U.S. DEPARTMENT OF THE INTERIOR

BUREAU OF INDIAN AFFAIRS

North Fork Jocko- Tabor Diversion Project

Lake County, Montana

Final Environmental Assessment

Prepared for:

The Confederated Salish and Kootenai Tribes

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Acronyms

BA: Biological Assessment

BIA: Bureau of Indian Affairs

BO: Biological Opinion

CSKT or the Tribes: Confederated Salish and Kootenai Tribes

DEWR: Department of Water Resources

EA: Environmental Assessment

EPA: Environmental Protection Agency

FIIP: Flathead Indian Irrigation Project

NAAQS: National Ambient Air Quality Standards

NEPA: National Environmental Policy Act

NTU: nephelometric turbidity units

PM: particulate matter

SOP: Standard Operating Procedures

TPD: Tribal Preservation Department

USFWS: U.S. Fish and Wildlife Service

1.0 Introduction

This Environmental Assessment (EA) analyzes the impacts of the North Fork Jocko - Tabor Diversion Project (Project or Proposed Action), located on the Flathead Indian Reservation (Reservation) in Section 24, Township 17 North, Range 18 West, Lake County, Montana. The Project is proposed by the Confederated Salish and Kootenai Tribes (Tribes or CSKT). The Project area (area of potential direct project disturbance) is located at the existing Tabor Diversion (Facility) on the North Fork Jocko River (NF Jocko) approximately 13 miles east of Arlee, Montana, six miles upstream of the confluence with the Jocko River (Figure 1).

The Project would be funded through Compact Settlement dollars managed by the CSKT. This EA was prepared to meet the Bureau of Indian Affairs' (BIA) responsibilities under the National Environmental Policy Act (NEPA) and was guided by the BIA 2012 NEPA Guidance (BIA 2012). The federal action is the approval of the Project on Tribal land, and the use of funds associated with the CSKT Water Rights Settlement. This triggers BIA's NEPA compliance review of the Project (42 USC § 4321- 4347).

This project was prioritized as part of the CSKT Montana Water Compact[1] (Compact), authorized in 2021 under the Montana Water Right Protection Act, due to the Tribal interest in restoring flows in the NF Jocko and improving fish passage and protection at the Facility. The Facility is located in critical Bull Trout (*Salvelinus confluentus*) habitat designated by the U.S. Fish and Wildlife Service (USFWS; 75 FR 63898). The Facility does not provide proper fish passage and impedes natural sediment transport in the North Fork Jocko. The Project proposes to remove the diversion dam at the Tabor Feeder Canal (Tabor Canal), construct a rock ramp fishway for fish passage, and add fish screens to eliminate fish entrainment in the canal. The Project would also add a concrete sluiceway channel and sluice gates to allow for bedload passage during sediment loading events, and for flushing of the river channel upstream of the diversion.

The Project area (Figure 2) consists of all areas of proposed ground disturbance or construction including the area within and adjacent to the NF Jocko surrounding the existing Facility, the Tabor Canal to approximately 400 feet downstream of the NF Jocko, staging areas, a concrete batch plant, as well as access roads that would be widened. Two existing off-site staging and materials sites would also be used, located several miles west of the Project area; however, these are not included in the Project area as they are already in use. The Tribes own all of the parcels within the Project area.

[1] CSKT Montana Water Compact: 85-20-1901, MCA, https://leg.mt.gov/bills/mca/title_0850/chapter_0200/part_0190/section_0010/0850-0200-0190-0010.html

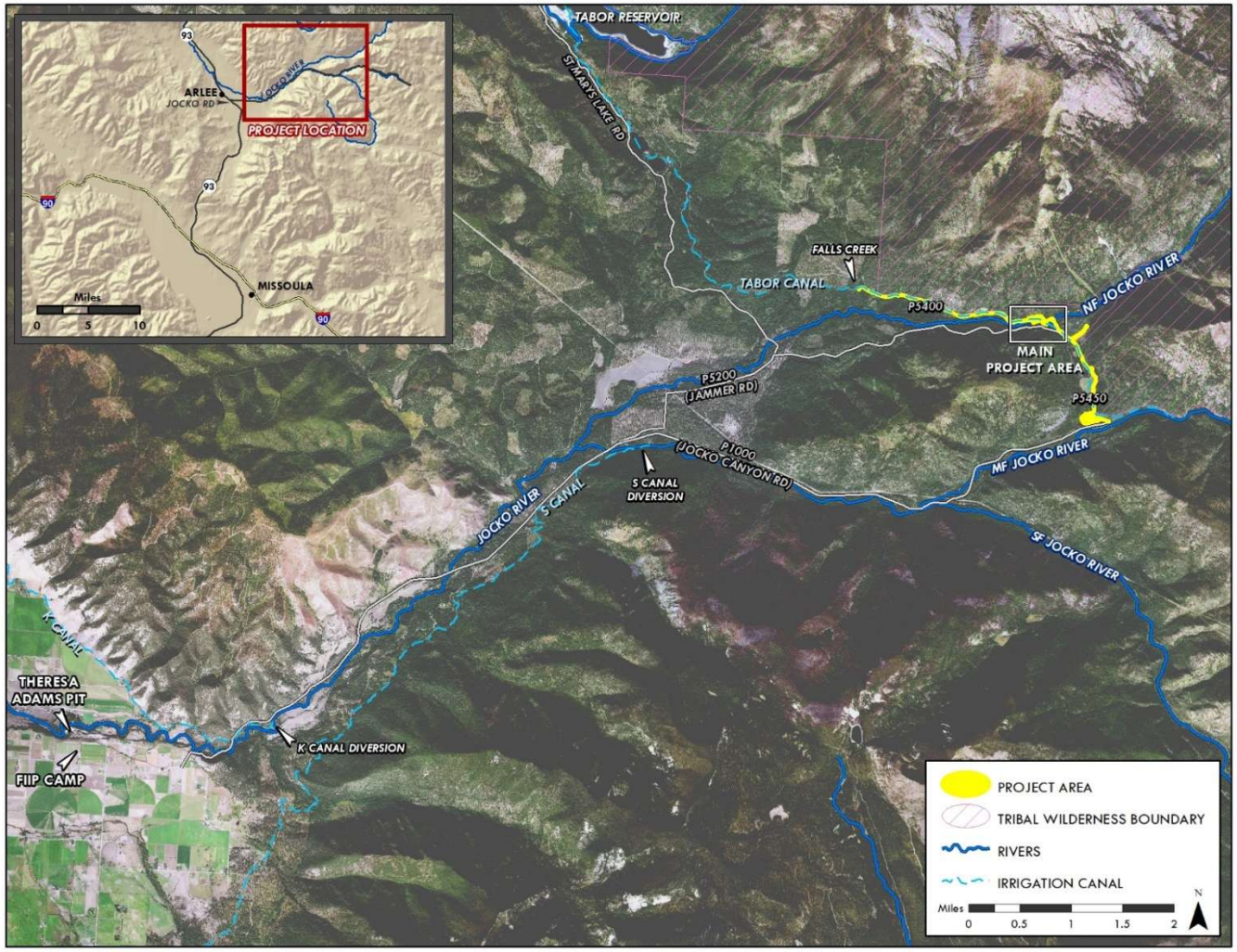

Figure 1. Project location.

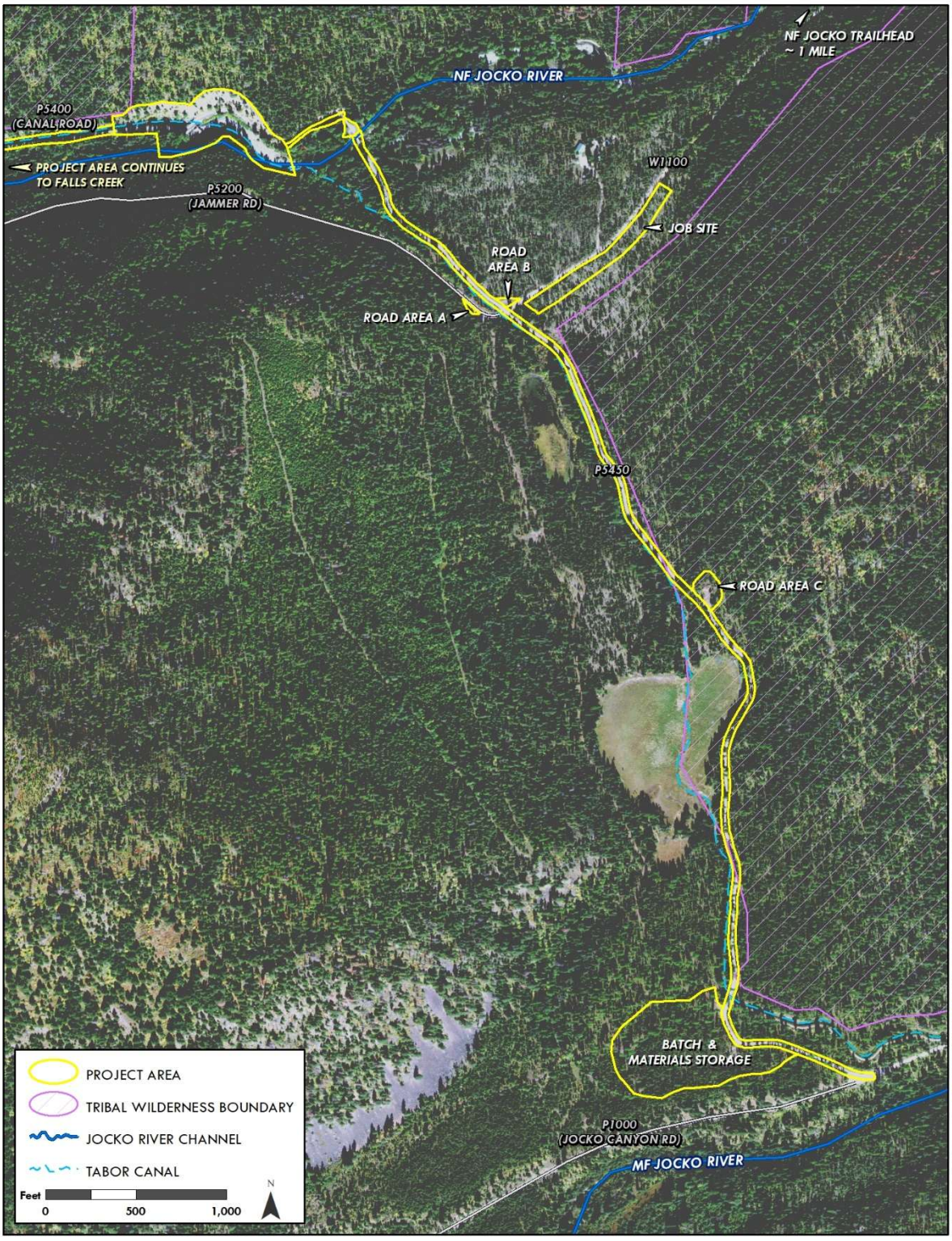

Figure 2. Project area and overview of Project features.

1.1 Background

The existing Facility comprises a river-spanning concrete gravity diversion dam structure built across the NF Jocko in 1924, operated by the Flathead Indian Irrigation Project (FIIP). Water diverted at the Facility enters the Tabor Canal and is conveyed several miles to the Tabor Reservoir where it is ultimately routed to reservoirs and irrigated land in the Mission Valley. This trans-basin diversion from the Jocko to the Mission Valley supplies over 15 percent of Mission Valley irrigation water and is the primary source of water supply and inflow to Tabor Reservoir.

The Facility is critical irrigation infrastructure and, at over 100 years old, is in a state of disrepair with the following structural, operational, and environmental deficiencies:

- Structural deterioration with weathered concrete and exposed rebar.
- Antiquated manually-operated sluice gates and headgate which cause the following problems:
    - Worker safety issues;
    - The manually-operated headgate lacks sensitivity to control flows and is therefore inadequate to meet pending instream flow requirements in the NF Jocko as stipulated by the Compact, or to implement channel-flushing bankfull flows recommended by the USFWS to improve Bull Trout habitat; and
    - Sediment that accumulates behind the diversion must be sluiced annually at the end of the irrigation season by opening the radial gate on the diversion. This results in a flush of sediment downstream in the NF Jocko, degrading water quality and aquatic habitat.
- The diversion does not allow upstream or downstream fish passage, causing habitat fragmentation.
- The Tabor Canal flow is unscreened, causing fish entrainment in the canal.

Given the importance of the Facility and its structural, operational, and environmental issues, the Project is specifically identified as a priority in the Compact (Compact Appendix 3.6). The Project is also in direct support of the first purpose of the Compact, outlined in Section 7(a) of the Montana Water Right Protection Act, which is “to conserve water resources, enhance fish and wildlife habitat, especially habitat of threatened and endangered species, and improve the movement of fish through and around FIIP facilities.”

The need to modernize and rehabilitate the Facility is further driven by the fact that the NF Jocko is designated by the USFWS as critical Bull Trout habitat and supports low numbers of Bull Trout. The USFWS identified the issues above in the 2018 FIIP Biological Opinion (BO; USFWS 2018) as negatively affecting Bull Trout and critical habitat in the NF Jocko. Westslope Cutthroat Trout (*Oncorhynchus lewisi*), a potential Bull Trout prey species and a Tribal Species of Special Consideration, are also found in this reach of the NF Jocko.

Restoring this key reach of stream is also an essential element of a much larger watershed effort aimed at conserving and enhancing native fishes. In 1998, a Consent Decree was signed that required the Atlantic Richfield Company (ARCO) to pay CSKT for natural resource damage in the Upper Clark Fork River related to ARCO's historic mining and ore processing activities in this area. Following the Consent Decree, CSKT developed the *Wetland and Riparian Habitat and Bull Trout Restoration Plan* (CSKT 2000) that identified the Jocko River watershed as the most similar to the damaged resources in the Upper Clark Fork River. CSKT therefore selected the Jocko River watershed as the target area to implement restoration actions in accordance with the Consent Decree to improve overall ecosystem integrity with an emphasis on reestablishing natural linkages between terrestrial, riparian, and aquatic environments.

1.2 Purpose and Need

The Project is needed because the Facility is deteriorating and causes worker safety issues; lacks fish screening; lacks sensitivity to efficiently manage water; is a complete barrier to fish passage; and impacts natural sediment movement, thereby affecting water quality and aquatic habitat due to the lack of appropriate sluicing capabilities and operational practices. Therefore, the purpose of the Project is to address these structural, operational, and environmental issues by replacing the diversion to include a rock ramp fishway that passes all life stages of fish; adding automated sluicing to the diversion to incrementally sluice sediment downstream in a more normative sediment regime; adding modern operational controls to manage flows and reduce worker safety issues; and installing fish screening in the Tabor Canal.

2.0 Proposed Action and Alternatives

The Proposed Action and No Action alternatives were the only alternatives evaluated, as there are no unresolved conflicts about the Proposed Action with respect to alternative uses of available resources.

2.1 No Action Alternative

The No Action Alternative provides the baseline of environmental conditions that are used to quantify the effects of the Proposed Action during the analysis. Under the No Action Alternative, the Project area would remain in its current state, as described in Section 1.1, Background. The Facility infrastructure would not be upgraded and would remain in its degraded condition, and FIIP would continue to operate the Facility with the current management. Environmental degradation from Facility operation would continue to occur (fish entrainment in Tabor Canal, the diversion acting as a fish barrier, and sediment transport issues).

2.2 Proposed Action

The Proposed Action is the Project. The primary objectives of the Project are as follows: 1) provide water diversion from the NF Jocko and conveyance flows from the Middle Fork Jocko

River, to Tabor Reservoir via the Tabor Canal, 2) provide means of passing bedload downstream of the diversion during runoff and/or flushing of accumulated bedload, 3) provide fish passage upstream of the diversion, and 4) provide screening of the Tabor Canal and fish bypass for downstream migrants to the NF Jocko below the diversion structure.

The majority of the Project is associated with the Facility, and the design for the Facility area is presented in detail in the Project Construction Drawings (Attachment A). The area surrounding the Facility where the majority of construction activities would occur is also referred to as the "main Project area". The Project also includes ancillary features such as improvements to access roads and development of temporary staging areas and the concrete batch plant, which are located near the Facility. Project features, restoration activities, construction schedule, water management, conservation measures and best management practices (BMPs), and operation of the new Facility are summarized in the sections below.

2.2.1 Construction Schedule

Table 1 presents a summary of the Project construction schedule, which would occur over a four-year period plus one additional year for any remaining site restoration or infrastructure calibration needed. Construction is anticipated to begin in 2025. Year 1 construction would commence in June, and the construction season would occur between April and November of each following year. If project delays occur, construction would occur in the same months and commence the following year. Key activities occurring during constructions years (or seasons) 1-4 are presented in Figure 3 through Figure 6. The construction schedule was developed to feasibly implement the Project over a four-year period due to physical and operational site constraints including the confined nature of the canyon at the diversion, restricted construction access, the requirement to maintain irrigation delivery through the construction period, the need to terminate work during winter months, and the need to adhere to Bull Trout in-water work conservation measures.

In-water work is defined by the USFWS as any work below the OHWM (dry or wetted channel), including on the stream banks directly above, and abutting, the OHWM that could subsequently produce sediment in the channel. Therefore, in-water work includes work occurring not only in the wetted channel, but also below the OHWM but under dry working conditions due to channel re-routing, or work occurring within the confines of a cofferdam. To the extent possible, in-water work would only occur July 15 through August 31 (referred to as the in-water work window) as stipulated by the Bull Trout conservation measures presented in the USFWS Biological Opinion (BO) for the Project (USFWS 2025).

To support assessment of potential impacts to aquatic species Table 1 presents which activities would occur below the OHWM (dry or wet) within and outside of the in-water work window. Color coding is used to differentiate between work that would be done in the wet (sediment producing) and work that would be done in the dry (isolated by a cofferdam or re-routing of the channel). The CSKT, design team, and construction contractors made every effort to schedule in-water work within the in-water work window wherever practicable. However, it was not

feasible to schedule all construction activities within the in-water work window due to physical and operational site constraints. Several conservation measures and best management practices (BMPs) would be in place to minimize impacts to fish and aquatic habitat from in-water work completed outside the in-water work window (Section 3.6, Conservation Measures and Best Management Practices). These include implementation of the fish rescue procedure any time fish may be stranded such as during channel re-routing (see Section 2.2.6.1 Aquatic Measures), implementation of a Water Control Plan, and erosion and sediment control measures (Section 2.2.6.3 Other Construction Best Management Practices). Fish would also be isolated from most of the in-water work activities, as river flow would be separated from work by a cofferdam.

Table 1. Project construction schedule by year[a].

Phase	Construction Activity	Apr	May	Jun	Jul 1-14	Jul[b] 15-31	Aug[b]	Sep	Oct	Nov
Year 1	Mobilization and Site Prep, install BMPs			x	x	x				
	Access Road improvements			x	x	x	x			
	Prep staging areas (clear and grub, strip topsoil, place geotextile and gravel)			x	x	x	x			
	Shoring on steep slope above road (retaining wall)					x	x	x	x	
	Grade NF Jocko streambed to move channel to left bank[c]				x					
	Install upper sheet pile cutoff wall (up to cofferdam) and upstream cofferdam				x	x	x	x	x	
	Cofferdam work zone dewatering[d]				x	x	x	x	x	x
	Demo bridge over Tabor Canal inlet				x	x				
Year 2	Channel Maintenance to ensure channel in left bank[c]			x	x					
	Cofferdam work zone dewatering[d]		x	x	x	x	x	x	x	x
	Mobilize concrete batch plant	x								
	Structure excavation for project features	x	x	x	x	x	x	x	x	
	Construct sluiceway, headworks, and upstream fishway. Fish bypass site prep.	x	x	x	x	x	x	x	x	
Year 3	Channel Maintenance to ensure channel in left bank[c]			x	x					
	Install box culvert under road	x	x	x						
	Construct sluiceway and fishway	x	x	x	x	x	x			
	Install fish bypass structure							x	x	x
	Install bypass return pipes and temporary plunge pool			x	x	x				
	Cofferdam work zone dewatering (until cofferdam is removed)[d]	x	x	x	x	x	x			
	Remove cofferdam (timeframe TBD in July-Aug)				x	x	x			
	Install lower sheet pile wall and remaining upper sheet pile wall (but not yet tying into river left bank)						x	x		
	Backfill in-water structures with rip rap to protect against high flows				x	x	x	x		
	Install temporary structure to isolate work zone, construct Micro-Hydro vault, then remove temporary structure						x	x	x	

Phase	Construction Activity	Apr	May	Jun	Jul 1-14	Jul[b] 15-31	Aug[b]	Sep	Oct	Nov
Year 4	Streambed re-grading to move channel to right bank and sluiceway[c]			x	x					
	Demolish existing diversion structures				x	x	x	x	x	
	Stream gauge relocation					x	x			
	Construct grouted rip rap channel (rock ramp)				x	x	x	x	x	
	Tie in upper and lower sheet pile walls to left bank								x	
	Install electrical and solar array		x	x			x	x		
	Construct utility buildings		x							
	Streambed grading and restoration								x	x
	Final upland grading and seeding								x	x
Year 5	Commissioning – Fish Screen		x	x	x	x	x	x		
	Commissioning – Gate flow calibration, gate operations, and Programmable Logic Control installation		x	x	x	x	x	x		
	Maintenance of revegetation and restoration features		x	x	x	x	x	x		

[a] = *Work occurring in the wet below the OHWM (i.e., in the active channel), and therefore would have the potential to produce sediment. Sediment-producing activities would occur periodically within the listed timeframe, therefore sediment production (if any) would not be continuous.*
= *Work occurring in the dry below the OHWM (i.e., isolated from the active channel by a cofferdam, channel re-routing, or other method).*

[b] *USFWS in-water work window for Bull Trout spawning and rearing habitat is July 15-August 31, outlined in red. In-water work includes work "in the dry" or "in the wet" below the OHWM in the NF Jocko.*

[c] *Initial channel regrading to left bank in year 1 and channel regrading to right bank in year 4 would be expected to produce the largest amount of suspended sediment during the channel activation. In years 2-3, the channel would be maintained only as necessary to ensure that flow is maintained along the designated route and would entail brief (0-1 days) excavations necessary for this purpose between June 15th and July 10th (or as needed) during low flows.*

[d] *Pumped water from dewatering behind the cofferdam would be disposed of in one of the three ways described in Section 2.2.4, Construction Water Management. Water disposal is not expected to result in sediment delivery to the NF Jocko with the implementation of BMPs, but could still potentially produce sediment in the rare case that a BMP measure fails, hence cofferdam dewatering is included here as potentially sediment producing.*

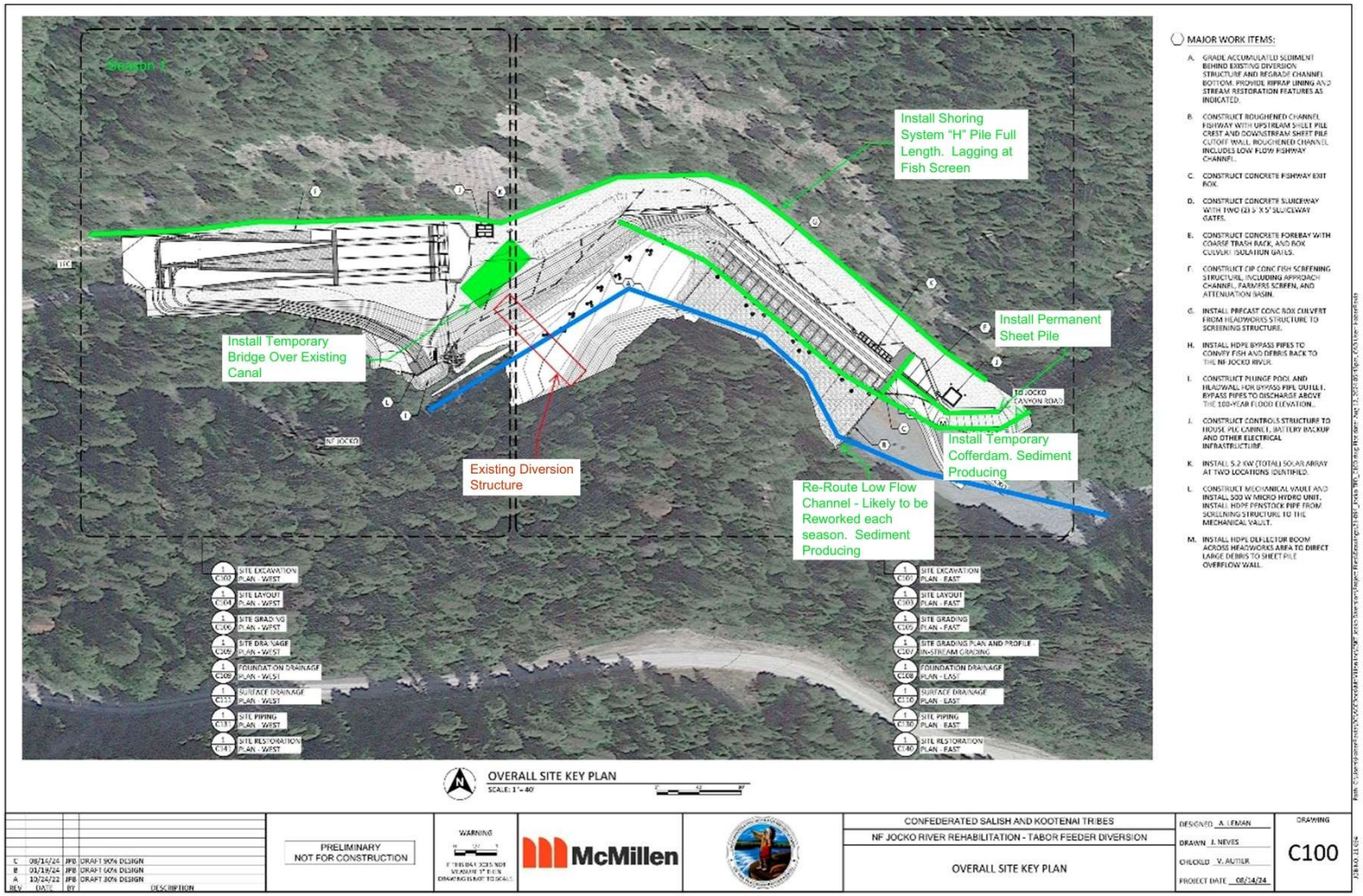

Figure 3. Year 1 construction activities.

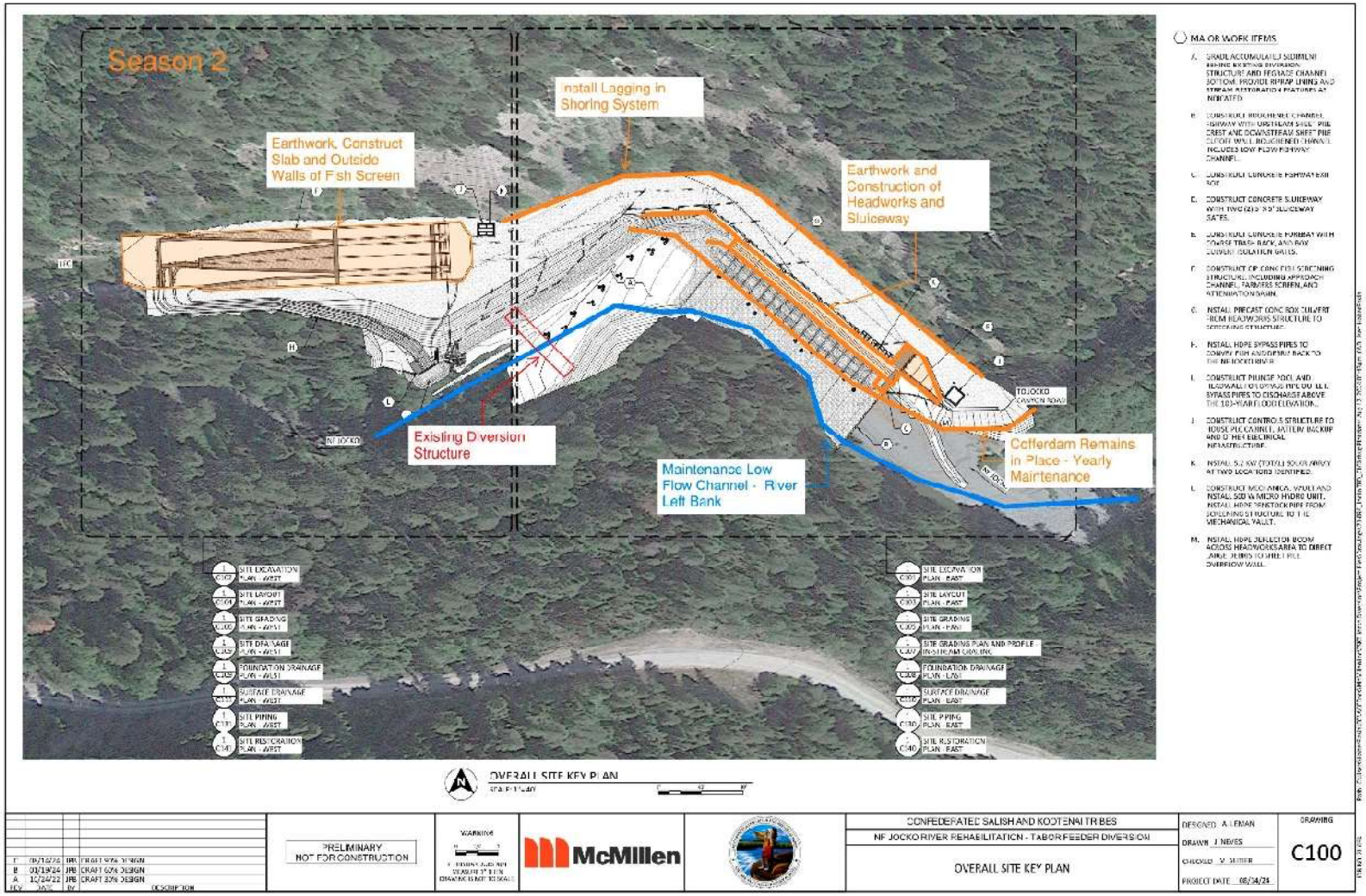

Figure 4. Year 2 construction activities.

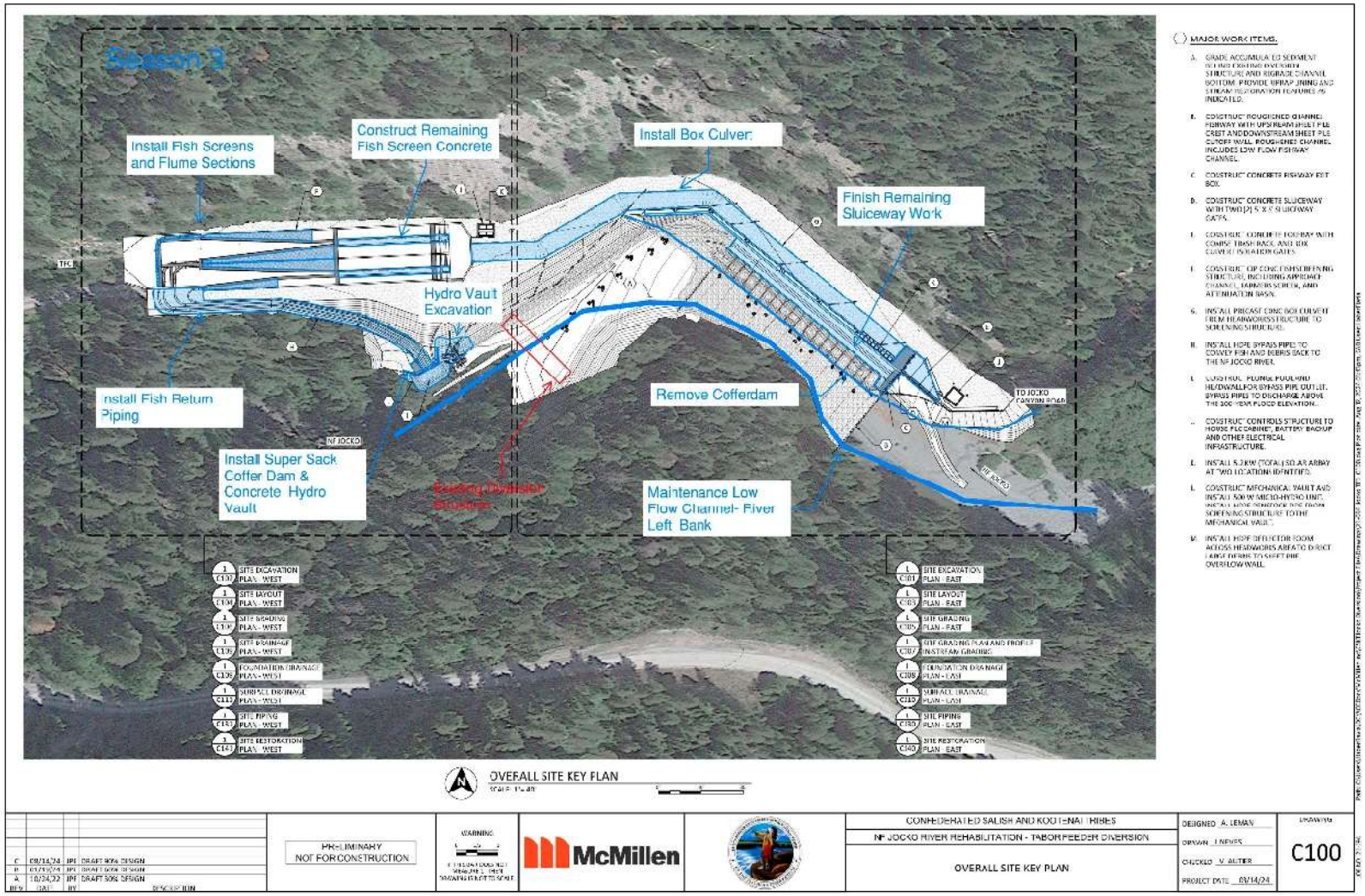

Figure 5. Year 3 construction activities.

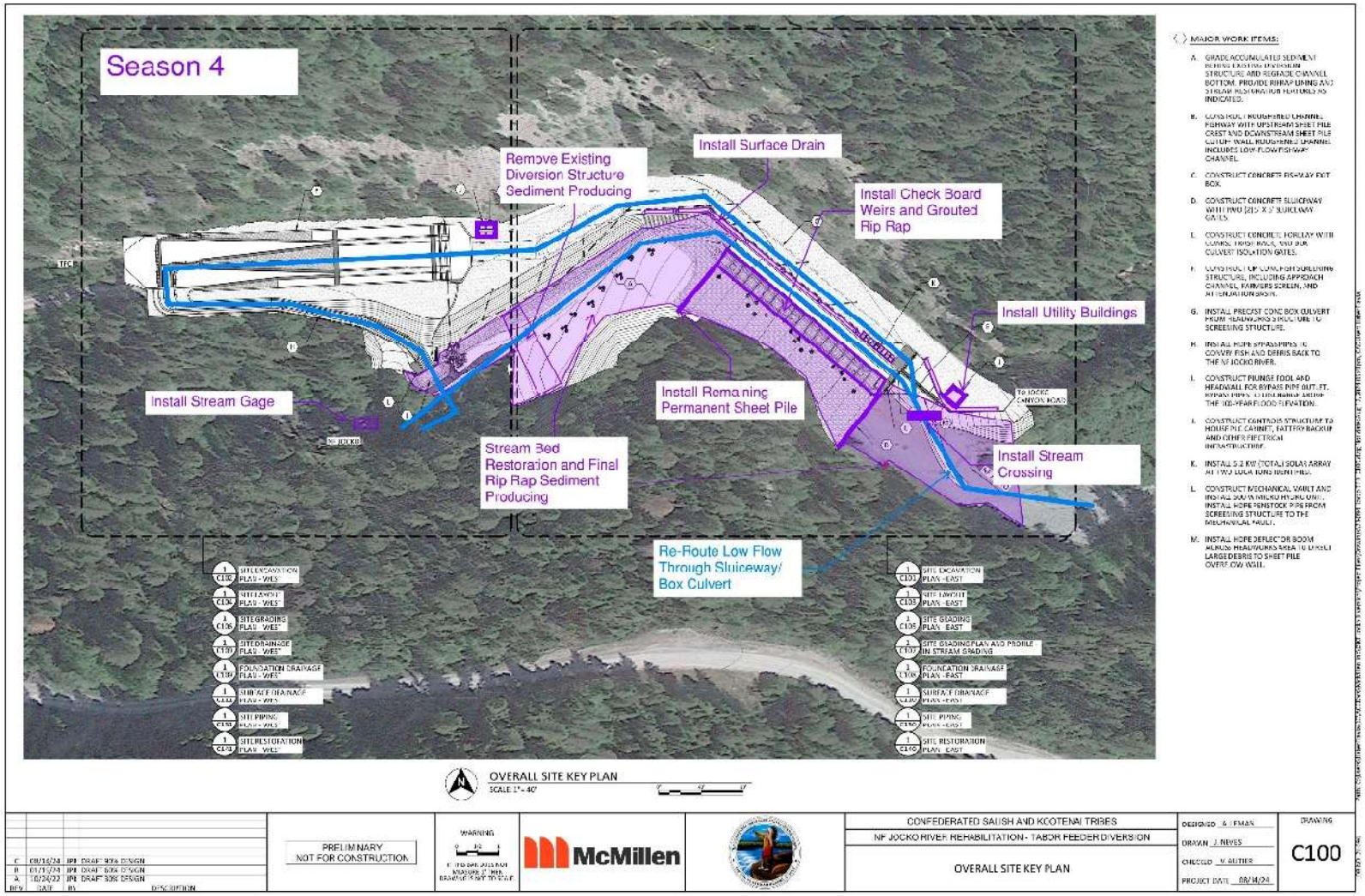

Figure 6. Year 4 construction activities.

2.2.2 Pre-Construction and Ancillary Activities

2.2.2.1 Project Access and Road Improvements

The project would be accessed from the town of Arlee, Montana, via Jocko Canyon Road (Road P-1000), and by then turning north on Road P-5450, which after its intersection with Road P-5200 continues north as Road P-5400 (Figure 1). Road improvements and dust abatement required to accommodate and mitigate Project traffic would occur as necessary.

The Project would use the following roads, with specific improvements and closures during construction listed:

Jocko Road would be used between the lower staging areas (Theresa Adams Pit and FIIP Camp; Figure 1) and the mouth of Jocko Canyon, where it turns into Road P-1000. No improvements would be made to this road (beyond routine maintenance), and there would be no closure during Project construction.

Road P-1000 (Jocko Canyon Road) would be used as primary access. No improvements would be made to this road (beyond routine maintenance), and there would be no closure during Project construction.

Road P-5200 (Jammer Road) would be used as an access route for light duty vehicles. No improvements would be made to this road (beyond routine maintenance), and there would be no closure during Project construction.

Road P-5450 would be widened only where necessary within the existing right-of-way (approximately 20 feet in each direction from the road's center), such as where tight turns may preclude equipment access or risk impacts to sensitive resources. Vegetation removal (including tree clearing) associated with this road widening would be limited to the minimum necessary to accommodate access. Road widening would be limited to the east side of the road in order to avoid any impacts to wetlands, the Tabor Canal, or other sensitive resources. Widened areas would be reclaimed and seeded post-construction. This road would be closed to the public during construction, with the exception of limited access for the residence located on Road W-1100.

Road P-5400 (Canal Road) would be closed to public access during construction. Outside of the direct construction footprint, wider pullout areas along the road from the north end of the NF Jocko Bridge (Figure 2) to the Falls Creek Diversion (approximately two miles downstream), would be utilized for staging materials and equipment. No improvements would be made to this road outside of the construction footprint (beyond routine maintenance). The road would not be used for construction access from the west.

Road W-1100 would be used to access the Job Site Staging Area. This road would remain open during construction, with traffic control, to allow access to the residence and the NF Jocko trail head located up this road. No improvements would be made to this road outside of the construction footprint (beyond routine maintenance).

New access road: A short segment (approximately 90 feet) of road would be built on the east end of the main Project area, connecting Road P-5400 with a temporary staging area within the NF Jocko channel ("TFC Access Road" in Attachment A, Drawing G105). Select vegetation removal (including trees) and earthwork would occur during road construction. The short-term purpose of this road would be to provide access during construction. Post-project, the road would be gated and limited to administrative use only, to access and maintain the headworks, sluiceway, and fishway.

2.2.2.2 Cut Slope Shoring-Retaining Wall

A section of cut slope above Road P-5400 directly to the north of the main project area is unstable due to unconsolidated materials and steep slope (Attachment A, Drawings C103 and C104, referred to as "permanent retaining"). This has resulted in sloughing of material into the roadway and risk of tree fall at the top of the slope. A permanent retaining wall would be driven horizontally into and along the toe of the hillslope to preclude slope material from damaging future infrastructure and to minimize safety risks to workers and equipment during construction. Hazard trees would be identified and removed during construction as necessary.

2.2.2.3 Concrete Batch Plant and Staging Area

A concrete batch plant may be mobilized at the developed staging area near the intersection of Road P-1000 and Road P-5450 (Figure 2). The batch plant would remain in use during construction as necessary for constructing concrete structures for the Project. Water for the concrete batch plant would be trucked from a well at the FIIP camp on Jocko Canyon Road (Figure 1) to meet the water requirements for the batch plant.

The batch plant staging area is nearly eight acres. The staging area is required with or without the placement of a batch plant. The location is a former clear cut with pole-size lodgepole pine, interspersed larger trees, and a logging road down the center. Clearing and grubbing would initially occur on approximately four acres, with the remaining ~four acres cleared only if additional staging was required as the Project progresses. The remaining area would serve as a potential campsite for construction crews. Post-construction, the area would be reclaimed and restored as needed following the guidelines in Attachment A, Drawing G104.

2.2.2.4 Construction Staging Areas and Salvage

Several small staging areas would be established near the main project area (Figure 2; Attachment A, Drawings G104 and G105). Staging activities would predominantly occur on existing disturbed ground with some grading and small brush clearing at limited locations. The Jobsite Staging Area along Road W-1100 was previously logged, and would be used to host job trailers, equipment and material storage, and other project needs. Vegetation would be cleared and ground leveled as necessary to accommodate these activities. All staging areas would be used to store Project equipment and materials. Post-construction, staging areas would be restored as needed following

the guidelines in Attachment A, Drawing G104. In all areas of excavation, materials such as vegetation and topsoil would be salvaged and staged for reuse during restoration activities.

Given the extremely limited space for staging near the main Project area, staging may be permitted, if absolutely necessary, below the OHWM in two locations,: 1) within the bottom of the Tabor Canal from the location of the current Facility to the Falls Creek Diversion, and 2) on a mid-channel gravel bar upstream of the current Facility (Figure 2; Attachment A, Drawing G105). The NF Jocko mid-channel bar staging area would be accessed by road from Road P-5400, then via the new access road extending down to the NF Jocko channel.

Vegetation removal and earthwork would not occur in these in-channel areas and staging would only occur when the channels are dry, outside of the irrigation season. Material staged below the OHWM would be limited to that which could be promptly removed in the case of rising flows or inclement weather, and will be removed when not in use. Construction equipment would be required to be removed from the areas daily. Materials that could pose a risk to water quality such as fuels, oils, or other pollutants, would not be stored in these locations. All applicable water quality standards and BMPs would be followed and the areas would be restored as needed following the guidelines in Attachment A, Drawing G105.

Two additional areas located on the Jocko Canyon Road several miles below the main Project area would be used for material storage: the Theresa Adams Pit and the FIIP Jocko Camp (Figure 1; and Attachment A, Drawing G103). These two areas are existing material storage areas or active material borrow sites for ongoing FIIP activities.

2.2.2.5 Work Camps

Construction workers may be permitted to camp at the concrete batch plant location (Figure 2) or other approved locations upon consultation with CSKT. Any type of camping would be limited and would require hard-sided camping facilities such as a truck camper or small trailer RV. Camping protocol would follow the BMPs listed in Section 2.2.6.3, Other Construction Best Management Practices, to avoid conflicts with wildlife or other resources.

2.2.3 Project Features and Activities

An overview of the Project is presented in Attachment A, Drawing C100. A new diversion and headworks would be constructed approximately 400 feet upstream of the current diversion dam (Attachment A, Drawings S101 – S110). The diversion structure design can be considered a series of engineering elements from river left to river right. Design of this structure is centered around the concept of a roughened rock ramp, which would provide upstream and downstream fish passage, and adjacent gates that would provide additional sediment sluicing. The rock ramp would be constructed with a sheet pile cutoff wall at the upstream and downstream ends. The rock ramp would check up water to allow the diversion to route water into a headworks structure on river right, then into a box culvert and into the Tabor Canal, where a set of fish screens would route any fish that had entered the canal into a set of pipes that would return fish to the NF Jocko downstream.

Additional details on each Project feature are presented in the sections below. Water management would be an integral part of all Project construction activities and is presented in Section 2.2.4, Construction Water Management.

2.2.3.1 Sheet Pile Cutoff Wall

The diversion structure starts at the upstream end as a 120-foot-wide sheet pile wall installed to a depth of 20 feet below grade (Attachment A, Drawing C100, and C130). This wall serves as the upstream crest for the grouted rock ramp and provides structural stability for the rock ramp and a stable elevation for flood flow passage.

The sheet pile would be driven or excavated, with the method to be determined in the field due to uncertain subsurface conditions. The contractor-preferred method is to drive sheet pile using a vibratory hammer or impact hammer, but large boulders could lead to refusal, or inability to continue driving. The alternate method is to excavate and place sheet piles. The upstream sheet pile cutoff wall would be installed in three segments in years 1, 3, and 4, all in the dry when the river is diverted either to river left or river right (Table 1). The top edge of the sheet pile would be finished smooth. Sheet- pile driving would follow the conservation measures presented in Section 2.2.6.1, Aquatic Measures, to avoid injury to fish.

2.2.3.2 Rock Ramp and Fishway

Downstream of the sheet pile cutoff wall, a 200-foot-long rock ramp would be constructed with an adjacent low-flow fishway (Attachment A, Drawings C100, and C131 – C134). Downstream of the rock ramp and fishway, another sheet pile cutoff wall would be installed to approximately eight feet below grade to provide structural stability and preclude undercutting. Together, the rock ramp and fishway would provide upstream travel for fish any time of year, and downstream travel outside of the irrigation season.

The rock ramp serves as a diversion check, a spillway to pass low recurrence interval floods, and a channel segment that can pass sediment and large wood. It would be constructed at a six percent grade using materials ranging from gravel-size up to twelve-inch plus rock for stability. Flowable concrete (grout) would be placed in the interstices between coarse materials.

The low-flow fishway would be constructed using 19 pre-cast structures intended to form a step-and-pool fishway. Three larger resting pools would be integrated into the fishway. The fishway design is adapted to meet flow criteria for the NF Jocko and the swimming performance of Bull Trout and Westslope Cutthroat Trout (the only fish present at the Facility), at all life stages (McMillen Jacobs 2021a). The upstream fishway exit is a control weir with geometry capable of passing low flows up to 36 cubic feet per second (cfs). Instream flows as large as the fishway flow capacity would be routed down the fishway. Excess instream flows would be routed through an adjacent sluiceway.

2.2.3.3 Sluiceway

A sluiceway would be constructed on far river right, adjacent to the rock ramp and low-flow fishway (Attachment A, Drawings C100). The sluiceway is intended to pass sediment and fine debris up to a discharge of 600 cfs. The sluiceway intake is set at the lowest elevation in the diversion forebay and would draw the channel thalweg to river right. The sluiceway itself is a 200-foot-long concrete rectangle with an inset low-flow channel to allow downstream fish passage over a range of flows, down to very low flows. Two slide gates at the sluiceway entrance would maintain upstream pool levels to keep the fishway active and meet irrigation diversion requirements.

2.2.3.4 Headworks and Box Culvert

Adjacent to and upstream of the sluiceway, a 50-foot-wide concrete headworks structure would be located to divert flows into the Tabor Canal through a 16-foot-wide by seven-foot-tall buried box culvert (Attachment A, Drawing C142). The box culvert would be installed under the existing road alignment and would be buried approximately two feet below grade, then backfilled and topped with gravel road surfacing to match the existing grade. The culvert intake would be controlled with three sluice gates with a combined capacity of 510 cfs. Debris screens would be placed before the intake gates and a log boom would be placed to route large floating debris down the rock ramp.

2.2.3.5 Fish Screening and Bypass and Plunge Pool

In the Tabor Canal below the box culvert, a new 330-foot-long concrete fish screening and bypass structure would be constructed that meets National Marine Fisheries Service criteria to screen canal flows of all fish, sediment, and small debris (Attachment A, Drawings S201 – S214). The structure would host four horizontal screens, training channels, and control gates that would supply screened flows into the canal. Each screen would discharge a bypass flow to a series of buried pipes, which would return fish, sediment, and small debris back into the river.

The 300-foot-long bypass pipes would follow an existing vegetated irrigation access road to a release point in the NF Jocko downstream of the current Facility (Attachment A, Drawings C143 – C146). The pipes would terminate at a concrete headwall structure constructed above the 100-year flood surface level and discharge into a rip-rap-lined, engineered plunge pool constructed along river right. In order to ensure work occurs in the dry during construction, the plunge-pool work area would be isolated from the river channel by a temporary structure composed of material such as super sacks filled with large-diameter cleaned gravel.

The CSKT worked closely with the fish screen manufacturer in the design of the fish screen array to maximize successful fish passage while avoiding and minimizing fish injury and mortality from stranding. Operation of the fish screens would follow the manufacturer’s guidance document that would be tailored to the Project to optimize fish screen performance. Fish stranding during operation would be avoided by only shutting down the diversion and fish screens when staff are present to ensure any fish remaining on the screens would be hazed downstream into the bypass pipes, or rescued and relocated (i.e., by hand with a net and bucket). This would be part of the

roles and communications protocol included in the Standard Operating Procedures (SOP) to be developed by the design engineer for the Project.

2.2.3.6 Power and Associated Infrastructure

Primary power for the Project would be supplied by two 5.2 kW solar arrays. The solar arrays and other appurtenant electrical and control infrastructure would be housed in two control buildings on concrete pads: one adjacent to the fish screening and bypass structure, and one immediately west of the headworks structure (Attachment A, Drawings E101 – E104).

A small-scale hydropower system (micro-hydro) would be constructed within a buried concrete vault downstream of the current Facility (Attachment A, Drawing M530). Three micro-hydro turbine generators housed in a vault house would supply backup power for the Project. Water for the micro-hydro units would be supplied through a separate buried pipe from the fish bypass structure following the same alignment as the fish bypass pipes.

2.2.3.7 Demolition of Existing Structures

The current Facility would be removed as detailed in Attachment A, Drawings D100 – D103. Demolition would include removal of: 1) the Road P-5400 bridge across the Tabor Canal headworks; 2) the concrete diversion structure and concrete slabs; 3) the radial gate and concrete sluiceway and appurtenances; 4) the concrete abutments on both sides of the river; and, 5) the canal headworks and radial canal gate. The bridge across the canal would be demolished in year 1. The remaining Facility structures would be demolished in year 4, as the Facility would be required to continue diverting irrigation water during construction, until the Facility comes online.

The channel near the demolition area would be re-graded as a naturalized channel in native bed materials and lined with riprap where areas of high shear stress are expected to occur. The removal of the existing Facility would be performed by heavy equipment such as excavators and hydro drills. The use of explosives would not be permitted. The construction contractor would develop a Demolition Plan at least one month prior to the start of construction to include anticipated methods for demolition equipment to be used, stockpiling locations for salvage materials and for off-hauling, and stream protection measures.

2.2.3.8 Stream Gauge Relocation

An existing stream measurement gage is located approximately 650 feet downstream of the current Facility. The gage control pool is prone to fine sediment infilling and requires recurrent field measurement to maintain rating curve accuracy. A new gage would be placed approximately 125 feet downstream of the proposed plunge pool and fish return bypass pipes. The new design would include placement of a constructed gage and control stream section, and a gage pool with a hardened riffle crest to improve measurement accuracy. Output from the new gage would be incorporated into the overall Project automation, eliminating the need to trench over 800 feet of conduit from the existing gage to the automation control house. The existing gage would be discontinued and manually removed, which would not require heavy equipment or in-channel work.

2.2.4 Construction Water Management

Water management would be an integral part of all Project construction activities. The construction contractor would develop a Water Control Plan for the Project for review and approval by the Engineer at least 40 days prior to construction. The Water Control Plan would include the following: cofferdam design and methods for diversion and dewatering of the river; care of the stream and water management during construction; measures required to meet permit requirements; methods for control and prevention of aquatic invasive species within the work area; protection measures aimed at guarding against spills or leaks of oils or other lubricants; and other BMPs to ensure protection of the aquatic environment. Two primary approaches would be implemented for construction water management: 1) rerouting the NF Jocko away from the construction area, and 2) groundwater management (dewatering) in construction excavations.

Channel re-routing with the cofferdam would occur years 1-3 (Figure 3 through Figure 6). The channel would be re-routed from upstream of the fishway exit and box culvert forebay to downstream of the sluiceway, using the permanent sheet pile wall that is integrated into the final design in combination with a temporary sheet pile wall intended solely for the cofferdam. The cofferdam is designed to pass a 100-year flood without overtopping, and to provide complete surface water separation between the re-routed channel and the combined river right fishway/sluiceway during construction. Hydrologic modeling by the Project design engineer additionally indicated that bed material would remain mobile while maintaining overall channel stability. The channel is over-widened upstream of the diversion dam due to sediment deposition, and the active wetted width of the channel in the non-irrigation period is narrower than the channel. Throughout the Project life, channel re-routing would occur during non-irrigation low-flow (and potentially dry) periods.

Groundwater dewatering would need to occur in excavations throughout construction, but exact groundwater dewatering requirements are difficult to anticipate due to subsurface variability. Geotechnical investigations (McMillen Jacobs 2021b) indicate groundwater levels correspond approximately to the river water surface elevation: groundwater is higher during irrigation operational periods when the forebay is full and lower in the off-irrigation season. Groundwater would be pumped from excavations as required, and would be managed using one of the following approaches (in order of priority): 1) water would be routed into the Tabor Canal, to pond and infiltrate into the canal (outside of irrigation season when the canal is dry); 2) water would be routed into vegetated areas, to allow infiltration and sediment filtration; or 3) water would be pumped to the NF Jocko below the diversion, only if the pumped water were clean and free of sediment. Discharges are expected to be up to 100 gallons per minute and would occur along the longest flow path possible. Any approach would employ BMPs to avoid sediment delivery to waterbodies, which could include filtration basins, sediment barriers (bioengineering materials and rock check structures), and technical solutions such as flocculation logs.

Key water management activities are summarized below.

1. Year 1

1. *Streambed grading to re-route channel to river left.* Prior to construction at low flows, the river bypass channel would be shaped and flow would be trained to river left. The new channel would be excavated in the dry before breaching the river for activation.
2. *Sheet pile cutoff wall and cofferdam installation.* Sections of the permanent sheet pile cutoff wall would be partially constructed on the right bank and would connect with the temporary cofferdam to isolate the work zone for the fishway, sluiceway, headworks intake, box culvert, and river right slope treatment.

2. Year 2
    1. *Channel maintenance.* During low flows the re-routed channel would be re-shaped as needed to ensure flows remain along the left bank. Work associated with channel reshaping is anticipated to be minimal and short in duration.
    2. *Cofferdam.* This would be evaluated for performance.
    3. *Groundwater management in excavations* would be ongoing with installation and maintenance of treatment techniques noted above.
3. Year 3
    1. *Channel maintenance.* During low flows the re-routed channel would be re-shaped as needed to ensure flows remain on river left. Work associated with channel re-shaping is anticipated to be minimal and short in duration.
    2. *Remove cofferdam.* The temporary segments of sheet pile would be removed during low flows, once all of the Project infrastructure on the right bank is complete (i.e., fish screens and bypass, box culvert, sluiceway).
    3. *Cofferdam for micro-hydro vault.* A small temporary cofferdam (likely built from supersacks containing cleaned gravels) would be installed to isolate the work zone for construction of the micro-hydro vault and fish screen return pipe outfalls.
    4. *Removal of cofferdam* for micro-hydro vault.
4. Year 4
    1. *Channel re-route to right bank.* Once the upper cofferdam is removed during low flows, the channel would be shaped and trained to flow to river right and down the sluiceway. The sluiceway invert is the lowest elevation feature in the headworks area and this would facilitate the shift in flow to river right.
    2. *Equipment access bridge:* a temporary crossing would be utilized to allow equipment to cross the active channel during construction, eliminating the need for equipment to enter the active channel. This crossing would be utilized for all work occurring on the left bank.

3. *Demolition of existing structures (except Tabor Canal bridge, removed in year 1)*
    - *Alternative 1:* Demolition would occur from river left to river right. After an opening is created, the river would be routed down its left bank to complete demolition on the right bank. The temporary river crossing would be used to keep equipment out of the active channel. Work “in the wet” would be largely associated with the activation of the channel on the left bank.
    - *Alternative 2:* Flows may be routed entirely down the fish bypass structure during demolition. Water would return to the NF Jocko via the fish bypass pipes. Some flows would be conveyed through the fish bypass structure and down the Tabor Canal. The bypass pipes would be utilized up to their maximum capacity of 60 cfs, ensuring that return flows to the NF Jocko meet or exceed instream flow requirements.
    - *Alternative 3:* Flows in the NF Jocko would be captured and conveyed downstream via pipe and would be moved as necessary to complete work items in dry conditions.
4. *Stream bed re-grading.* After all Project features are constructed the stream bed would be re-graded to allow the natural flow pattern.
    - Work would be sediment-producing unless flows were routed entirely down the bypass structure as stated in Alternative 2, above.

Protection measures to avoid and minimize impacts of water management activities are presented in Section 2.2.6.1, Aquatic Measures. Dewatering of the stream channel would occur in stages to allow fish to move out of the reach or congregate in deeper portions of the channel, where they could be captured and relocated. Biologists would be prepared to rescue any fish that become stranded as the channel is dewatered. BMPs such as silt fences and turbidity curtains would be installed downstream of the Project site, and in other areas to isolate other work items such as the bypass pipe headwall as necessary to reduce impacts to water quality. Close coordination with CSKT Fisheries, Shoreline Protection, and Water Quality programs would occur during the placement and removal of the cofferdam and other water management-related activities to minimize impacts and ensure all applicable permits and regulations would be followed. Yearly spring water management meetings would be held between the contractor and CSKT project managers and fish biologists to ensure early coordination and adaptive management to reduce sedimentation or other adverse impacts to the NF Jocko.

2.2.5 Restoration

All areas of ground disturbance that are not permanently impacted by the Project would be restored after construction is complete. Given the extent of grading required for the Project within and adjacent to the NF Jocko channel, and the current altered geomorphic condition of the NF Jocko channel, the NF Jocko channel and streambanks would not be restored to pre-construction conditions. Rather, the goal would be to restore the NF Jocko channel and streambanks to a more

natural geomorphic condition for the site, while protecting the newly constructed Project features from erosion at high flows or during storm events.

Restoration design specifications are found in Attachment A, Drawings C150 to C155. Drawings C150 and C151 present an overview of the restoration treatments for areas of ground disturbance between the NF Jocko bridge and the current Tabor Diversion. Wherever possible, designs for streambank armoring include natural materials such as live native willow cuttings, native brush, and logs. Restoration treatments are also intended to promote point bar and slope vegetation development on surfaces downstream of the Project. Restoration treatments for the upland staging areas are not presented in the Drawings but are described below.

Drawing C152 presents a typical cross section with restoration treatments and references specific Drawings for each treatment. Point bar restoration would consist of floodplain roughness and willow trenches on the left bank, where a depositional surface has been incorporated into the grading design. Partially buried logs and brush, in addition to willow trenches, would create microtopography for surface diversity and native seed capture, trap sediments, and support revegetation of the site through natural processes. A vegetated brush bank would be constructed along the right bank. In conjunction with the riprap, the brush bank would dissipate streamflow energy, provide habitat complexity in the form of overhanging cover, and promote native vegetation establishment through the incorporation of live willow cuttings. Slope roughness treatments (partially embedded logs and brush) would be applied to tie-in slopes along both banks to limit erosion and sediment runoff.

2.2.5.1 Floodplain and Slope Treatments

Floodplain and slope treatments are presented in Drawing C153 (Attachment A). Floodplain treatments include the installation of micro-topography roughness and woody material within the floodplain. The surface would be roughened to create an irregular surface that varies +/- 0.5 ft from grade while de-compacting the surface soils. Approximately half of the length of each piece of wood would be buried. This treatment creates areas within the floodplain to trap seeds, provide protection to seedlings, slow and spread surface water, and recruit nutrients and organic matter to support re-establishment of riparian vegetation.

In steeper areas, slope treatments include partially buried logs in the slope to prevent erosion, slow and spread runoff water, and support revegetation by creating micro-sites where seedlings can establish. Logs would be placed on slopes at a rate of 150 pieces per acre. Approximately half of the length of the wood would be buried in the slope surface.

2.2.5.2 Brush Bank Treatments

Brush bank treatments are presented in Drawing C154 (Attachment A). Brush bank treatments in the upstream section would be offset from the channel behind a riprap toe and backfilled with native substrate on top of the logs and brush. In the lower section, the brush banks would be installed adjacent to the channel, with a riprap toe that is filled with native substrate to seal voids and backfilled with riprap on top of the logs and brush.

2.2.5.3 Willow Brush Trenches

Willow brush trench treatments are presented in Drawing C155 (Attachment A). Willow brush trenches would be constructed within the floodplain to support rapid establishment of riparian vegetation, trap sediment, and provide habitat. Trenches would be dug up to four feet deep and would extend across the floodplain according to design, generally perpendicular to flow direction. Assorted native willow cuttings and brush would be placed vertically in the trench which would then be backfilled to match the existing floodplain elevation.

2.2.5.4 Revegetation Seeding

The seeding plan is presented in the Project Design Specifications (McMillen 2025), including soil preparation, seed mixes, and methods of seed application. The upland staging areas and two steeper slopes within the project area adjacent to the NF Jocko channel (Drawings C150-151) would be seeded using hydroseeding methods. Other areas would be seeded using broadcast methods. The seed mix from the Design Specifications is presented in Table 2.

Table 2. Seed mix from the Project Design Specifications

Species	Percent of Mix
Canada wheatgrass (*Elymus canadensis*)	40
Streambank wheatgrass (*Elymus lanceolatus ssp. lanceolatus*)	10
Slender wheatgrass (*Elymus trachycaulus*)	40
Bluebunch wheatgrass (*Pseudoroegnaria spicata*)	10

2.2.6 Conservation Measures and Best Management Practices

The Project would adhere to all conservation measures presented in the Project Biological Assessment (BA; Attachment B) and the terms and conditions in the USFWS BO Incidental Take Statements for Bull Trout and Grizzly Bear. These measures are summarized here, along with additional conservation measures and BMPs intended to minimize or avoid impacts to resources. Monitoring activities are presented in Section 2.2.7, Monitoring.

2.2.6.1 Aquatic Measures

1. Construction - In-water work (below OHWM)
    a. In-water work is defined by the USFWS as any work below the OHWM (dry or wetted channel), or on the stream banks abutting the OHWM that could subsequently produce sediment into the channel below the OHWM.
    b. July 15-August 31 is the preferred in-water work window for protection of spawning and rearing Bull Trout. In-water work outside this period would occur only if there

were no other practicable alternative, and as negotiated during the regulatory permitting process.

c. To prevent introduction and spread of terrestrial and aquatic invasive species, clean mud and plants (preferably by power washing) and dry all equipment to be used for in-water work prior to mobilizing onsite, including pumps and hoses.

d. Perform daily visual checks on vehicles, equipment, and heavy machinery to minimize the chances of introduction of petroleum products to waterways. External grease and oil would be removed off vehicles, equipment, and machinery offsite prior to operating in project area.

e. Have and maintain a spill kit and backup spill materials onsite.

f. Fuel equipment away from the stream, preferably at least 150 feet.

g. Pumps and gas-powered equipment would utilize fuel containment devices.

h. If machinery is to be stored below OHWM, secondary containment measures would be installed.

i. Clear-water diversions would be used to route surface water from or around the Project area. Specifically, constructed channels and cofferdams would be used for isolation and diversion.

j. Fish rescues would be conducted to remove fish from the construction area during dewatering or rerouting of the channel (see procedure below).

k. Cofferdam sacks would be filled with washed material. Cofferdam heights would be elevated above modeled flood elevations to preclude overtopping.

l. Water pump lines would be screened at the inlets with minimum 3/32-inch mesh to preclude fish entrapment.

m. All imported materials would consist of clean, granular material free of contaminants and all other deleterious material.

n. Upon locating dead, injured or sick Bull Trout, notification must be made within 24 hours to the USFWS Montana Ecological Services Office. Information relative to the date, time and location of dead or injured Bull Trout when found, and possible cause of injury or death should be recorded if available.

o. BIA and CSKT shall provide the USFWS with a report detailing the construction timeline implementation, the effectiveness of the conservation measures [for Bull Trout and Bull Trout habitat], and the extent downstream where increased sediment levels were observed. This report will be provided to the service by December 31st at the end of each construction year.

2. Construction - Sheet pile driving

a. To minimize impacts to overwintering and migrating Bull Trout, USFWS stipulates that impact pile driving that has not been attenuated for noise can occur between February 1 and March 31 and between July 1 and September 30. According to past correspondence with USFWS for projects on Bull Trout-occupied waters and Bull Trout critical habitat, these periods coincide with periods of no overwintering, no juvenile downstream migration, and no adult upstream migration. However, these work windows include dry land and in-water impact pile driving.

b. Should piles be driven or other in-stream construction conducted outside of the above time periods, one of the following measures would be employed:

    i. Use a vibratory hammer or initiate impact hammer pile-driving of each pile with lower hammer strokes than are required for the initial six strikes to encourage fish to vacate the surrounding area. If driving pile with an impact hammer over consecutive days, do not drive piling between the hours of 9:00 pm and 6:00 am.

    ii. Use Montana Department of Transportation (MDT)-approved noise reduction methods (i.e. bubble curtains, cofferdams), and conduct hydroacoustic monitoring.

        1. Through hydroacoustic monitoring, should it be determined that either of the following physical harm thresholds have been attained or exceeded, impact pile driving must be stopped for the day, with impact pile driving permitted to commence the next morning.

            a. A peak sound pressure level of 206 dB (re: 1 µPa).

            b. A cumulative sound exposure level of 187 dB (re: 1 µPa) for fish >2 g, or 183 dB (re: 1 µPa) for fish <2 g.

3. Fish Rescue Procedure

    a. During channel rerouting trained personnel would be prepared to rescue any fish that become stranded in pools as the channel is dewatered. The fish rescue would be led by an experienced crew from the Tribes' Fisheries Program, with assistance from additional CSKT staff if needed.

    b. As flows diminish there should be relatively little holding water in the abandoned channel. Crews would walk the entire reach, attempting to drive remaining fish towards the downstream channel confluence. As flows become more isolating, the crew would search and net fish from any remaining pocket water within the entire reach, making a concerted effort to search for smaller size classes of fish that might seek refuge under larger rocks and within interstitial spaces.

    c. Captured fish would be bucketed, transported, and released either upstream or downstream of the dewatered reach.

d. The final step in the rescue would be to electrofish pools and pocket water that would likely temporarily persist within the dewatered portion of the channel. Electrofishing would be done using the minimum electricity settings needed to initiate galvanotaxis and allow for capture of fish. Particular care would be taken if larger fish are observed. Fish captured by electrofishing would be netted, bucketed, transported to live cars, and allowed to fully recover before release upstream or downstream of the abandoned channel.

4. Operations - Flow management and fish screen operation
    a. Flow management
        i. Flow management would be driven by the Compact required NF Jocko instream flows – MEF's and TIF's in wet and normal years.
        ii. Bankfull flows would follow the approach developed by the CSKT Water Management Program (CSKT 2017), which was agreed to by FIIP and adopted as part of the BO for Operation and Maintenance of FIIP (USFWS 2018) to minimize flow alterations to Bull Trout. The Water Management Program would develop the specific bankfull schedule each year based on timing of flow and water year conditions.
    b. Fish screen operation
        i. Fish screens would be operated per the manufacturer's guidelines to avoid fish stranding.
        ii. Fish screens would be shut down only when personnel are present to ensure that fish are not stranded on the screens (either by hazing fish down flow, or by capturing with a net and bucket to relocate downstream). Initially this would be CSKT Fisheries Program staff to understand whether fish may be stranded during screen shutdown.
        iii. Fish screens would be maintained and adjusted as outlined in operational guidelines, working with the manufacturer if needed. CSKT would ensure that FIIP staff are trained in fish screen operations and conduct pre-season testing and repairs. During the irrigation season, CSKT would address and document any issues and corrective actions. After the season, trained personnel would inspect the fish screen, bypass pipe, and canal with CSKT fisheries staff present, for mechanical issues and for stranded or dead Bull Trout, and report findings to the USFWS/BIA/CSKT.

2.2.6.2 Terrestrial Measures

1. Migratory Bird Measures

a. Avoid vegetation clearing from April 15 to August 15 to avoid impacts to nesting migratory birds. If clearing cannot be avoided during this entire timeframe, limit or avoid vegetation clearing during peak nesting season from May 1 to July 15.

b. If these nesting timeframes cannot be avoided, vegetation clearing areas should be assessed prior to disturbance by a qualified wildlife biologist to determine if any migratory bird nests are present. If a nest is discovered, it should be left in place until the young hatch and depart.

2. Wolverine Measures

    a. If a wolverine is observed in the project area, a CSKT wildlife biologist would be notified immediately.

    b. Many BMPs applicable in lynx habitat are also applicable in wolverine habitat, primarily regarding habitat connectivity, road density, improved access, and concentration of development in high-use or pre-disturbed areas.

3. Lynx Measures

    a. Activities would adhere to all Canada Lynx-related requirements in Tribal Forest Management Plans and Resource Management Plans (i.e., Northern Rockies Lynx Management Direction [USFS 2007], Canada Lynx Conservation Assessment and Strategy [Interagency Lynx Biology Team 2013]), Terms and Conditions in past and future consultation, and other management plans and relevant literature.

    b. If an active denning site used by Canada Lynx is found within 0.25 miles of any activity, operations would cease until a wildlife biologist is notified, and activities would be modified as necessary.

    c. Activities should conserve riparian areas, forest stringers, unburned inclusions, or forested ridges to provide habitat connectivity within and between patches of lynx habitat. Consult local biologists to determine critical linkage areas that promote lynx dispersal.

    d. Upgrading unpaved roads should be avoided in lynx habitat. Activities should not result in permanent increased road density, traffic speeds, traffic volume, or associated human activity/development within lynx habitat.

    e. Restrict public access on roads designed for Project area access.

    f. To minimize habitat loss, concentrate activities, access, and staging areas within existing developed and high-use areas, rather than developing new areas in lynx habitat. Locate new development outside of lynx habitat when possible, and minimize the footprint of developments within lynx habitat.

4. Grizzly Bear measures

    a. Construction would only occur during daylight hours.

b. Anyone working in Grizzly Bear habitat (i.e., contractors, partners, and tribal employees) would be briefed on bear-country safety, including use of bear spray and measures to avoid providing attractants and minimizing potential for conflicts and disturbance to bears.

c. All workers would be equipped with and carry bear spray.

d. Promptly clean up any project related spills, litter, garbage, debris, etc.

e. Store all food, food related items, petroleum products, antifreeze, garbage, and personal hygiene products inside a closed, hard-sided vehicle or commercially manufactured IGBC Certified bear resistant container.

f. Remove garbage from project sites daily and dispose of it in accordance with applicable regulations. Anyone working in Grizzly Bear habitat (i.e., contractors, partners, and Tribal employees) would comply with applicable attractant storage orders (Interagency Grizzly Bear Committee 2025). If no specific rule exists for the area, a review and adaptation of the available food storage orders would be considered adequate.

g. Activities would adhere to all Grizzly Bear -related requirements in Tribal Forest Management Plans and Resource Management Plans, Terms and Conditions in past and future consultations, and other management plans. This includes consistency with any Forest-specific bear safety plans.

h. Between April 1 and June 1, all activities would avoid high-quality spring season habitats wherever feasible. If not feasible to avoid these areas, projects in quality spring habitats during the spring season would be completed in 5 or fewer days. These areas are defined as snow-free forested and open habitats that afford fresh green-up of grasses, roots, and bulbs, as well as foraging opportunities for small rodents, and may include riparian areas, meadows, open grassy parklands, and avalanche chutes.

i. No new openings would be created in riparian management zones where the distance to cover would exceed 350 feet.

j. Projects cannot contribute to motorized access conditions that result in potentially significant effects to Grizzly Bear. In areas where existing motorized access conditions may affect grizzly bears, motorized use would only occur during daylight hours, and no motorized access for project activities would occur further than 300 feet from any open road.

k. The Project should avoid or minimize a net increase in the amount of motorized or non-motorized access routes or route density and/or a net decrease in the amount of core or secure habitat, as assessed by a wildlife biologist.

l. Any motorized access (on bermed roads or cross country) that is further than 500 meters from any open or gated road would need to be reviewed and approved by a wildlife biologist. Such access would be consistent with all plan-level direction and Section 7 Terms and Conditions.

m. No seeding or planting of species palatable for Grizzly Bear (i.e., clovers) would occur. Projects that involve seeding or planting grasses, forbs, or shrubs must do so in a manner that would tend not to attract bears into areas where increased mortality risk or interaction between bears and people is likely, such as adjacent to roads or in or near developed or designated recreation and/or camping sites.

n. Camping for project-related activities would occur at developed campgrounds or if at dispersed sites, would consist of ≤20 individuals for up to 5 days per campsite.

o. Grizzly bear sightings and/or incidents would be reported to the CSKT Wildlife Management office within 48 hours.

p. Notify the CSKT Wildlife Management Program of any animal carcasses found in the area.

2.2.6.3 Other Construction Best Management Practices

1. Permit compliance:
    a. The Project would follow all requirements and conditions included in permit authorizations and clearances (e.g., Section 401 Certification, Section 404 authorization, CSKT Aquatic Lands Conservation Ordinance (ALCO) 87A permit, CSKT cultural resources clearance).
    b. The construction manager would review permit provisions with the contractor, and copies of Project permits would be posted on-site.
2. Water Control Plan
    a. The construction contractor would develop a Water Control Plan at least 40 days prior to construction start. This plan would include the following:
        i. Cofferdam design, and methods for diversion and dewatering of the river.
        ii. Care of the stream during construction and measures taken to meet permit requirements.
        iii. Methods for control and prevention of aquatic invasive species within the work area.
        iv. Protection measures against spills or leaks of oils or other lubricants.
        v. Other BMPs to ensure protection of the aquatic environment.
3. Demolition Plan

a. The construction contractor would develop a Demolition Plan at least 1 month prior to construction start to include anticipated methods for demolition; equipment to be used; stockpiling locations for salvage materials and for off-hauling; and stream protection measures.

4. Vegetation management
    a. Limits of disturbance would be clearly staked to avoid ground disturbance in wetlands where disturbance is not authorized by permit (Attachment A, Drawing G106.)
    b. All vehicles would follow designated access routes to minimize disturbance.
    c. Excavated materials shall be stockpiled outside of existing wetlands, other areas noted for preservation, or cultural resource buffer zones.
    d. All areas of ground disturbance would be seeded and revegetated as soon as reasonably possible after construction. Revegetation activities are presented in Attachment A, Drawings C150-151.
    e. Weed management
        i. All equipment would be washed prior to site mobilization to minimize the introduction of weed seeds or propagules.
        ii. Revegetation would use only certified weed-free seed.
        iii. Areas of ground disturbance would be minimized to limit the introduction and spread of invasive weeds.
        iv. Disturbed areas would be revegetated (seeded and/or planted, and mulched) directly after construction.
5. Erosion and sediment control
    a. The following erosion-related plans would be developed for the Project:
        i. Erosion and Sediment Control Plan to include erosion and sediment control measures and products, as well as installation, maintenance, repair, and removal processes.
        ii. Stormwater Pollution Prevention Plan to include measures to minimize stormwater discharge to waterbodies and wetlands during construction, as well as spill prevention and control measures.
    b. The construction contractor would follow the MDT Erosion and Sediment Control Best Management Practices Manual (MDT 2016).
    c. Fugitive dust would be controlled per the Dust Abatement Plan to be developed for the Project, to include wetting soil and access roads with water during dry periods.
    d. Disturbance to channel banks shall be minimized.

e. Site grading would promote drainage by diverting surface runoff from excavations.

f. Prior to construction, install and maintain erosion and sediment control measures, such as swales, grade stabilization structures, berms, dikes, waterways, filter fabric fences, and sediment basins.

g. Turbidity filtration devices such as silt curtains, gravel berms, bulk bags or other filtration devices would be used to reduce or eliminate instream turbidity.

h. Erosion and sediment control measures within the main project area are detailed on Attachment A, Drawing EC100.

6. Hazardous materials (e.g., fuel or other vehicle or equipment fluids, pesticides, or other chemicals)

    a. Hazardous materials would be stored and disposed of per a hazardous waste plan developed by the construction contractor.

    b. Spill prevention and response measures would be detailed in the Stormwater Pollution Prevention Plan.

2.2.6.4 Cultural Resources Measures

1. A cultural resources monitor from the CSKT Tribal Preservation Department (TPD) would be on site at the start of Project construction, and for the duration of the Project as they deem necessary.
2. An all-hands cultural awareness session would be presented to all construction contractors prior to the start of Project construction.

2.2.7 Monitoring

Monitoring measures during construction, and post-construction during operations, are presented here, and are also discussed in the relevant resource sections in Section 3.0, Affected Environment.

2.2.7.1 Construction Monitoring

1. Water quality

    a. Turbidity would be monitored in the NF Jocko directly downstream of all in-water work throughout Project construction (per the USFWS Biological Opinion [USFWS 2025]).

    b. Sediment and erosion control BMPs would be monitored for effectiveness to ensure they are minimizing sediment delivery to the NF Jocko. Any ineffective control measures would be corrected immediately (per the USFWS Biological Opinion [USFWS 2025]).

2. Fish
    a. If sheet pile is driven (rather than excavated), acoustic monitoring would be conducted *if* the other conservation measures cannot be employed, as presented in Section 2.2.6.1, Aquatic Measures [Construction Measures and Best Management Practices].
3. Cultural resources: cultural resources monitoring by qualified TPD would occur as needed for the duration of Project construction.

2.2.7.2 Post-Construction Monitoring

1. Streamflow: the CSKT Water Measurement Program would continue to conduct streamflow monitoring to track changes in the streamflow regime post-construction.
2. Fish sampling by CSKT Fisheries Program
    a. Continued fish monitoring:
        i. Annual monitoring of fish populations at the two long-term monitoring sites on the NF Jocko located downstream of the Facility (Figure 7)- site N5 is located near the Road P-5000 bridge, and site N10 is located just downstream of the Facility.
        ii. Additional random sampling at systematic sample sites (Figure 7) along the stream gradient from the mouth to the falls near the NF Jocko trail head upstream of the Facility.
        iii. Bull Trout numbers are also monitored at the Jocko K Canal and Upper S Canal fish ladders (Figure 7) in the upper Jocko River drainage by documenting captured pit-tagged fish.
    b. New Facility fish monitoring:
        i. Fish passage through the new Facility would be evaluated by capturing fish upstream of the new Facility, marking them, and releasing them downstream. Sampling would then occur one week later upstream of the Facility to determine whether fish are passing upstream.
        ii. Fish stranding during Facility operation would be avoided by only shutting down the diversion and fish screens when staff are present to ensure any fish remaining on the screens would be hazed downstream into the bypass pipes, or rescued and relocated (i.e., by hand with a net and bucket).
        iii. Fish screens: the BIA must work with CSKT and the USFWS to develop a monitoring strategy to assess the performance and effectiveness of the screen design and bypass system, including maintenance, shutdowns, debris cleaning, and operations.

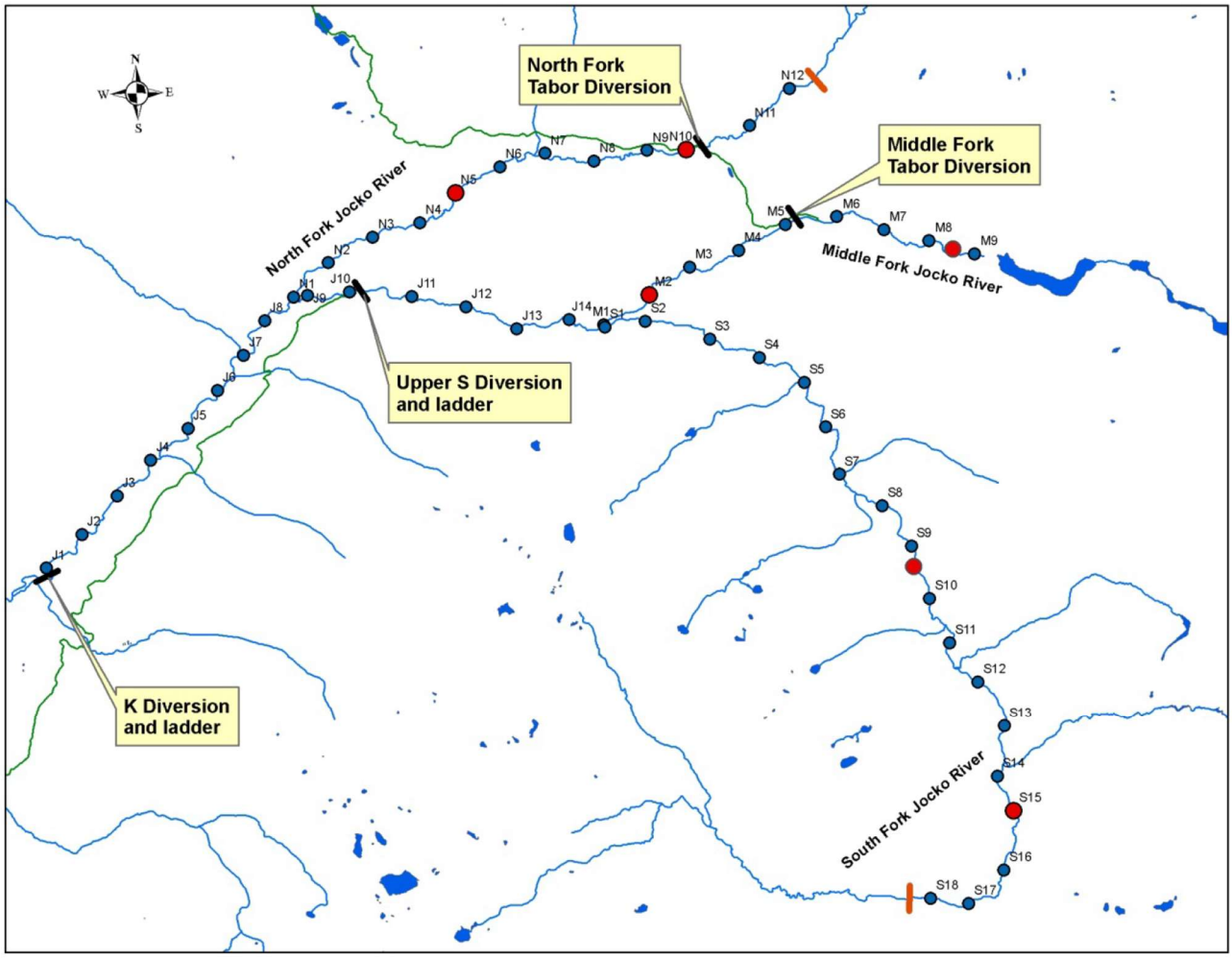

Figure 7. CSKT Fisheries Program long-term monitoring (red) and systematic sample sites (blue) (from the Amended FIIP BA [BIA 2017]).

2.2.8 Facility Operation

Following commissioning, the Facility would be operated following the SOP to be developed by the design engineer, which would include specifics on operations, roles, and communication procedures. The Facility would be operated to meet the instream flows required by the Compact for the NF Jocko (Table 3). The Compact defines minimum enforceable flows (MEFs) and target instream flows (TIFs), which would be implemented incrementally using operational improvements. The pre-Compact interim minimum instream flow is currently set at 18 cfs for the entire year, but the MEFs and TIFs would fluctuate by month, and TIFs would be further parsed for normal versus wet years. Compact MEFs would be incrementally implemented as the Facility operational improvements allow. The order of precedence would be to meet instream flows in the NF Jocko, and then diversion into the Tabor Canal.

Table 3. Compact MEFs and TIFs for the NF Jocko below Tabor Canal near mouth.

	Discharge (cfs)											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Interim	18	18	18	18	18	18	18	18	18	18	18	18
MEF	3	4	9	25	40	30	22	8	6	6	6	6
TIF Normal Year	4	4	14	26	70	44	24	12	10	10	12	8
TIF Wet Year	10	8	9	30	110	210	60	14	8	8	12	7

The new Facility would have an integrated sluiceway to move sediment downstream incrementally throughout the irrigation season, therefore eliminating the annual end of irrigation season sluicing that results in an unnatural pulse of sediment downstream mid-summer when flows are not high enough to flush it downstream, or to move it onto the floodplain. Improved Facility operation would also allow for implementation of the bankfull flow schedule recommended in the FIIP BO (USFWS 2018), which would also support more natural sediment transport and distribution. A specific regimen of bankfull flows would be implemented to support the movement of sediment downstream during higher flows, with the intent of allowing sediment to be transported farther downstream and onto the floodplain, rather than settling out and accumulating in the upstream reaches.

The period of operation (typically from April into early July, but the water right extends into October) is not anticipated to change since this timing is related to water availability. Day-to-day visitation by FIIP staff would remain similar for a period of one to three years and would likely diminish over time as confidence in the gate operations increases. Periodic maintenance would be required to clean screens and ensure gates are operating.

2.3 Alternatives Considered but Dismissed

The Preliminary Engineering Report (McMillen Jacobs 2021a) developed a set of alternatives for various components of the Project related to the Tabor Diversion. These alternatives were screened, and those meriting further consideration were integrated into three alternatives that were advanced for CSKT's review. The Proposed Action was selected as the design for the Project; the other alternatives were dismissed from further consideration. This process is described in the sections below.

2.3.1 Initial Alternatives Screening

Alternatives related to diversion location, sediment sluicing, fishway/fish passage, and fish screening, were initially screened using criteria associated with design feasibility, advantages, disadvantages, and cost. The following alternatives were evaluated and the **bolded alternatives were advanced** for further consideration; all others were dismissed.

<u>Location Alternatives</u>

1. **Replacement, in-kind**
2. **Replacement, in-place (refurbishment)**
3. **Relocation, upstream 350 feet**
4. Relocation, to NF Jocko bridge
5. Relocation, downstream
6. Relocation, upstream to falls

Sediment Sluicing Alternatives

1. **Sluice gate bank, manual operation**
2. **Sluice gate bank, automated operation**
3. Bladder weir

Fishway/Fish Passage Alternatives

1. **Technical fishway (Denil-type, vertical slot, or weir and orifice)**
2. **Natural fishway (roughened natural channel/rock ramp)**
3. **No fishway (no passage)**

Fish Screening Alternatives

1. **In-canal fish screening**
2. In-river fish screening
3. **No fish screening**

2.3.2 Advanced Alternatives

The advanced alternatives (bolded above) were then integrated into the three alternatives below.

1. Diversion replacement in-kind
    a. Diversion replacement in-place
    b. Sluice gate bank, automated operation
    c. No fishway
    d. No fish screening
2. Diversion replacement in-place
    a. Diversion replacement in-place
    b. Sluice gate bank, automated operation
    c. Technical fishway

d. In-canal fish screening

3. **Diversion relocation upstream**
    a. Diversion relocated upstream 350 feet
    b. Sluice gate bank, automated operation
    c. Natural fishway
    d. In-canal screening

Alternative #3 was recommended to CSKT for progression to the engineering design stage. The Project team of design engineers, CSKT hydrologists, fish biologists, and consultant restoration specialists, spent two years reviewing and refining this alternative, with the goal of minimizing adverse impacts to river flow, sediment and large woody debris transport, channel geomorphology, and channel substrate. This alternative ultimately developed into the Proposed Action.

3.0 Affected Environment and Environmental Impacts

This section describes the present condition of the affected environment and the potential environmental impacts of the No Action Alternative and the Proposed Action. Direct and indirect impacts are analyzed within each of the individual resource sections below. Cumulative impacts are considered in Section 3.9, Cumulative Impacts.

For the purpose of this EA, impact duration and magnitude were defined as follows:

Impact duration

- Temporary impacts: impacts that are restored to pre-construction conditions after construction is complete (i.e., within two to three years post-construction).
- Permanent (or long-term) impacts: impacts that are not restored to pre-construction conditions after construction is complete.

Geographic extent: the effects of the Project are evaluated at a minimum within the Project area, and this is the geographic extent evaluated unless specified otherwise. Some resources are evaluated within a larger area of potential effect, defined for each resource depending on the expected extent of impact to or from the resource.

Impact magnitude: evaluates the magnitude of intensity or severity of change to the resource. For adverse impacts, the amount and type of mitigation required to offset the impact provides a useful tool to assess impact intensity. Magnitude of intensity is assigned to one of the five categories below.

- No impact/None: no change to resource conditions.
- Negligible: Slight but immeasurable or imperceptible change to resource conditions.

- Minor: Small measurable or perceptible change to resource conditions. Simple, standard avoidance and minimization mitigation measures would easily offset the impact.
- Moderate: Measurable, perceptible change to resource conditions. Tailored mitigation measures beyond standard avoidance and mitigation measures would be needed to offset the impact, possibly including compensatory mitigation.
- Major: Large, measurable, or perceptible change to resource conditions. Tailored, extensive mitigation measures would be needed to offset the impact, likely to include compensatory mitigation.

For this EA, all impacts are adverse unless otherwise noted as neutral or beneficial. Geographic extent (local or regional) and frequency of the impact are also often evaluated, depending on the resource and type of impact.

Table 4 presents the resources that were initially evaluated based on the BIA 2012 Guidance (BIA 2012), with the exception of environmental justice (not evaluated per the direction of BIA [personal communication, Tobiah Mogavero]). Each resource was evaluated to determine whether it would be analyzed in greater detail in this EA, and the associated rationale. Resources were analyzed in detail in the EA if they were determined to be associated with meaningful impacts to the environment, or if additional impact description was required beyond what could be succinctly described in Table 4. Resources were not analyzed further if they, 1) were not present in the Project vicinity, or 2) were not applicable to the Proposed Action or environment, or 3) would not be expected to be meaningfully impacted by the Proposed Action, *and* the rationale for this determination could be succinctly described within Table 4.

Table 4 also presents a summary of the environmental impacts of the Proposed Action based on the analysis in this EA. The summary of impacts includes the type (beneficial or adverse) and duration (temporary versus permanent).

In summary, the Project is anticipated to result in temporary adverse impacts to various resources during the four years of construction, and within 1-3 years after construction. Permanent impacts would be beneficial given the improvement in instream flow, sediment transport, and aquatic habitat in the NF Jocko. No permanent adverse impacts were identified.

Table 4. Resources evaluated in this EA and a summary of impact findings.

Component	Detailed analysis in EA		Rationale	Impact Type[a]	
	Yes	No		Temporary	Permanent
Land Resources					
Topography	x		Very confined landscape that informed Project design. Steep slope above road would be stabilized.	○	+
Soils	x		Steep slope above road would be stabilized.	-	+
Geology/Mineral/ Paleontological Resources		x	Geology would not change under the proposed or no action alternative. No mineral/paleontological resources present.	○	○
Water Resources					
Surface Waterbodies and Wetlands	x		The Project would be constructed within and adjacent to the NF Jocko and Tabor Canal, and wetlands associated with these waterbodies.	-	+
Water Quality	x		Project construction within the NF Jocko and Tabor Canal would impact water quality (increased sediment), but would result in long-term improvements to sediment transport in the NF Jocko.	-	+
Groundwater	x		Project construction would require groundwater management.	-	○
Water Rights/Use	x		The Project would improve operations and safety for FIIP, and result in more efficient water delivery for FIIP users.	○	+
Air					
Air Quality	x		The batch plant and road dust would increase sources of air quality impairment during construction.	-	○
Living Resources					
Vegetation and Invasive Weeds	x		Vegetation would be impacted by the Project. Noxious weeds are present in the Project area.	-	○
General Fish and Wildlife	x		Fish may be impacted by instream construction activity. Wildlife may be impacted by construction noise and activity.	-	+
Threatened, Endangered, and Special Status Species	x		Endangered Species Act (ESA) listed species may be temporarily adversely impacted by Project construction, but Project goals have a long-term beneficial impact to fisheries, including Bull Trout.	-	+
Cultural Resources					
Cultural Resources	x		There are cultural resources identified within the Project area.	○	○

Component	Detailed analysis in EA		Rationale	Impact Type[a]	
	Yes	No		Temporary	Permanent
Socioeconomic Conditions					
Employment and Income		x	The Project would not have a meaningful impact or increase in construction jobs or local work force development.	○	○
Demographic Trends		x	The Project would not result in a change to demographic trends.	○	○
Lifestyle and Cultural Values		x	The Project would not change lifestyle and cultural values.	○	○
Community Infrastructure (Public Services, Utilities)		x	No residential or commercial structures are located in the Project area. No community infrastructure, public services, or utilities would be constructed or eliminated.	○	○
Resource Use Patterns					
Timber Harvesting		x	There is no timber harvesting at the Project area.	○	○
Agriculture		x	There is no agriculture harvesting at the Project area.	○	○
Mineral Extraction		x	There is no mineral extraction at the Project area.	○	○
Hunting, Fishing, Gathering	x		The Project area is used locally for hunting, fishing, and gathering. Project would improve and expand fish habitat.	-	+
Recreation	x		Recreational use includes fishing, and possibly other activities.	-	○
Transportation Networks	x		Project would require closure of the local access roads, and would increase traffic on Road P-1000/Jocko Canyon Road. It would increase dust and road use on all access roads.	-	+
Land Use Plans and Management		x	The staging areas and access roads are subject to the CSKT Forestry Management Plan but DEWR coordinated with the CSKT Forestry Department to ensure there would be no conflict with forestry activities during construction. The Wilderness area adjacent to the Project area is discussed in the Wilderness, Refuges, Ecological Sensitive/Critical Areas, Wild and Scenic Rivers Section.	○	○
Other Values					
Wilderness, Refuges, Ecological Sensitive/Critical Areas, Wild and Scenic Rivers	x		Designated Tribal Wilderness abuts the Project area and extends into the Project area along Road P-5450.	**-**	**+**

Component	Detailed analysis in EA		Rationale	Impact Type[a]	
	Yes	No		Temporary	Permanent
Noise and Light	x		Increased traffic and construction activity will increase noise levels in the vicinity and along access road.	-	○
Visual	x		The Project would result in a change in aesthetics during and after construction.	-	-
Climate Change	x		The Project would temporarily increase greenhouse gas emissions from vehicles and equipment. It would permanently increase resilience to climate change.	-	+
Indian Trust Assets		x	The Project would occur solely on Indian Trust lands and the status of these lands would remain the same post-project.	○	○
Public Health and Safety		x	The Project would not adversely public health. Public safety issues associated with the increased traffic on Jocko Canyon Road and the other access roads are addressed in the Transportation Networks section. The Project would improve safety for FIIP operators.	○	+
Hazardous Materials		x	Fuels and fluids for construction equipment would be the only hazardous materials stored on site. These materials would be managed per the spill prevention and containment measures presented in the Stormwater Pollution Prevention Plan. Per the design specifications the contractor would be required to prepare a plan for storing and disposing of hazardous materials at least 21 days before commencing construction activities.	○	○

a: Impact type: - adverse, + beneficial, ○ No impacts to resource

3.1 Land Resources

Geology, mineral, and paleontology resources in the Project area would not be impacted and were therefore not evaluated further. Topography and Soils are evaluated below.

3.1.1 Topography

3.1.1.1 Affected Environment

The Project area is located within a narrow valley bottom along the NF Jocko and the Tabor Canal channel, with steep mountainous slopes extending directly upwards from the Project area. Elevation within the Project area is approximately 4,200 feet. Primary landforms are the NF Jocko active channel with in-channel vegetated and gravel bars, the Tabor Canal, wetland fringes and forested upland adjacent to the river and the canal, and gravel road beds. The NF Jocko channel is rip-rapped at the bridge, and along portions of the right bank to protect the road from the naturally dynamic channel that is subject to erosion during high flows. There is also a naturally steep slope (~45 degrees) located directly above Road P-5400 (Attachment A, Drawings C103 and C104). The slope is naturally erosive and poses a safety risk to the road due to material sloughing into the road, and the potential for trees to fall and roll down the hill onto the road.

3.1.1.2 No Action Environmental Impacts

Under this alternative the steep slope above the road would not be shored up, and would continue to pose a risk to the road. All other topography would not change under this alternative.

3.1.1.3 Proposed Action Environmental Impacts

Temporary changes to topography would occur during construction associated with dewatering of the NF Jocko channel when the channel is excavated to move water away from active construction areas, within the bed of Road P-5400 to install the fish bypass channel, and within staging areas which would be graded to accommodate material and equipment storage, and at the batch plant area. All areas of temporary excavation and grading would be recontoured either to pre-construction conditions, or to more natural contours (such as to allow the NF Jocko channel to regain a more natural geomorphology), per the restoration plan (see Section 2.2.5 Restoration). After restoration, these **temporary impacts to topography would cause a negligible impact**, and would be isolated within the areas of excavation or grading.

Permanent changes to topography would occur within the current NF Jocko channel where some channel grading would be required to install Project features such as the rock ramp, sluiceway, plunge pools, and new rip-rap. The prism of the Tabor Canal just downstream of the current Facility would be contoured to construct the fish screen. The short segment of new road extending from Road P-5400 would also permanently change topography within the road bed. The **permanent changes to topography would cause a negligible impact**, and to be isolated to the footprint of the Project features.

3.1.2 Soils

3.1.2.1 Affected Environment

The Natural Resources Conservation Service (NRCS) Web Soil Survey data (NRCS 2025) shows five soil map units within the Project area (Table 5, Figure 8). Most of the Project area is designated as “area not surveyed” (48 percent). The remaining area is mapped primarily as aeric haplaquepts 1-3 percent (24.4 percent, within the main project area) and Courville gravelly silt loam 15-30 percent (17.9 percent, along the Tabor Canal downstream of the Facility). Soil characteristics are presented in Table 5.

Slopes within the Project area are generally stable and well vegetated. The exception is a section of cut slope above Road P-5400 directly to the north of the main project area that is unstable due to unconsolidated materials, sparse vegetation, and steep slope. Material from the slope occasionally sloughs into the road, and there is a risk of trees falling onto the road and where construction work would occur.

Table 5. Soil Characteristics within the Project area.

Map Unit Name	Slopes	Landform	Texture and parent material	Drainage/flooding	Hydric	Percent of Project area
Area not surveyed (ANS)	/	/	/	/	/	48
Aeric haplaquepts (1)	1-3%	Floodplains	Not available	Poorly drained Frequently flooded	Yes	24.4
Courville gravelly silt loam (28)	4-15%	Moraines	Volcanic ash over glacial till	Well drained Not flooded/ponded	No	9
Courville gravelly silt loam (29)	15-30%	Moraines	Volcanic ash over glacial till	Well drained Not flooded/ponded	No	17.9
Courville gravelly silt loam, warm (32)	15-30%	Moraines	Volcanic ash over glacial till	Well drained Not flooded/ponded	No	0.01
Winkler very gravelly loam (186)	30-60%	Mountains	Colluvium	Somewhat excessively drained Not flooded/ponded	No	0.7

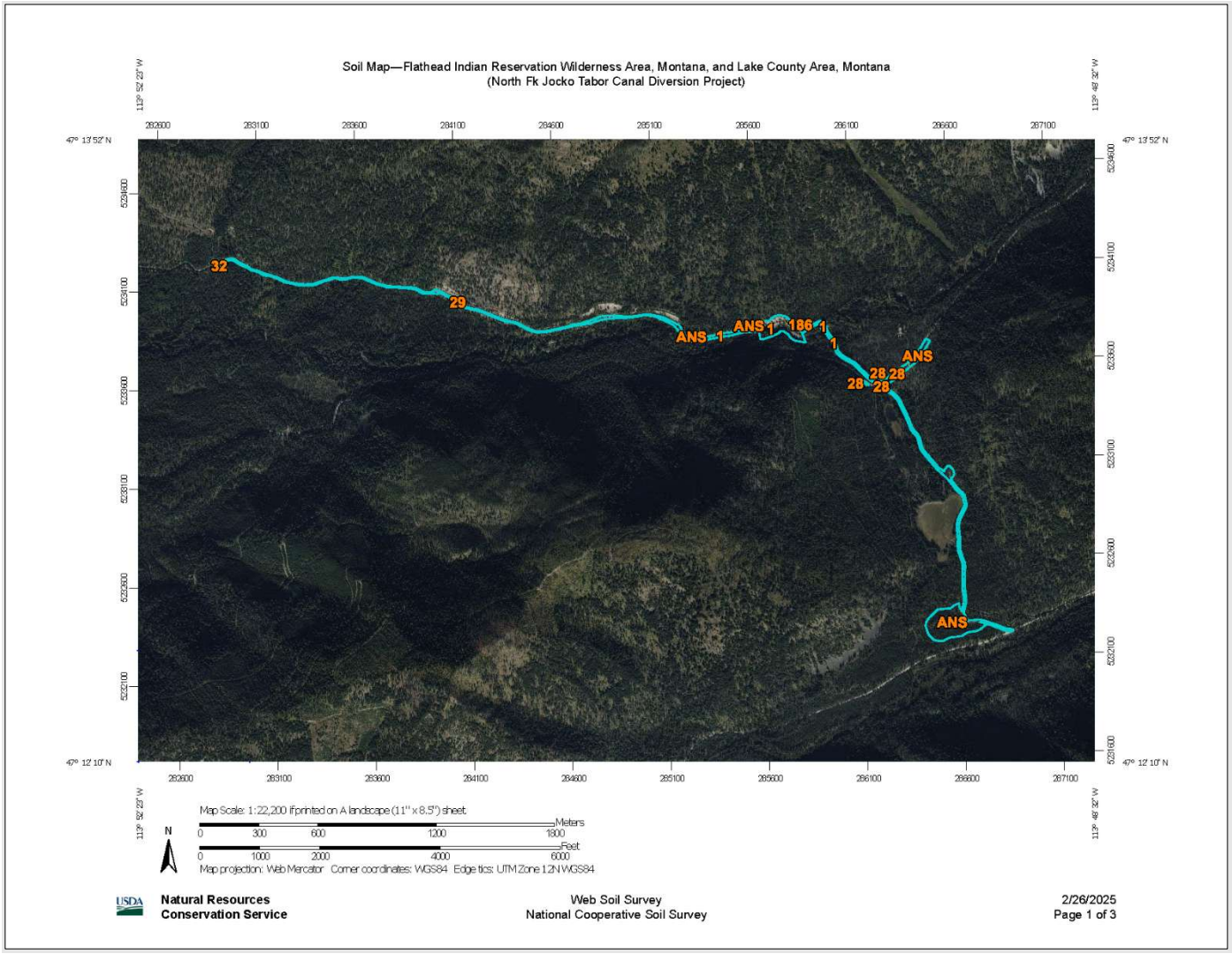

Figure 8. NRCS soil map units within the Project area.

3.1.2.2 No Action Environmental Impacts

Under the No Action alternative, soils would continue to erode at the steep cut slope north of Road P-5400. Soils elsewhere in the Project area would remain unchanged under this alternative.

3.1.2.3 Proposed Action Environmental Impacts

Soils would be temporarily impacted during Project construction, in areas of vegetation clearing, in the staging areas, and on the NF Jocko streambanks. All areas of temporary ground disturbance would be reclaimed and revegetated post-construction (see Section 2.2.5 Restoration). For areas where streambanks would be restored, river flow could erode soil until restoration is complete, but the streambank structures were designed to limit erosion by reducing near-bank stress, redirecting flow away from the bank, and assisting with stabilizing banks by providing site conditions suitable for vegetation establishment adjacent to the channel. Erosion and sediment control measures (Section 2.2.6.3 Other Construction Best Management Practices) would also be implemented to minimize soil erosion throughout the Project area.

With the implementation of the restoration measures and Best Management Practices (BMPs), any **adverse impacts to soils are expected to be minor, temporary, and localized to within the Project area**. The cut slope above Road P-5400 would be stabilized, resulting in a **permanent beneficial impact to soils**.

3.2 Water Resources

3.2.1 Waterbodies and Wetlands

3.2.1.1 Affected Environment

Figure 1 and Figure 2 present an overview of the flow paths of the NF Jocko and Tabor Canal. A delineation of waterbodies and wetlands was conducted in 2022 (Geum 2022) to identify potential waters of the U.S. and Tribal Waters within the Project area. Results of the delineation are presented in Figure 9 through Figure 11. Waterbodies and wetlands were classified using the Federal Geographic Data Committee classification system (FGDC 2013). The delineation evaluation extent was larger than the current Project area but the information in Table 6 provides context on the distribution of waterbodies and wetlands in the Project area. The NF Jocko and the Tabor Canal are the only waterbodies within the Project area. Wetlands are present adjacent to the NF Jocko and the Tabor Canal, and along the access roads. Further descriptions of the Tabor Canal, NF Jocko, and wetlands, are presented below the figures.

Table 6. Classification and acres of delineated waterbodies and wetlands within the 2022 delineation evaluation extent.

	FGDC[a] Code	FGDC Classification Description	Acres	Name
Waterbodies	R3UB	Riverine upper perennial unconsolidated bottom	2.12	NF Jocko
	R3UBx	Riverine upper perennial unconsolidated bottom, excavated	0.86	Tabor Canal
	R4UBx	Riverine intermittent stream bottom, excavated	2.38	Tabor Canal
		Total Waterbody Acres	**5.36**	
Wetlands	PEM	Palustrine emergent	0.92	
	PSS	Palustrine scrub-shrub	1.94	
	PFO	Palustrine forested	0.76	
		Total Wetland Acres	**3.63**	
		Grand Total	***8.99***	

a: FGDC 2013

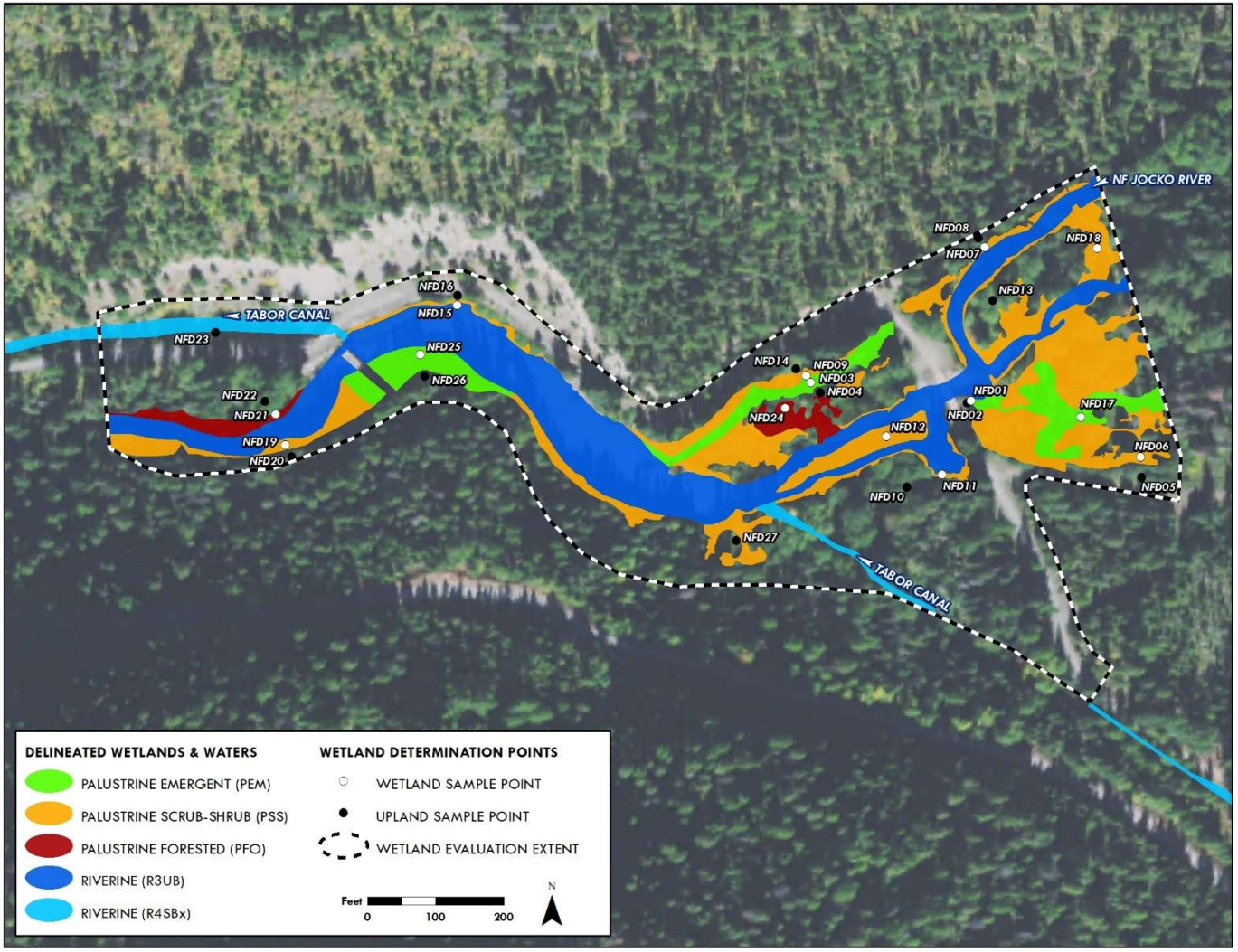

Figure 9. Delineated wetlands and waterbodies- main project area.

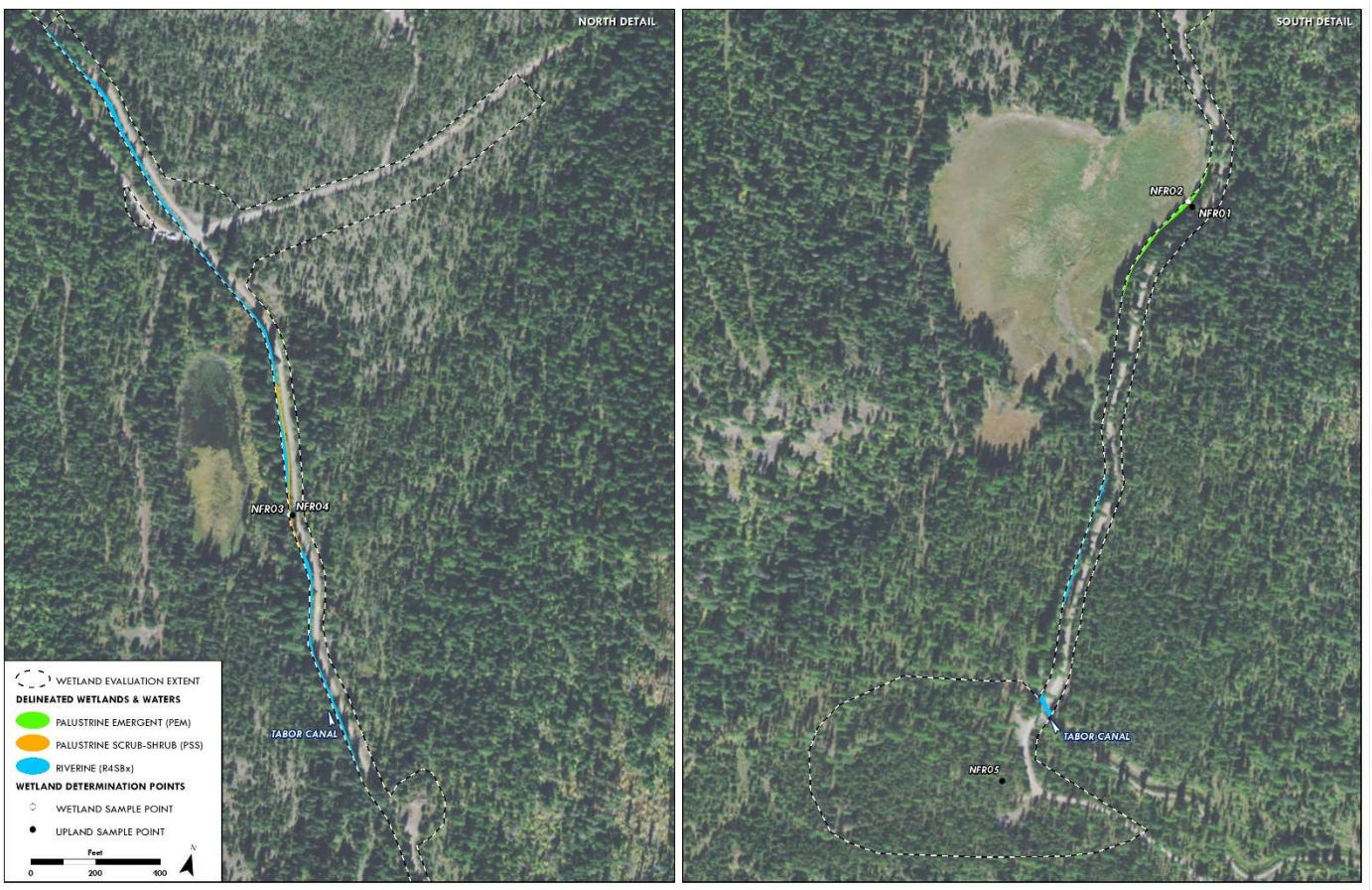

Figure 10. Delineated wetlands and waterbodies- P5450 Road, batch plant, and staging areas.

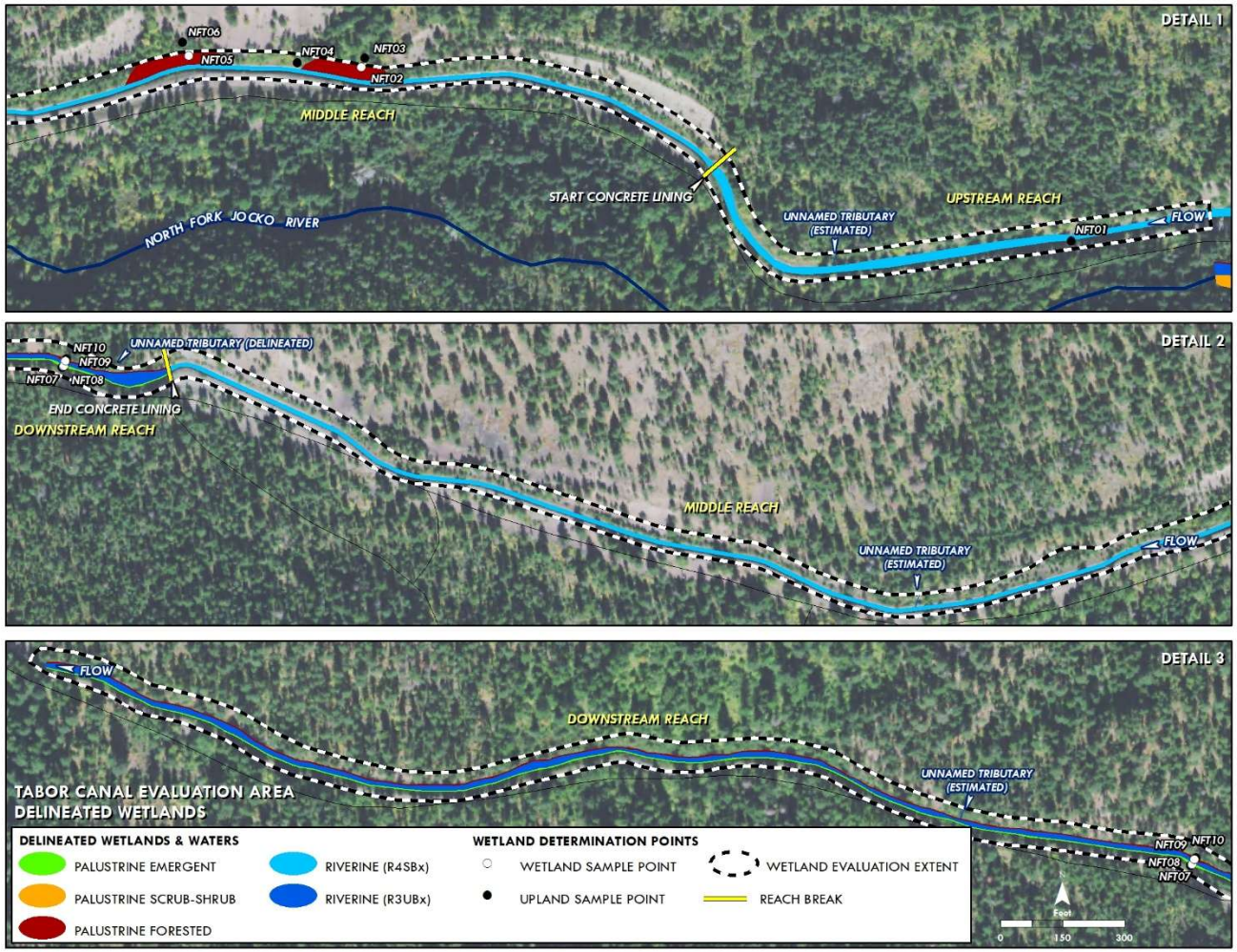

Figure 11. Delineated wetlands and waterbodies- evaluation extent along P5400/Canal Road. The main project area abuts the eastern/upstream end of the evaluation extent in Detail 1; the western/downstream end of the evaluation extent ends at Falls Creek in Detail 3.

Tabor Canal

The Tabor Canal starts at the diversion on the Middle Fork Jocko just upstream of the intersection of the P-5450 and P-1000 roads (Figure 1). It flows along Road P-5450 (Figure 12) for approximately 1 mile and through a large wetland (Figure 10) before entering the NF Jocko downstream of the NF Jocko bridge (Figure 9). It exits the NF Jocko again at the Tabor Feeder Diversion and flows to the northwest for several miles (Figure 11; Figure 13), crossing into the Mission Creek watershed before flowing into Tabor Reservoir.

Diversion from the NF Jocko typically occurs from April to early July. The peak diversion capacity at the Facility is 450 cfs, but flows are generally 350 cfs or less. The Tabor Canal trans-basin diversion is an important water supply for the FIIP irrigation system in the Mission Valley, on average supplying 25,000 to 28,000 acre-feet of water per year.

Within most of the Project area the canal bottom is an earthen bed of gravel and fine substrate, but it is lined within concrete for a segment downstream of the NF Jocko, starting approximately 1,500 feet downstream of the Tabor Diversion (Figure 13). Upstream of the NF Jocko the canal is dry outside of the irrigation season, except where shallow water persists where seeps enter the canal. Downstream of the NF Jocko the canal is dry outside of irrigation season from the Tabor Diversion downstream to the end of the concrete liner. From where the concrete liner ends, downstream to Falls Creek (the end of the Project area), is permanently inundated as a result of springs entering the channel from the north. A wetland fringe is present along the edge of the canal prism in the areas where water persists outside of the irrigation season.

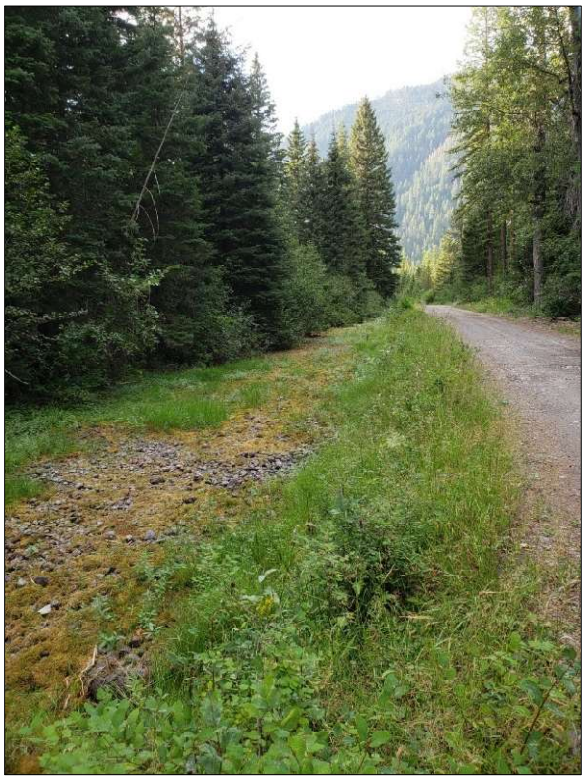

Figure 12. Tabor Canal along P5450 Rd. Looking north/downstream.

Figure 13. Tabor Canal along P5400 Rd where concrete liner starts. Looking west/ downstream.

North Fork Jocko River

The area of potential effect for the NF Jocko includes the Project area, as well as the reach within one mile downstream of the Project area (referred to as the “affected reach”). The NF Jocko watershed above the Tabor Canal is 18.9 square miles, with a mean annual precipitation of 60 inches (McMillen Jacobs 2021a). The NF Jocko is a second order stream (Strahler 1957) characteristic of a mountain headwater stream, with bankfull widths above and below the diversion measured at 29 and 21 feet respectively. The Facility is located approximately six river miles upstream of the confluence with the NF Jocko (Figure 1). Photos of the NF Jocko are presented in Figure 14 and Figure 15. Flow, sediment and substrate, and geomorphology of the NF Jocko within the affected reach are described below.

Figure 14. NF Jocko at low flow along P5450 Rd, diversion just out of photo background. Looking west/downstream.

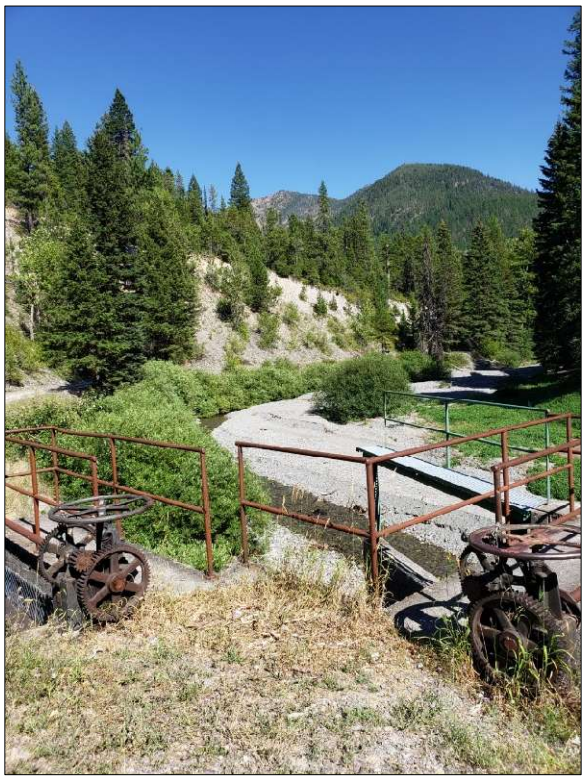

Figure 15. NF Jocko at diversion at low flow. Looking east/ upstream.

Flows

Flow monitoring conducted by the CSKT Department of Engineering and Water Resources (DEWR) concluded that the hydrologic regime in the NF Jocko is highly altered downstream of the Tabor Canal Diversion as a result of the Tabor Diversion. The NF Jocko has reduced annual flow volumes compared to natural condition, and peak flows are much lower in magnitude and duration than natural conditions.

High flows occur during spring runoff as snow melts, but additional high flows often occur during fall storm events, which can be flashy with water levels rising and falling rapidly. Flow statistics for the period of 1990-2022 measured for the NF Jocko below Tabor Canal (CSKT gage 513000) are presented in Table 7 and Table 8. Median daily flow was 19 cfs; median monthly minimum flows was 2 cfs; and the median of all monthly maximum flows was 296 cfs. There is no stream gage located on the NF Jocko upstream of the Facility that would represent natural flow conditions in absence of the Facility, but average and peak flows under the current diversion regime are known to be lower than natural flows would have been in the absence of diversion into the Tabor Canal (CSKT 2010).

Instream flow requirements set by the Compact are presented in Table 7 for reference (also presented in Section 2.2.8, Facility Operation). Because the MEFs are considered difficult with the current Facility operation, the interim year-round instream flow requirement is set at 18 cfs, until modernization of the Facility can allow for the Compact instream flow requirements to be met through new operational controls.

Table 7. Daily discharge statistics per month, measured on the NF Jocko below the Tabor Canal (diversion period outlined in red)

	Discharge (cfs) 1990-2022			Water Compact
Month	**Monthly Median**	**Monthly Minimum**	**Monthly Maximum**	**MEF (cfs)[a]**
January	6	1	119	3
February	5	1	79	4
March	10	1	191	9
April	23	5	229	25
May	29	8	829	40
June	82	13	916	30
July	27	7	453	22
August	8	2	119	8
September	4	0.6	146	6
October	7	0.1	207	6
November	14	1	356	6
December	10	2	106	6
Median annual	***19***	/	/	

Source: CSKT gage 513000 for the period of 1990-2022, provided by the CSKT Water Measurement Program, 2024.
a: Compact MEF compliance point would be located at NF Jocko mouth. Interim instream flows would remain set at 18 cfs until the Project is constructed and new operational controls are in place.

Table 8. Annual peak and minimum discharge, measured on the NF Jocko below the Tabor Canal

	Discharge (cfs)	
Year	**Minimum**	**Maximum**
1990	4	370
1991	3	296
1992	2	99
1993	2	227
1994	1	54
1995	1	79
1996	3	380
1997	2	497
1998	3	112
1999	2	223

	Discharge (cfs)	
Year	**Minimum**	**Maximum**
2000	3	102
2001	0.6	159
2002	0.1	438
2003	1	278
2004	1	207
2005	2	292
2006	3	780
2007	1	356
2008	1	254
2009	2	266
2010	2	359
2011	4	548
2012	2	393
2013	2	317
2014	2	322
2015	3	191
2016	1	156
2017	2	644
2018	3	829
2019	3	273
2020	3	916
2021	2	348
2022	2	448
Median	***2***	***296***

Source: CSKT gage 513000, provided by the CSKT Water Measurement Program, 2024.

Geomorphology

The affected reach of the NF Jocko is classified as a Rosgen Type B channel (Rosgen 1996), it has a moderate gradient, and is moderately to highly confined. Vegetation along the river is dense forest and shrubs, with very limited bank erosion. The dominant stream features are fast-water habitats (runs, riffles, and pocket water), and pool frequency is naturally low. Floodplain areas are limited within the affected reach due to the confined channel.

Clearwater Biostudies (Clearwater Biostudies 2005) conducted a habitat study for the entire NF Jocko from the mouth to the Facility. They found that habitat consisted of approximately 22 percent pools, 50 percent riffles, and 21 percent runs, with pool frequency and large woody debris increasing in an upstream direction. The study documented an average of 20 primary pools per mile (12.3 pools/km), defined as pools spanning the channel width and located in the primary channel, that met specific residual pool depth criteria. They documented 2.25 high quality pools per mile (1.4 pools/km), defined as pools located in stream reaches with less than 3 percent slope that

were ranked as higher quality based on size, depth, and cover. This frequency of primary and high-quality pools was considered similar to a reference reach; however, the pool habitat diagnostic indicators (pool frequency and quality, and large pools), was determined to be “functioning at risk” in the 2017 Amended FIIP BA (BIA 2017), given past and ongoing land management practices (season-long grazing at the time) and the risk of increased sedimentation and pool filling.

The 2004 Clearwater survey also documented nearly 200 pieces of large woody debris per mile (124 pieces/km), defined as pieces >4 inches diameter and >10 feet long, and root wads. Of these, key wood (>12 inches diameter and >35 feet long) averaged ~23 pieces per mile (14 pieces/km). This amount of large woody debris was considered similar to a reference reach; however, the large woody debris habitat diagnostic indicator was determined to be “functioning at risk” in the 2017 Amended FIIP BA (BIA 2017), given that amounts were lower than average in downstream reaches and that historical road building and timber harvest practices in portions of this stream have likely contributed to a reduction in woody debris accumulations. However, riparian logging or roading has not occurred in decades, and some riparian roads have been re-contoured.

Sediment and Substrate

As a mountainous headwater stream with moderate gradient and flashy runoff, the NF Jocko has a naturally high bedload because of lateral and longitudinal channel scour, and inputs from a landslide from the adjacent mountain slopes approximately 1.5 miles upstream of the Project area. Anthropogenic sources of sediment to the NF Jocko in the affected reach include runoff from adjacent roads during storm events, and historic grazing.

Limited data are available on the substrate composition of the NF Jocko within the affected reach. In 2002 the CSKT Fisheries Program conducted sediment sampling in a low-gradient section of the NF Jocko downstream of the affected reach, near the crossing of the P5000 Road approximately 3 miles upstream of the mouth. They used a McNeil Corer sampler to collect three replicate samples across a transect. Fine sediment (less than 6.35 mm) ranged from 10 percent up to 40 percent, the upper end of which is considered relatively high and would be expected to impair spawning and emergence success for Bull Trout (Craig Barfoot, personal communication). A 2004 internal CSKT study of geomorphic conditions on the NF Jocko documented that substrate was smaller diameter in the reach downstream of the diversion compared to the reach upstream of the diversion. Although this study did not investigate sediment transport, it concluded that the diversion appears to selectively transport the fine sediment fraction through the diversion, which is then deposited downstream of the diversion.

Based on decades of observation, CSKT has concluded that the presence and operation of the Facility causes changes to the geomorphic character of the river up and downstream of the Facility. Sediment currently accumulates behind the Tabor Diversion, and a portion of this sediment is flushed downstream annually at the end of the irrigation season (in July) when FIIP closes the diversion headgates and opens the sluice gates (Figure 16). This pulse of sediment occurs mid-summer when flows are not high enough to flush it downstream, or to move it onto the floodplain. Therefore, it is assumed to degrade downstream habitat by causing substrate embeddedness, pool filling, and

excessive turbidity. It also potentially diminishes aquatic macroinvertebrate production and corresponds with the timing of egg incubation and larval emergence of Westslope Cutthroat Trout, a potential Bull Trout prey species (Craig Barfoot, personal communication). Figure 17 presents a photo of the level of embeddedness just downstream of the Facility. The FIIP BO (USFWS 2018) identified these sedimentation issues as a threat to Bull Trout and critical habitat, and suggested scheduling and implementing channel-forming bankfull flows in the NF Jocko as one measure to reduce sediment issues downstream of the Facility.

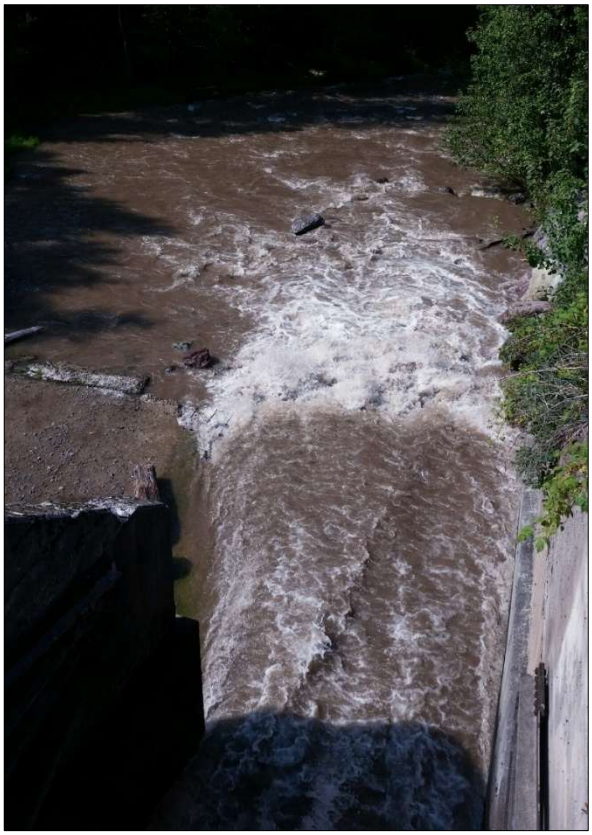

Figure 16. Sediment pulse in NF Jocko downstream of diversion after closing Tabor Feeder Canal headgate, July 17, 2014.

Figure 17. Embeddedness downstream of Tabor Diversion, October 2017.

Wetlands

Wetlands delineated in the delineation evaluation extent (which covers the project area) are presented in

Table 6 and in Figure 9 through Figure 11. Wetland vegetation for each wetland type are described in Section 3.4.1.1, Affected Environment (Vegetation and Invasive Weeds). Palustrine emergent (herbaceous) and palustrine scrub-shrub wetlands are found throughout the NF Jocko floodplain (in, and as a wetland fringe along the western/downstream portion of the Tabor Canal along the P5400 Road. Forested wetlands are limited to two areas within the NF Jocko floodplain (Figure 9), and in two areas north of the Tabor Canal downstream of the NF Jocko (Figure 11).

3.2.1.2 No Action Environmental Impacts

Waterbodies and wetlands would remain unchanged under the No Action alternative.

3.2.1.3 Proposed Action Environmental Impacts

Permanent and temporary impacts to waterbodies and wetlands are presented in

Table 9 and Figure 18. Most impacts to waterbodies and wetlands would be temporary (restored to their pre-construction conditions post-construction). Examples of temporary impacts are staging areas that would be restored to pre-construction conditions within two to three growing seasons (such as where trees would not be removed), NF Jocko stream banks that would be revegetated, and in the Tabor Canal where the fish screens would be placed, such that the canal would function in its current state post-construction. Restoration design specifications are found in Attachment A, Drawings C150 to C155 and are described in Section 2.2.5, Restoration.

Most permanent impacts would occur within the NF Jocko channel, with only very minimal permanent impacts to wetlands. Two types of permanent impacts were identified: 1) loss- impacts that result in a loss of the waterbody or wetland because it transitions to an upland area due to the placement of fill (such as infrastructure, or due to grading), and 2) conversion- impacts that result in conversion of a waterbody to wetland or vice versa, where the feature does not become an upland area. Examples of conversion are the conversion of a wetland to waterbody due to excavation adjacent to the NF Jocko channel, or conversely, conversion of an area of the river to wetland due to fill placement such that the area would maintain wetland hydrology but would no longer be part of the river with an ordinary high water mark. Another example of conversion is for the rock ramp, where the bottom of the river channel would be grouted but it would remain river channel, and therefore classified as a “modified waterbody” for the rock ramp section.

Adverse and beneficial impacts to the NF Jocko, Tabor Canal, and wetlands within the Project area are presented in the sections below.

Table 9. Impacts to wetlands and waterbodies within the Project area.

		Permanent Impact		
	Aquatic Resource (FGDC classification[a])	**Loss**	**Conversion**	**Temporary Impact**
Waterbodies	NF Jocko River (R3UB)	0.23	0.35	0.39
	Tabor Canal (R4UBx)	0.03	0	0.73
	Total Waterbody Impact	**0.26**	**0.35**	**1.11**
Wetlands	Palustrine emergent (PEM)	0.01	0.03	0.14
	Palustrine scrub-shrub (PSS)	0.05	0.02	0.04
	Palustrine forested (PFO)	0.001	0.01	0.00
	Total Wetland Impact	**0.06**	**0.06**	**0.18**
	Grand Total	***0.32***	***0.41***	***1.29***

a: FGDC 2013

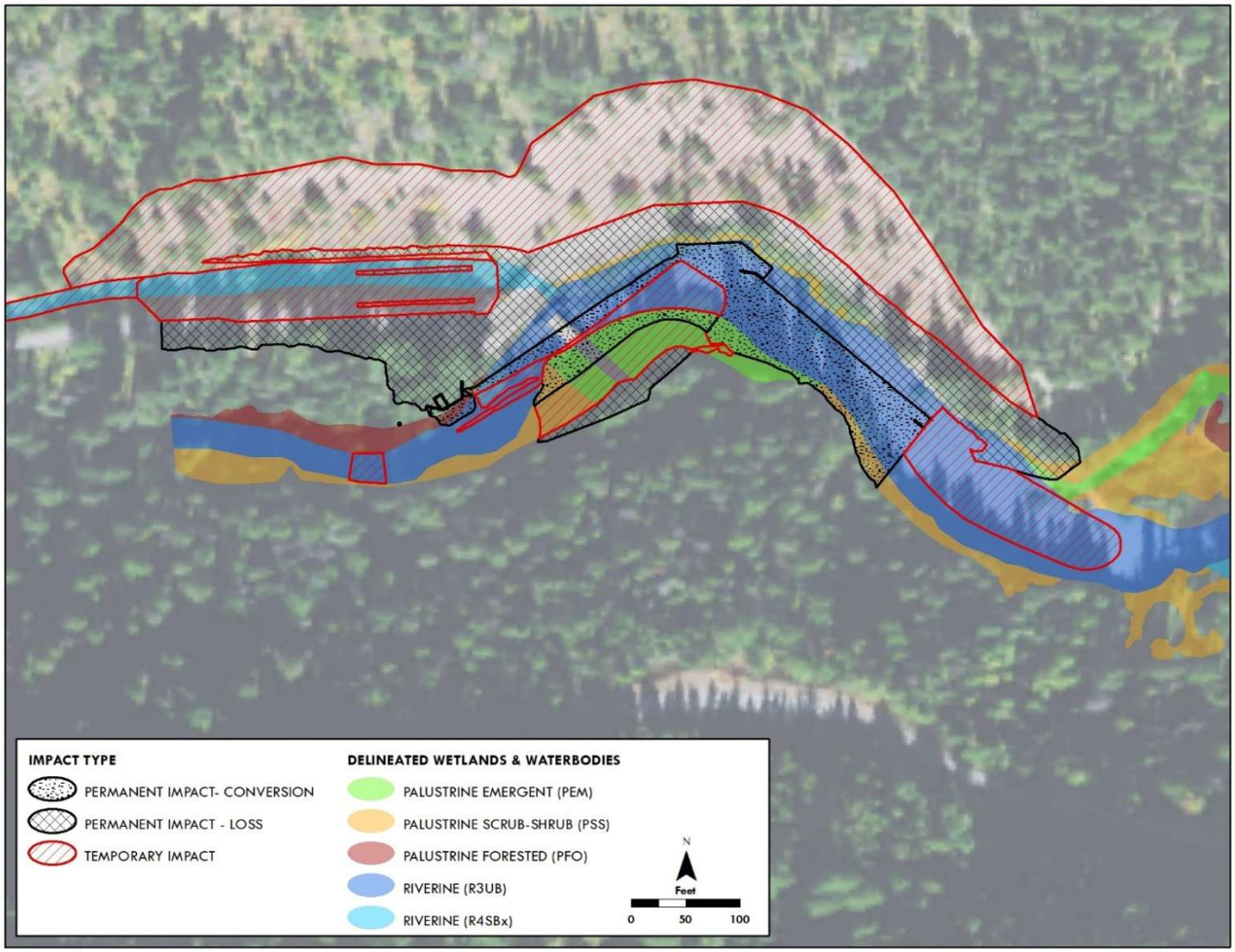

Figure 18. Project impacts to waterbodies and wetlands (no impacts to wetlands or waterbodies elsewhere in the Project area).

Tabor Canal

During Project construction there would be temporary impacts to the Tabor Canal due to staging of materials within dry segments of the canal outside of irrigation season, as well as from the installation of the fish screens which would be elevated on piers within the canal bottom. Flow timing and duration would not be impacted during construction, as the Facility would continue to deliver irrigation water on the same schedule. These **temporary impacts would be limited to the Project area, and would be negligible.**

The small footprint of the piers would cause a very small permanent impact in the Tabor Canal. The fish screens themselves would not be considered a permanent fill impact because once they were operational the canal would function the same as it had pre-construction. Once the Facility were operational, irrigation diversion flows into the Tabor Canal would be impacted, as the Facility would be operated to prioritize meeting MEFs in the NF Jocko (the senior water right; Table 3) before diverting water into the canal (see Section 2.2.8, Facility Operation). The amount, timing, and duration of flow reduction would depend on water availability in the upstream watershed in any given year. As such, the magnitude of the **permanent impact on flows in the Tabor Canal would range from minor to moderate.**

North Fork Jocko River

A total of 0.39 acres of NF Jocko channel (

Table 9, Figure 18) would be temporarily impacted throughout the four seasons of Project construction. Temporary impacts would result from all of the construction activities presented in Section 2.2.3, Project Features and Activities, as well as from the water management activities presented in Section 2.2.4, Construction Water Management. Key impacts include extensive grading of the NF Jocko channel to move flow away from work areas, staging of materials within the channel, and heavy equipment working within the channel and on the stream banks. Conservation measures and BMPs described in Section 2.2.6.3, Other Construction Best Management Practices, would be implemented to minimize adverse impacts to the NF Jocko. The Water Control Plan and the Demolition Plan would also include stream protection measures to avoid and minimize adverse impacts within the construction footprint, as well as downstream in the affected reach. Given the duration of construction across four seasons, and the degree of physical change to the NF Jocko channel during construction activities, the Project **would cause a moderate to major temporary impact on the NF Jocko during construction.**

A total of 0.58 acres of NF Jocko channel (

Table 9, Figure 18) would be permanently adversely impacted by the footprint of the new Facility features including the sheet pile cutoff wall, rock ramp and fishway, sluiceway, headworks, box culvert, and the widened P5400 Road. The Project team of design engineers, CSKT hydrologists, fish biologists, and consultant restoration specialists spent an extensive amount of time reviewing and refining the Project design throughout the design process, with the goal of minimizing adverse

impacts to river flow, sediment and large woody debris transport, channel geomorphology, and channel substrate. To further minimize impacts they developed the stream protection measures presented in Section 2.2.6, Conservation Measures and Best Management Practices. As such, with the design process and BMPs, the **permanent adverse impact on the NF Jocko would be localized to the direct footprint of the Facility, causing a moderate adverse impact** due to the loss or modification of the river channel.

Lastly, post-construction, operation of the new Facility would result in permanent beneficial impacts to the NF Jocko by improving instream flows, sediment transport, and channel geomorphology. The timing, duration, and volume of natural bankfull flows are reduced with current diversion of irrigation flows. While the Project would not change the overall hydrologic regime of the NF Jocko, the new Facility would allow for increased operational controls which would support implementation of the Compact MEFs and TIFs in the NF Jocko (Table 3, and Section 2.2.8, Facility Operation).

NF Jocko channel geomorphology would also be improved, as the current diversion would be removed, and the river would be graded to a more natural channel geomorphology. Over time the river would regain a more natural channel form within the confines of the remaining Facility infrastructure. Sediment would also no longer accumulate behind the diversion after removal, and combined with improved operation, this would support a more natural sediment regime and restoration and maintenance of aquatic habitat. The new Facility would have an integrated sluiceway to move sediment downstream incrementally throughout the irrigation season, therefore eliminating the annual end of irrigation season sluicing that results in an unnatural pulse of sediment downstream mid-summer when flows are not high enough to flush it downstream, or to move it onto the floodplain. In addition to eliminating this mid-summer sediment pulse, improved Facility operation would allow for implementation of the bankfull flow schedule recommended in the FIIP BO (USFWS 2018), which would also support more natural sediment transport and distribution. As such, **operation of the new Facility would result in major permanent beneficial impacts to the NF Jocko**.

Wetlands

Impacts to wetlands are presented in

Table 9 and Figure 18. The Project would cause temporary impacts to palustrine emergent and scrub-shrub wetlands on the inner meander bend where the diversion would be removed, resulting from re-grading of the NF Jocko channel. These wetlands would be restored to a condition similar (but not identical) to pre-construction, given the change in geomorphology that would occur with the removal of the diversion. These **temporary impacts would be considered minor** given their limited area.

Permanent impacts resulting in a loss of wetlands would occur associated with the new access road to the headgate and sluiceway, and for widening of the road along the outer meander bend upstream and downstream of the current diversion. Note that the impacts to the forested wetland downstream of the diversion were considered permanent due to the length of time required to

revegetate mature trees. Permanent impacts resulting in conversion of wetlands to waterbodies would occur where the rock ramp would be installed, and in areas where the channel would be graded to result in a lower elevation such that the wetland would transition to river channel. Given the very limited area of permanent wetland impact, **permanent Project impacts to wetlands would be considered negligible.**

3.2.2 Water Quality

3.2.2.1 Affected Environment

The area of potential effect for water quality is comprised of the waterbodies within the Project area (NF Jocko and Tabor Canal), as well as the NF Jocko for one mile downstream of the Project area (referred to as the "affected reach"). The NF Jocko within affected reach is listed in the CSKT Water Quality Standards (Standards; CSKT 2024) as "unclassified", but it flows into the portion of the NF Jocko downstream that is classified as a B-1 waterbody. Therefore, this reach of the NF Jocko is subject to the B-1 Standards (Evan Smith, personal communication).

As described in Section 3.2.1.1. [Waterbodies and Wetlands] Affected Environment, the NF Jocko has a naturally high bedload that is transported during (often flashy) high flow events. Anthropogenic sources of water quality impairment in the NF Jocko within the Project area are limited to the discrete sediment pulses caused by operation of the Facility, and possibly sediment inputs from adjacent roads during storm events. Therefore, this section focuses on sediment and turbidity as the primary potential constituents of concern in the NF Jocko.

Mean daily water temperature data collected by the CSKT Fisheries Program in 2011 approximately one mile downstream from the Project area just upstream of Falls Creek did not exceed 11ºC. Maximum summer water temperatures would have exceeded 11ºC but there is no maximum temperature data available the affected reach. However, this data indicates that water temperatures remain relatively cold even during summer months. There are no known sources of agricultural or industrial contaminants in the drainage.

Standards for sediment and turbidity in B-1 waterbodies are as follows:

- Sediment: No increases are allowed above naturally occurring concentrations of solids that will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, fish, or wildlife.
- Turbidity: The maximum allowable increase above naturally occurring turbidity is five nephelometric turbidity units.

Turbidity and sediment data are limited within the affected reach of the NF Jocko but CSKT collected turbidity and suspended sediment data approximately one mile upstream of the Project area (at the North Fork trail head) in October 2005, and monthly from spring through fall in 2006 and 2007 (Table 10). These data are considered to be representative of natural conditions in the NF Jocko within the Project area, documenting that suspended sediment levels are naturally low. In addition, based on observation by CSKT staff over several decades, suspended levels are also

naturally low downstream of the Facility, except during storm events and when FIIP closes the Facility head gate annually in late June resulting in an intense pulse of sediment. Suspended sediment naturally increases annually during high flows (namely spring runoff and fall storm events), as high flows erode the stream bed and banks and transport sediment downstream. This sediment and larger substrate (gravel to cobble) accumulates behind the Tabor Diversion. When FIIP closes the Tabor Canal headgate at the end of the diversion season (typically between late June and early July), these accumulated materials are washed downstream in a pulse of sediment. Given that flows are usually relatively low that time of year, approaching minimum instream flows, stream power is diminished, and thus fine sediments settle out within the stream bed rather than being carried along the stream gradient and deposited in the floodplain as they would be during spring runoff. Observations by the CSKT Fisheries Program indicate that this sediment pulse dissipates to background levels within 24 hours, and the resulting increased embeddedness extends a maximum of one mile downstream (Craig Barfoot, personal communication).

Other sources of sediment to the affected reach include a natural landslide located approximately 1 mile upstream of the Facility, and some minimal inputs from roads. The bridge in the upper portion of the Project area on Road P5400 was replaced in 2024, and it was constructed with the goal of minimizing sedimentation and erosion from the road surface or from erosion at the bridge abutments. The P5400 road abuts the NF Jocko downstream of the bridge, but vegetation is mostly dense along the river and sediment delivery from the road is likely minimal.

Table 10. Turbidity and total suspended solid sampling data collected in NF Jocko at North Fork trail head just upstream of Project area.

Month	Turbidity (NTU)	Total Suspended Solids (mg/L)
10/19/2005	0.5	<1
5/16/2006	1.7	<1
6/13/2006	1.5	2
7/11/2006	0.5	3
8/7/2006	0.2	2
9/11/2006	0.3	<1
10/16/2006	0.5	<1
5/22/2007	1.2	<1
6/6/2007	1.6	4
7/11/2007	1.0	3
9/11/2007	0.2	<1

3.2.2.2 No Action Environmental Impacts

Under the No Action Alternative, the sediment regime would remain altered by the presence and operation of the Facility. The annual pulse of sediment would continue to occur during an unnatural

time period and flow conditions for this amount of sediment, unnaturally increasing suspended sediment and turbidity levels within the NF Jocko downstream of the Facility when the diversion season ends. This would continue to cause an annual, major impact on water quality in the NF Jocko for a duration of less than 24 hours, within at least one mile downstream of the Facility (possibly farther but the distance has not been quantified; Craig Barfoot, personal communication).

3.2.2.3 Proposed Action Environmental Impacts

The Project would not affect water temperature within the action area because the Project would not alter anything that would affect temperature, such as vegetation that provides stream shading, or groundwater or surface water inputs. Project construction would temporarily adversely impact water quality in the NF Jocko, Tabor Canal, or wetlands, by increasing suspended sediment, and through the potential spill or leak of chemical contaminants. Post-construction the new Facility would result in beneficial impacts to water quality resulting from restoration of a more normative sediment regime.

Temporary

Sediment

Project construction would cause temporary increases in suspended sediment in the NF Jocko downstream of in-water work areas. As presented in the construction schedule (Table 1), the activities listed below would occur “in the wet” and could therefore cause periodic increases in suspended sediment within the affected reach. These activities would not occur continuously for the entire period listed in the construction schedule. Rather they would occur for only hours to days during and after the in-water work, sometime within the listed timeframe.

Year 1

- July 1-14: grading the NF Jocko streambed to move the channel to the left bank
- July-November: cofferdam work zone dewatering. Pumped water from dewatering behind the cofferdam would be disposed of in one of the three ways described in Section 2.2.4, Construction Water Management. Water disposal is not expected to result in sediment delivery to the NF Jocko with the implementation of BMPs, but could still potentially produce sediment in the rare case that a BMP measure fails.

Year 2

- June through July 14: channel maintenance to ensure the NF Jocko channel is along the left bank
- May through November: cofferdam work zone dewatering

Year 3

- June through July 14: channel maintenance to ensure the NF Jocko channel is along the left bank
- August through September: install lower sheet pile wall and remaining upper sheet pile wall (not tying into river left bank)

- August: install temporary structure to isolate work zone, construct micro-hydro vault, then remove temporary structure
- April through August: cofferdam work zone dewatering (until cofferdam is removed in July or August)

Year 4

- June through July 14: streambed re-grading to move channel to right bank and sluiceway
- July through October: demolish existing diversion structures
- October through November: streambed grading and restoration

Each activity would be expected to increase suspended sediment for the duration of the activity (i.e., hours to days), and for a certain timeframe after the activity has ceases that would vary depending on the degree of disturbance. This post-activity timeframe of elevated suspended sediment was estimated to range from hours, up to one day, based on observational monitoring studies conducted by the USFS (Foltz, Yanosek, and Brown 2008) for culvert removal projects, and CSKT (CSKT 2024b) as part of the NF Jocko Bridge Replacement Project. It was estimated that sediment would likely be elevated for a few hours after in-water disturbance activities but could remain elevated for up to 1 day. Increased suspended sediment would likely extend downstream at least 300-500 feet, but would be expected to dissipate to background levels within 2,500 feet, or nearly 0.5 mile. The longer/farther estimates would only be expected in the case where rain events and higher water unexpectedly occur during or immediately after the in-channel disturbance.

Sediment production during construction would be minimized through implementation of erosion and sediment control BMPs presented in Section 2.2.6, Conservation Measures and Best Management Practices, as well as through implementation of measures included in the Water Control Plan, Erosion and Sediment Control Plan, the Demolition Plan, and Stormwater Pollution Prevention Plan to be developed for the Project. Sediment transport would be minimized by using forecasting to avoid or restrict in-channel work during high flow or storm events.

These increases in suspended sediment would occur periodically across the four-year construction period. With the implementation of the Project BMPs and measures included in the plans listed above, the increase in suspended sediment would be expected to result in a **temporary moderate impact on water quality within the affected reach of the NF Jocko** (Project area and one mile downstream).

Chemical Contaminants

Contaminants and hazardous materials such as vehicle and equipment fluids, pesticides, or other chemicals could be introduced into the river during construction due to the presence of equipment and vehicles in or near the channel. Standard BMPs would be implemented to avoid spills and contamination into the river. Hazardous materials would also be stored and disposed of per a hazardous waste plan developed by the construction contractor. No hazardous materials would be stored at the in-channel staging area, or near wetland or waterbodies. Spill prevention and response measures for the Project would also be detailed in the Stormwater Pollution Prevention Plan that the

construction contractor would prepare as part of authorization under the Construction General Permit for stormwater permitting.

With the implementation of the Project BMPs and measures included in the Stormwater Pollution Prevention Plan, chemical contaminants would be expected to result in a **negligible impact on water quality in the Project area.**

Permanent

No permanent adverse impacts to water quality were identified. Implementing the Project and operation of the new Facility would result in a permanent beneficial effect on sediment transport in the NF Jocko. The Project would contribute to restoration of a more natural sediment regime, as the existence and operation of the current structure greatly alters sediment transport and negatively impacts critical habitat above and below the diversion, causing embeddedness, pool filling, and extreme turbidity during canal shutdown. Additionally, the modernized structure would allow for better water management and compliance with instream flows and bankfull flow scheduling.

Given the restoration of a natural sediment regime, the Project would result in **permanent major beneficial impacts to water quality in the NF Jocko**. This beneficial impact would occur at a minimum within the affected reach of the NF Jocko (Project area and within one mile downstream).

3.2.3 Groundwater

3.2.3.1 Affected Environment

Geotechnical investigations (McMillen Jacobs 2021b) indicate groundwater levels correspond approximately to the river water surface elevation, and are higher during irrigation operational periods when the forebay is full (April through early July), and lower in the off-irrigation season. Groundwater flow paths and direction has not been mapped in the Project area but it is assumed to follow the surface topography, flowing towards the NF Jocko down valley (east to west). There are no Montana Groundwater Information Center database wells in or near the Project area (MBMG 2025).

3.2.3.2 No Action Environmental Impacts

Groundwater quantity and quality would not change under this alternative.

3.2.3.3 Proposed Action Environmental Impacts

During construction, work areas in the NF Jocko channel would be isolated using a coffer dam, and water would be managed by excavating a temporary channel to route water away from the isolated work areas. Shallow groundwater in the hyporheic zone would be expected to fill the area behind the coffer dam, requiring dewatering. Groundwater would be pumped from excavations as required, and would be managed using one of the following approaches (in order of priority): 1) water would be routed into the Tabor Canal to pond and infiltrate into the canal (outside of irrigation season when the canal is dry); 2) water would be routed into vegetated areas to allow infiltration

and sediment filtration; or 3) water would be pumped to the NF Jocko below the diversion, only if the pumped water were clean and free of sediment. Discharges are expected to be up to 100 gallons per minute and would occur along the longest flow path possible. Any approach would employ BMPs to avoid sediment delivery to waterbodies, which could include filtration basins, sediment barriers (bioengineering materials and rock check structures), and technical solutions such as flocculation logs.

Dewatering may result in lowering of the groundwater table directly adjacent to the area being dewatered. This impact would be temporary, as groundwater levels would return to pre-construction condition upon completion of pumping activities. Therefore, the Project would result in a **negligible temporary adverse impact to groundwater directly adjacent to the area being dewatered**.

The Project would not cause any permanent adverse or beneficial impacts on groundwater.

3.2.4 Water Rights and Uses

3.2.4.1 Affected Environment

Water diverted from the Facility into the Tabor Canal flows for several miles crossing from the Jocko Watershed into the Mission Watershed and into Tabor Reservoir. Water is then distributed across the Mission Valley through a complex network of FIIP distribution and conveyance canals. The Tabor Canal supplies Tribal and non-Tribal irrigation users in the Mission Valley with 25,000 to 28,000 acre-feet of water per year through FIIP irrigation infrastructure. The Tribes beneficially own senior water rights managed at the Project area, in downstream river segments, and in the various FIIP sources of supply. The Compact quantifies the Tribal Water Right and establishes protocols for implementation of two of the Tribal Water Rights related to the project- 1) MEFs and TIFs intended to ensure flows adequate to maintain aquatic species and habitat, and 2) the Tribal Water Right for FIIP for irrigation and incidental purposes. The Compact instream flows for the NF Jocko, measured below the Tabor Canal diversion, are presented in Table 2 in Section 2.2.8, Facility Operation. The MEFs have been incrementally implemented starting in 2024, and will be fully implemented in 2027. The current year-round interim instream flow for the NF Jocko is set at 18 cfs.

3.2.4.2 No Action Environmental Impacts

Under the No Action Alternative, the Facility would continue to lack the operational control to meet the pending Compact MEFs and MRPEs to fulfill the Tribal Water Right. This would result in an adverse impact on water rights and uses.

3.2.4.3 Proposed Action Environmental Impacts

After the Facility becomes operational, the FIIP would have greater control to distribute water according to the Compact, meeting instreams flows in the NF Jocko as the senior water right priority, and irrigation diversions into the Tabor Canal as the second priority. While it is expected

there would be a reduction in irrigation diversion, the reduction should have **no or negligible adverse impact on on-farm water use**, since operational improvements are ongoing in the Jocko irrigation services areas. There would be a **major beneficial impact on the Tribal instream flow water right, and possibly a moderate beneficial impact on the Tribal water right for FIIP**. The Compact calls for a reduction in seasonal diversion volumes, but the modernized facility will be sensitive and capable of close operational control.

3.3 Air Quality

3.3.1 Affected Environment

The Project area is not located within a non-attainment area for any criteria pollutants identified under the National Ambient Air Quality Standards (NAAQS) in 2025, as of the writing of this EA (EPA 2025). The closest 2025 non-attainment areas to the Project area are Polson and Ronan, which are listed as non-attaining for particulate matter (PM-10). The closest Montana Department of Environmental Quality air monitoring stations are located in Missoula, to the south of the Project area on Interstate 90, and in Seeley Lake across the mountains to the east. These monitoring stations would not reflect air quality at the Project area.

Sources of air quality pollutants within the Project vicinity are limited to dust on the gravel roads during the months when roads are open, and smoke from local and regional wildfires during the summer months. Traffic on the roads within and adjacent to the Project area is very minimal, estimated at a few vehicles per day based on observations during site visits and the wetland delineation.

3.3.2 No Action Environmental Impacts

Air quality would not change under this alternative.

3.3.3 Proposed Action Environmental Impacts

Construction equipment and vehicles would temporarily emit NAAQS criteria pollutants such as particulate matter (PM) PM2.5 pollutants, nitrogen dioxide, and carbon monoxide. The concrete batch plant would emit concrete dust (primarily PM10 with some PM2.5). PM10 pollutants would also result from construction activities that produce dust such as driving on the gravel access roads, excavation, grading, and dust blown from bare ground prior to revegetation.

Construction BMPs would be implemented to limit the emission of air quality pollutants including ensuring all equipment and vehicles comply with emissions standards; and revegetating bare soils as soon as possible after construction to limit dust. Dust would also be controlled on the access roads (i.e., Road P-1000/Jocko Canyon Road) and within the Project area during dry periods, as needed. With the implementation of design elements and BMPs, **adverse impacts to air quality are expected to be minor, temporary, and local to the site**. No permanent adverse or beneficial impacts to air quality are expected once the Project is constructed.

3.4 Living Resources

3.4.1 Vegetation and Invasive Weeds

3.4.1.1 Affected Environment

Vegetation

The vegetation types occurring in the Project area are listed below, and presented in Figure 19 and Figure 20.

Forested upland (15 acres): This cover type is the most abundant in the action area, existing in any area outside of wetlands in the valley bottom, on the hillslopes, and within the dryer well-drained riparian areas within the NF Jocko floodplain. Forested upland vegetation is shown in the photos presented in Figure 12- Figure 15. Tree canopy is generally dense, with the exception of the area on the steep slope above the P-5400 Road where trees are sparse. Dominant trees were Douglas-fir *(Pseudotsuga menziesii)*, Engelmann spruce (*Picea engelmannii)*, lodgepole pine (*Pinus contorta*), and subalpine fir (*Abies lasiocarpa*), with black cottonwood (*Populus balsamifera*) found in riparian areas. Dominant understory species were snowberry (*Symphoricarpos albus)*, red-osier dogwood (*Cornus alba*), raspberry (*Rubus idaeus),* bristly black currant *(Ribes lacustre*), Woods' rose (*Rosa woodsii),* Rocky Mountain maple (*Acer glabrum),* serviceberry (*Amelanchier alnifolia)*, (*Sherperdia canadensis),* and kinnikinnick (*Arctostaphylos uva-ursi),* and upland forbs and grasses such as creeping bentgrass (*Agrostis stolonifera),* catchweed bedstraw (*Galium aparine)*, queencup beadlily (*Clintonia uniflora),* great-northern aster (*Canadanthus modestus),* arrow-leaf ragwort (*Senecio triangularis*), starry false-Solomon's seal (*Maianthemum stellatum*), beargrass (*Xerophyllum tenax*), nodding fescue (*Festuca subulata),* and timothy (*Phleum pratense)*.

Emergent (herbaceous) wetland (0.21 acres): Herbaceous wetlands exist along the NF Jocko channel throughout the riparian corridor and on mid-channel river bars (on the right side of the photo in Figure 15), and along the fringes of the Tabor Canal primarily downstream of the NF Jocko. There is also a large herbaceous wetland located directly west of the P-5450 Road. Dominant vegetation is American mannagrass (*Glyceria grandis*), arrow-leaf ragwort, creeping bentgrass*,* great-northern aster*,* Northwest Territory sedge (*Carex utriculata*), water sedge (*Carex aquatilis),* bluejoint (*Calamagrostis canadensis),* blue wildrye (*Elymus glaucus),* and water smartweed (*Persicaria amphibia)*.

Shrub wetland (0.26 acres): Shrub wetlands exist along the NF Jocko channel throughout the riparian corridor, on mid-channel river bars, and along the rip-rap between the river channel and the P5400 Road (Figure 15). Dominant vegetation is red-osier dogwood, Drummond's willow (*Salix drummondiana*), sandbar willow (*S. exigua*), speckled alder (*Alnus incana*), hawthorn (*Crataegus gaylussacia*), field horsetail (*Equisetum arvense)*, nodding fescue, tall buttercup (*Ranunculus acris*), violet (*Viola species*), sidebells wintergreen (*Orthilia secunda*), Kentucky bluegrass (*Poa pratensis*), blue wildrye, and catchweed bedstraw.

Forested wetland (0.06 acres): This cover type is the least abundant of wetland cover types and is found only downstream of the diversion, and just downstream of the NF Jocko bridge. Dominant vegetation is black cottonwood and Engelmann spruce*,* with an understory of speckled alder, red osier dogwood, American mannagrass, field horsetail, Northwest Territory sedge, water sedge, pink wintergreen (*Pyrola asarifolia),* common lady fern (*Athyrium filix-femina)*, and starry false-Solomon's seal.

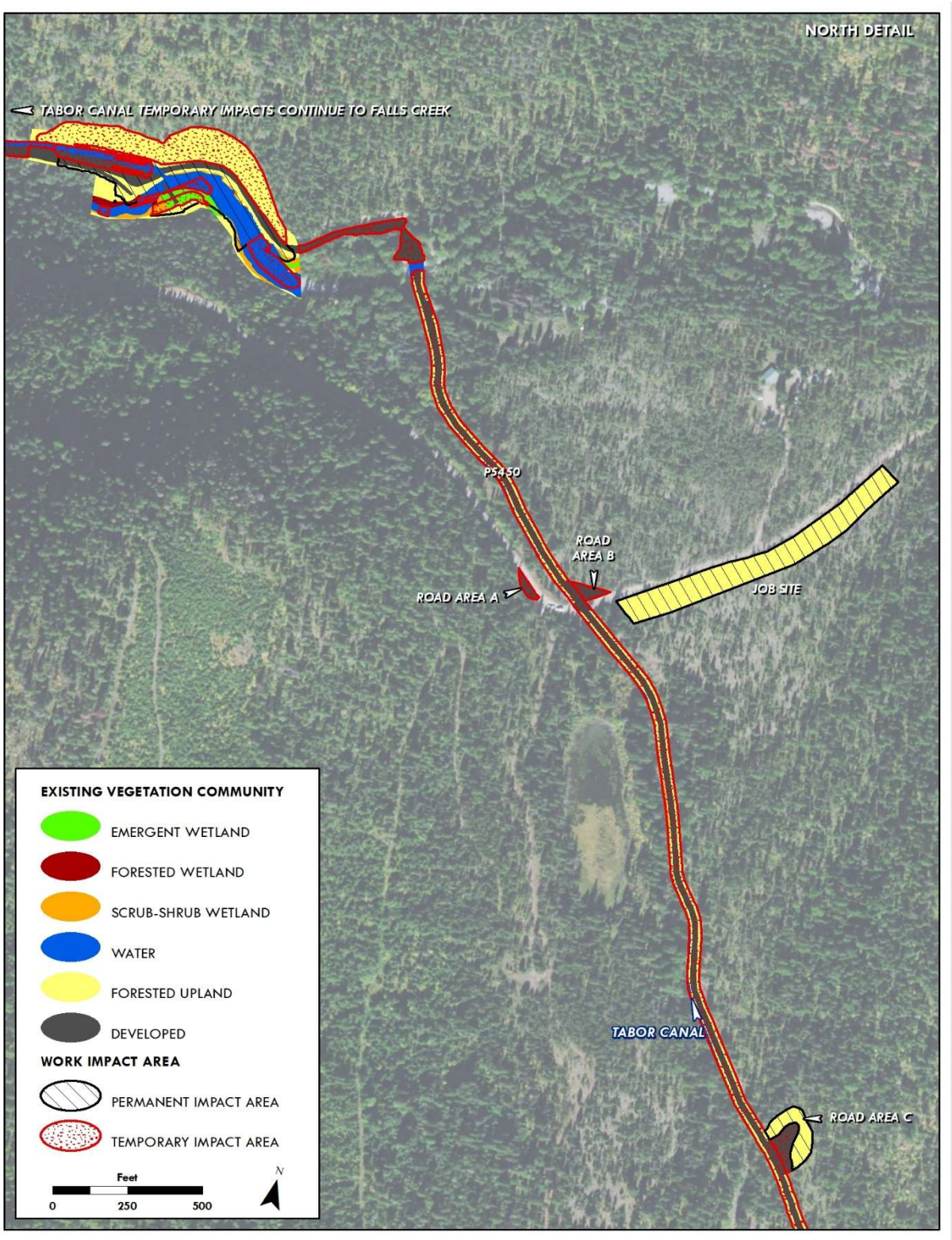

Figure 19. Vegetation types and Project impacts- northern portion of Project area.

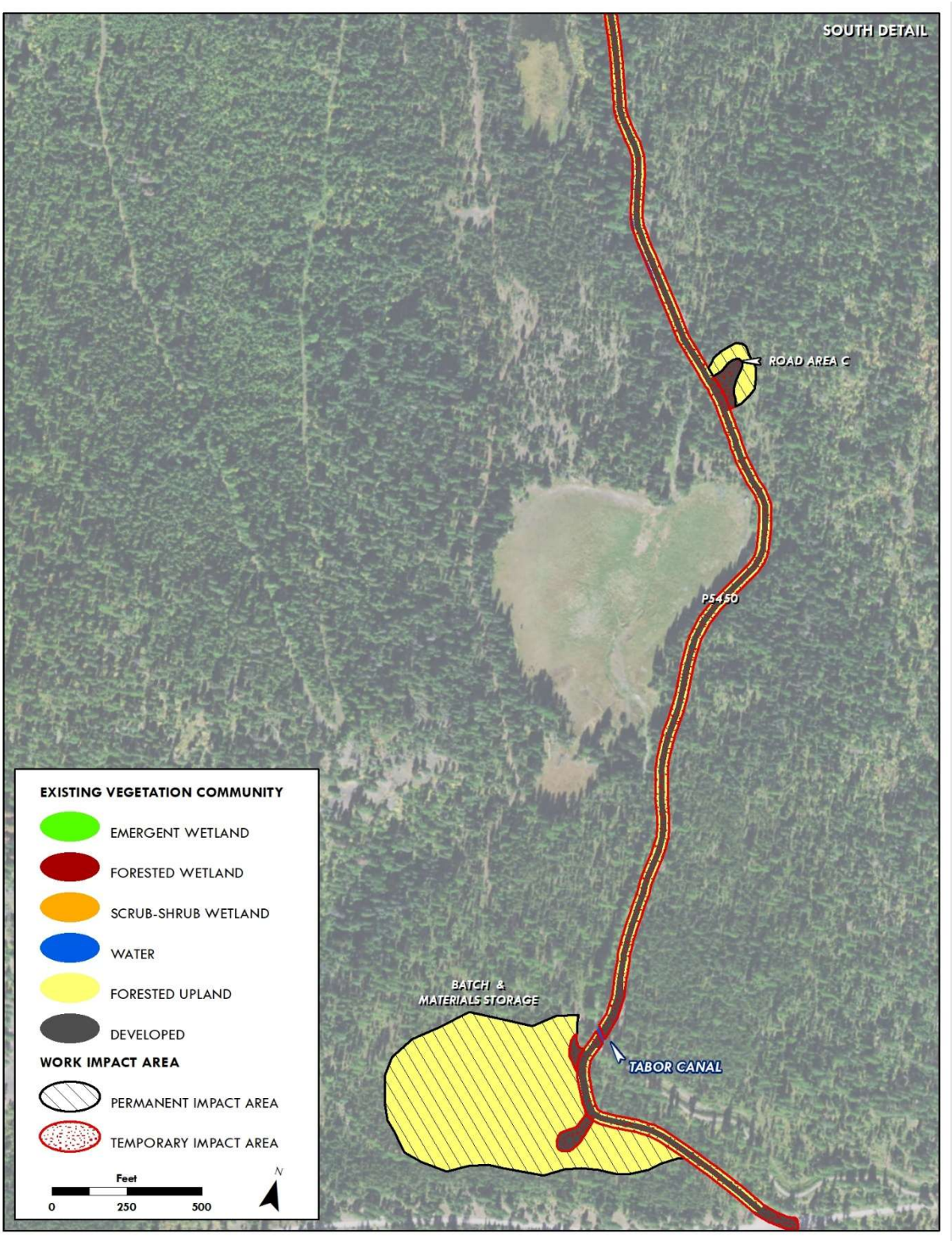

Figure 20. Vegetation types and Project impacts- southern portion of Project area.

Invasive Weeds

No formal weed survey has been completed in the Project area, but observations made during site visits and during the delineation indicate that noxious weeds listed by the Montana Department of Agriculture (MDOA 2019) and Lake County (Lake County 2025) are present in very low densities in select areas within the Project area. Overall native vegetation is diverse, dense, and undisturbed, limiting the introduction and establishment of invasive weeds. Spotted knapweed (*Centauria stoebe*), oxeye daisy (*Leucanthemum vulgare*), Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), and St. Johnswort (*Hypericum perforatum*) were documented in disturbed areas such as within and adjacent to the road right-of-ways and the Tabor Canal, as well as on sparsely vegetated gravel bars within and along the NF Jocko. These species are all listed as Priority 2B species by the State and Lake County. Dandelion (*Taraxacum officinale*) is not listed as a noxious weed, but it was also documented in the Project area and is noted here given the limited extent of invasive species found within the Project area.

3.4.1.2 No Action Environmental Impacts

Vegetation and invasive weeds would not change under the No Action Alternative.

3.4.1.3 Proposed Action Environmental Impacts

Vegetation

Areas of permanent and temporary impacts to vegetation are presented in Figure 19 and Figure 20, and in Table 11. Impacts to vegetation were considered temporary if the area would be restored to its pre-construction condition (vegetation and contours) within 1-3 years post-construction. This included areas of herbaceous and shrub clearing, or where there would be very limited tree clearing. Temporary impacts to vegetation would occur within the Road P-5450 right-of-way where clearing would be limited to select trees, on the steep slope north of the NF Jocko that would be shored up to minimize erosion, and herbaceous and shrub wetlands that would be restored post-construction. Along Road P-5450 vegetation would be cleared exclusively within the right-of-way (within 20 feet either side of center) on the east side of the road to widen the road for equipment access or to avoid sensitive resources. Vegetation would not be cleared within wetland areas, and the large larch trees along the road would be avoided by placing a buffer around them to avoid any impacts to the trees. Areas of temporary impact would be restored following the guidelines in Attachment A, Drawing G104. These **temporary impacts to vegetation would be localized to the footprint of the impact, and minor**.

Permanent impacts to vegetation (i.e., longer than 2-3 years post construction) would occur in areas of tree clearing. Tree clearing is considered a permanent impact due to the time required to restore mature trees. A small portion of the permanent vegetation disturbance would occur in previously undisturbed areas, namely in an area of forested wetland downstream of the diversion, and for the new ~90-foot access road extending from the P-5400 Road which would require removal of large cottonwood and Engelman spruce trees. The majority of these permanent impacts

to vegetation would occur in areas that have been previously disturbed by logging (the batch plant area, Job Site staging area, and the Road Area C staging area), or by fill associated with the adjacent road right-of-way (along Road P-5400 and P-5450).

The batch plant area would be approximately 7.8 acres located within a former clear cut with pole-size lodgepole pine and interspersed larger trees, and a logging road down the center. Clearing and grubbing would initially occur on approximately four acres, with the remaining ~four acres cleared only if additional staging was required as the Project progresses. The Jobsite Area is also located in a former clear cut with pole-sized trees interspersed with larger trees that would be cleared to accommodate staging. Road Area C is already partially cleared, but additional vegetation (including trees) would be cleared to expand the area for staging. Post-construction, the batch plant and staging areas would be reclaimed and restored, but given the amount of time required for trees to reestablish, these impacts were considered a permanent impact per the definition used in this EA.

Therefore, **permanent impacts to vegetation were considered minor** given that most of the area of permanent vegetation was previously disturbed and would be eventually revegetated, and the surrounding area is dominated by the same forest vegetation type as the areas that would be disturbed. The two areas of permanent impact to undisturbed vegetation are very small and were therefore also considered a minor impact.

Table 11. Project impacts to vegetation types.

	Impacts (acres)	
Cover Type	**Permanent**	**Temporary**
Forested upland	10.31	4.33
Emergent (herbaceous) wetland	0.09	0.08
Shrub wetland	0.08	0.09
Forested wetland	0.01	0
Total	**10.49**	**4.50**

Invasive Weeds

The Project may cause a temporary increase in invasive weeds due to the increase in ground disturbance that may allow existing weed seeds in the soils to germinate. Although weed densities are currently low in the Project area, the weed species present are known to be aggressive and could readily spread throughout the Project area. Further, because weed densities are currently low, minimizing and avoiding the introduction and spread of invasive weeds is a high priority to ensure that the Project area remains dominated by native vegetation. Standard weed management BMPs would be implemented to minimize the introduction and spread of invasive weeds. All equipment would be washed prior to site mobilization to minimize the introduction of weed seeds or propagules; revegetation seed mixes would use only certified weed-free seed and mulch; areas of ground disturbance would be minimized, and these areas would be revegetated directly after

construction (seeded and/or planted, and mulched) to limit the introduction and spread of invasive weeds.

With the revegetation activities and weed management measures proposed, this temporary increase in invasive weeds is expected to be minor and confined to within the Project area.

3.4.2 General Fish and Wildlife

Fish and wildlife are described in this section. A more detailed evaluation of threatened and endangered fish and wildlife species is presented in Section 3.4.3, Threatened and Endangered Species, and in the BA prepared for the Project (Attachment B). Birds are also discussed in this section, with evaluation specific to the Migratory Bird Protection Act (MBTA), and the Bald and Golden Eagle Protection Act (BGEPA) presented in Section 3.4.4.

3.4.2.1 Affected Environment

Terrestrial Wildlife

Terrestrial habitats are described in Section 3.1.1, Vegetation and Invasive Weeds, and the cover types mapped within the Project area are presented in Figure 19, Figure 20, and Table 11. The Project area supports at least 80 species of birds, reptiles, amphibians, and large mammals (MNHP 2025a). No terrestrial invertebrate, small mammal, or bat data are available in the region of the Project area.

Amphibians including the Columbia spotted frog (*Rana luteiventris*), Rocky Mountain tailed frog (*Ascaphus montanus*), and long-toed salamander (*Ambystoma macrodactyllum*) have been documented in the region of the Project area. Reptiles documented in the region of the Project area include the common garter snake (*Thamnophis sirtalis*), terrestrial garter snake (*Thamnophis elegans*), and northern rubber boa (*Charina bottae*). The riparian corridor along the NF Jocko is important for common birds such as the American robin (*Turdus migratorius*), black-capped chickadee (*Poecile atricapillus*), MacGillivray's warbler (*Geothlypis tolmiei*) and warbling vireo (*Vireo gilvus*) as well as less common birds such as the golden eagle (*Aquila chrysaetos*), olive-sided flycatcher (*Contopus cooperi*), rufous hummingbird (*Selasphorus rufus*), flammulated owl (*Psiloscops flammeolus*) and black swift (*Cypseloides niger*). Medium-sized and large mammals recorded in the area include moose (*Alces alces*), Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), Black Bear (*Ursus americanus),* North American wolverine (*Gulo gulo luscus*), and fisher (*Pekania pennanti*).

Fish and Other Aquatic Species

Aquatic habitat within the Project area is described in Section 3.2.1, Waterbodies and Wetlands. The Tabor Canal provides only very limited aquatic habitat within the Project area given that most of the canal within the Project area is dry after irrigation ceases annually in early July. Therefore, this section presents information on fish and other aquatic species within the NF Jocko.

The only fish present in the Project area are native Westslope Cutthroat Trout and Bull Trout and introduced Brook Trout. Bull Trout are not expected to be present above the existing diversion as the CSKT Fisheries Program has conducted extensive sampling in this reach and has not documented a Bull Trout since 2018. Resident Bull Trout may be present below the diversion in very low numbers. Bull Trout are further discussed in Section 3.4.3, Threatened and Endangered Species. Westslope Cutthroat Trout are present above and below the diversion and could be spawning in late spring-early summer, with eggs incubating mid-summer and fry emerging later in the summer.

Aquatic macroinvertebrate data are not available for the affected reach, but sampling done in the early 2000s upstream of the Project area (outside of the influence of the diversion) and at another location near the mouth of the NF Jocko indicated a non-impaired assemblage indicative of cold and clean conditions (Bollman 2007). Given aggradation and sedimentation observed in the Project area, there is assumed to be some level of impairment and a modified assemblage both above and below the diversion structure in the area influenced by the Facility and FIIP operations.

Western Pearlshell Mussels (*Margaritifera falcata*), a Montana State species of concern, are not known to be present in the NF Jocko based on extensive surveys by the CSKT Fisheries Program. The closest known population of this species is in Finley and Valley Creeks, tributaries to the Jocko River. The high-energy habitat in the NF Jocko, with few microhabitats, would also not be expected to support Western Pearlshell Mussels (Craig Barfoot, personal communication, 2024).

As described in Section 1.1, Background, the Facility structure and operation currently cause various adverse impacts to aquatic resources and habitat, namely habitat fragmentation due to the diversion acting as a fish barrier, fish entrainment in the Tabor Canal, an unnatural sediment transport regime, and the inability to meet instream flow requirements due to inefficient operational controls. The diversion is considered a complete barrier to fish, which blocks access to approximately two miles of high-quality habitat between the Facility and the natural barrier located upstream. The diversion also inhibits genetic exchange for fish populations above and below the diversion. Fish entrainment in the Tabor Canal is also an issue as the canal does not have a fish screen. During the primary months of diversion in May and June, about 80 percent of mean daily discharge of the NF Jocko is diverted down the Tabor Canal, resulting in a high risk for fish entrainment. The CSKT Fisheries Program conducts annual end-of-season fish rescues, but these are inefficient and do not mitigate for season-long loses of fish to the canal.

As discussed above, operation of the Facility causes pulses of sediment to be flushed into the NF Jocko annually at the end of the irrigation season (late June to early July) when the canal headgate is shut and sediment is sluiced through the radial gates on the diversion. This sediment pulse results in increases in turbidity, and long-term increases in the levels of fine sediment downstream of the diversion in the NF Jocko. The increased sediment is assumed to cause substrate embeddedness, pool filling, excessive turbidity, and could possibly disrupt fish foraging and cause gill trauma. Suspended sediment loads may also reduce aquatic macroinvertebrate production, fill interstitial spaces, and reduce survival of incubating Westslope Cutthroat Trout embryos, and decrease suitability of spawning and rearing habitat for Bull Trout (personal communication Craig

Barfoot). Observations by the CSKT Fisheries Program indicate that this sediment pulse likely dissipates to background levels within 24 hours, and the resulting increased embeddedness varies annually but is estimated to extend a maximum of 1 mile downstream (Craig Barfoot, personal communication).

3.4.2.2 No Action Environmental Impacts

Terrestrial wildlife would not be affected under the No Action alternative, and there would be no change to the existing adverse impacts caused by the Facility under the No Action alternative. Fish and other aquatic species would continue to be adversely affected by the Facility structure and operations through habitat fragmentation due to the diversion acting as a fish passage barrier, fish entrainment in the Tabor Canal, and increases in sediment downstream of the diversion.

3.4.2.3 Proposed Action Environmental Impacts

Terrestrial Wildlife

Impacts to terrestrial wildlife species include noise from construction equipment and activities, noise and road dust from increased vehicle traffic, increased human presence, and vegetation clearing. These impacts would cause temporary minor wildlife impacts including individual displacement and localized habitat degradation during Project implementation. As described in Section 3.4.1.3 [Proposed Action Environmental Impacts], Vegetation, vegetation removal would cause temporary minor adverse impacts to shrub habitat, and permanent minor adverse impacts to tree habitat (due to the length of time required to regrow mature trees). However, vegetation clearing would occur primarily in areas previously disturbed either by logging, or by fill from the adjacent road right-of-way. Therefore these areas were not considered high quality wildlife habitat. Wildlife would also be able to easily move away from the Project area during Project construction, given the availability of adjacent high quality undisturbed habitats. The exception would be that nesting birds would not be able to use other habitats. Measures to minimize impacts, and Project impacts to migratory birds, are discussed in Section 3.4.4, Migratory Birds and Bald/Golden Eagles.

Overall, with the implementation of the proposed conservation measures, BMPs, and regulatory requirements, the Project is expected to have **temporary minor to moderate adverse impacts to general terrestrial wildlife**, localized to within or closely adjacent to the Project area, due to noise, increased traffic and human presence, and potential impacts to nesting birds. The Project would have **permanent minor adverse impacts to terrestrial wildlife** due to clearing of forested areas, given that most clearing would not occur in high quality wildlife habitat, and the surrounding area is primarily similar forested habitat.

Fish and Other Aquatic Species

Project construction would cause temporary adverse impacts to aquatic species and habitats, but post-construction the new Facility would result in permanent beneficial impacts.

Temporary Impacts

Project construction could cause temporary adverse impacts to fish and aquatic species due to: 1) sediment increases due to in-water disturbance, 2) noise and vibration from in-water impact pile driving and demolition, 3) fish stranding during channel re-routing and dewatering, and 4) possible chemical contaminants associated with construction activities.

Sediment

Project construction would cause periodic increases in suspended sediment in the NF Jocko downstream of where in-water work is proposed. In-water construction activities that would increase suspended sediment, and details on the timeframe, duration, and estimated downstream extent of increased suspended sediment, are described in Section 3.2.2.3 [Water Quality] Proposed Action Environmental Impacts.

In-water construction activities would periodically occur for hours to days during the timeframes listed in the construction schedule (Table 1). In turn, these activities could increase suspended sediment during the activity, and for a short time period after the activity has ceased (such as for hours, up to 1 day). The increased sediment would not be continuous, as it would be limited to pulses during in-water construction actions. These episodic increases in suspended sediment could cause the following impacts to spawning, rearing, or migrating fish: disruption of foraging due to increased turbidity, reduction of aquatic macroinvertebrates (prey), reduced survival of incubating embryos, decreased suitability of spawning and rearing habitat by increasing fine sediment substrates, and potential gill trauma.

Based on surveys conducted by the CSKT Fisheries Program, Bull Trout could be present in very low numbers in the Project area or downstream in the affected reach of the NF Jocko when sediment is increased, but are very unlikely to be spawning there. Westslope Cutthroat Trout and other fishes are likely to be spawning, rearing, or migrating in the Project area and the affected reach of the NF Jocko when sediment is increased and could be adversely impacted.

Project conservation measures and BMPs to minimize sediment production and transport during in-water work activities are presented in Section 3.2.2.3 [Water Quality] Proposed Action Environmental Impacts, and in Section 2.2.6, Conservation Measures and Best Management Practices. With the implementation of the Project BMPs and measures, construction-related increased suspended sediment would be expected to result in a **temporary minor impact on fish and aquatic species and habitat within the affected reach of the NF Jocko** (Project area and one mile downstream).

Sheet pile wall installation- pile driving or excavation

The upstream sheet pile cutoff wall would be installed in three segments in years 1, 3, and 4, all in the dry when the river is diverted either to river left or river right (Table 1). It would be installed sometime between July and October in year 1; in August-September in year 3; and in October in year 4. The sheet pile wall would be 120 feet wide and installed at a depth of 20 feet below the grade of the river channel. The contractor-preferred method of installation would be to drive the pile

(if possible based on subsurface conditions) using a vibratory hammer or impact hammer. If pile driving is not possible, the alternative method would be to excavate and place sheet piles. Installation of sheet pile using the excavation method would not be expected to impact fish, as it would not occur in the wetted channel.

Although the sheet pile installation would occur in the dry, pile driving could result in sound pressure waves that travel through the shallow groundwater in the hyporheic zone to the wetted channel, potentially causing barotrauma injury or mortality to any fish that remain in the area. It can also change fish behavior as they avoid the area. The noise and vibration may also impact benthic macroinvertebrates. Conservation measures for limiting the effects of sheet pile driving presented in Section 2.2.6.1, Aquatic Measures [Construction Measures and Best Management Practices], would include one of the following: pile driving timeframes to avoid impacts to fish, measures to initiate pile driving with lower level vibration to allow fish to leave the area to avoid injury, or acoustic monitoring. The diversion would also still be in place when pile driving occurred, blocking upstream migration of fish into the Project area which would reduce the number of fish exposed to the pile driving noise.

The spatial extent of the potential vibratory impact of pile driving on aquatic species (i.e. the distance that noise and vibration attenuates to non-injurious levels) is difficult to determine as it varies with water depth, soil conditions, and driving method. However, it can be assumed that the impact would primarily occur upstream of the diversion. Bull Trout are not likely to be present upstream of the diversion and would therefore be less impacted by pile driving. Westslope Cutthroat Trout, but it is assumed that with the proposed conservation measures, fish would leave the vicinity before any potential trauma occurred. Worst-case scenario, pile driving could cause serious injury or mortality to individual fish and other aquatic species present in the vicinity upstream of the diversion. This **pile driving impact would be temporary and expected to be minor to moderate** given the limited exposure timeframe, the small spatial extent, the presence of the diversion as a barrier to fish access from downstream, and implementation of conservation measures and BMPs.

Demolition noise and vibration

Demolition of existing Facility structures would occur over a four-month period in year 4 using heavy equipment such as excavators and hydrodrills. The use of explosives would not be permitted. The construction contractor would develop a Demolition Plan at least one month prior to the start of construction to include stream protection measures. The noise and vibration associated with demolition may cause fish to avoid the area, temporarily blocking access to habitat. Demolition would not likely cause injury or mortality to fish as they would be expected to vacate the area. Less mobile aquatic species could be crushed by falling concrete and steel material, and when the river channel is graded as part of reclamation. Conservation measures for limiting the effects of demolition are presented in Section 2.2.6, Construction Measures and Best Management Practices.

The impact of demolition would be **temporary, and limited to the area directly surrounding the structures** to be demolished, resulting in a **negligible impact to fish and aquatic species**.

Dewatering and Channel Rerouting

The Project would temporarily reduce aquatic macroinvertebrate populations in the immediate Project area when the channel is re-routed and dewatered for in-channel work. After the channel is re-wetted in year 4, it is anticipated that it could take between one and six months for macroinvertebrates to fully re-colonize within the re-wetted channel via downstream drift (Craig Barfoot, personal communication). The reduced macroinvertebrate densities would in turn temporarily reduce the food base for fish that prey on macroinvertebrates.

Fish species may also be stranded and die during channel dewatering, but the fish rescue plan described in Section 2.2.6.1, Aquatic Measures (Conservation Measures and Best Management Practices), is intended to avoid and minimize fish mortality. This impact would also be temporary, occurring only while the channel is dewatered. With the implementation of the proposed conservation measures, BMPs, and regulatory requirements, these **temporary adverse impacts to fish and other aquatic species** are expected to occur at most **during Project construction**, be **localized to within or adjacent to the Project area, and of minor magnitude.**

Chemical Contaminants

Project construction could temporarily introduce contaminants into the river during construction due to the presence of construction equipment and vehicles in or near the channel, which could in turn be toxic to fish and aquatic species. The construction contractor would follow spill prevention and containment measures listed in the Stormwater Pollution Prevention Plan, and standard BMPs listed in Section 2.2.6, Construction Measures and Best Management Practices. Chemicals would also not be stored or used in or near waterbodies or wetlands. With the implementation of BMPs, chemical contaminants are unlikely to be introduced to waterbodies or wetlands, but if there were a spill or leak, it would likely remain localized given the proposed containment measures. Therefore, the **impact of chemical contaminants on fish and aquatic species is expected to be negligible**.

Permanent Impacts

Implementing the Project would result in permanent beneficial impacts to aquatic species and habitats in the NF Jocko through the removal of the diversion as a fish barrier, elimination of fish entrainment in the Tabor Canal, restoration of the natural sediment transport regime, and the ability to more effectively meet instream flow requirements in the NF Jocko.

The new Facility would allow for upstream and downstream passage of trout at all flow levels for all life stages, allowing access to approximately two miles of high-quality spawning and rearing habitat upstream of the Facility. The Tabor Canal would also be screened, eliminating fish entrainment (and mortality) in the Tabor Canal. The Project would contribute to restoration of a more natural sediment regime, eliminating the annual sediment sluicing event at the end of the irrigation season. The modernized Facility would allow for better water management and compliance with instream

flows required by the Compact, and for implementation of channel-flushing bankfull flows to flush sediment from downstream of the Facility, as suggested by the FIIP BO (USFWS 2018). In turn, the restoration of a natural sediment regime would eliminate the current impacts on substrate embeddedness, pool filling, excessive turbidity, possible disruption of foraging ability by trout and potential gill trauma, and aquatic macroinvertebrate production, reduced survival of incubating Westslope Cutthroat Trout embryos, and decreased suitability of spawning and rearing habitat for Bull Trout (personal communication Craig Barfoot).

Overall the Project would result in a **permanent moderate beneficial impact to fish and aquatic species.**

3.4.3 Threatened and Endangered Species

3.4.3.1 Affected Environment

A BA was prepared for the Project (Attachment B) as part of ESA Section 7 consultation with the USFWS. For this EA threatened and endangered species were evaluated within the Project area, as well as in the larger area that was evaluated in the BA (referred to as the BA action area). This BA action area included the Project area, and extended down along the Jocko Road to the two lower staging areas to capture the increased disturbance of traffic on these more sensitive species.

Table 12 presents the ESA-listed species identified by the USFWS Information on Planning and Consultation (IPaC) report (Attachment B) as potentially occurring in the BA action area, along with brief assessments of population and habitat occurrence known by Tribal wildlife and fisheries specialists, and a review of the Montana Natural Heritage Program (MNHP) species and habitat information (MNHP 2025b). Affected species (species further evaluated in the BA) are Grizzly Bear, Lynx, Wolverine, Bull Trout, and Bull Trout Critical Habitat. Yellow-billed Cuckoo, Spalding’s catchfly, and Whitebark Pine were not evaluated further as they are unlikely to occur in or near the BA action area and there is no potential suitable habitat for these species within the BA action area.

Table 12. Screening of ESA-listed species for the Project.

Species	ESA Status	Potential Occurrence in Action Area[a]	Potential Suitable Habitat in Action Area[b]	Affected Species[c]
Bull Trout *Salvelinus confluentus* Bull Trout critical habitat	Threatened	**Yes.** Incidental, found in very low numbers downstream of the project (see 5.1.3 Status within the Action area). **Designated critical habitat**	**Yes.** Found in coldwater rivers, streams and lakes with clean spawning gravels and sufficient cover. **Yes.** Designated critical habitat	Yes
North American Wolverine *Gulo gulo luscus*	Threatened	**Yes.** Wolverine are known to occur in the vicinity of the main Project area (MNHP 2024a).	**Yes.** Primarily found in alpine tundra, mountain forests, often in larger wilderness areas. Known to disperse through other habitats.	Yes
Grizzly Bear *Ursus arctos horribilis*	Threatened	**Yes.** Grizzly Bears are documented to occur within the action area. This is also an important corridor for grizzlies moving between the Flathead and Swan valleys.	**Yes.** Found in diverse habitats, including meadows, grasslands, riparian, woodlands, forests, and alpine.	Yes
Canada Lynx *Lynx canadensis*	Threatened	**Yes.** Lynx are known to occur in the Mission Mountains (MNHP 2024a) and have been documented <10 miles from the main Project area.	**Yes.** Primarily found in dense conifer forest in mountains and subalpine at elevations ~4,000-7000 ft (west of Continental Divide in MT). Known to disperse through other habitats.	Yes
Yellow-billed Cuckoo *Coccyzus americanus*	Threatened	**Unlikely.** Most recent MNHP occurrence documented near Polson Bay, ~35 miles from action area, in 1959. CSKT does not monitor this species on the Reservation.	**No.** Found in low elevation deciduous and riparian woodlands with heavy understory shrub cover and large cottonwood trees. Typically require intact sections of riparian woodland (>25 ac).	No
Spalding's catchfly *Silene spaldingii*	Threatened	**Unlikely.** Nearest MNHP occurrence and predicted habitat is 50 miles from action area. Not documented during recent wetland delineations and weed mapping in action area.	**No.** Found in open mesic grasslands in valleys and foothills along draws and swales.	No

Species	ESA Status	Potential Occurrence in Action Area[a]	Potential Suitable Habitat in Action Area[b]	Affected Species[c]
Whitebark pine *Pinus albicaulis*	Threatened	**Unlikely.** Known to occur at higher elevations near the action area. Although MNHP has documented occurrences at similar elevations and environments adjacent to the Reservation (MNHP 2024a), the Tribal Forestry department has determined that occurrence is unlikely because the action area is <4200 feet and there are no subalpine habitat types within the analysis area.	**No.** Found in mid to high elevation conifer forests in the mountains. Most are found at elevations higher than the main project area (6000-7500 feet) and within subalpine habitat types (MNHP 2024b).	No

[a] *Montana Natural Heritage Program Occurrence Data (MNHP 2024a)*

[b] *Montana Natural Heritage Program Field Guide (MNHP 2024b). This includes any type of habitat known to be used by the species, including low quality habitat used primarily for migration and dispersal.*

[c] *"Affected species" were fully reviewed in the BA given their known or potential occurrence in the Project area.*

3.4.3.2 No Action Environmental Impacts

The No Action alternative would continue to have permanent adverse impacts to Bull Trout fisheries in the NF Jocko River. Bull Trout populations living above the Facility would continue to be disconnected from populations below the Facility, and those migrating downstream through the Facility would continue to become entrained in the Tabor canal. Ineffective sediment mobilization through the Facility would maintain poor habitat conditions for Bull Trout living in or successfully migrating to the reach of the NF Jocko River below the Facility. Habitat and populations of threatened terrestrial species would not be affected by the No Action alternative.

3.4.3.3 Proposed Action Environmental Impacts

ESA Section 7 consultation for the Project was completed with the USFWS in November 2024, and the USFWS concurred with the effects determinations as presented in Table 13 (USFWS 2025). A full list of conservation measures for ESA-listed species appears in Section 2.2.6, Conservation Measures and Best Management Practices.

Table 13. Federally-protected species potentially occurring in the Project area and BA effects determinations.

Species	Listed Federal Status	Effect Determination
Bull Trout	ESA-Threatened	May affect, Likely to adversely affect
Bull Trout critical habitat	ESA-Critical habitat	May affect, Likely to adversely affect
Grizzly Bear	ESA-Threatened	May affect, Likely to adversely affect
Canada Lynx	ESA-Threatened	May affect, Not likely to adversely affect
North American Wolverine	ESA-Threatened	May affect, Not likely to adversely affect
Yellow-billed Cuckoo	ESA-Threatened	No effect
Spalding's Catchfly	ESA-Threatened	No effect
Whitebark pine	ESA-Threatened	No effect

The effects determination for Canada Lynx and Wolverine were based on the limited extent and temporary length of Project impacts, abundance of Lynx, Snowshoe Hare and Wolverine habitat surrounding the Project area, implementation of Project conservation measures and subsequent lack of mortality or competition risk. Given the *may affect, likely to adversely affect* determinations for Bull Trout, Bull Trout critical habitat, and Grizzly Bear, formal consultation was required for these constituents. Biological Opinions (BO) for Bull Trout and Grizzly Bear were issued in February of 2025 (USFWS 2025), which included incidental take permits for both species. Project impacts to the ESA-listed species and habitats are discussed in more detail in Section 3.4.2.3 [Proposed Action Environmental Impacts], Terrestrial Wildlife, and Fish and Other Aquatic Species.

With the implementation of the proposed conservation measures, BMPs, and regulatory requirements, the Project could cause **temporary minor to moderate adverse impacts to Bull Trout critical habitat, and to individual Bull Trout, Grizzly Bear, Lynx and Wolverine,** localized to within or adjacent to the Project area**.**

The Project could have **permanent minor adverse impacts to terrestrial ESA-listed wildlife species (Grizzly Bear, Lynx and Wolverine) due to clearing of forested areas.** This impact was considered minor because most of the clearing would not occur in high quality wildlife habitat, and the surrounding area is primarily similar forested habitat. There would be **no permanent adverse impacts to Bull Trout or Bull Trout critical habitat,** but the Project would result in **permanent major beneficial impacts to Bull Trout and critical habitat** through the connection of populations below and above the Facility, reduction of entrainment and subsequent mortality in the Tabor Canal, improved instream flows, and improved aquatic habitat due to a more natural sediment regime.

3.4.4 Migratory Birds and Bald/Golden Eagles

Migratory birds and eagles were evaluated in the BA action area (Attachment B). All native birds except upland game birds (such as grouse and turkey) are afforded protection under authority of the Migratory Bird Treaty Act (MBTA; 16 U.S.C 703-712). Under the MBTA, it is unlawful to intentionally or incidentally (86 FR 54642-54656) at any time, by any means or in any manner pursue, hunt, take, capture, kill, or possess any migratory bird, nest or egg, or parts thereof. The USFWS also maintains a list of Migratory Birds of Conservation Concern (MBCC), which are migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the ESA (USFWS 2021).

Bald and Golden Eagles are also protected under the Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668-668d). “Take” is defined under the BGEPA as agitating or bothering a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. Nests are also protected year-round under the BGEPA. If there is any risk incidental take during a project, an incidental take permit must be obtained through the USFWS Migratory Bird Permit Office.

3.4.4.1 Affected Environment

The IPaC report identified fifteen MBCCs, including Bald and Golden eagles, that may be found in the BA action area. Terrestrial habitats are described in Section 3.1.1, Vegetation and Invasive Weeds, and presented in Table 11, and Figure 19 and Figure 20. Table 14 presents MBCC species’ habitats and breeding dates, and whether nesting is likely within the EA-defined Project area where the primary impacts and disturbance from the Project would occur.

Table 14. Habitat and breeding summaries of Migratory Birds of Conservation Concern identified in the BA IPaC report, and likelihood of nesting in the EA Project area.

Common name	Scientific name	Habitat[a]	Breeding[b]	Nesting location	Nesting[c] likely
Bald eagle	*Haliaeetus leucocephalus*	Riparian / Mature mixed conifer	Jan – Aug	Tree branch	N
Black swift	*Cypseloides Niger*	Lotic / Riparian	Jun – Sep	Behind waterfalls	N
Bobolink	*Dolichonyx oryzivorus*	Grasslands	May – Jul	Ground	N
California gull	*Larus californicus*	Large rivers / Lakes	Mar – Jul	Ground	N
Calliope hummingbird	*Selasphorus calliope*	Mature mixed conifer	May – Aug	Tree branch	Y
Cassin's finch	*Haemorhous cassinii*	Riparian / Mature mixed conifer	May – Jul	Tree branch	Y
Clark's grebe	*Aechmorphous clarkii*	Large lakes / Marshes	Jun – Aug	Water	N
Evening grosbeak	*Coccothraustes vespertinus*	Mature mixed conifer	May – Aug	Tree branch	Y
Flammulated owl	*Psiloscops flammeolus*	Mature mixed conifer	May – Aug	Tree cavity	Y
Golden eagle	*Aquila chrysaetos*	Open mixed conifer	Jan – Aug	Cliffs / Tree branch	N
Lewis' woodpecker	*Melanerpes Lewis*	Riparian / Mature mixed conifer	Apr – Sep	Tree cavity	Y
Olive-sided flycatcher	*Contopus Cooperi*	Riparian / Mature mixed conifer	May – Aug	Tree branch	Y
Rufous hummingbird	*Selasphorus Rufus*	Shrub / Mature mixed conifer	Apr – Jul	Tree branch	Y
Western grebe	*Aechmorphorus occidentalis*	Large lakes / Marshes	Jun – Aug	Water	N
Williamson's sapsucker	*Sphyrapicus thyroideus nataliae*	Mature mixed conifer	May – Jul	Tree cavity	Y

[a] *Cornell Lab of Ornithology (2025)*
[b] *BA IPaC, Attachment Bb*
[c] *A. Swicegood, personal communication. Annual surveys are conducted for nesting eagles, but not other species.*

3.4.4.2 No Action Environmental Impacts

Under the No Action alternative, MBCC habitat would be unaffected.

3.4.4.3 Proposed Action Environmental Impacts

Migratory birds, including Bald and Golden eagles, may be incidentally disturbed and displaced to adjacent habitats over the short-term due to construction noise, increased vehicle traffic and road

dust, increased human presence, and minor vegetation removal activities. No existing Bald or Golden eagle nests are known to occur within or near the Project area; therefore, a BGEPA incidental take permit is not required. The Project does not entail any intentional take of migratory birds. However, construction activities would occur within the nesting season for various MBCC species (Table 14).

To avoid impacts to nesting birds, vegetation clearing would ideally be avoided from April 15 to August 15. The Project would not be able to avoid clearing during this entire timeframe because clearing for access road improvements and within the staging areas is scheduled to occur between June and August in year 1 (Table 1). Therefore, vegetation clearing would at a minimum be avoided to the extent practicable during peak nesting season between May 1 and July 15. Efforts would also be made for a qualified biologist to survey areas of vegetation clearing prior to disturbance to determine if any migratory bird nests may be present. If a nest is discovered it would be left in place until the young hatch and depart. This may still result in disturbance to the nesting birds, and possible chick mortality if the adults abandon the nest, depending on the proximity of the nest to continued vegetation clearing and staging activities.

Therefore, with the implementation of the proposed conservation measures, the Project would be expected to result in **temporary minor to moderate adverse impacts to migratory birds** resulting from potential disturbance to nesting birds during vegetation clearing and staging. The Project is expected to result in **minor permanent beneficial impacts to migratory birds**, their habitat, and their food web through the sediment sluicing and restoration Project components for aquatic habitat along the NF Jocko.

3.5 Cultural Resources

3.5.1 Affected Environment

The CSKT TPD reviewed the Project area for any known cultural resources as part of the cultural resources clearance process, including sites that are eligible for listing under the National Historic Preservation Act (NHPA). There are no historic properties or archaeological resources identified in the Project area that are eligible for listing in the NHPA.

The NHPA, as amended, 54 U.S.C. § 300101 et seq. defines historic properties as sites, buildings, structures, districts (including landscapes), and objects included in, or eligible for inclusion in the National Register of Historic Places (NRHP), as well as the artifacts, records, and remains related to such properties. Section 106 of the NHPA requires Federal agencies to duly consider the effects of their actions on HRHP-eligible properties.

The CSKT DEWR hosted multiple on and off-site meetings with the TPD and Tribal Elders. These coordination efforts highlighted the prominence of this area in the Tribes' historic use of the area, prevalent resources, and ongoing importance of the North Fork Jocko and surrounding areas. Project scoping included a site visit with TPD and other resource specialists in April, 2024, a presentation to the Salish Qlispe Culture Committee followed by a field trip with Tribal Elders in June, 2024, and an

open house pubic meeting which included Tribal Elders and TPD in October, 2024. Cultural resources are present within and adjacent to the Proposed Action footprint and concerns over overall impacts to this sensitive area were communicated repeatedly. DEWR worked closely with these groups to inform the project, particularly in the placement, size, and preservation of staging areas.

The CSKT Tribal Historic Preservation Department conducted reviews of the Proposed Action based on these interactions and desktop surveys for the presence of any known cultural resources. The CSKT do not recognize FIIP infrastructure as eligible for listing under the National Register of Historic Places.

3.5.2 No Action Environmental Impacts

Impacts to cultural resources would not change under this alternative.

3.5.3 Proposed Action Environmental Impacts

A Letter of Cultural Clearance received from the TPD on February 10th, 2025 is provided in Attachment C. This cultural clearance determined that the Project would have “no adverse effect” to CSKT cultural and historic sites and that the Project may go forward. It is also expected that there would be no impact to historic properties and archaeological resources listed, or eligible for listing, on the NRHP over the short and long term.

The Project would adhere to the following cultural resource conservation measures:

- An all-hands cultural awareness session would be presented to all construction contractors prior to the start of Project construction.
- A cultural resource monitor be on-site, or available, for the duration of the Project.
- The TPD would work closely with Project managers to ensure cultural resources were protected, and would be available for research or recommendations regarding cultural resources during the Project.
- The construction contractor would cease all construction disturbances in an area and notify the TPD if any potential cultural resource sites are discovered. Construction work may not continue in the area of the discovery until the TPD issues a notice to proceed.

The Project is expected to have **minor temporary impacts, and no permanent adverse impacts to cultural resources**. Excavation and general construction activity would occur within and adjacent to areas of cultural importance containing sensitive cultural resources. Known resources occurring within the project footprint would be marked for preservation and avoidance. Specific measures were taken during Project design to avoid and minimize impacts to the area, with special importance given to complete avoidance of specific locations.

3.6 Socioeconomic Conditions

Table 4 contains brief evaluations for employment and income, demographic trends, community infrastructure, lifestyle and cultural values, and environmental justice, which were found to have no adverse impacts from Project activities.

3.7 Resource Use Patterns

Table 4 contains brief evaluations for timber harvest, agriculture, and mineral extraction. It was determined that these activities would not be impacted by the Project and were not evaluated further. Hunting, fishing, gathering, recreation, transportation networks, and land use plans and management are evaluated below.

3.7.1 Hunting, Fishing, Gathering

3.7.1.1 Affected Environment

Hunting, fishing, and gathering are permitted within the Project area by Tribal members, and people are known to use the Project area for these activities, but the level of use is unknown. Non-Tribal members may fish and hunt certain species of upland game birds and waterfowl with the proper licenses and during set seasons (CSKT and MFWP 2024). Tribal members may fish and hunt all upland game birds, waterfowl, and big game without a license. Tribal members are also known to gather plants in the Project area (Tabitha Espinoza, personal communication). Non-tribal members are not permitted to gather plants on Tribal land.

3.7.1.2 No Action Environmental Impacts

Hunting, fishing, and gathering would not change under this alternative.

3.7.1.3 Proposed Action Environmental Impacts

Hunting, fishing, and gathering access would be temporarily adversely impacted, as public access would be restricted during the four seasons of construction. Construction noise may cause large game animals and game birds to avoid the area. In addition, game species habitat would remain disturbed until revegetation is complete. Although there is other hunting and fishing access in the vicinity, the closure and noise disturbance for four seasons could result in **temporary minor impacts on hunting, fishing, and gathering** during construction. The Project would also result in **permanent moderate beneficial impacts on fishing through the improvement of aquatic habitat, and the removal of the diversion which currently acts as a fish barrier**.

3.7.2 Recreation

3.7.2.1 Affected Environment

Recreational activities are permitted in the Project area, but non-Tribal members must have a valid CSKT recreation permit. In addition to the fishing and hunting discussed above, recreational

activities in the Project area may include hiking, walking, scenic driving, bird watching. No formal maintained trails or paths exist within the Project area; however, the Mission Mountain Tribal Wilderness (Wilderness) is directly adjacent to much of the Project area. The NF Jocko trail head into the Wilderness and the NF Jocko day use area nearby are accessed through the Project area on the W-1100 Road (Figure 2). There is also another dispersed campsite off Road P-5450 southeast of the NF Jocko bridge, about 0.15 miles from the main Project area (accessed through the Project area).

3.7.2.2 No Action Environmental Impacts

Recreation would not change under this alternative.

3.7.2.3 Proposed Action Environmental Impacts

Recreation access would be temporarily adversely impacted as the dispersed camp site southeast of the NF Jocko bridge, and other recreational activities within the Project area, would be restricted during the four seasons of construction. The NF Jocko trail head would remain accessible via Road W-1100, with traffic controls. Increased traffic would also temporarily adversely impact recreation along transportation corridors. However, alternative recreation access is available in the Project vicinity. With the implementation of design elements and BMPs, the project is expected to have **temporary minor adverse impacts to recreation.**

3.7.3 Transportation Networks

3.7.3.1 Affected Environment

Roads used for Project construction are described in Section 2.2.2.1, Project Access and Road Improvements. The Project would be accessed from the town of Arlee, MT, via the Jocko Road, which turns into Road P-1000 (Jocko Canyon Road) at the mouth of Jocko Canyon. From Road P-1000, vehicles would turn north on Road P-5450, which after its intersection with Road P-5200 (Jammer Road) continues north as Road P-5400 (Canal Road). Road P-5200 may also be used by light vehicles during construction, but Road P-5450 would be the primary access route.

All roads are constructed of dirt and generally accessible to the public, but are not maintained for year-round passenger vehicle travel. Roads are closed in winter (generally at a minimum December through March). All roads are very dusty and wash boarded during dry conditions, and dust abatement and road grading is limited. Road P-5400 along the NF Jocko has a steep cut slope that sometimes erodes into the road, causing a safety hazard.

There is no traffic count data for the access roads, but the CSKT Roads Program estimates that traffic on Road P-1000 averages approximately 25 vehicles per day, with fewer vehicles (10-30 per day) on the smaller roads (S. Johnston, personal communication). The speed limit on Road P-1000 is 35 miles per hour (mph). Speed limits on other roads are unposted, falling under the default speed limit for unpaved roads of 25 mph (Scott Johnson, personal communication).

3.7.3.2 No Action Environmental Impacts

Transportation networks would not change under this alternative.

3.7.3.3 Proposed Action Environmental Impacts

The Project would require additional vehicles to enter the Project area each day during four annual construction seasons. This increased traffic would impact transportation networks (access roads and roads within the Project area), which could cause public safety issues, increased dust, and other road maintenance needs. Public users and local residents would also be adversely impacted.

Passenger vehicles and light to medium duty trucks would routinely access the Project area throughout the four construction seasons. Heavy equipment would be mobilized to the Project area throughout the construction season as needed, and typically remain for longer durations rather than traveling to and from the Project area.

Due to weight limitations, construction traffic would not use the P-5400 Road west of Falls Creek to access the Project area; this road would only be accessed from within the Project area. On roads P-1000 and P-5450, construction traffic would account for approximately 10-25 vehicles per day, while general traffic would decrease by varying amounts due to construction restrictions throughout the Project duration (Road P-5200 would see limited use by construction traffic, and Road W-1100 would only be used to access the Job Site Area).

Speed limits in construction zones would be restricted to 10-20 mph. The Jocko Road is paved up to the mouth of the canyon where it becomes Road P-1000. As all other roads are unpaved, the Project is expected to increase road dust along roads P-1000, P-5450, P-5400, W-1100, and P-5200 in dry weather during construction hours.

Per the design specifications, the contractor would be required to prepare and submit to CKST a Detailed Access Plan and a Traffic Control Plan within 30 days after the Notice to Proceed and prior to mobilization to the site. The plans must include the following measures:

- **Detailed Access Plan**: Describe primary construction access and haul routes; necessary improvements required to gain access and egress with proposed construction equipment; road closures schedule, durations, and planned means traffic management; proposed speed limits, traffic patterns, and means of protecting the public; proposed road maintenance measures; and proposed means of road restoration following construction.
- **Traffic Control Plan**: Provide a map identifying lengths of road closure or traffic control; a schedule of anticipated road closures; proposed materials for road closures and traffic control; proposed staffing for traffic control; and any other information to adequately characterize traffic control.
    - **Traffic Control Measures**: Provide, place, and maintain necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of the Montana Department of Transportation. Barricades and obstructions must be from sunset until sunrise. Guards or flaggers will conform to

safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. Traffic control devices will be removed when no longer needed. And any damage caused by installation of the devices will be repaired.

- **Temporary Street Closures**: Apply in writing to the Lake County Road Department or any other jurisdictional agency at least 30 Days in advance of any required street closure, providing a Detour and Traffic Control Plan.
- **Temporary Driveway Closure**: Notify the owner(s) or occupant(s) (if not owner-occupied) at least three (3) working days prior to the closure, and minimize the inconvenience and time period that the driveways will be closed. Fully explain the Access and Traffic Control Plans to the owner(s) or occupant(s).

The location of road closures would be confirmed by the contractor as part of the Traffic Control Plan, but it is assumed that roads P-5400, P-5450, and W-1100 would be closed in their entirety, except to allow access to the resident on W-1100. The contractor would also be required to control dust on all roads within the Project area, [and near residences on P-1000/Jocko Canyon Road outside of the Project area whenever dust were an issue. The contractor would place signage on the Road P-1000 prior to the start of construction with a Project summary and contact information. Any increased road maintenance required due to the increased traffic across four seasons would be addressed by the CSKT Roads Program.

With the implementation of the BMPs, plans, and other safety measures, the increases in road traffic, and resulting impacts on dust, public safety, and road maintenance needs are expected to result in **temporary moderate adverse impacts to transportation networks** (and in turn on public road users and residents along the access roads). Conversely, project components such as road and cut bank improvements would have **permanent minor beneficial impacts to transportation networks**.

3.8 Other Values

Table 4 contains brief evaluations for hazardous materials and public health and safety. It was determined that these factors would not be impacted by the Project and were not evaluated further. Wilderness, noise and light, visual resources, climate change, and Indian Trust assets are evaluated below.

3.8.1 Wilderness, Refuges, Ecological Sensitive/Critical Areas, Wild and Scenic Rivers

3.8.1.1 Affected Environment

The Mission Mountains Tribal Wilderness (Wilderness) area was established by a Tribal ordinance (CSKT 1982) as the first Tribally designated wilderness area within the United States. The purpose of the Wilderness is to support recreational, scenic, scientific, educational, conservation, cultural, religious and historical use of the area, with minimal human interference. Most of the Project area

is either nearby or directly adjacent to the Wilderness boundary, except for a section of Road P-5450 that enters the Wilderness as it skirts a large wetland (Figure 2). This section of road includes Road Area C staging area, which has a history of use in past construction projects. The nearest road access to the Wilderness is at the North Fork Jocko Trailhead on Road W-1100 approximately 1.5 miles east of the Job Work Site, and the trail extends away from the Project area. There are no other designated refuges, ecologically sensitive/critical areas, or wild and scenic rivers within the Project area.

3.8.1.2 No Action Environmental Impacts

Wilderness, refuges, ecological sensitive/critical areas, and Wild and Scenic Rivers would not change under this alternative.

3.8.1.3 Proposed Action Environmental Impacts

During certain stages of the Project, construction noise and heavy equipment traffic may have **minor temporary adverse impacts on the character of the Wilderness** along the Wilderness boundary. Construction noise would not be expected to be heard along the North Fork Jocko trail, as it is over a mile from the Project area at its closest point. Road Area C would be reclaimed to a more natural condition after Project completion. Based on this mitigation action the Tribe's Wildland Recreation Program Manager issued a statement of Project approval (Todd Espinoza, personal communication). The Project would have **minor permanent beneficial impacts to the character of the Wilderness** due to reclamation of Road Area C.

3.8.2 Noise and Light

3.8.2.1 Affected Environment

There are currently no light sources in the Project area. Ambient noise levels within the Project area have not been measured but noise sources are limited given the rural location. Traffic noise levels vary considerably across the Project area depending on proximity to popular areas of access and environmental factors such as vegetation, terrain, and wind.

Noise receptors in the Project area are limited to the general public and wildlife within the Project area. The closest residence is within approximately 0.1 miles of the Job Site staging area and 0.3 miles from the main Project area. All other residences are located greater than 2 miles from any given point of the Project area.

3.8.2.2 No Action Environmental Impacts

Noise and light conditions would not change under this alternative.

3.8.2.3 Proposed Action Environmental Impacts

Project construction would cause light and noise levels within and adjacent to the Project area to increase beyond background conditions. In addition to generally increased traffic light and noise

along transportation routes within and leading to the Project area, the following areas would generate increased construction light and/or noise:

Main Project area: Noise associated with heavy equipment, demolition, construction, sheet pile driving, backup alarms, vehicle traffic, dewatering pumps, and possibly generators.

Jobsite area: Light and noise associated with jobsite trailers, equipment and materials movement, generators, and general worker activity.

Concrete Batch Plant area: Light and noise associated with concrete production and transportation, general worker activity, generators, and after-hours work camp activity.

With the implementation of design elements and BMPs, the Project is expected to have **temporary minor to moderate impacts of increased light and noise on residences and wildlife** during different stages of Project demolition and construction. All residential impacts would occur during daylight hours; impacts from the work camps (i.e., at the batch plant area) would also increase noise at dawn and dusk. The impact of sheet pile driving vibrations on aquatic species are assessed in Section 3.4.2.3 [Proposed Action Environmental Impacts] Fish and Other Aquatic Species, and conservation measures to mitigate impacts are detailed in Section 2.2.6.1, Aquatic Measures. After Project construction, staff and vehicles would access the Project area periodically for monitoring and maintenance activities, but these activities would not cause a substantive increase in noise beyond background levels.

3.8.3 Visual Resources

3.8.3.1 Affected Environment

The Project area is primarily an undeveloped natural landscape. Photos of existing conditions within and around the Tabor Canal, the NF Jocko, and the Facility are presented in Figure 12 through Figure 15. The Jobsite staging area is currently undisturbed. All other staging areas have been previously disturbed.

The visible components of the existing Facility consist of the 100-year old concrete diversion dam, sluiceway and headworks spanning approximately 100 feet, as well as several sluice gate handwheels and roadside concrete access ramps bordered by steel railings. The Facility is in an advanced state of deterioration, with fractured and spalled concrete, exposed rebar, and basal erosion visible throughout the structural components. The two staging areas located along Jocko Road several miles to the west of the Project area are already developed material staging sites or gravel borrow sites.

3.8.3.2 No Action Environmental Impacts

All staging areas would remain visually unchanged from their current state. The existing Facility would continue to deteriorate both functionally and visually.

3.8.3.3 Proposed Action Environmental Impacts

The main Project features to be constructed would be visible from the Road P-5400; staging and road widening activities would be visible from Road P-5450 and P-5400; the Job Site area would be visible from Road P-5450 and W-1100; and the batch plant would be visible from Road P-5450 and possibly P-1000. The Jobsite and concrete batch plant staging areas will be selectively cleared of brush and small diameter trees to house work trailers, equipment and materials during Project implementation. About 4 acres of the Concrete Batch Plant staging area would be cleared of all trees and vegetation. After Project completion, all staging areas will be de-compacted and hydroseeded to facilitate vegetative restoration to an original state. Most adverse visual impacts to the staging areas are expected to be temporary (during Project implementation) and minor; however, areas of tree clearing would take 10-20 years to re-establish large trees and would therefore be considered a permanent impact. Minor permanent beneficial impacts are also expected as restored vegetation matures in those staging areas with a history of disturbance.

The visible components of the new Facility are illustrated in Figure 21, and components are described in Section 2.2.3, Project Features and Activities. After the new Facility is installed, streambank vegetation within the main Project area would be restored using natural native materials including willow cuttings and other brush, logs, and native seeding. Within the river channel downstream of the main Project area, treatments such as floodplain roughness, willow trenches, and partially buried logs would also promote point bar and slope vegetation restoration. Staging areas would also be restored to a natural undisturbed condition. The new Facility would have a larger visual footprint than the old one, but with the implementation of these design elements and BMPs, the Project is expected to result in **permanent minor to moderate visual resource impacts.**

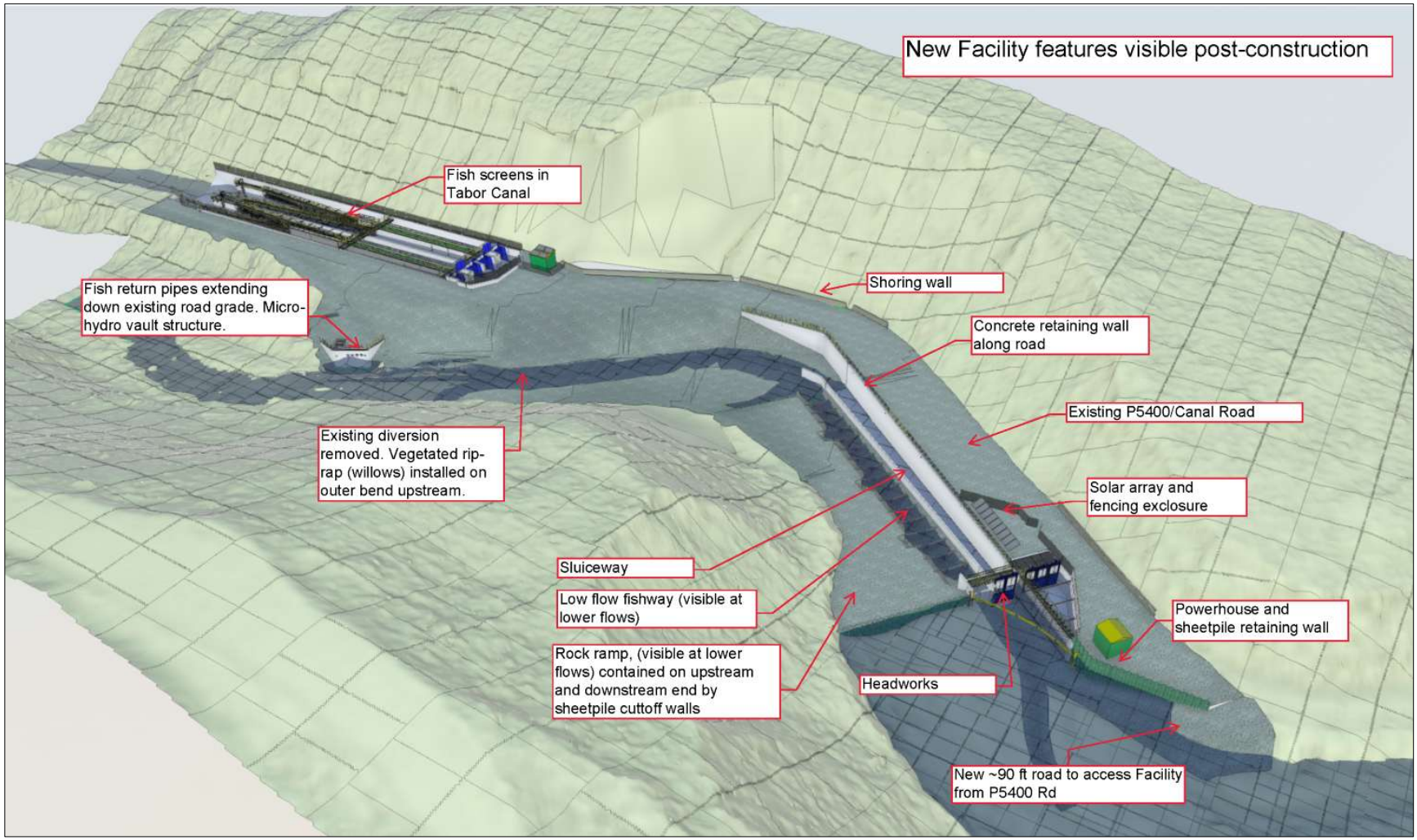

Figure 21. Project features visible at base flows (produced by design engineers at McMillen).

3.8.4 Climate Change

3.8.4.1 Affected Environment

This section analyzed the impact of the Project on two aspects of climate change: 1) greenhouse gas emissions, and 2) resiliency to climate change. Greenhouse gases include carbon dioxide, methane, nitrous oxide, ozone, water vapor, and certain synthetic chemicals. The only sources of greenhouse gases within the Project area are the limited vehicles on the gravel roads running through the Project area.

3.8.4.2 No Action Environmental Impacts

Climate change would not be affected under this alternative.

3.8.4.3 Proposed Action Environmental Impacts

Exhaust from construction equipment and increased vehicle use during construction would cause a **negligible temporary increase in greenhouse gas emissions** during construction. The Project could also have **minor permanent beneficial impacts on resiliency to climate change**. The Project would result in increased operational control of the Facility, in turn allowing for the implementation of the Compact instream flows in the NF Jocko. This in turn would improve climate resiliency within the NF Jocko watershed by ensuring instream flows even during drought conditions that may become more frequent with changing climate.

3.9 Cumulative Impacts

This section analyzes cumulative impacts of the Project, combined with any other past, present, and reasonably foreseeable future actions (RFFAs). Cumulative impacts were analyzed within the following temporal and geographic scope:

- Temporal scope
    - Past: from the construction of the Facility in 1924.
    - Future: through the year 2030. This is the general estimated planning timeframe for development projects, including projects associated with the Compact in the Jocko River watershed. It is also the timeframe within which information on other CSKT or non-CSKT projects is reasonably available for forecasting development actions.
- Geographic scope- includes all areas that could affect, or be affected, by the Project:
    - Within 0.5 mile of the Project area to account for noise impacts.
    - The Jocko River and any tributary streams that support migratory fish to account for the movement of migratory Bull Trout and Westslope Cutthroat Trout populations in the watershed, as well as anticipated changes in sediment transport and delivery in the NF Jocko associated with the existing Facility and Project construction.

- Lands adjacent to the NF Jocko upstream of the Project area, and land adjacent to the NF Jocko within one mile downstream of the Project area to capture any land-based sediment inputs to the NF Jocko within the reach of potential changes to sediment delivery and transport associated with the existing Facility and Project construction.

Table 15 displays past actions, present actions, and RFFAs within the above temporal and geographic scopes that were evaluated for their potential cumulative effects on resources.

In summary, the following temporary and permanent cumulative impacts were identified, when combined with the Project:

Temporary adverse cumulative impacts

- *FIIP operation* due to both projects producing increased suspended sediment, as there would be continued annual sediment sluicing through the Tabor Diversion for at least the first two years of Project construction (until the sluiceway is constructed).
- *Lower J Diversion Project* because both projects involve a fish rescue that could result in fish injury or mortality.
- *Jocko River Restoration- Bison Range Reach Project* because both projects involve a fish rescue that could result in fish injury or mortality.

Permanent beneficial cumulative impacts

- *FIIP operation* due to the Project resulting in the ability of instream flows to be met in the NF Jocko, resulting in a *net* benefit by reducing the adverse impacts of FIIP operation on instream flows.
- *Jocko River restoration projects* because both projects result in improved aquatic habitat.
- *North Fork Bridge Project* because it improved flow at the bridge site within the Project area, improving aquatic habitat.
- *Jocko K Diversion Project* because both projects improve fish passage.
- *Lower J Diversion Project* because both projects improve fish passage.
- *Jocko River Restoration- Bison Range Reach Project* because it would improve FMO habitat for fish that migrate upstream to spawn and rear in the NF Jocko.
- *Jocko K Canal Project* because both projects would improve instream flows in the Jocko River.

Table 15. Cumulative effects analysis of past, present, and future actions.

Action	Timeframe	Project Description and Impacts	Cumulative Effec
FIIP operation	Past and present	FIIP became operational in 1908 and has altered sediment transport, hydrologic regimes (peak flow and duration, instream flows), and water storage; impacted fish passage, and caused fish entrainment within the Jocko River watershed (CSKT 2008). The annual sluicing through the Facility and sediment pulse causes adverse impacts to water quality and aquatic habitat downstream of the Facility.	There would be a **temporary impact** when combined with t from Project construction, as t event would still need to occu years of Project construction operational. There would be a n **cumulative impact** when comb to improvements in sediment t control of instream flows
Natural disturbance, and resource extraction activities	Past and present	Natural disturbances such as wildfire, and anthropogenic resource extraction activities such as logging and grazing have historically occurred adjacent to the NF Jocko upstream of, and within one mile downstream of the Project area. These activities can reduce streamside vegetation and shading, and can increase sediment delivery to the stream. There is no grazing, road building, or logging currently proposed for this area. There are existing roads located near the NF Jocko, but there is typically a vegetated buffer between the road and the stream that would limit sediment delivery from the road.	There could be a **temporary impact** when combined with t from Project construction, given logging, and grazing, may have delivery to the NF Jocko. Howev would be expected to be very activities occurred
Jocko River restoration projects	Past and present	The CSKT Fisheries Program implemented several large-scale wetland, floodplain, and aquatic restoration projects in the Jocko River watershed as part of the Jocko River Master Plan	**No adverse cumulative impa** the Project. These projects wou to a **beneficial cumulative imp** the Project, as they impro
North Fork Bridge	Past and present	Located within the Project area. In 2023, CSKT replaced the bridge over the North Fork Jocko River to improve hydrologic flow and safety. Temporary impacts included a negligible increase in turbidity during construction. There were no permanent adverse impacts but it resulted in improved hydraulics, in turn benefiting aquatic habitat.	**No adverse cumulative impa** the Project. Both projects involv sediment and turbidity, and te terrestrial wildlife, but they wer apart. **Beneficial cumulative** with the Project, as the Nort improved flow, thereby impr

Action	Timeframe	Project Description and Impacts	Cumulative Effects Analysis
Falls Creek Diversion	Past and present	Located adjacent to the west end of the Project area along the Tabor Canal. The Project started in 2024 and would modernize the deteriorated structure to improve debris management and operational flexibility.	There may be a **temporary adverse cumulative impact** when combined with the increased sediment from Project construction, as the Falls Creek Diversion Project may have also resulted in minor temporary increases in the NF Jocko. There would be **beneficial cumulative impacts** when combined with the Project due to improved instream flows in the NF Jocko.
Jocko K Diversion	Past and present	Located ~9 miles downstream of the Project area. Constructed in 2023. Modernized the Jocko K diversion and headworks to improve FIIP operational control, safety, and fish passage. The Project required a fish rescue during construction as portions of the river were dewatered. There was a temporary increase in sediment transport and turbidity during construction but it resulted in permanent improved fish passage through the site.	Temporary increases in sediment and turbidity during Project construction would not be expected to extend downstream to the river reach that would have been impacted by the Jocko K Diversion Project. The Jocko K Diversion Project contributed to **beneficial cumulative impact** when combined with the Project through the improvement of fish passage.
Lower J Diversion Project	Past and present	Located >20 miles downstream the Project area. Constructed started fall 2024, was put on hold, and will resume in 2026. This project replaced the diversion with a rock ramp passable by fish, piped the canal between the diversion and the Highway 200 crossing, and created ~ 1 acre of wetland. The Project required a fish rescue during construction as portions of the river were dewatered. The EA (DOWL 2024) identified negligible temporary impacts related to turbidity, and to fish during the fish rescue, and permanent beneficial impacts to wetlands, aquatic habitat and fish passage.	Temporary increases in sediment during Project construction would not extend downstream to the river reach impacted by the Lower J Diversion Project. The Project could contribute to **temporary adverse cumulative impacts** with the Lower J Diversion Project related to fish mortality and stress during fish rescues. The Lower J Diversion Project contributed to **beneficial cumulative impact** when combined with the Project through the improved fish passage.
Jocko River Restoration-Bison Range Project (BRR Project)	Present	Located >20 miles downstream of the BRR Project. Construction started in 2025 and will run through 2026. This project will restore ~3 miles of the Jocko River and its floodplain by relocating the river back to its historic channel and restoring the abandoned channel. The Project will require a fish rescue during construction as a portion of the river is being abandoned.	Any temporary increase in turbidity during Project construction would not extend downstream to the BRR Project area. The Project could contribute to **temporary adverse cumulative impacts** with the BRR Project related to fish mortality and stress during the fish rescues. The projects would have a combined **beneficial cumulative impact** on fish and aquatic habitat as the

Action	Timeframe	Project Description and Impacts	Cumulative Effects Analysis
			BRR Project would improve FMO habitat for fish that migrate upstream to spawn and rear in the NF Jocko.
Upper S Fish Ladder	Future	Located ~1 mile upstream of the NF Jocko on the Jocko River. Proposed for construction in 2026. This project would replace the fish ladder and restore wetland and floodplain areas. There may be a temporary increase in sediment transport and turbidity during construction.	**No adverse cumulative impacts** when combined with the Project because the combined area of potential impact would start at the confluence of the NF Jocko and Jocko Rivers, and the Project is located six miles upstream of this location and any temporary increase in turbidity and suspended sediment would not extend downstream this far.
Jocko K Canal Conversion	Future	Proposed to start construction in 2025. This project includes lining and/or piping ~11 miles of the Jocko K Canal, reducing water diversion from the Jocko River. The EA identified permanent beneficial impacts to surface water quality, instream flows, and aquatic habitat.	**No adverse cumulative impacts** when combined with the Project. The Jocko K Canal Conversion Project would contribute to **beneficial cumulative impacts** when combined with the Project due to improved instream flows in the Jocko River.

4.0 Mitigation

4.1.1 No significant impacts have been identified for the Proposed Action, and thus no mitigation is required. Conservation measures, BMPs, and design elements intended to avoid or minimize impacts to resources are presented in Section 2.2.6, Conservation Measures and Best Management Practices

The Project would adhere to all conservation measures presented in the Project Biological Assessment (BA; Attachment B) and the terms and conditions in the USFWS BO Incidental Take Statements for Bull Trout and Grizzly Bear. These measures are summarized here, along with additional conservation measures and BMPs intended to minimize or avoid impacts to resources. Monitoring activities are presented in Section 2.2.7, Monitoring.

4.1.1.1 Aquatic Measures

5. Construction - In-water work (below OHWM)
    a. In-water work is defined by the USFWS as any work below the OHWM (dry or wetted channel), or on the stream banks abutting the OHWM that could subsequently produce sediment into the channel below the OHWM.
    b. July 15-August 31 is the preferred in-water work window for protection of spawning and rearing Bull Trout. In-water work outside this period would occur only if there were no other practicable alternative, and as negotiated during the regulatory permitting process.
    c. To prevent introduction and spread of terrestrial and aquatic invasive species, clean mud and plants (preferably by power washing) and dry all equipment to be used for in-water work prior to mobilizing onsite, including pumps and hoses.
    d. Perform daily visual checks on vehicles, equipment, and heavy machinery to minimize the chances of introduction of petroleum products to waterways. External grease and oil would be removed off vehicles, equipment, and machinery offsite prior to operating in project area.
    e. Have and maintain a spill kit and backup spill materials onsite.
    f. Fuel equipment away from the stream, preferably at least 150 feet.
    g. Pumps and gas-powered equipment would utilize fuel containment devices.
    h. If machinery is to be stored below OHWM, secondary containment measures would be installed.
    i. Clear-water diversions would be used to route surface water from or around the Project area. Specifically, constructed channels and cofferdams would be used for isolation and diversion.

j. Fish rescues would be conducted to remove fish from the construction area during dewatering or rerouting of the channel (see procedure below).

k. Cofferdam sacks would be filled with washed material. Cofferdam heights would be elevated above modeled flood elevations to preclude overtopping.

l. Water pump lines would be screened at the inlets with minimum 3/32-inch mesh to preclude fish entrapment.

m. All imported materials would consist of clean, granular material free of contaminants and all other deleterious material.

n. Upon locating dead, injured or sick Bull Trout, notification must be made within 24 hours to the USFWS Montana Ecological Services Office. Information relative to the date, time and location of dead or injured Bull Trout when found, and possible cause of injury or death should be recorded if available.

o. BIA and CSKT shall provide the USFWS with a report detailing the construction timeline implementation, the effectiveness of the conservation measures [for Bull Trout and Bull Trout habitat], and the extent downstream where increased sediment levels were observed. This report will be provided to the service by December 31st at the end of each construction year.

6. Construction - Sheet pile driving

    a. To minimize impacts to overwintering and migrating Bull Trout, USFWS stipulates that impact pile driving that has not been attenuated for noise can occur between February 1 and March 31 and between July 1 and September 30. According to past correspondence with USFWS for projects on Bull Trout-occupied waters and Bull Trout critical habitat, these periods coincide with periods of no overwintering, no juvenile downstream migration, and no adult upstream migration. However, these work windows include dry land and in-water impact pile driving.

    b. Should piles be driven or other in-stream construction conducted outside of the above time periods, one of the following measures would be employed:

        i. Use a vibratory hammer or initiate impact hammer pile-driving of each pile with lower hammer strokes than are required for the initial six strikes to encourage fish to vacate the surrounding area. If driving pile with an impact hammer over consecutive days, do not drive piling between the hours of 9:00 pm and 6:00 am.

        ii. Use Montana Department of Transportation (MDT)-approved noise reduction methods (i.e. bubble curtains, cofferdams), and conduct hydroacoustic monitoring.

1. Through hydroacoustic monitoring, should it be determined that either of the following physical harm thresholds have been attained or exceeded, impact pile driving must be stopped for the day, with impact pile driving permitted to commence the next morning.
    a. A peak sound pressure level of 206 dB (re: 1 µPa).
    b. A cumulative sound exposure level of 187 dB (re: 1 µPa) for fish >2 g, or 183 dB (re: 1 µPa) for fish <2 g.

7. Fish Rescue Procedure
    a. During channel rerouting trained personnel would be prepared to rescue any fish that become stranded in pools as the channel is dewatered. The fish rescue would be led by an experienced crew from the Tribes' Fisheries Program, with assistance from additional CSKT staff if needed.
    b. As flows diminish there should be relatively little holding water in the abandoned channel. Crews would walk the entire reach, attempting to drive remaining fish towards the downstream channel confluence. As flows become more isolating, the crew would search and net fish from any remaining pocket water within the entire reach, making a concerted effort to search for smaller size classes of fish that might seek refuge under larger rocks and within interstitial spaces.
    c. Captured fish would be bucketed, transported, and released either upstream or downstream of the dewatered reach.
    d. The final step in the rescue would be to electrofish pools and pocket water that would likely temporarily persist within the dewatered portion of the channel. Electrofishing would be done using the minimum electricity settings needed to initiate galvanotaxis and allow for capture of fish. Particular care would be taken if larger fish are observed. Fish captured by electrofishing would be netted, bucketed, transported to live cars, and allowed to fully recover before release upstream or downstream of the abandoned channel.

8. Operations - Flow management and fish screen operation
    a. Flow management
        i. Flow management would be driven by the Compact required NF Jocko instream flows – MEF's and TIF's in wet and normal years.
        ii. Bankfull flows would follow the approach developed by the CSKT Water Management Program (CSKT 2017), which was agreed to by FIIP and adopted as part of the BO for Operation and Maintenance of FIIP (USFWS 2018) to minimize flow alterations to Bull Trout. The Water Management

Program would develop the specific bankfull schedule each year based on timing of flow and water year conditions.

b. Fish screen operation

i. Fish screens would be operated per the manufacturer's guidelines to avoid fish stranding.

ii. Fish screens would be shut down only when personnel are present to ensure that fish are not stranded on the screens (either by hazing fish down flow, or by capturing with a net and bucket to relocate downstream). Initially this would be CSKT Fisheries Program staff to understand whether fish may be stranded during screen shutdown.

iii. Fish screens would be maintained and adjusted as outlined in operational guidelines, working with the manufacturer if needed. CSKT would ensure that FIIP staff are trained in fish screen operations and conduct pre-season testing and repairs. During the irrigation season, CSKT would address and document any issues and corrective actions. After the season, trained personnel would inspect the fish screen, bypass pipe, and canal with CSKT fisheries staff present, for mechanical issues and for stranded or dead Bull Trout, and report findings to the USFWS/BIA/CSKT.

4.1.1.2 Terrestrial Measures

5. Migratory Bird Measures

a. Avoid vegetation clearing from April 15 to August 15 to avoid impacts to nesting migratory birds. If clearing cannot be avoided during this entire timeframe, limit or avoid vegetation clearing during peak nesting season from May 1 to July 15.

b. If these nesting timeframes cannot be avoided, vegetation clearing areas should be assessed prior to disturbance by a qualified wildlife biologist to determine if any migratory bird nests are present. If a nest is discovered, it should be left in place until the young hatch and depart.

6. Wolverine Measures

a. If a wolverine is observed in the project area, a CSKT wildlife biologist would be notified immediately.

b. Many BMPs applicable in lynx habitat are also applicable in wolverine habitat, primarily regarding habitat connectivity, road density, improved access, and concentration of development in high-use or pre-disturbed areas.

7. Lynx Measures

a. Activities would adhere to all Canada Lynx-related requirements in Tribal Forest Management Plans and Resource Management Plans (i.e., Northern Rockies Lynx

Management Direction [USFS 2007], Canada Lynx Conservation Assessment and Strategy [Interagency Lynx Biology Team 2013]), Terms and Conditions in past and future consultation, and other management plans and relevant literature.

b. If an active denning site used by Canada Lynx is found within 0.25 miles of any activity, operations would cease until a wildlife biologist is notified, and activities would be modified as necessary.

c. Activities should conserve riparian areas, forest stringers, unburned inclusions, or forested ridges to provide habitat connectivity within and between patches of lynx habitat. Consult local biologists to determine critical linkage areas that promote lynx dispersal.

d. Upgrading unpaved roads should be avoided in lynx habitat. Activities should not result in permanent increased road density, traffic speeds, traffic volume, or associated human activity/development within lynx habitat.

e. Restrict public access on roads designed for Project area access.

f. To minimize habitat loss, concentrate activities, access, and staging areas within existing developed and high-use areas, rather than developing new areas in lynx habitat. Locate new development outside of lynx habitat when possible, and minimize the footprint of developments within lynx habitat.

8. Grizzly Bear measures

    a. Construction would only occur during daylight hours.

    b. Anyone working in Grizzly Bear habitat (i.e., contractors, partners, and tribal employees) would be briefed on bear-country safety, including use of bear spray and measures to avoid providing attractants and minimizing potential for conflicts and disturbance to bears.

    c. All workers would be equipped with and carry bear spray.

    d. Promptly clean up any project related spills, litter, garbage, debris, etc.

    e. Store all food, food related items, petroleum products, antifreeze, garbage, and personal hygiene products inside a closed, hard-sided vehicle or commercially manufactured IGBC Certified bear resistant container.

    f. Remove garbage from project sites daily and dispose of it in accordance with applicable regulations. Anyone working in Grizzly Bear habitat (i.e., contractors, partners, and Tribal employees) would comply with applicable attractant storage orders (Interagency Grizzly Bear Committee 2025). If no specific rule exists for the area, a review and adaptation of the available food storage orders would be considered adequate.

g. Activities would adhere to all Grizzly Bear -related requirements in Tribal Forest Management Plans and Resource Management Plans, Terms and Conditions in past and future consultations, and other management plans. This includes consistency with any Forest-specific bear safety plans.

h. Between April 1 and June 1, all activities would avoid high-quality spring season habitats wherever feasible. If not feasible to avoid these areas, projects in quality spring habitats during the spring season would be completed in 5 or fewer days. These areas are defined as snow-free forested and open habitats that afford fresh green-up of grasses, roots, and bulbs, as well as foraging opportunities for small rodents, and may include riparian areas, meadows, open grassy parklands, and avalanche chutes.

i. No new openings would be created in riparian management zones where the distance to cover would exceed 350 feet.

j. Projects cannot contribute to motorized access conditions that result in potentially significant effects to Grizzly Bear. In areas where existing motorized access conditions may affect grizzly bears, motorized use would only occur during daylight hours, and no motorized access for project activities would occur further than 300 feet from any open road.

k. The Project should avoid or minimize a net increase in the amount of motorized or non-motorized access routes or route density and/or a net decrease in the amount of core or secure habitat, as assessed by a wildlife biologist.

l. Any motorized access (on bermed roads or cross country) that is further than 500 meters from any open or gated road would need to be reviewed and approved by a wildlife biologist. Such access would be consistent with all plan-level direction and Section 7 Terms and Conditions.

m. No seeding or planting of species palatable for Grizzly Bear (i.e., clovers) would occur. Projects that involve seeding or planting grasses, forbs, or shrubs must do so in a manner that would tend not to attract bears into areas where increased mortality risk or interaction between bears and people is likely, such as adjacent to roads or in or near developed or designated recreation and/or camping sites.

n. Camping for project-related activities would occur at developed campgrounds or if at dispersed sites, would consist of ≤20 individuals for up to 5 days per campsite.

o. Grizzly bear sightings and/or incidents would be reported to the CSKT Wildlife Management office within 48 hours.

p. Notify the CSKT Wildlife Management Program of any animal carcasses found in the area.

4.1.1.3 Other Construction Best Management Practices

7. Permit compliance:
    a. The Project would follow all requirements and conditions included in permit authorizations and clearances (e.g., Section 401 Certification, Section 404 authorization, CSKT Aquatic Lands Conservation Ordinance (ALCO) 87A permit, CSKT cultural resources clearance).
    b. The construction manager would review permit provisions with the contractor, and copies of Project permits would be posted on-site.
8. Water Control Plan
    b. The construction contractor would develop a Water Control Plan at least 40 days prior to construction start. This plan would include the following:
        i. Cofferdam design, and methods for diversion and dewatering of the river.
        ii. Care of the stream during construction and measures taken to meet permit requirements.
        iii. Methods for control and prevention of aquatic invasive species within the work area.
        iv. Protection measures against spills or leaks of oils or other lubricants.
        v. Other BMPs to ensure protection of the aquatic environment.
9. Demolition Plan
    a. The construction contractor would develop a Demolition Plan at least 1 month prior to construction start to include anticipated methods for demolition; equipment to be used; stockpiling locations for salvage materials and for off-hauling; and stream protection measures.
10. Vegetation management
    a. Limits of disturbance would be clearly staked to avoid ground disturbance in wetlands where disturbance is not authorized by permit (Attachment A, Drawing G106.)
    b. All vehicles would follow designated access routes to minimize disturbance.
    c. Excavated materials shall be stockpiled outside of existing wetlands, other areas noted for preservation, or cultural resource buffer zones.
    d. All areas of ground disturbance would be seeded and revegetated as soon as reasonably possible after construction. Revegetation activities are presented in Attachment A, Drawings C150-151.
    e. Weed management

i. All equipment would be washed prior to site mobilization to minimize the introduction of weed seeds or propagules.

ii. Revegetation would use only certified weed-free seed.

iii. Areas of ground disturbance would be minimized to limit the introduction and spread of invasive weeds.

iv. Disturbed areas would be revegetated (seeded and/or planted, and mulched) directly after construction.

11. Erosion and sediment control

    a. The following erosion-related plans would be developed for the Project:

        i. Erosion and Sediment Control Plan to include erosion and sediment control measures and products, as well as installation, maintenance, repair, and removal processes.

        ii. Stormwater Pollution Prevention Plan to include measures to minimize stormwater discharge to waterbodies and wetlands during construction, as well as spill prevention and control measures.

    b. The construction contractor would follow the MDT Erosion and Sediment Control Best Management Practices Manual (MDT 2016).

    c. Fugitive dust would be controlled per the Dust Abatement Plan to be developed for the Project, to include wetting soil and access roads with water during dry periods.

    d. Disturbance to channel banks shall be minimized.

    e. Site grading would promote drainage by diverting surface runoff from excavations.

    f. Prior to construction, install and maintain erosion and sediment control measures, such as swales, grade stabilization structures, berms, dikes, waterways, filter fabric fences, and sediment basins.

    g. Turbidity filtration devices such as silt curtains, gravel berms, bulk bags or other filtration devices would be used to reduce or eliminate instream turbidity.

    h. Erosion and sediment control measures within the main project area are detailed on Attachment A, Drawing EC100.

12. Hazardous materials (e.g., fuel or other vehicle or equipment fluids, pesticides, or other chemicals)

    a. Hazardous materials would be stored and disposed of per a hazardous waste plan developed by the construction contractor.

    b. Spill prevention and response measures would be detailed in the Stormwater Pollution Prevention Plan.

4.1.1.4 Cultural Resources Measures

3. A cultural resources monitor from the CSKT Tribal Preservation Department (TPD) would be on site at the start of Project construction, and for the duration of the Project as they deem necessary.
4. An all-hands cultural awareness session would be presented to all construction contractors prior to the start of Project construction.

4.1.2 Monitoring

Monitoring measures during construction, and post-construction during operations, are presented here, and are also discussed in the relevant resource sections in Section 3.0, Affected Environment.

4.1.2.1 Construction Monitoring

4. Water quality
    a. Turbidity would be monitored in the NF Jocko directly downstream of all in-water work throughout Project construction (per the USFWS Biological Opinion [USFWS 2025]).
    b. Sediment and erosion control BMPs would be monitored for effectiveness to ensure they are minimizing sediment delivery to the NF Jocko. Any ineffective control measures would be corrected immediately (per the USFWS Biological Opinion [USFWS 2025]).
5. Fish
    a. If sheet pile is driven (rather than excavated), acoustic monitoring would be conducted *if* the other conservation measures cannot be employed, as presented in Section 2.2.6.1, Aquatic Measures [Construction Measures and Best Management Practices].
6. Cultural resources: cultural resources monitoring by qualified TPD would occur as needed for the duration of Project construction.

4.1.2.2 Post-Construction Monitoring

3. Streamflow: the CSKT Water Measurement Program would continue to conduct streamflow monitoring to track changes in the streamflow regime post-construction.
4. Fish sampling by CSKT Fisheries Program
    a. Continued fish monitoring:
        i. Annual monitoring of fish populations at the two long-term monitoring sites on the NF Jocko located downstream of the Facility (Figure 7)- site N5 is

located near the Road P-5000 bridge, and site N10 is located just downstream of the Facility.

ii. Additional random sampling at systematic sample sites (Figure 7) along the stream gradient from the mouth to the falls near the NF Jocko trail head upstream of the Facility.

iii. Bull Trout numbers are also monitored at the Jocko K Canal and Upper S Canal fish ladders (Figure 7) in the upper Jocko River drainage by documenting captured pit-tagged fish.

b. New Facility fish monitoring:

i. Fish passage through the new Facility would be evaluated by capturing fish upstream of the new Facility, marking them, and releasing them downstream. Sampling would then occur one week later upstream of the Facility to determine whether fish are passing upstream.

ii. Fish stranding during Facility operation would be avoided by only shutting down the diversion and fish screens when staff are present to ensure any fish remaining on the screens would be hazed downstream into the bypass pipes, or rescued and relocated (i.e., by hand with a net and bucket).

iii. Fish screens: the BIA must work with CSKT and the USFWS to develop a monitoring strategy to assess the performance and effectiveness of the screen design and bypass system, including maintenance, shutdowns, debris cleaning, and operations.

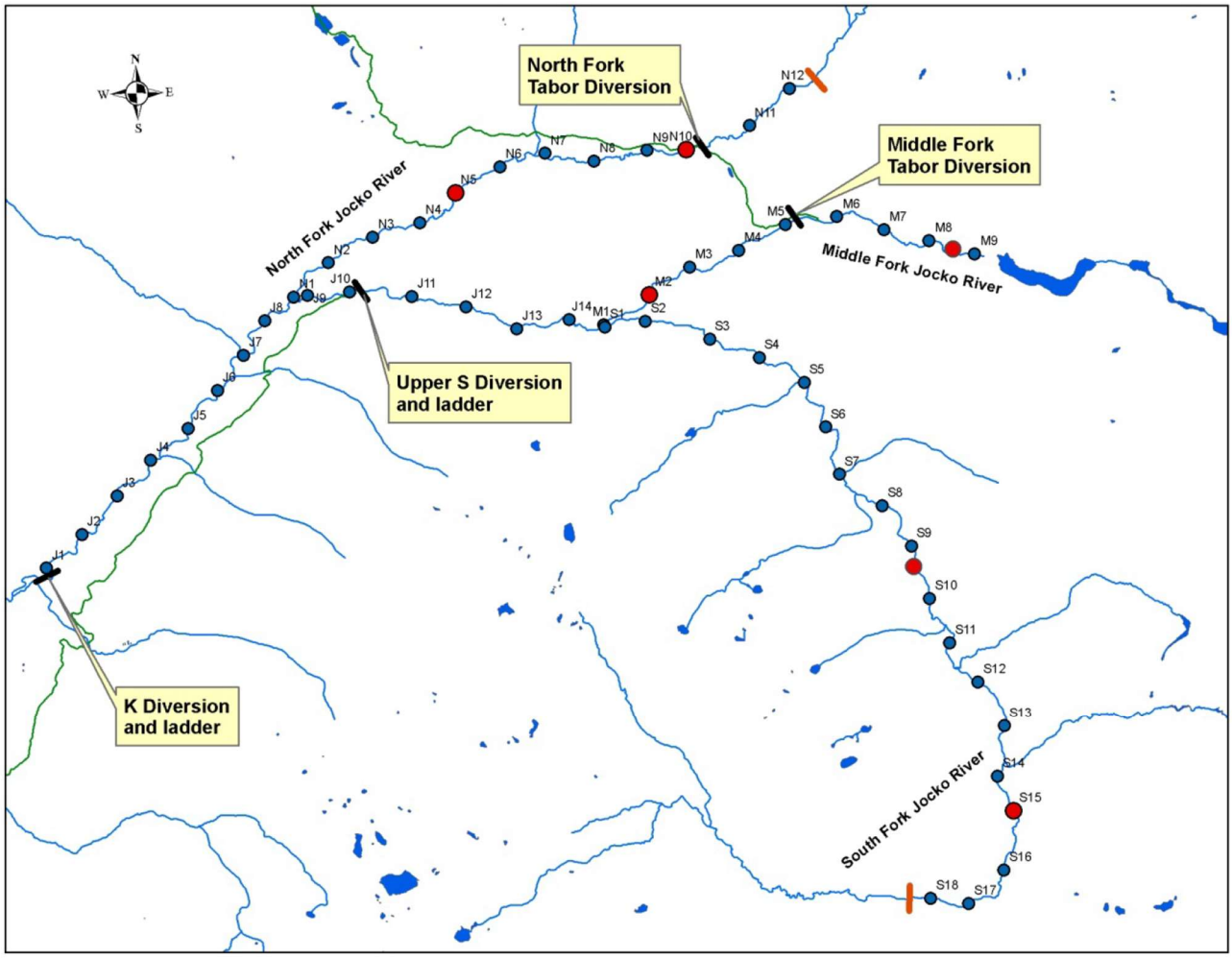

Figure 7. CSKT Fisheries Program long-term monitoring (red) and systematic sample sites (blue) (from the Amended FIIP BA [BIA 2017]).

4.1.3 Facility Operation

Following commissioning, the Facility would be operated following the SOP to be developed by the design engineer, which would include specifics on operations, roles, and communication procedures. The Facility would be operated to meet the instream flows required by the Compact for the NF Jocko (Table 3). The Compact defines minimum enforceable flows (MEFs) and target instream flows (TIFs), which would be implemented incrementally using operational improvements. The pre-Compact interim minimum instream flow is currently set at 18 cfs for the entire year, but the MEFs and TIFs would fluctuate by month, and TIFs would be further parsed for normal versus wet years. Compact MEFs would be incrementally implemented as the Facility operational improvements allow. The order of precedence would be to meet instream flows in the NF Jocko, and then diversion into the Tabor Canal.

Table 3. Compact MEFs and TIFs for the NF Jocko below Tabor Canal near mouth.

	Discharge (cfs)											
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Interim	18	18	18	18	18	18	18	18	18	18	18	18
MEF	3	4	9	25	40	30	22	8	6	6	6	6
TIF Normal Year	4	4	14	26	70	44	24	12	10	10	12	8
TIF Wet Year	10	8	9	30	110	210	60	14	8	8	12	7

The new Facility would have an integrated sluiceway to move sediment downstream incrementally throughout the irrigation season, therefore eliminating the annual end of irrigation season sluicing that results in an unnatural pulse of sediment downstream mid-summer when flows are not high enough to flush it downstream, or to move it onto the floodplain. Improved Facility operation would also allow for implementation of the bankfull flow schedule recommended in the FIIP BO (USFWS 2018), which would also support more natural sediment transport and distribution. A specific regimen of bankfull flows would be implemented to support the movement of sediment downstream during higher flows, with the intent of allowing sediment to be transported farther downstream and onto the floodplain, rather than settling out and accumulating in the upstream reaches.

The period of operation (typically from April into early July, but the water right extends into October) is not anticipated to change since this timing is related to water availability. Day-to-day visitation by FIIP staff would remain similar for a period of one to three years and would likely diminish over time as confidence in the gate operations increases. Periodic maintenance would be required to clean screens and ensure gates are operating.

, and in the relevant resource sections above.

5.0 Consultation and Coordination

The following agencies and individuals were consulted as part of preparation of this EA:

- CSKT TPD: Kevin Askan, (NHPA Section 106 consultation)
- DEWR IDT meetings (monthly)
- USFWS: Ben Conard, Carter Fredenberg, Austin McCullough, Brian Ham, (ESA Section 7 consultation). ESA Section 7 consultation was initiated in November 2024 and concluded in February 2025.
- Site visits with permitting agencies, CSKT resource staff, and CSKT Elders Committees

Coordination and communication is ongoing with Project permitting agencies (CSKT Water Quality Program, CSKT Shoreline Protection Program, and the U.S. Army Corps of Engineers).

6.0 List of Contributors

The following individuals contributed to this EA:

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- CSKT
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    - Tabitha Espinoza, Restoration Program Manager
    - Craig Barfoot, Fisheries Biologist
    - Amber Swicegood, Wildlife Biologist

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Attachment A:

North Fork Jocko Area Rehabilitation Project Tabor Feeder Diversion Volume 2- Construction Drawings

Provided as separate file due to size

Attachment B:

Biological Assessment- North Fork Jocko- Tabor Diversion Project

Provided as separate file due to size

Attachment C: Cultural Resources Clearances

CSKT Tribal Preservation Department Cultural Clearances Permit

Preservation Department

Confederated Salish and Kootenai Tribes
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Pablo, MT 59855
(406) 675-2700 Ext. 1075

File Code: 023

February 7th, 2025

Tribal Historic Preservation Department

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Taryn Bushey

DEWR NEPA Coordinator

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RE: THPO Consultation- NRD DEWR North Fork Jocko River Area Rehabilitation Project

Preservation Department
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Dear Taryn,

The Confederated Salish and Kootenai Tribes (CSKT) Tribal Preservation Department (TPD) appreciates the opportunity to review, research, and comment on the North Fork Jocko River Area Rehabilitation Project. The CSKT TPD is responsible for Section 106 review and consultation. Cultural resources and/or culturally sensitive sites pertaining to the practices of the Salish, Kootenai, and Qlispe' people are important to consider as part of the existing landscape throughout history. As a program working along side CSKT Natural Resources Department (NRD), we are glad to have taken the time to create a great working relationship with the Department of Engineering and Water Resources (DEWR) staff.

CSKT Preservation has taken time and effort through a series of virtual technical staff, group elder meetings, on-site elder meetings and internal research over the last 8 months to assure minimal disturbance to a very important area of the North Jocko River corridor. A place that holds sacred importance to the Séliš-Ql̓ispé people and community. There are tangible and intangible sites in the North Fork of the Jocko River. Preservation has worked very hard to address concerns related to ground disturbance and proximity to these importance places. Preservation's ethnographic research pushed to the threshold of Section 106 and collaborated with the Séliš-Ql̓ispé Cultural Committee Director Sadie Peone-Stops and Séliš-Ql̓ispé Elders Advisory Council for cultural resources concurrence of project design and minimization of impact to the project area.

The CSKT Preservation Department has reached determination that this project is approved with continued consultation with the CSKT Preservation Department staff with proposed timelines and cultural resource monitors at proposed staging areas construction and dam construction to satisfy the CSKT Preservation Department's no archaeologic data recovery by

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test pits initiative. We choose to monitor ground disturbing work at critical project times for assured responsibility to the Séliš-Qlispé Elders and community.

Please contact CSKT Preservation Department Head Kevin Askan with timelines and contractor information when project is ready to proceed.

Preservation would like to thank the NRD DEWR Program for taking the time and effort to meet out on site for our Elders' and community's benefit of knowing the project and staff associated with such a large undertaking.

Thank you,

Kevin Askan

Preservation Department Head

Acting Tribal Historic Preservation Officer (THPO)

Confederated Salish and Kootenai Tribes (CSKT) Preservation Department