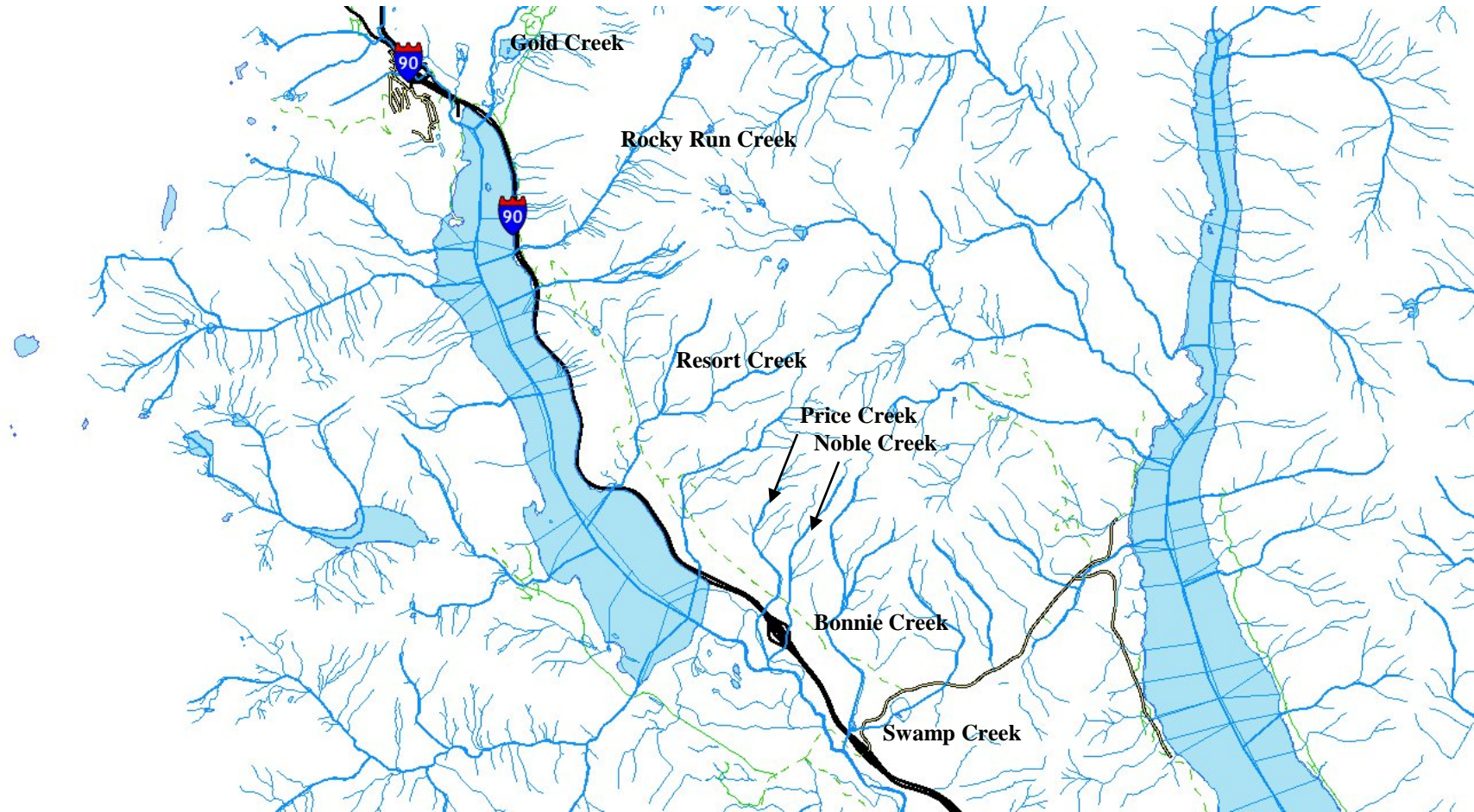
Chinook Salmon



Cutthroat Trout



2008 Monitoring Sites

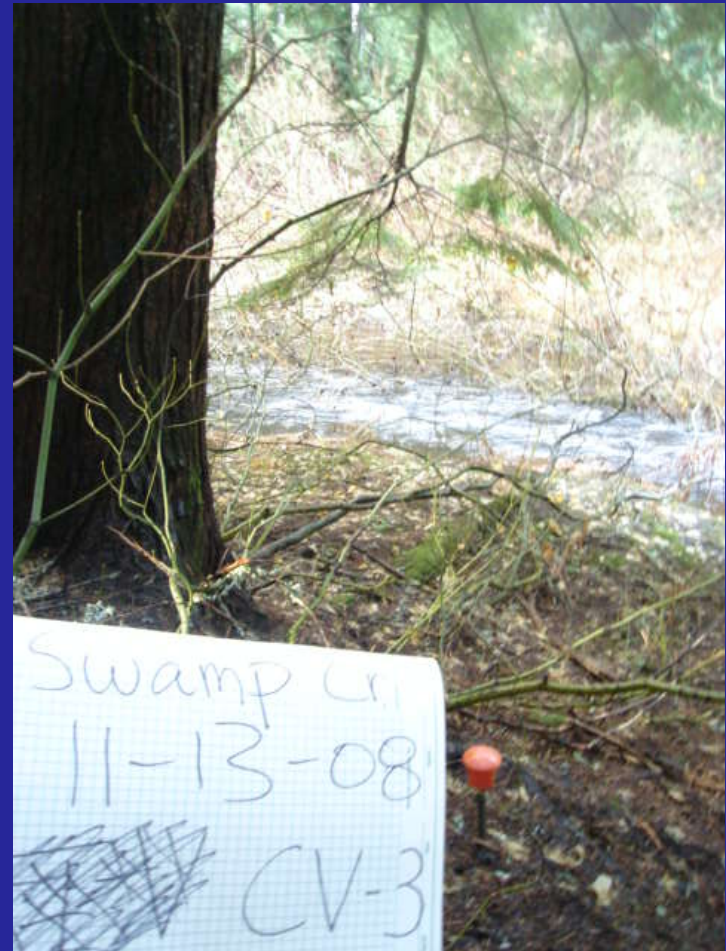


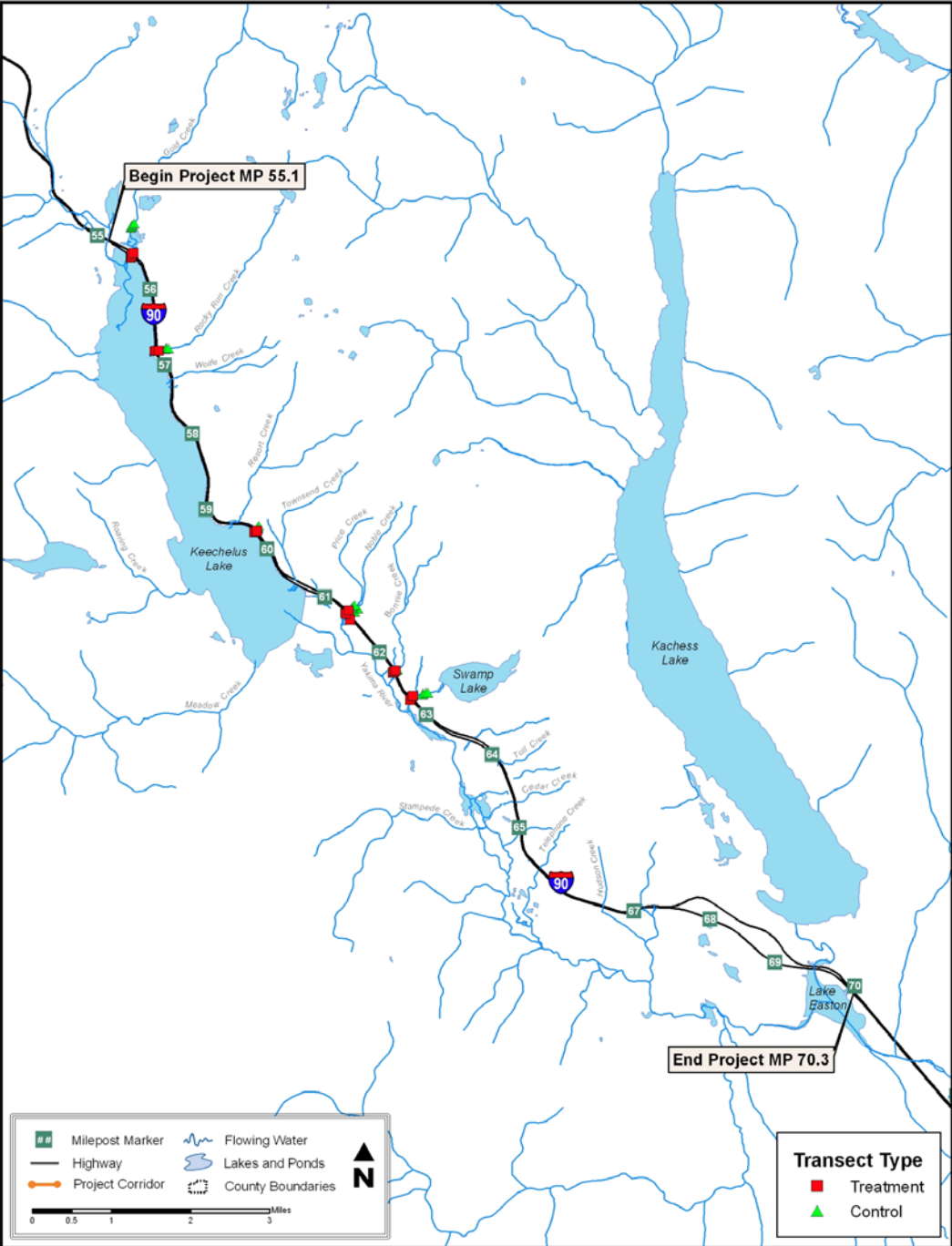
Methods – Baseline Stream Conditions

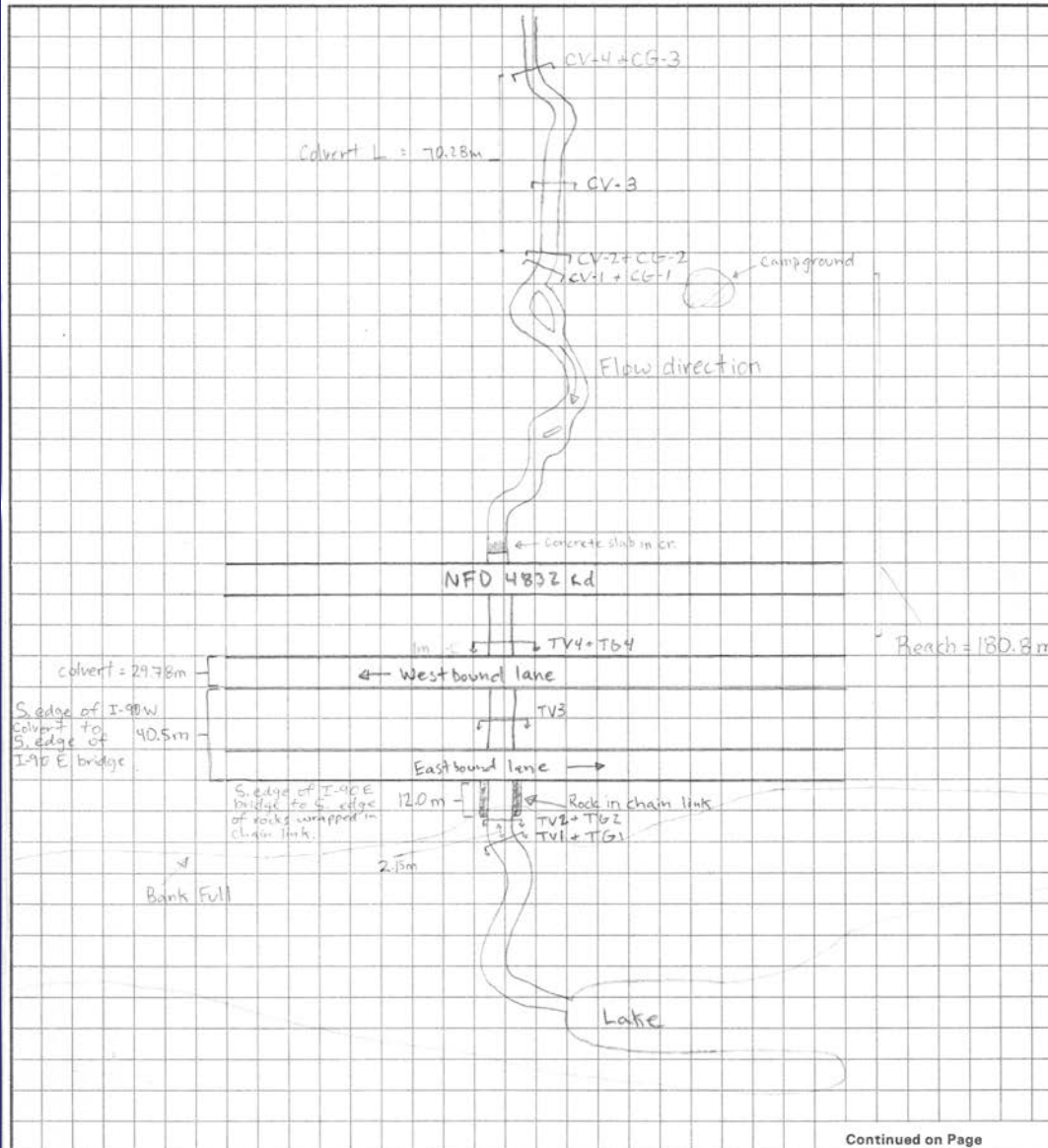
Established permanent “treatment” transects on target streams at culverts and bridges



Established permanent “control” transects upstream from culverts and bridges







Continued on Page

Read and Understood By

Brooklyn Hudson

Signed

Date

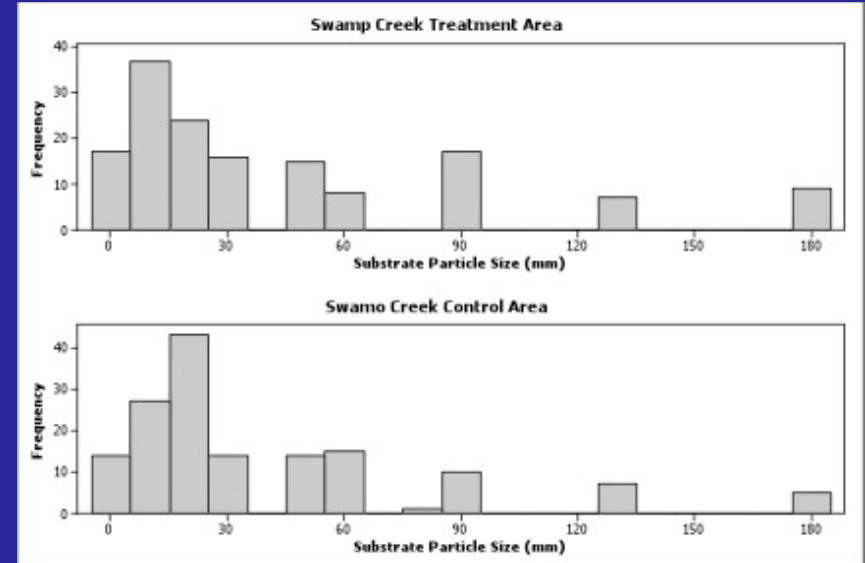
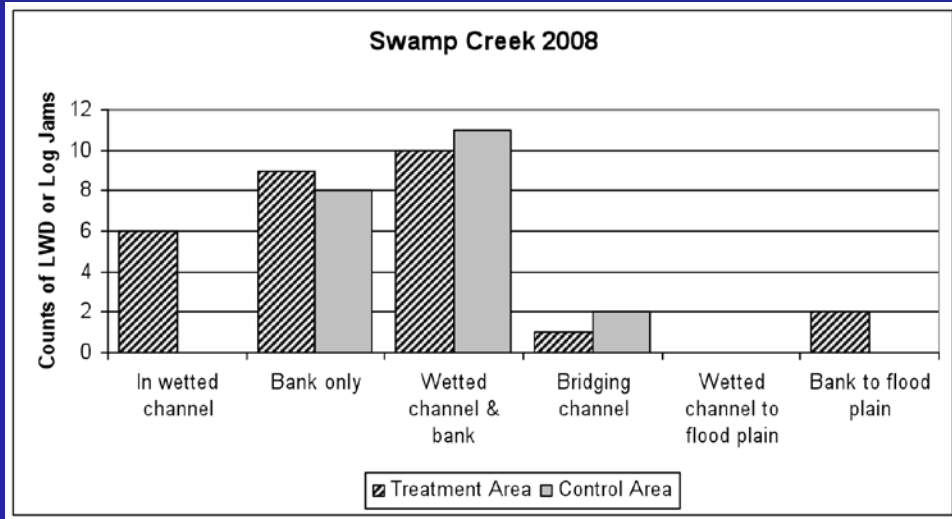
Signed

Date

Woody debris



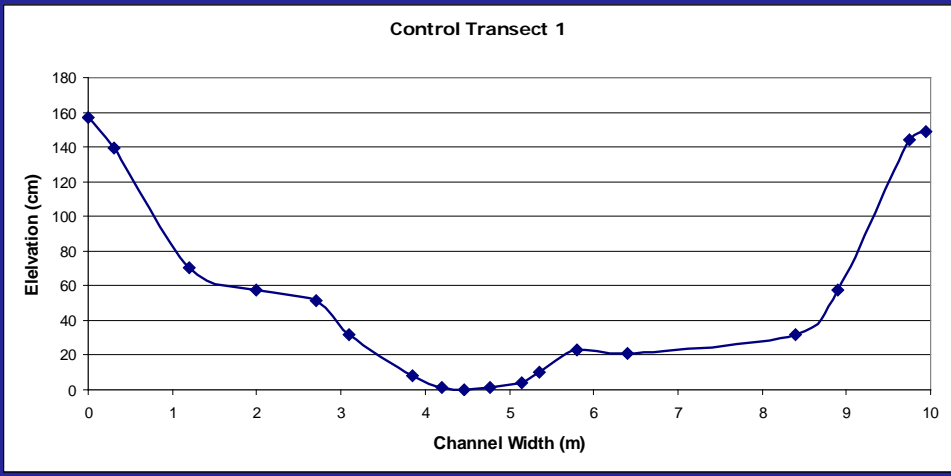
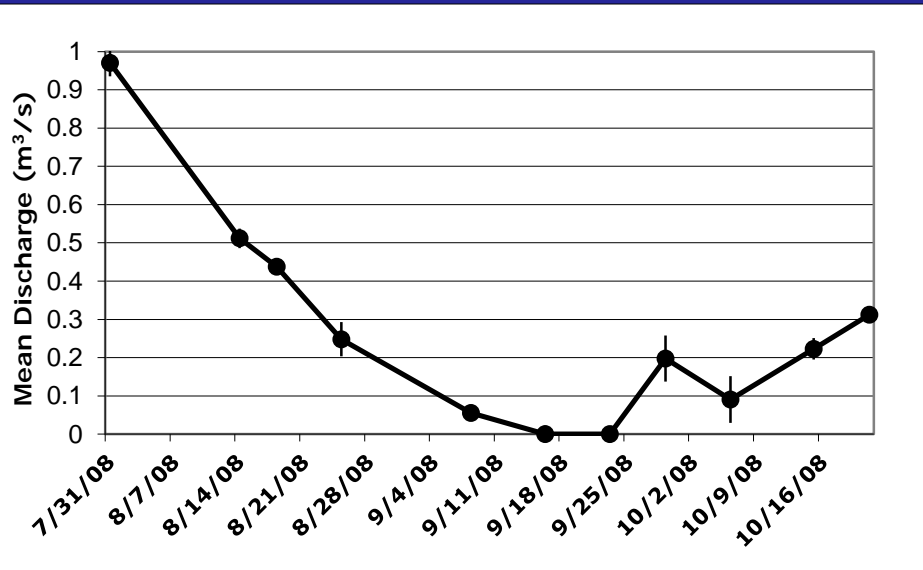
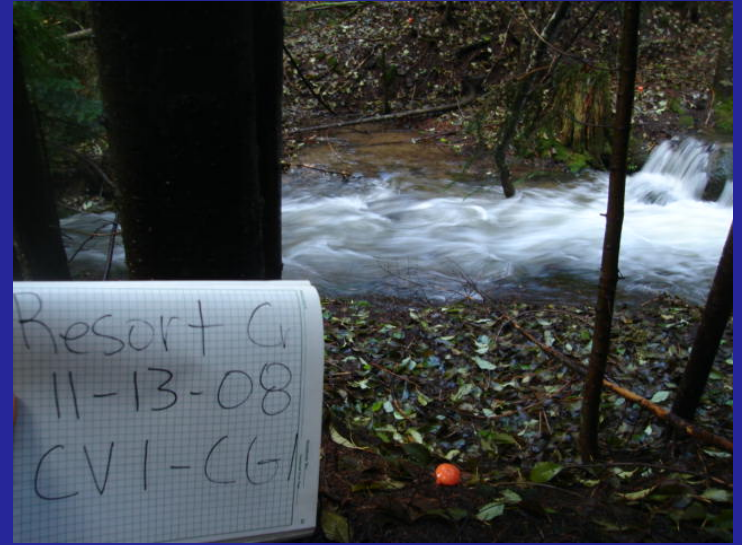
Substrate



Stream flow



Channel profile

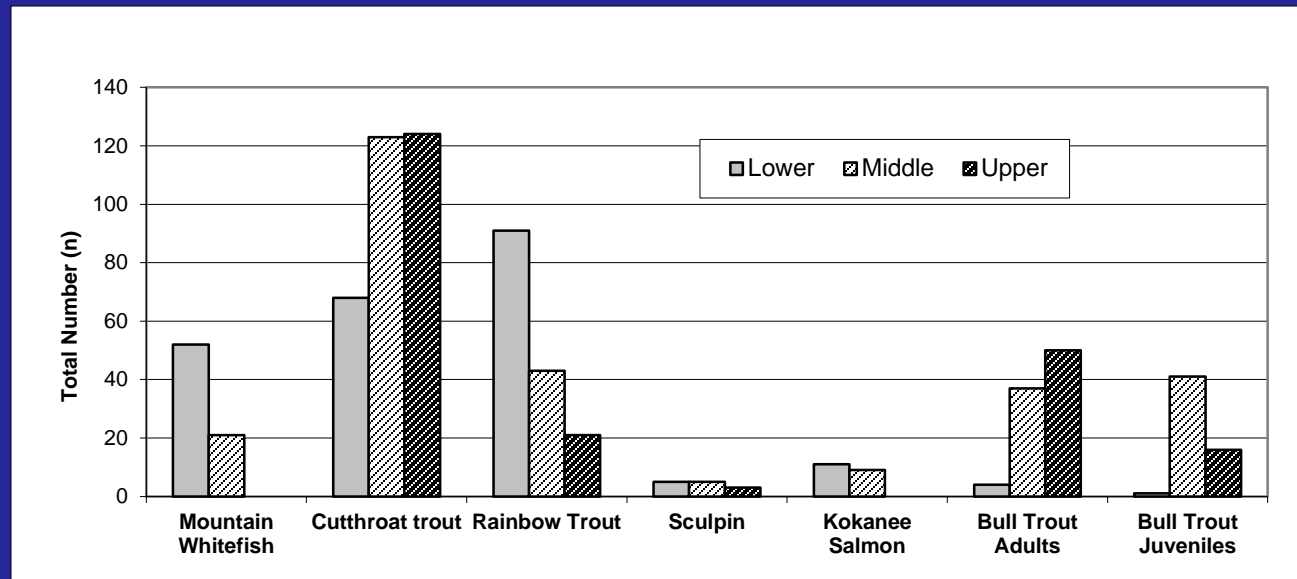


Methods – Baseline Fish Population Data

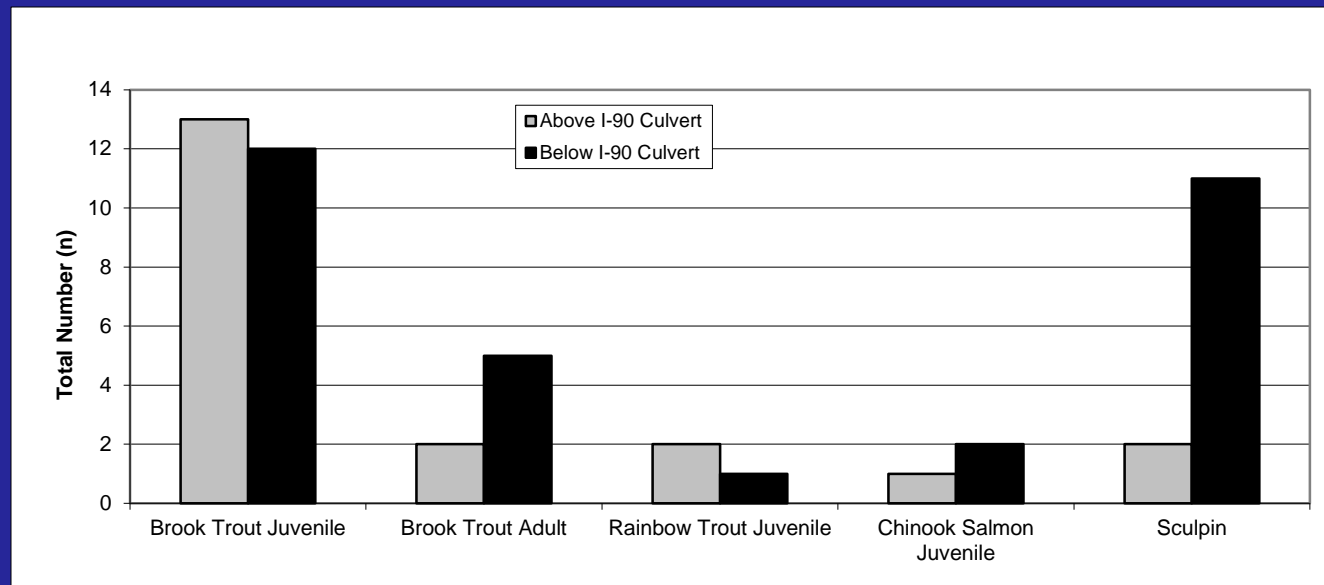
- Established permanent “treatment” transects on target streams at culverts and bridges
- Establishes permanent “control” transects upstream



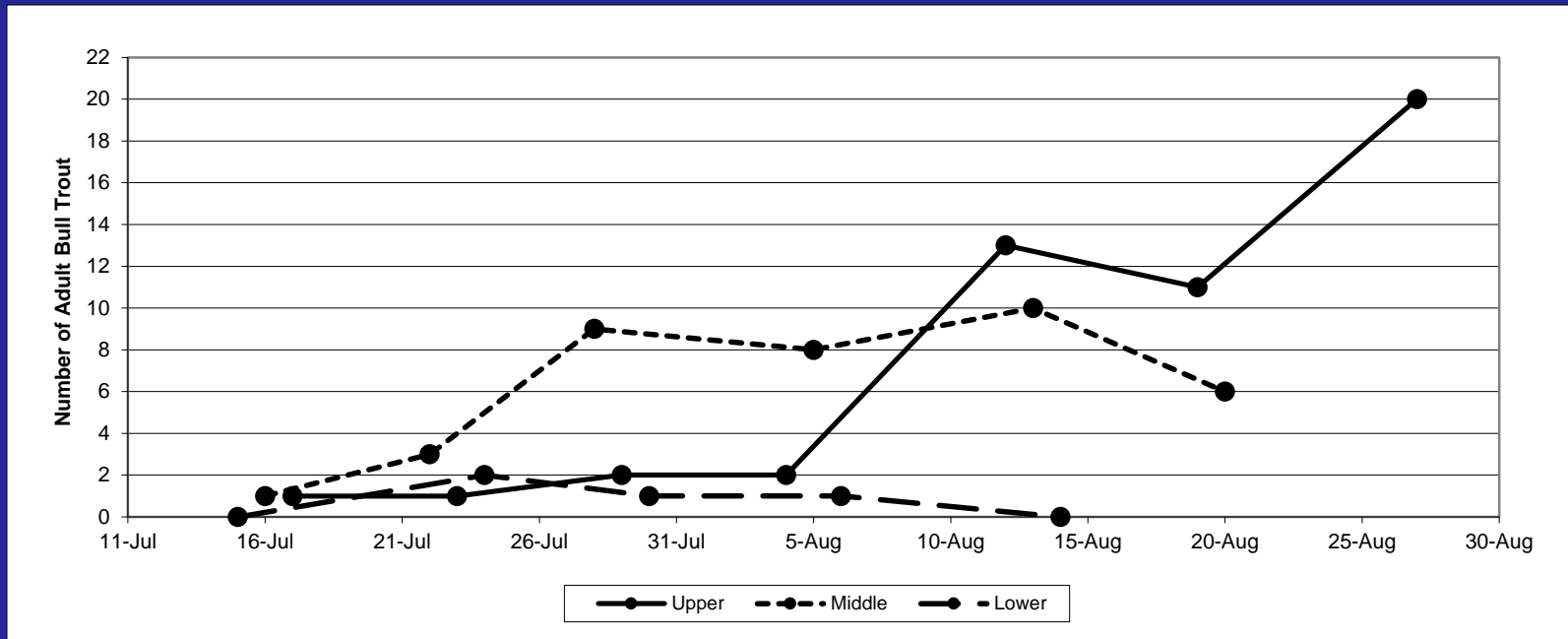
Gold Creek



Swamp Creek



Adult Bull Trout Migrations into Gold Creek in 2008



Jan—Feb—Mar—Apr—May—Jun—Jul—Aug—Sep—Oct—Nov—Dec

Kokanee Salmon Spawning Season

Jan—Feb—Mar—Apr—May—Jun—Jul—Aug—Sep—Oct—Nov—Dec



2009 Monitoring Plans

- Bi-weekly snorkel surveys in Gold Creek
- Measure stream physical characteristics
- Sample fish populations in treatment and control areas
- Map kokanee spawning areas in lower Gold Creek
- Install PIT tag antennas to begin fish monitoring
- Begin macroinvertebrate monitoring
- Monitor Coal Creek as a control stream



Future Project Ideas

**Assessment of Swamp Creek
for coho re-introduction**



**Hydrological study of
Gold Creek**

