

Physical Objectives	Description	Measureable Criteria	Monitoring Technique	Effectiveness Criteria	Notes
1. Habitat protection and conservation	<ul style="list-style-type: none"> • Fee title acquisition • Term conservation easement 	<ul style="list-style-type: none"> • Protected acreage 	<ul style="list-style-type: none"> • Bi-weekly livestock trespass monitoring • Fence/water gap inspection • Boundary inspection 	<ul style="list-style-type: none"> • Increased acreage protected 	<ol style="list-style-type: none"> 1. Livestock exclusion, direct benefit for riparian protection. 2. Habitat program directly involved with planning/management of acquisition/easements,
2. Floodplain reconnection	<ul style="list-style-type: none"> • Restore connectivity to promote hydrologic and physical processes that maintain complex and resilient habitats that hydrate/store, attenuate floods, and buffer water temperature. 	<ul style="list-style-type: none"> • Inundation @ annual 1.25 flood flow • Summer base flow • Acreage inundated • Ground water elevations • Beaver habitat suitability (# acres)(see notes) 	<ul style="list-style-type: none"> • UAV Imagery (remote sensing) • Groundwater wells • Stage recorders • Piezometer 	<ul style="list-style-type: none"> • Inundated acreage (annual) • Groundwater elevation in relation to ground surface • Summer base flow discharge • Increase acre-foot (af) storage 	<ol style="list-style-type: none"> 1. Valley form and stakeholder/landowner buy-in are limiting factors for max potential of floodplain connectivity. 2. Increase floodplain connectivity as discharges increase without increasing flood damage to nearby infrastructure (if present). 3. Beaver habitat suitability will correlate with floodplain acreage.
3. Channel morphology restoration	<ul style="list-style-type: none"> • Increase stream length and channel complexity 	<ul style="list-style-type: none"> • Lengths of main channel and side channels (miles) • Number of pools (see notes) • Sinuosity • Node density • Maintain side-channel activation 	<ul style="list-style-type: none"> • Longitudinal profile • UAV (remote sensing) • River complexity index (RCI) 	<ul style="list-style-type: none"> • Increase main and side channel lengths • Increase sinuosity (geomorphic template) • Increase pools (4' depth)/mi • Higher RCI than pre-project conditions • Side-channel and peripheral habitat persistence 	<ol style="list-style-type: none"> 1. RCI will follow standard protocol of Brown 2002. 2. Deriving a target value of pool frequency will be consistent with McIntosh et al. 2000 coupled with Rosgen morphology and BOR Tributary Assessment. 3. Sinuosity is contingent on geomorphic template of project reach.
4. Instream habitat structure and complexity	<ul style="list-style-type: none"> • Increase large wood (LW) in project reach 	<ul style="list-style-type: none"> • Wood loading (pieces/mile) commensurate with reference condition wood loading (see notes) 	<ul style="list-style-type: none"> • Survey prior to project start • UAV(remote sensing) 	<ul style="list-style-type: none"> • Increase pieces/mile in relation to design based on reference 	<ol style="list-style-type: none"> 1. It is expected wood loadings will vary due to recruitment and dismissal of LW. 2. Large wood frequencies within the bankfull channel will be correlated to quantities associated with reference conditions (Mcintosh et al. 1994). 3. Bioclimatic region, drainage area, and channel width are dominant predictors of instream wood load (Wohl et al. 2017).
5. Riparian restoration and management	<ul style="list-style-type: none"> • Restore riparian and floodplain vegetation 	<ul style="list-style-type: none"> • Percent vegetation cover 	<ul style="list-style-type: none"> • UAV imagery (remote sensing) • Stock/stem survival • Photo points 	<ul style="list-style-type: none"> • Year 5: >80% fully vegetated (herbaceous cover, including sedges and rushes/herbaceous) • Year 5: 20% riparian and forest shrub tree cover • Year 25: >50% riparian and forest shrub tree cover 	<ol style="list-style-type: none"> 1. Riparian vegetation will be assessed through a combination of remotely sensed imagery and on-the-ground surveys. 2. Monitoring of vegetation can extend out to 15 years post-project completion.
6. Water quality	<ul style="list-style-type: none"> • Improve summer and winter altered thermal regime 	<ul style="list-style-type: none"> • Stream temperature 	<ul style="list-style-type: none"> • Forward looking infrared (FLIR) • Thermographs • Maximum Weekly Maximum Temperature (MWMT) • Diurnal fluctuation range 	<ul style="list-style-type: none"> • Reduce # days under 25°C (lethal limit) • Increase #days within 10°C and 18°C (core cold temps for salmonids) 	<ol style="list-style-type: none"> 1. Contingent on funding availability, hyporheic exchange would be monitored.
7. Fish passage	<ul style="list-style-type: none"> • Improve fish passage for all life stages of targeted species (steelhead, chinook salmon, bull trout, and Pacific lamprey) 	<ul style="list-style-type: none"> • Overflow capacity for floodplain connection • Native fish species present • Life history stages that require fish passage 	<ul style="list-style-type: none"> • ODFW Fish Passage Criteria (635-412-0035)(See notes) 	<ul style="list-style-type: none"> • Miles of restored or improved passage for targeted species 	<ol style="list-style-type: none"> 1. ODFW Chapter 635: Division 412 Fish Passage – 635-412-0035