**Backwater LBK Skagit (Site AN)**

Site Map

* AN1 – site outlet
* WPT 306 – channel that connects side channel and pond
* WPT 309 – western side channel point of disconnect at small berm
* WPT 307 – habitat measurements taken in side channel 9/23/2021
* WPT 308 – habitat measurements taken in side channel 9/23/2021
* WPT 436 – habitat measurements taken in pond 11/4/2021
* WPT 437 – habitat measurements taken in pond 11/4/2021
* WPT 438 – habitat measurements taken in pond 11/4/2021
* WPT 439 – habitat measurements taken in pond 11/4/2021

**Map

Description automatically generated**

Figure 1: Map of Site AN with Relative Elevation Model (REM) showing elevation (ft) relative to the mainstem at base flows

Temperature, Water Level, and Connectivity Trends

* No equipment installed at the site because not able to access until late in the field season
* It is unclear what the connectivity threshold is because no timelapse camera installed and only able to access site outlet for one visit
* Skagit discharge less than 6,000 cfs site likely disconnected
* Given the low relative elevation of the side channel to the Skagit mainstem, site connectivity is likely primarily influenced by mainstem discharge
* Connectivity between the pond and side channel is likely also primarily driven by Skagit discharge although flow needs to be much higher to flow over the berm separating the two
* It is possible that the water is the pond comes primarily from rainfall and runoff with only occasional inundation from the mainstem during high flood events

9/23/2021

* Boat reconnaissance
* Site disconnected at WPT 309 where there is a small berm on the western side of the side channel (Figure 2)

A picture containing outdoor, nature, plant, tree

Description automatically generated

Figure 2. Looking downstream at small berm on western end of side channel that acts as disconnection point from mainstem Skagit

* WPT 307 – took habitat measurements in side channel
  + Depth: 0.38 m
  + Temperature: 10.5°C
  + DO: 3.95 mg/L
* WPT 308 – took habitat measurements in side channel
  + Depth: 0.30 m
  + Temperature: 11.7°C
  + DO: 4.10 mg/L
* Adult pink carcass observed in side channel so river able to inundate recently
* 60-70 mm juvenile salmonids observed
* Very clear visibility with cobble bottom (Figure 3)
* WPT 306 – channel branches off from side channel to the pond but there’s a large berm and wall of blackberry that not able to pass through (Figure 4)
* Pond disconnected from side channel

A person fishing in a river

Description automatically generated with medium confidence

Figure 3. Looking upstream at side channel with clear visibility and cobble substrate

A picture containing grass, outdoor, plant, tree

Description automatically generated

Figure 4. Looking upstream at dry channel that connects side channel to pond

11/4/2021

* Land reconnaissance from Fred’s Lane by Illabot Creek
* Unsure of side channel connectivity because not able to access AN1 from entry point but pond disconnected from side channel just west of WPT 439
* WPT 436 – took habitat measurements in pond
  + Depth: 0.1 m
  + Temperature: 10.2 °C
  + DO: 4.79 mg/L
* Channel is narrow with silt substrate in eastern part of the pond
* WPT 437 – took habitat measurements in pond
  + Depth: 0.3 m
  + Temperature: 9.6 °C
  + DO: 3.55 mg/L
* WPT 438 – took habitat measurements in pond
  + Depth: 1.0 m
  + Temperature: 9.3 °C
  + DO: 3.68 mg/L
* As move west in the pond the substrate becomes mixed gravel and opens into wider channel that looks more suitable for fish but no fish observed
* Poor visibility so could be fish but not able to see
* WPT 439 – took habitat measurements in pond
  + Depth: 0.6 m
  + Temperature: 9.0 °C
  + DO: 4.62 mg/L
* Pond becomes dry and reaches disconnection point with side channel about 20 m west of WPT 439