**Deadman/Skiyou Slough (Site C)**

Seasonally Disconnected Floodplain Habitat Project: Year 1 (2021) Reconnaissance Report

Maddie Hicks, Jonathan Armstrong (Oregon State University)

Catherine Austin (Skagit River System Cooperative)

Site Map

* C1 – site outlet
* WPT 440 – large grown in beaver dam that acts as potential disconnection point during 6/10/2021 site visit
* WPT 294 – new second large grown in beaver dam as of 9/22/2021 site visit downstream of previous beaver dam causing upstream water level to be much higher
* Level logger – placed in deepest downstream location of site upstream of potential beaver dam disconnection point 6/10/2021 – 10/11/2021
* Temperature logger – placed in deepest downstream location of site upstream of potential beaver dam disconnection point 6/10/2021 – 10/11/2021
* Timelapse camera – placed at potential beaver dam disconnection point 6/10/2021 – 10/11/2021

Diagram

Description automatically generated with medium confidence

Figure 1: Map of Deadman/Skiyou Slough with Relative Elevation Model (REM) showing elevation (ft) relative to the mainstem at base flows. REM developed by NSD from USGS 2016 LiDAR and provided by SRSC.

Temperature, Water Level, and Connectivity Trends

Chart, histogram

Description automatically generated

Figure 2. Changes in water level (m) and temperature (°C) in Deadman/Skiyou Slough relative to Skagit discharge (cfs) (USGS Marblemount, WA)

* It is unclear if and when the site becomes disconnected because there is dynamic beaver activity that alters connectivity
* The site remains connected to the mainstem at C1 so any disconnect would occur at large grown in beaver dams which are difficult to assess if fish passable
* Given the low relative elevation of Deadman/Skiyou Slough to the Skagit mainstem, water level is heavily influenced by mainstem discharge
* 6/10/2021 – 10/11/2021
  + Minimum Temperature: 11.1°C
  + Maximum Temperature: 18.3°C
  + Average Temperature: 14.3°C

6/10/2021

* Boat reconnaissance
* Site connected at C1 with wide open channel that can navigate boat through (Figure 3)
* Site very turbid and not able to snorkel
* Potential disconnection point at large grown in beaver dam at WPT 440 but unsure if fish passable (Figure 4)
* No fish observed

A picture containing tree, grass, outdoor, water

Description automatically generated

Figure 3. Looking upstream into lower portion of Deadman/Skiyou Slough from C1 site outlet

A picture containing outdoor, tree, grass, plant

Description automatically generated

Figure 4. Large grown in beaver dam (left) at WPT 440 that acts as potential disconnection point

9/22/2021

* Boat reconnaissance
* Site connected at C1 with open channel that can barely navigate boat through
* Site still very turbid
* Large grown in beaver dam at WPT 440 from previous site visit now completely underwater (Figure 5)
* WPT 294 – new large grown in beaver dam downstream of initial beaver dam that backed up water upstream causing increase in water level (Figure 6)
* Beaver dam at WPT 294 is likely fish passable
* Took temperature and DO measurements just upstream of WPT 294
  + Temperature: 14.1°C
  + DO: 2.67 mg/L
* A couple of juvenile salmonids observed surfacing

A picture containing tree, outdoor, water, river

Description automatically generated

Figure 5. Looking upstream at previous large grown in beaver dam (circled) at WPT 440

A picture containing grass, tree, outdoor, nature

Description automatically generated

Figure 6. Looking upstream at newly created beaver dam at WPT 294 causing backed up water upstream

10/11/2021

* Boat reconnaissance
* Site connected at C1 with open channel that can barely navigate boat through
* Site still very turbid
* Coho observed jumping and one dead 90 mm coho found near timelapse camera location