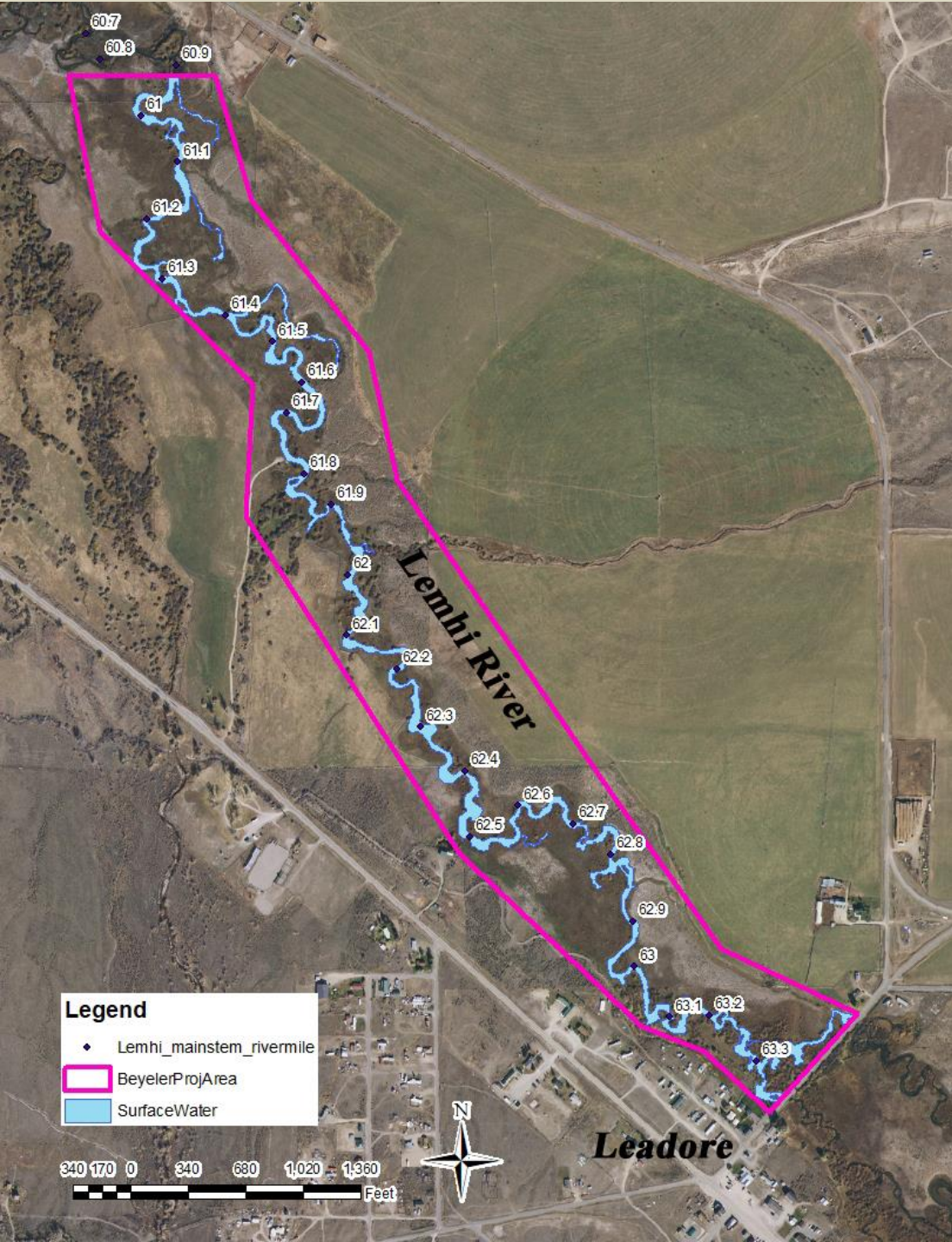


Beyeler Ranch, Upper Lemhi Habitat Enhancement Project

USBWP Advisory Committee

June 6, 2019

Homegrown, Common-Sense Conservation



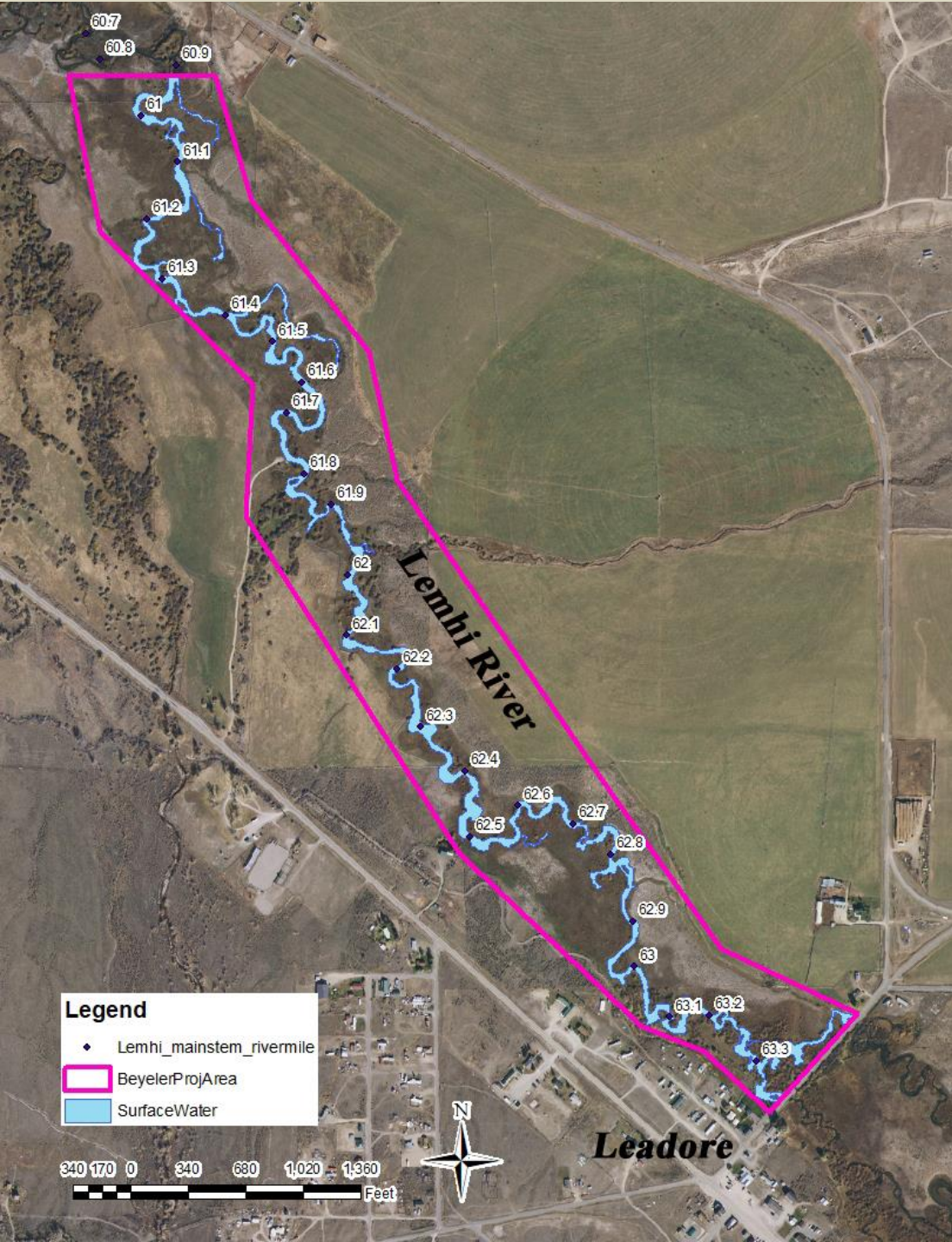
Project location

2.5 river miles

Leadore Ranch Conservation Easement, Beyeler property

High priority area for Chinook as identified by *Upper Salmon Integrated Rehabilitation Assessment*

Ties in with the Fayle Project completed in 2017 on lower end and with upcoming new Hwy 29 Bridge on upper end



Existing Condition

Single thread channel

Historical Condition

Anastomosing channel with multiple side channels and vegetated islands

Existing Condition

Artificially high capacity channel
Little slow water refugia

Historical Condition

Regularly accessed floodplains
Provided slow water refugia



Existing Condition

Overwidened
Lacking instream complexity

Historical Condition

Presence of pools and riffles



Project Goals

- Benefit all life stages of Chinook, steelhead and bull trout
- Enhance habitat, including instream and adjacent floodplain areas
- Maintain landowner's advocacy of the benefits of this Project on their lands

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Upper Salmon Basin
WATERSHED PROGRAM

Project Goals

- Benefit all life stages of Chinook, steelhead and bull trout
- Enhance habitat, including instream and adjacent floodplain areas
- Maintain landowner's advocacy of the benefits of this Project on their lands

Short term

Maximize immediate habitat benefits while working towards long-term recovery

Balance constraints of the existing conservation easement along with ranch management to maximize potential within the least amount of time

Project Goals

- Benefit all life stages of Chinook, steelhead and bull trout
- Enhance habitat, including instream and adjacent floodplain areas
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Life Stage Specific

Prioritization of habitat conditions is as follows:

- a. Tier 1 – Priority: Pre-smolts (over-winter rearing)
- b. Tier 1 – Priority: Parr (summer rearing)
- c. Tier 1 – Priority: Parr (high flow refugia)
- d. Tier 2 – Priority: Adult (spawning and holding)

Tier 1 = Directed effort towards needs of this life stage

Tier 2 = Indirect improvements for this life-stage from Tier 1 actions

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Project Objectives

Maintain and improve thermal conditions and connectivity of existing spring-fed channels.

Method:

Maintain and improve spring water source while avoiding increased thermal influence by mainstem channel. Add cover, deepen, and narrow as needed to create rearing habitat conditions that provide low-velocity areas with cover and thermal benefits that are accessible to fish during the summer and winter base flow periods.

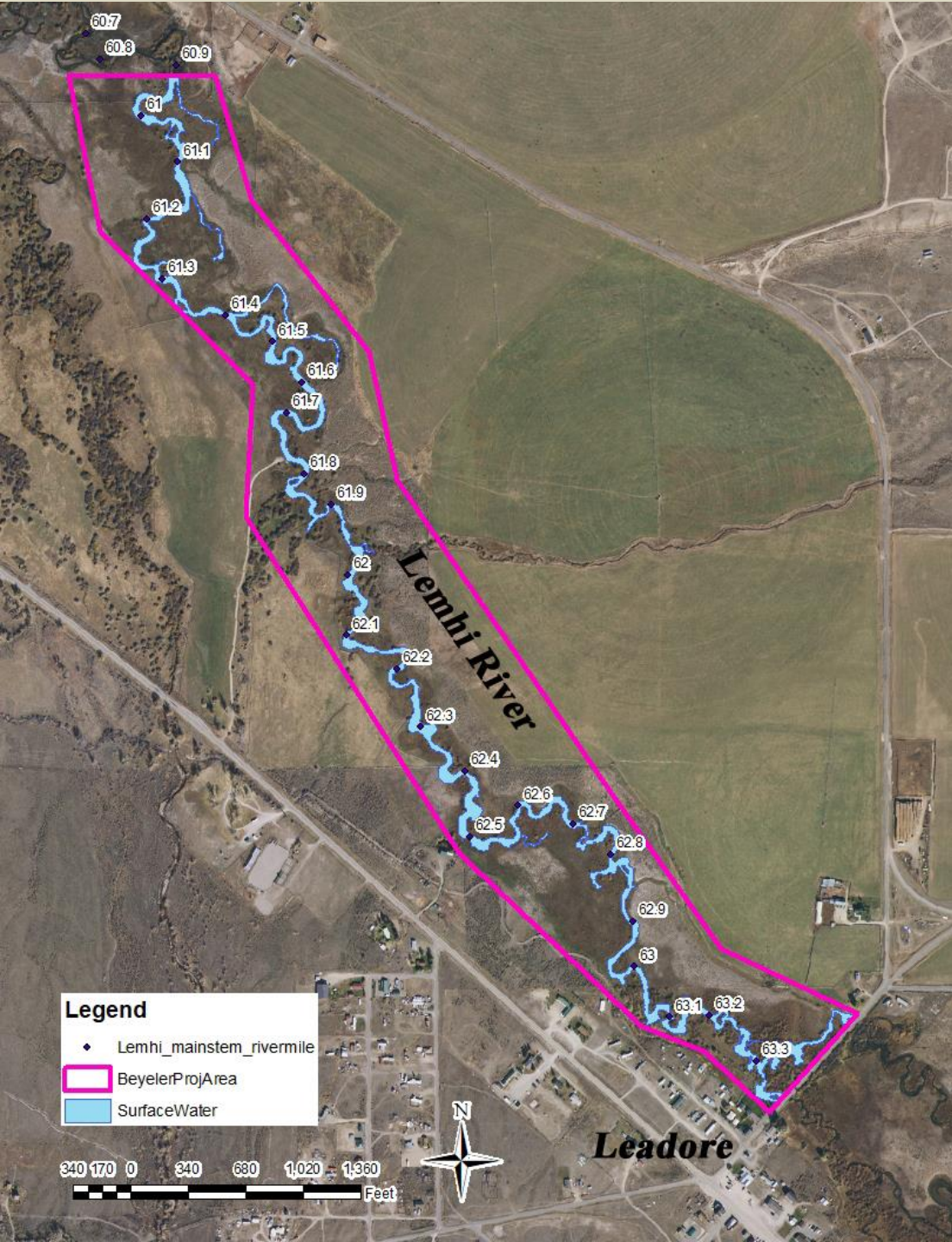
Target Life Stages:

- Pre-smolt over-winter rearing
- Parr summer rearing

Short term

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Balance constraints of the existing conservation easement along with ranch management to maximize potential within the least amount of time



Project Actions

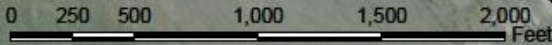
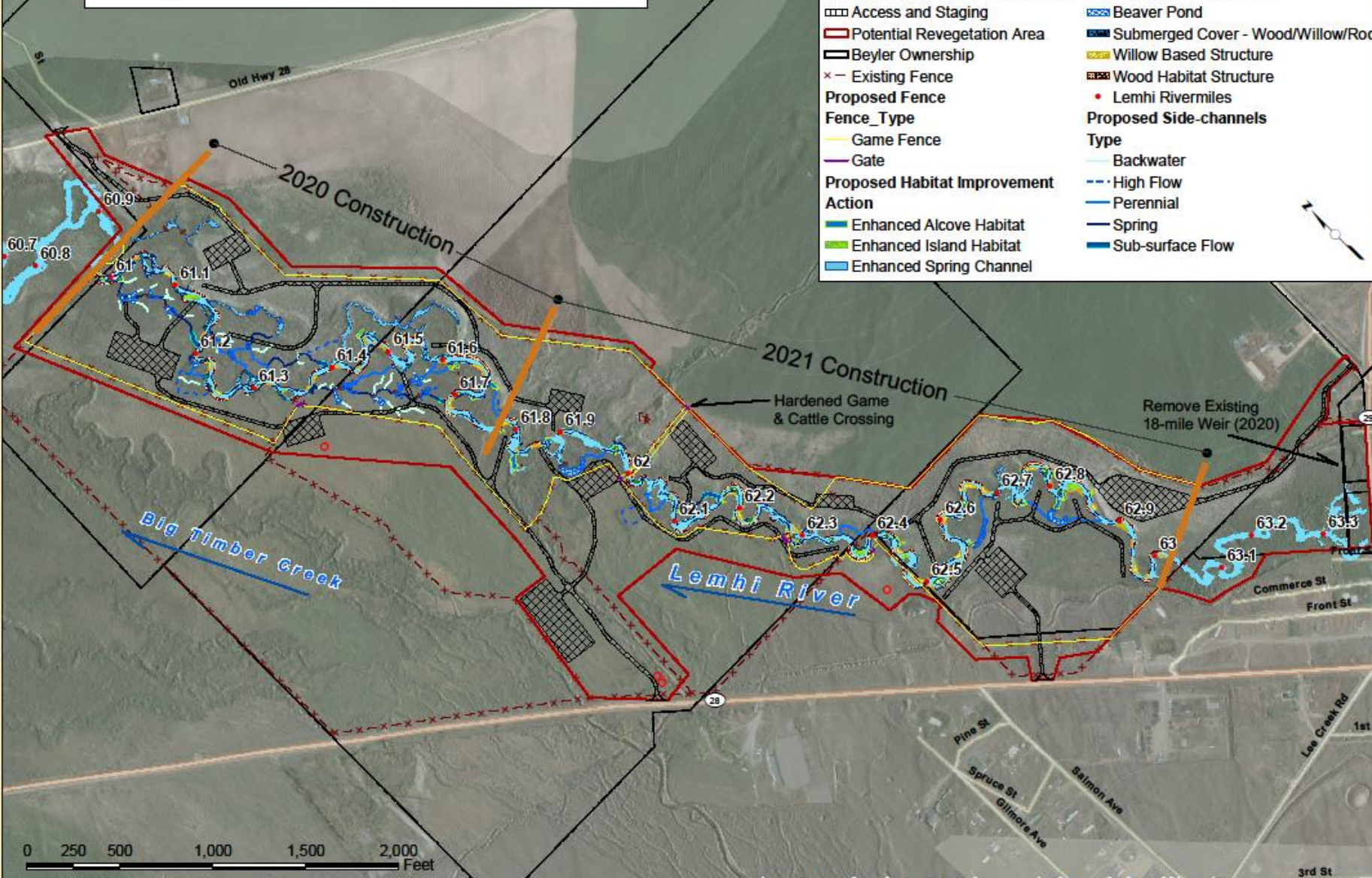
Range from minimal:
planting and browse exclusion

To full restoration:
Channel narrowing
Island braiding
Side channels
BDA's

Large scale project-
Requires much preliminary and
ongoing data collection

Project Concept Overview

- Existing Lemhi River
- Construction Phase Boundaries
- Proposed Off-channel Stockwater
- Access and Staging
- Potential Revegetation Area
- Beyer Ownership
- x Existing Fence
- Proposed Fence**
- Fence_Type**
- Game Fence
- Gate
- Proposed Habitat Improvement Action**
- Enhanced Alcove Habitat
- Enhanced Island Habitat
- Enhanced Spring Channel
- New Alcove Habitat
- New Island Habitat
- Simulated Beaver Dam
- Beaver Pond
- Submerged Cover - Wood/Willow/Rock
- Willow Based Structure
- Wood Habitat Structure
- Lemhi Rivermiles
- Proposed Side-channels**
- Type**
- Backwater
- High Flow
- Perennial
- Spring
- Sub-surface Flow



Source: Aerial, Digital Globe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID

Goal 3 – Maintain landowner’s advocacy of the benefits of this Project on their lands.

a. Develop a positive relationship between the landowner(s) and the Project Design Team.

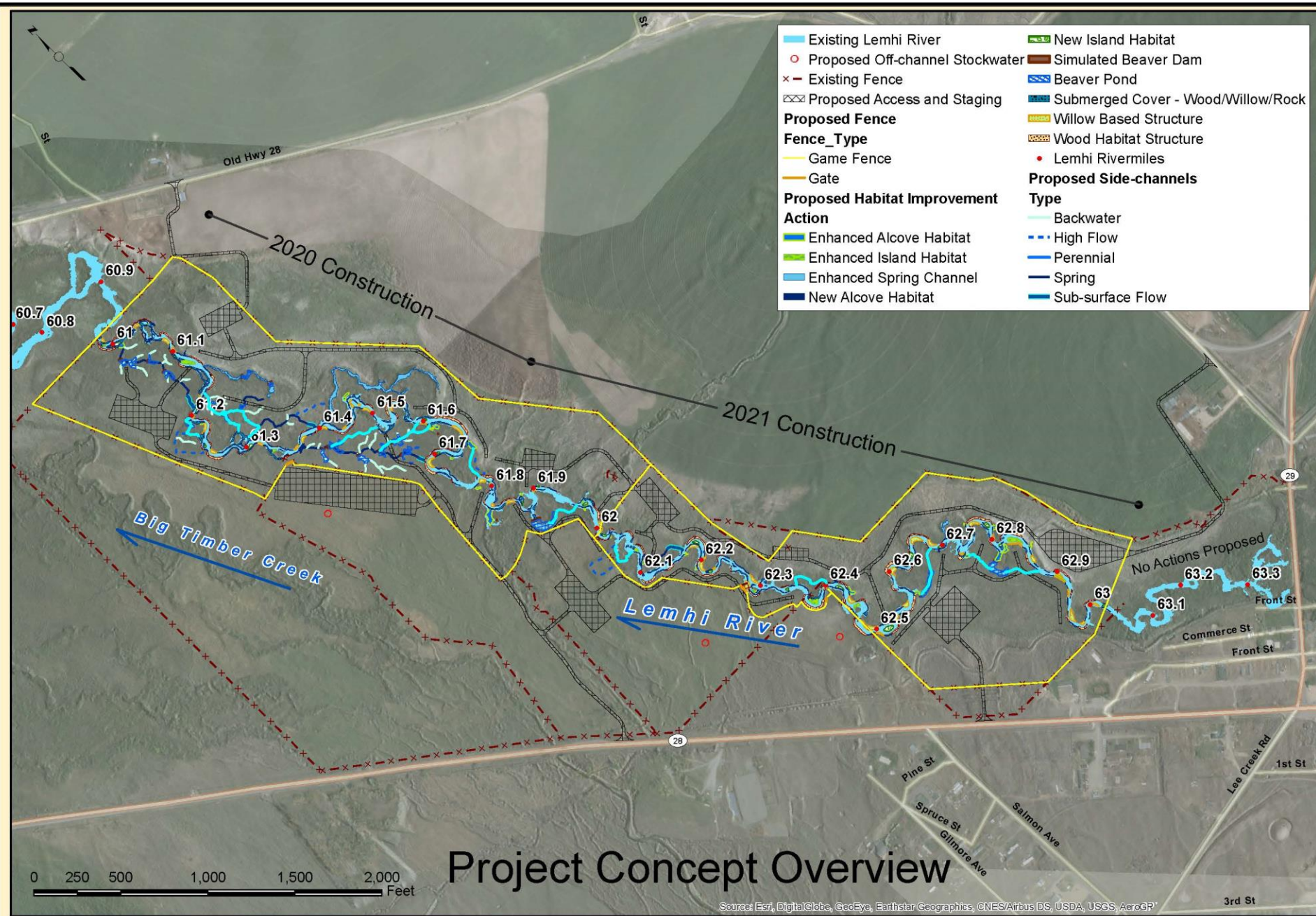
Methods to be used are as follows:

Include landowner in design process by inviting to participate in appropriate design discussions and field site visits. **Meet with landowner and listen.** Hear landowner and address concerns in design process.

b. **Ensure that landowner(s) understand the proposed Project and how it may affect their operations.**

Methods to be used are as follows:

At each Project milestone (15 percent, 30 percent, 80percent and final design), appropriate Project team members will meet with the landowner(s) and discuss design and potential dynamic outcome of all proposed features by season. Maintain Project design transparency by providing “open-door” policy and contact information for appropriate design team member(s). Address questions and concerns quickly and professionally through direct face-to-face interaction whenever possible. Provide landowner(s) with appropriate map and design products at each Project milestone.



Project Concept Overview

Source: Esri, DigitalGlobe, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, Aero3P

3rd St

Partners and Roles

Trout Unlimited: project sponsor

USBWP: project planning, permitting, ESA compliance, funding applications, conservation measure oversight

Lost River Fish Ecology: project planning, construction oversight

USBR: engineering, cultural survey, technical assistance

BPA: funding (potential), environmental and cultural compliance

PCSRF: funding (potential)

EQIP: funding (potential)

IDFG: fish salvage

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Upper Salmon Basin
WATERSHED PROGRAM

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