

Table 1. Limiting life stage and species limiting factors for ASRP indicator species.

Species	Limiting life stage	Species limiting factors	Best Achieved By
Winter Run Steelhead	Spawning and juvenile rearing	Complex habitats and stable spawning gravels	<ul style="list-style-type: none"> • Access to multiple habitat types (connected side and floodplain areas) ELJs to split flow, raise WSEL, and direct flow into floodplain, side channel and backwater areas. • ELJs partition shear stress and sort sediment.
Coho Salmon	Juvenile rearing	Complex habitats and cold water	<ul style="list-style-type: none"> • Access to multiple habitat types (connected side and floodplain areas) ELJs to split flow, raise WSEL, and direct flow into floodplain, side channel and backwater areas. • Deep pools created through ELJ scour and floodplain connectivity that increase groundwater storage.
Fall-run Chinook and Chum salmon	spawning	Cold water and stable spawning gravels	<ul style="list-style-type: none"> • Deep pools created through ELJ scour and floodplain connectivity that increase groundwater storage. • ELJs partition shear stress and sort sediment.
Northern red-legged frog	Egg laying productivity	Backwater habitat, increasing wetland hydroperiod	<ul style="list-style-type: none"> • Access to multiple habitat types (connected side and floodplain areas) ELJs to split flow, raise WSEL, and direct flow into floodplain, side channel and backwater areas.
Olympic mudminnow	rearing	Backwater habitat, increasing wetland hydroperiod	<ul style="list-style-type: none"> • Access to multiple habitat types (connected side and floodplain areas) ELJs to split flow, raise WSEL, and direct flow into floodplain, side channel and backwater areas.
Great blue heron	nesting	Mature riparian vegetation – specifically alders	<ul style="list-style-type: none"> • Slowing channel migration rates to allow colonization of banks and bars with vegetation and active plantings
North American beaver	Young to dispersal age	Availability of food, side channels in proximity to riparian vegetation	<ul style="list-style-type: none"> • Access to multiple habitat types (connected side and floodplain areas) ELJs to split flow, raise WSEL, and direct flow into floodplain, side channel and backwater areas. • Slowing channel migration rates to allow colonization of banks and bars with vegetation and active plantings.

Table 2. Table 2. SMART goals to achieve project objectives by addressing limiting factors for indicator species.

Objective	Problem Statement	Specific	Measurable	Achievable	Relevant	Time-Bound
Winter Run Steelhead	In-channel ELJ's to sort stable gravels and provide complex habitats and food production. Reduction of fine sediment inputs.	-Install 30 in-channel ELJ's -Reduce erosion rate along 5,000 feet of aggressively eroding bank.	yes	yes	yes	Construction in 2022
Coho Salmon	In-channel wood ELJ's to sort stable gravels and provide complex habitats and food production. Reduction of fine sediment inputs. Mature riparian vegetation along channel margins.	-Install 30 in-channel ELJ's -Reduce erosion rate along 5,000 feet of aggressively eroding bank -Plant 100 acres with appropriate riparian species	yes	yes	yes	Construction in 2022
Fall-run Chinook and Chum salmon	In-channel wood ELJ's to sort stable gravels, reduction of fine sediment inputs, mature riparian vegetation along channel margins.	-Install 30 in-channel ELJ's -Reduce erosion rate along 5,000 feet of aggressively eroding bank -Plant 130 acres with riparian species	yes	yes	yes	Construction in 2022
Northern red-legged frog	In channel wood ELJ's to create backwaters in the floodplain and increase the wetland hydroperiod.	-Install 30 in-channel ELJ's -Plant 130 acres with riparian species -Increase frequency of inundation of 120 acres of floodplain at Q1 flow (10,000cfs)	yes	yes	yes	Construction in 2022
Olympic mudminnow	In channel wood ELJ's to create backwaters in the floodplain and increase the wetland hydroperiod.	-Install 30 in-channel ELJ's -Plant 130 acres with riparian species	yes	yes	yes	Construction in 2022
Great blue heron	Plant riparian vegetation and use ELJ's as hard points on the floodplain to promote succession of riparian vegetation.	-Install 30 in-channel ELJ's -Plant 130 acres with riparian species	yes	yes	yes	Planting in 2022
North American beaver	Plant riparian vegetation and use ELJ's as hard points on the floodplain to promote succession of riparian vegetation and promote side channel development.	-Install 30 in-channel ELJ's -Plant 130 acres with appropriate riparian species	yes	yes	yes	Planting in 2022