The Clark Fork Project
FERC Project No. 2058

2023 Annual Report

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Section 1: Introduction

1.1 Document Background and Purpose

Avista owns and operates the Noxon Rapids and Cabinet Gorge hydroelectric developments (HEDs), known collectively as the Clark Fork Project. Operation of the Clark Fork Project is conditioned by the Clark Fork Settlement Agreement (CFSA), signed in 1999 and the Federal Energy Regulatory Commission (FERC) License No. 2058 (License), effective March 1, 2001.

Article 402 of the License requires that Avista file an Annual Report on or before April 15, including a summary of the protection, mitigation, and enhancement (PM&E) measures implemented, funds expended, and resource benefits gained during the previous calendar year, as well as the annual implementation plans for PM&E measures proposed for the current calendar year. In the event the Management Committee (MC) identifies any unresolved issue with regard to the implementation of the CFSA, the Annual Report will include an explanation of such issues. In 2002, FERC granted Avista's request to submit the proposed annual implementation plans for PM&E measures in a separate document on or before April 15.

In addition, four License articles require annual reporting that are included as sections of Avista's Annual Report. The original submittal dates for annual reporting of these articles were modified after License issuance (Table 1).

Table 1. License articles with revised annual reporting and included in Avista's Annual Report.

Article Number	Description	Revision Document
412	Water Quality Protection and Monitoring Plan	FERC Order No. P-2058-025
432	Threatened and Endangered Species Plan	Letter from USFWS (August 8, 2002)
433	Fishway Plan and Annual Report	Letter from USFWS (August 8, 2002)
442	Use and Occupancy of Project Lands and Waters	FERC Order No. P-2058-026, -031, & -032

1.2 Summary

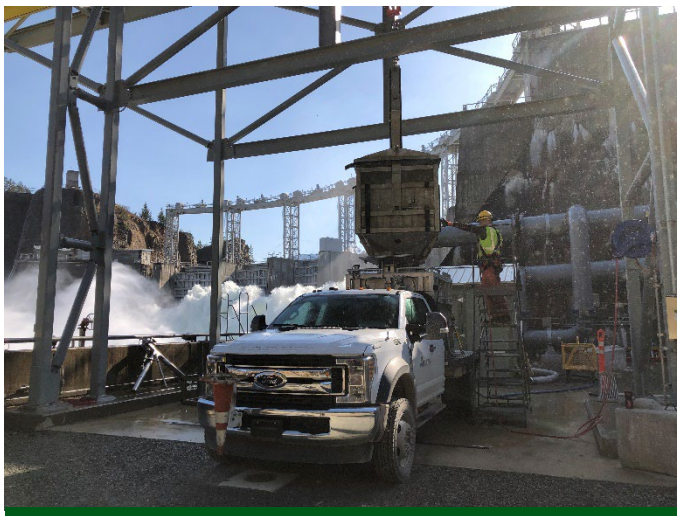
The 2023 Annual Report documents the twenty-fifth consecutive year of implementation of the CFSA and twenty-third year of the License. In 2023, Avista implemented the terms and conditions of the CFSA in consultation with, and full approval of, the MC and the terms and conditions of the License. The MC is comprised of State and Federal agencies, non-governmental organizations, and five Native American Tribes (see Section 2). Avista, in consultation with members of the MC, continued to implement the current PM&E measures identified in the CFSA and the License. The MC, Terrestrial Resources Technical Advisory Committee (TRTAC), Water Resources Technical Advisory Committee (WRTAC), and Cultural Resources Management Group (CRMG) continued to meet in 2023. For meeting information see Sections 2, 3, 4, and 5.

In August 2023 the U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), and Montana Fish, Wildlife and Parks (MFWP) joined Avista for a tour of the upstream and downstream fish passage programs. Numerous other tours of the Cabinet Gorge Fish Passage

Facility (CGFPF) were provided to interested groups including the U.S. Army Corps of Engineers, Seattle City Light, Idaho Power, and the Upper Colombia United Tribes.

Among the 22 PM&E measures, more than 100 projects and programs to benefit aquatic, terrestrial, historical, and cultural resources were implemented. The following paragraphs provide select highlights from the 2023 efforts.

Avista, through CFSA Appendix R, continued to work with Idaho and Montana State Historic Preservation offices, the USFS, and representatives from five Native American Indian tribes (Confederated Salish and Kootenai, Coeur d'Alene, Kootenai, and Kalispel), collectively referred to as the CRMG, to preserve and protect cultural and historic resources associated with the Clark Fork Project. In 2023, the Avista Cultural Resource Specialist and/or the CRMG reviewed 81 CFSA-related projects with proposed ground disturbance and/or projects related to the Noxon Rapids and Cabinet Gorge HEDs.



Avista technicians loading the CGFPF hopper onto the back of the fish truck during high flows.

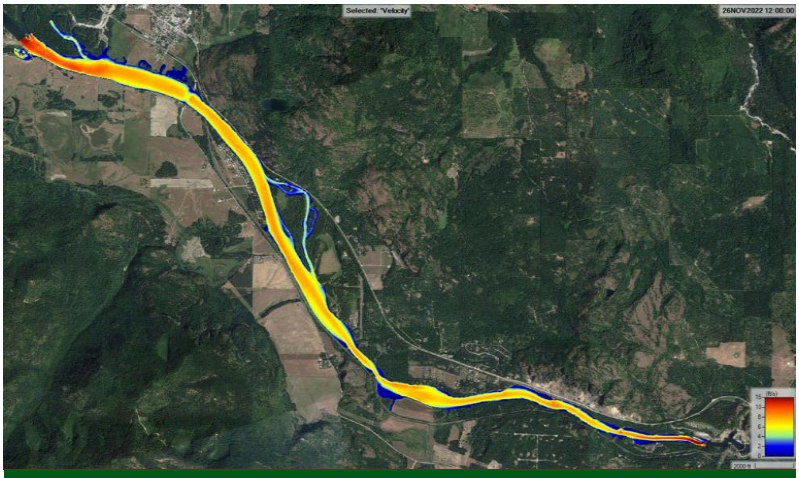
The CGFPF was operated for 136 days between early April and mid-October in 2023. This was the first full year of operation and, although, many challenges arose during the season, valuable insight was gained on operating the CGFPF in a configuration that was more effective at capturing Bull Trout. In 2023 the attraction efficiency, which is the percentage of Montana origin Bull Trout present downstream of Cabinet Gorge Dam that entered the CGFPF, was 74%. This verifies that the majority of Bull Trout downstream of Cabinet Gorge Dam are attracted to the CGFPF. Twenty-two percent of Montana origin Bull Trout present downstream of Cabinet Gorge Dam were captured in the CGFPF. Fifty total adult Montana origin Bull Trout were captured downstream of Cabinet Gorge Dam and transported to their streams of origin, including twelve captured in the CGFPF and the rest were captured in the Cabinet Gorge Hatchery Ladder Trap. A new record number of adult Bull Trout were transported to Graves Creek (n=32).

Also of note, Bull Trout that were previously captured as juveniles by electrofishing in Montana tributaries and transported downstream of Cabinet Gorge Dam were recaptured as returning adults in 2023. Avista, with stakeholder support, is experimenting with using stream electrofishing as a tool to collect juvenile Bull Trout in Montana streams for transport below Cabinet Gorge Dam in an effort to increase survival for Bull Trout migrating to Lake Pend Oreille (LPO), Idaho. The implications of these efforts will be further investigated in coming years as more of these individuals return below Cabinet Gorge Dam.

The release of a transported adult Montana origin Bull Trout into Graves Creek.

Angler-submitted Walleye heads from the Lake Pend Oreille area.

The Lake Pend Oreille Experimental Walleye Angler Incentive Program was implemented for the fifth year in 2023. The goal of this program is to reduce the number of non-native Walleye present in LPO through recreational angler harvest, thereby reducing the threat Walleye pose to native and recreationally important species. The program remains popular with anglers, and saw both an increase in angler participation and in the number of Walleye heads turned in. In fact, more than twice as many heads were turned in during 2023 than in 2022. Random drawings that awarded ten $100 rewards occurred every month and 13 $1,000 reward tags were turned in during 2023.



Clark Fork River Flow Model, showing an example result of velocities for a particular river reach.

The Lower Clark Fork River Flow Model Project began in 2022 and was completed in 2023. The goal of this project was to develop a high quality, precise flow model extending from Cabinet Gorge Dam downstream to the submerged portion of the Clark Fork River delta. Now that the model has been completed, it will be used to help identify areas of the lower Clark Fork River where fish can compensate for the effects of elevated total dissolved gas (TDG) as well as incorporate flow-specific habitat availability into a fish growth model for the river. An additional potential use of this model is to identify areas where in-channel habitat improvements could occur.

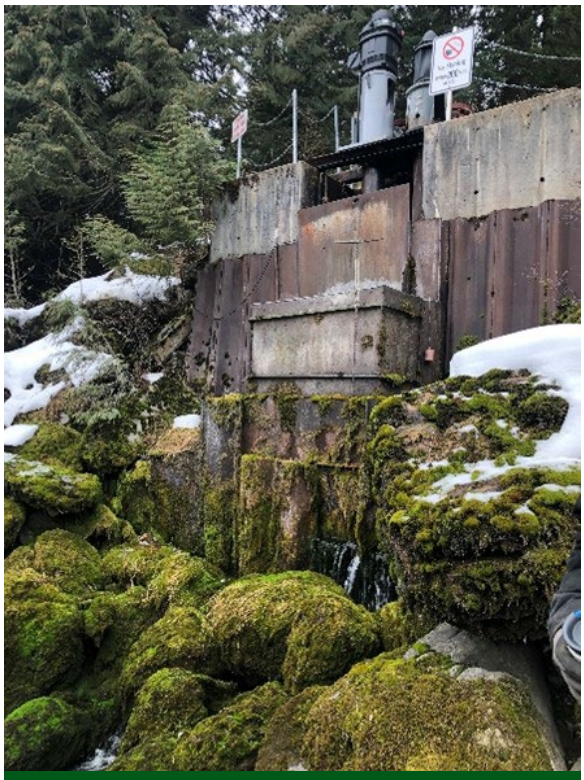
The Cabinet Gorge and Noxon Reservoir Fisheries Monitoring Plan is an ongoing project originally approved in 2000. Annual monitoring activities have included fall gill netting, juvenile bass beach seining, fishing tournament monitoring, and more recently, springtime sampling of Walleye in order to evaluate capture techniques and further understand year-class strength.

Adult Walleye captured during spring electrofishing surveys.

This annual monitoring has revealed important changes in the fisheries communities of the reservoirs. For example, eliminations of large water level fluctuations by Avista in the 1980s resulted in successful reproduction of bass species and an increase bass abundance and angling pressure; with the result that five or more bass tournaments are now held on Noxon Reservoir annually. Additionally, shifts in species composition of tournament-caught fish and increases in Walleye abundance since 2000 have been documented and monitored under this program. Walleye monitoring has shown that the Noxon Reservoir Walleye population experiences sporadic recruitment, likely due to variability in environmental conditions during the spawning season (i.e., flows, and temperature) resulting in boom or bust year-classes documented in both spring electrofishing and fall gill netting efforts.

Construction of the Cabinet Gorge Fish Hatchery Spring Water Collection System Upgrade Project began in June after years of planning and design work. The purpose of this project was to collect a larger amount of cold groundwater that flows from the riverbank to be used at the Idaho Department of Fish and Game (IDFG) Hatchery, the Avista Fish Handling Facility, and the ladder

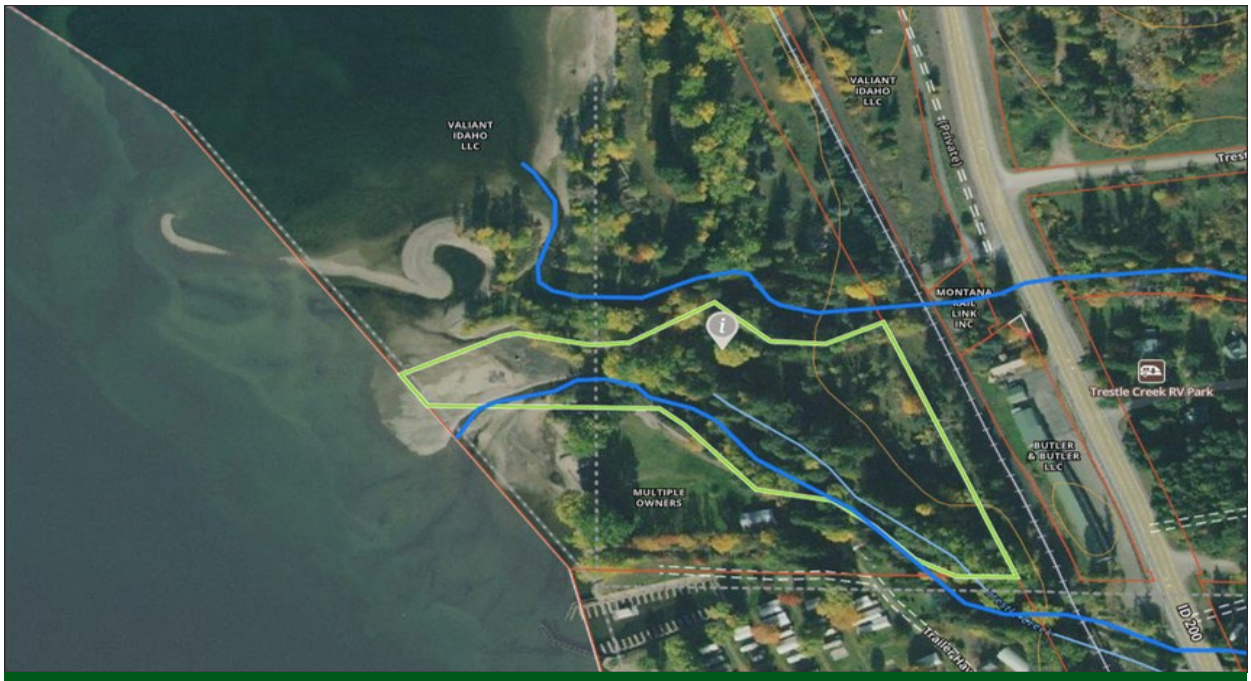
trap. In-water work was initiated in July and fish salvage efforts occurred daily, when appropriate, to prevent fish entrainment during construction. The contractor constructed a new concrete spring collection basin without disturbing the old one, collecting a substantially larger quantity of spring water. The contractor installed three new 50 horsepower pumps in October. The project team also decided to install flow meters on the individual pipes that lead to the hatchery, the Fish Handling Facility, and the ladder trap. The construction was completed in late 2023. Along with the construction work, Avista and IDFG developed a Memorandum of Understanding (MOU) for water use to memorialize need and priority into the future.



Before photo showing the original spring water collection basin and old pumps.

After construction photo of the new collection basin and equipment.

Over the course of 2023 the Trestle Creek Mouth Property Acquisition project was identified and brought to fruition through a large, coordinated effort among IDFG, the Kalispel Tribe, Kaniksu Land Trust, Avista, and the property owner. The 5.8-acre parcel at the mouth of Trestle Creek in Idaho was being proposed, as part of a larger development project, to be developed into two high end home sites. The project team worked with the landowner to negotiate a bargain sale agreement,



Map of the approximate Trestle Creek Mouth property boundary (green), the property is bordered on the south by the mainstem of Trestle Creek (blue) and the north by the north branch of Trestle Creek (blue).

using Appendix A funds as the cash portion, with the remaining property value donated by the landowner. Kaniksu Land Trust developed a conservation easement to restrict development and ensure access for conservation and connectivity work. The Kalispel Tribe accepted ownership of the property, protecting the mouth from development and allowing any future connectivity of Trestle Creek to LPO issues to be addressed.

In 2023, Avista contracted Pinnacle Research and Consulting to conduct a comprehensive survey of recreation visitors at 27 pre-determined Avista recreation sites throughout the Project Area. The review was conducted in accordance with the monitoring section of CFSA Appendix H – Implementation of the Recreation Resource Management Plan (RRMP), which requires periodic detailed studies of recreation use every 5-10 years, based on need. Results from these detailed studies are utilized to identify revises needed to the RRMP. Following a 10-year schedule for conducting the detailed studies, the comprehensive survey should have taken in place in 2021; however, the TRTAC members agreed that due to the atypical recreation use trends during the COVID 19 pandemic, it was appropriate to postpone the comprehensive survey to a later year when trends had stabilized.

Visitor surveys were conducted at Avista recreation sites over the course of the 2023 recreation season. Approximately 80% of the surveys were conducted in-person, and the remainder were conducted online. The final report is anticipated to be completed in February 2024, preliminary results indicated the following:

- Approximately 2/3 of visitors were repeat visitors.
- Approximately 1/3 of visitors are day-use groups while 2/3 stay overnight.
- Popular activities at recreation sites include viewing scenery, picnicking, swimming, and launching boats for on-water activities.
- Satisfaction with the number, type, and condition of public recreation facilities and sites are high, averaging greater than 4 on a 5-point scale from "Not at all Satisfied" (1) to "Extremely satisfied" (5).
- Roughly 2/3 of visitors were from Montana, with half of those visitors being Sanders County residents. The other 1/3 were from outside Montana, with about half of those visitors being from North Idaho.
- Visitor comments were generally positive with visitors indicating their satisfaction with the recreation sites and reservoir access.

Onsite surveys with Clark Fork recreators were conducted throughout the 2023 summer season.

After the report is finalized, Avista and the Recreation Subgroup will work to incorporate changes into the RRMP update, to be completed in 2024.

During the 2023/2024 winter Avista implemented a shoreline erosion maintenance project at Pilgrim Creek Park. The fishing platform pilings were experiencing severe erosion around their base, as well as loss of rip rap and material along the adjacent shoreline. Avista coordinated schedules with Operations for a low water elevation window to access the shoreline. With an archaeologist monitor on site the contractor rebuilt the base of the pilings and shoreline by placing large riprap as a base on top of the existing geotextile fabric, compacting it and placing large rocks around the base of the pilings.

Shoreline stabilization construction under the Pilgrim Creek Park fishing platform.

Additional smaller rock was placed as the cap around the pilings and the walking path down to the bank was topped with shale. The contractor also removed a severely damaged standing tree along the shoreline, without removing the rootwad.

1.3 Acronyms and Abbreviations

AIP	Annual Implementation Plan
CFSA	Clark Fork Settlement Agreement
CGDF *or* CGFPF	Cabinet Gorge Fish Passage Facility
CRMG	Cultural Resources Management Group
EWM	Eurasian Watermilfoil
FERC	Federal Energy Regulatory Commission
GDP	Gross Domestic Product
GSCP	Gas Supersaturation Control Program
HED	hydroelectric development
IDFG	Idaho Department of Fish and Game
KNRD	Kalispel Tribe Natural Resources Department
LCFWG	Lower Clark Fork Watershed Group
LPO	Lake Pend Oreille
LUMP	Land Use Management Plan
MC	Management Committee
M&E	Monitoring and Evaluation
MFWP	Montana Fish, Wildlife and Parks
NP	Northern Pike
NSRP	Native Salmonid Restoration Plan
PIT	passive integrated transponder
PM&E	protection, mitigation, and enhancement
RPMs	Reasonable and Prudent Measures
RRMP	Recreation Resource Management Plan
TDG	total dissolved gas
TRTAC	Terrestrial Resources Technical Advisory Committee
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WRTAC	Water Resources Technical Advisory Committee
Y2Y	Yellowstone to Yukon

Section 2: Management Committee

2.1 Purpose

Paragraph 26 of the CFSA established a MC composed of representatives from each of the CFSA signatories. The MC oversees all PM&E measures. The MC shall have the authority, subject to such FERC approvals as may be necessary in appropriate cases, to:

- Approve plans developed by Avista and the appropriate technical committee for the implementation of PM&E measures, including the related funding;
- Approve modifications of PM&E measures;
- Oversee the implementation of all PM&E measures by Avista and the appropriate committees;
- Establish such committees as it deems necessary for the purpose of implementing the CFSA and PM&E measures, and determine, as appropriate, the size, membership, and procedures of such committees;
- Establish appropriate procedures for conducting its activities, including procedures for proxy voting and teleconferencing methods;
- Permit additional entities to execute the CFSA and thereby become parties to the CFSA (Parties) and, as appropriate, permit the addition of such new Parties on terms different from those of the original signatories to the CFSA;
- Resolve all disputes regarding implementation of approved PM&E measures and all disputes brought to it for resolution by any of the Parties or committees;
- Amend the CFSA including the PM&E measures, in accordance with the voting provisions set forth in the CFSA.

2.2 List of Representatives

In 2023, the MC consisted of representatives from 27 Parties of the CFSA. Representatives are verified bi-annually through the sign-in sheet distributed at each MC meeting. The 2023 MC representatives are listed below:

Avista	Monica Ott
Bull River Watershed Council	Tom McDowell
Cabinet Resource Group	Jim Nash
Coeur d'Alene Tribe	Caj Matheson
Confederated Salish and Kootenai Tribes	Les Evarts
Green Mountain Conservation District	Terry Hightower
Idaho Department of Environmental Quality	Bob Steed
Idaho Department of Fish and Game	Carson Watkins
Idaho Rivers United	Kevin Lewis
Kalispel Tribe	Joe Maroney
Kootenai Tribe of Idaho	Shawn Young
Lake Pend Oreille Idaho Club	David Gillespie/Carter Sandhal
Montana Bass Federation	Bob Beberg
Montana Department of Environmental Quality	Keenan Storrar
Montana Department of Natural Resources and Conservation	Valerie Kurth
Montana Fish, Wildlife and Parks	Lee Anderson/Mike Hensler

Montana State Historic Preservation Office	Jessica Bush
Noxon-Cabinet Shoreline Coalition	Rick Robinson
Panhandle Chapter Trout Unlimited	Loren Albright
Rock Creek Alliance	Diane Williams/Mary Costello
Sanders County, Montana	Tony Cox
U.S. Fish and Wildlife Service	Ben Conard
U.S. Forest Service	Michael Feiger

Management Committee representatives not designated in 2023:

Alliance for the Wild Rockies
Elk Creek Watershed Council
Idaho Department of Parks and Recreation
Idaho State Historic Preservation Office

2.3 Meeting and Activity Summary

In 2023 the MC again conducted business utilizing in-person meetings with a virtual option to meet the requirements of Paragraph 28 of the CFSA. These represented the 58th and 59th meetings of this group since the signing of the CFSA. The first meeting of 2023 consisted of sending all members copies of the 2023 AIPs and holding a meeting on March 14, 2023. Through this process all 2023 AIPs were approved as presented by consensus. The MC also reviewed the 2022 Annual Report and approved the budget sheet.

The second meeting of the MC was held in-person on September 20, 2023 and provided updates on the implementation of the 2023 AIPs. The MC reviewed five Avista-held parcels purchased through the CFSA, and approved by consensus maintaining the ownership status quo for the next five years, recognizing that any action requires MC review and approval. Additionally, the MC approved a proposed property acquisition and conservation easement on Trestle Creek, Idaho, under Appendix A (see Section 1.2) and two budget increases in Appendix C. On September 21, 2023, MC members toured CFSA project sites in Idaho including both fisheries and recreation projects.

All meetings were open to the public, meeting information was placed on Avista's Clark Fork Project website, and notices were placed in the local newspaper. Annual Implementation Plans and project updates were provided to the MC and anyone that requested them.

2.3.1 2023 Consent Mails

Throughout 2023, the MC reviewed and approved four Consent Mails received through the request process established by the Clark Fork Management Committee Procedures. Consent Mail requests are a business process utilized for decision making between MC meetings. Proposals that are approved move forward, while those that are not approved are discussed at the next regularly scheduled MC meeting. The following proposals were received by Consent Mail, and approved:

- April 24, 2023 request for approval for the Upstream Fish Passage Program Project Plan Protocol Revision: Idaho Department of Fish and Game Westslope Cutthroat Trout Wild Broodstock Evaluation (CFSA Appendix C; approved on May 11, 2023)
- June 15, 2023 request for approval for Facilities Fund Budget Allocation for Two Rivers RV Park (CFSA Appendix H; approved on June 30, 2023)
- November 27, 2023 request for approval for Facilities Fund Budget Allocation for Pilgrim Creek Park Baseball Field Improvements (CFSA Appendix H; approved on December 12, 2023)
- November 27, 2023 request for approval for Facilities Fund Budget Allocation for Trout Creek Boat Ramp Improvements (CFSA Appendix H; approved on December 12, 2023)

2.4 Key 2023 References

Avista. 2023. Consent Mail approval of Appendix C - Upstream Fish Passage Program Plan Protocol Revision: Idaho Department of Fish and Game Westslope Cutthroat Trout Wild Broodstock Evaluation (May 11, 2023). Avista document identification number 2023-0108.

Avista. 2023. Consent Mail approval of Appendix H – Facilities Fund Budget Allocation for Two Rivers RV Park (June 30, 2023). Avista document identification number 2023-0110.

Avista. 2023. Consent Mail approval of Appendix H – Facilities Fund Budget Allocation for Pilgrim Creek Park Baseball Field Improvements and Appendix H – Facilities Fund Budget Allocation for Trout Creek Boat Ramp Improvements (December 12, 2023). Avista document identification number 2023-0226.

Avista. 2023. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2023).

Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Notes from March 14, 2023. Avista document identification number 2023-0098.

Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Record from September 20, 2023. Avista document identification number 2023-0260.

Sanders County Ledger. 2023. Public meeting notice for the March MC Meeting (March 14, 2023). Avista document identification number 2023-0259.

Section 3: Water Resources Technical Advisory Committee

3.1 Purpose

The WRTAC is one of two technical advisory committees designated by Paragraph 32 of the CFSA. The WRTAC provides technical review of water-related PM&E measures (Section 3.2), including those dealing with fishery resources, water quality, and water quantity. The WRTAC is consulted in the development of appropriate implementation plans for water resources PM&E measures and related funding recommendations.

3.2 Water Related PM&E Measures

PM&E Measure	CFSA Appendix	Clark Fork License Article
Idaho Tributary Habitat Acquisition and Fishery Enhancement Program	A	404
Montana Tributary Habitat Acquisition and Recreational Fishery Enhancement Program	B	405
Fish Passage/Native Salmonid Restoration Plan	C	406
Bull Trout Protection and Public Education Project	D	407
Watershed Councils Program	E	408
Clark Fork River Water Quality Monitoring Program	F1	409
Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals	F2	410
Aquatic Organism Tissue Analysis	F3	411
Water Quality Protection and Monitoring Plan for Maintenance, Construction and Emergency Activities	F4	412
Dissolved Gas Supersaturation Control, Mitigation, and Monitoring	F5	413
Project Operations Package	T	429/430/431

3.3 List of Representatives

The WRTAC consists of representatives appointed by MC members. The 2023 representatives are listed below:

Avista	Eric Oldenburg
Bull River Watershed Council	Tom McDowell
Cabinet Resource Group	Jim Nash
Coeur d'Alene Tribe	Caj Matheson
Confederated Salish and Kootenai Tribes	Craig Barfoot
Green Mountain Conservation District	Terry Hightower
Idaho Department of Environmental Quality	Chantilly Higbee
Idaho Department of Fish and Game	Ken Bouwens
Kalispel Tribe	Ken Merrill
Kootenai Tribe of Idaho	Shawn Young
Lake Pend Oreille Idaho Club	David Gillespie

Montana Bass Federation	Bob Beberg
Montana Department of Environmental Quality	Keenan Storrar
Montana Department of Fish, Wildlife and Parks	Jason Blakney
Montana Department of Natural Resources and Conservation	Valerie Kurth
Montana State Historic Preservation Office	Jessica Bush
Noxon-Cabinet Shoreline Coalition	Rick Robinson
Panhandle Chapter Trout Unlimited	Bill Love
Rock Creek Alliance	Diane Williams
U.S. Fish and Wildlife Service	Carter Fredenberg
U.S. Forest Service	Chris Rossel

The following parties to the CFSA did not designate WRTAC representatives in 2023:

Alliance for the Wild Rockies
Elk Creek Watershed Council
Idaho Department of Parks and Recreation
Idaho Rivers United
Idaho State Historic Preservation Office
Sanders County, Montana

3.4 Meeting and Activity Summary

The WRTAC met twice in 2023, on January 18 and August 29. Both meetings were conducted in-person with virtual attendance offered. Notices of the meetings were placed in the local newspaper and posted on Avista's Clark Fork Project website. In addition, the Aquatic Implementation Team initially ranked eligible projects and provided the recommended scores to the WRTAC, which were discussed and ratified during the January 18 meeting.

3.5 Key 2023 References

Avista. 2023. Water Resources Technical Advisory Committee Meeting Packet from January 18, 2023. Avista document identification number 2023-0047.

Avista. 2023. Water Resources Technical Advisory Committee Meeting Packet from August 29, 2023. Avista document identification number 2023-0271.

Avista. 2023. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2023).

Section 4: Terrestrial Resources Technical Advisory Committee

4.1 Purpose

The TRTAC is one of two technical advisory committees designated by Paragraph 32 of the CFSA. The TRTAC provides technical review of terrestrial-related PM&E measures (see Section 4.2), including those dealing with wildlife, botanical resources, wetlands, land use, recreation, and aesthetics. The TRTAC is consulted in the development of appropriate implementation plans for terrestrial resource PM&E measures and related funding recommendations.

4.2 Terrestrial Related PM&E Measures

PM&E Measures	CFSA Appendix	Clark Fork License Article
Implementation of the Land Use Management Plan	G	414
Implementation of the Recreation Resource Management Plan	H	415
Implementation of the Aesthetics Management Plan	I	416
Development and Implementation of the Wildlife, Botanical and Wetland Management Plan	J	417
Wildlife Habitat Acquisition, Enhancement and Management Program	K	418
Black Cottonwood Habitat Protection and Enhancement	L	419
Wetlands Protection and Enhancement Program	M	420
Forest Habitat Protection and Enhancement	P	425
Reservoir Island Protection	Q	426
Erosion Fund and Shoreline Stabilization Guidelines Program	S	428

4.3 List of Representatives

The TRTAC consists of representatives appointed by MC members. The 2023 representatives are listed below:

Avista	Arthur Potts
Bull River Watershed Council	Tom McDowell
Cabinet Resource Group	Rob Kjos
Coeur d'Alene Tribe	Caj Matheson
Elk Creek Watershed Council	Judy Hutchins
Green Mountain Conservation District	Terry Hightower
Idaho Department of Environmental Quality	Bob Steed
Idaho Department of Fish and Game	Ken Bouwens
Kalispell Tribe	Ray Entz/Kevin Lyons
Kootenai Tribe of Idaho	Scott Soults/Shawn Young
Montana Bass Federation	Bob Beberg
Montana Department of Environmental Quality	Craig Jones
Montana Fish, Wildlife and Parks	Zack Farley/Brian Schwartz
Montana State Historic Preservation Office	Jessica Bush

Noxon-Cabinet Shoreline Coalition	Rick Robinson
Rock Creek Alliance	Mary Costello
Sanders County, Montana	Tony Cox
U.S. Fish and Wildlife Service	Wayne Kasworm
U.S. Forest Service	Caleb Matthew/Ron Torretta

The following parties to the CFSA did not designate TRTAC representatives in 2023:

Alliance for the Wild Rockies
Confederated Salish and Kootenai Tribes
Idaho Department of Parks and Recreation
Idaho Rivers United
Idaho State Historic Preservation Office
Lake Pend Oreille Idaho Club
Montana Department of Natural Resources and Conservation
Panhandle Chapter Trout Unlimited

4.4 Meeting and Activity Summary

The TRTAC met twice in 2023, on January 19 and August 30. Both meetings were hybrid with both in-person and virtual options. Notices of these meetings were placed in the local newspaper and posted on Avista's Clark Fork Project website. At the January meeting the TRTAC discussed the 2023 Annual Implementation Plans and provided recommendations for the MC. The August meeting consisted of project updates for the 2023 project plans.

4.5 Key 2023 References

Avista. 2023. Terrestrial Resources Technical Advisory Committee (TRTAC) January 19, 2023. Avista document identification number 2023-0048.

Avista. 2023. Terrestrial Resources Technical Advisory Committee Meeting Packet from August 30, 2023. Avista document identification number 2023-0272.

Avista. 2023. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2023).

Section 5: Cultural Resources Management Group (License Article 427 – CFSA Appendix R)

5.1 Purpose and Resource Benefit

The CRMG was formed in support of CFSA Appendix R (Clark Fork Heritage Resource Program). Appendix R of the CFSA corresponds to Article 427 in the FERC License for Clark Fork Project No. 2058.

The CRMG consists of representatives from Coeur d'Alene, Kootenai, Confederated Salish and Kootenai, Kalispel Tribes, Idaho and Montana State Historic Preservation offices, USFS, and Avista. Individual representatives of each tribe and agency may vary from meeting to meeting. Due to confidentiality requirements, these meetings are not open to the public. The CRMG reviews all ground-disturbing activities that may impact cultural or historic resources and uses the Clark Fork Heritage Resource Management Plan (Plan) to guide implementation of management efforts.

The purpose of CFSA Appendix R is to provide directives for all eligible properties associated with the Clark Fork Project, including dam sites, homesteading-era properties, pre-historic properties, and sites with traditional cultural significance. The Plan helps to support many of the projects in other CFSA PM&E measures. It also helps to ensure that historic properties are protected and managed. The Plan is intended to extend beyond a mere "treatment plan" and provides the flexibility to be useful to a variety of audiences. The Plan includes public education goals, objectives, and action strategies as important focuses.

5.2 Meeting and Activity Summary

On March 2, 2023, the CRMG held a virtual meeting to discuss the 2023 AIPs for aquatic and terrestrial resources, proposed ground disturbances at recreation sites, various land use permits, and annual monitoring results. Meeting attendees included the Confederated Salish and Kootenai Tribes, Coeur d'Alene Tribe, Kootenai Tribe of Idaho, USFS Kootenai National Forest, Montana and Idaho State Historic Preservation Offices, and Avista.

The fall CRMG meeting placeholder was cancelled, with group consensus, since all projects and monitoring were going as planned.

5.3 2023 Annual Implementation Plan Project Plan

- Clark Fork Heritage Resource Program
  - ***Variance*** [1, 2]*; see Section 5.3.2*

5.3.1 Other 2023 Activities

- Other projects not specifically tied to aquatic or terrestrial PM&E measures reviewed by the Avista Cultural Resource Specialist and/or the CRMG include:
  - Maintenance projects for Noxon Rapids and Cabinet Gorge dams and associated facilities.

5.3.2 Projects with Significant Variances

Project Plan	Variances
Clark Fork Heritage Resource Program	No work occurred on the Honey Flats Botanical Assessment in 2023. This project was initiated in 1999 as part of Appendix P to develop a site-specific management plan and regenerate native food plants. In 2000, a timber management plan was developed, reviewed by the CRMG, and finalized. This project was added to the Appendix R project plan in 2014 as a task and did not include a final report or work product. In 2015, ethnobotanical vegetation surveys and several culturally significant plant species were identified and documented. The site is currently classified and managed as Conservation 1 and afforded the maximum protection provided through the Land Use Management Plan. The site management and usage are reviewed by the CRMG at their annual meetings. This site will continue to be managed as Conservation 1 and the task will be removed from future Appendix R project plans. If a new assessment is identified in the future, it will be addressed through the Annual Implementation Plan process.

5.4 Key 2023 References

[1] Johnson, L. 2023. Appendix R Clark Fork Heritage Resource Program. 2023 Annual Work Summary. Avista document identification number 2023-0281.

[2]Avista. 2022. CRMG Meeting Summary (Public Version) from March 1, 2022. Avista document identification number 2022-0302.

Section 6: Water Resources PM&E Measures Implementation Efforts

6.1 Idaho Tributary Habitat Acquisition and Fishery Enhancement Program (License Article 404 – CFSA Appendix A)

6.1.1 Purpose and Resource Benefit

The purpose of this program is to offset the power peaking impacts of the Cabinet Gorge Development to native salmonid species (i.e., Bull Trout, Westslope Cutthroat Trout, and Mountain Whitefish). Resource benefits are accomplished through watershed restoration and enhancement, fishery monitoring and management support, and a public education and enforcement initiative focused on Bull Trout in Idaho.

6.1.2 2023 Annual Implementation Plan Project Plans

Tributary Habitat Acquisition and Enhancement

- Habitat Restoration Scoping Allocation
  - ***Completed per 2023 AIP*** [1, 2]
- Habitat Restoration and Acquired Property Maintenance and Monitoring Allocation
  - ***Completed per 2023 AIP*** [1, 3]
- Priority Native Salmonid Habitat Acquisition and Conservation Allocation
  - ***Completed per 2023 AIP*** [1, 4]
- Idaho Field Station Operation and Maintenance
  - ***Completed per 2023 AIP*** [1]
- Pack River Watershed Management Plan Addendum
  - ***Variance*** [1]*; see Section 6.1.4*
- Trestle Creek Habitat Enhancement Project Phase I
  - ***Completed per 2023 AIP*** [1]
- Rattle Creek Habitat Enhancement Project Design
  - ***Completed per 2023 AIP*** [1, 5, 6, 7]

Fishery Resource Monitoring, Enhancement, and Management

- Fish Resource Monitoring, Enhancement, and Management Plan
  - ***Completed per 2023 AIP*** [1, 8, 9]

6.1.3 Other 2023 Activities

- September 20, 2023 MC meeting approval of up to $2,200,000 for the Trestle Creek Mouth Property Acquisition project under Appendix A of the CFSA (see Section 1.2).

- ***Completed*** [1, 4]

6.1.4 Projects with Significant Variances

Project Plan	Variances
Pack River Watershed Management Plan Addendum	The Pack River Native Salmonid Habitat Restoration Plan was not completed by the Pack River Watershed Council by the November 1, 2023 due date. The new completion date for this document is November 1, 2024.

6.1.5 Key 2023 References

[1] Bouwens, K. 2023. Appendix A: Idaho Tributary Habitat Acquisition and Fishery Enhancement Program. 2023 Annual Work Summary. Avista document identification number 2023-0264.

[2] RivHab. 2023. Strong Creek 30% Design and Estimate of Probable Costs (June 20, 2023). Technical Memorandum. Avista document identification number 2023-0214.

[3] Avista. 2023. Pesticide/Herbicide application summary for Clark Fork Project. Avista document identification number 2023-0240.

[4] Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Record from September 20, 2023. Avista document identification number 2023-0260.

[5] RivHab. 2023. Meeting with USFS regarding 30% Design Review (Meeting Date: 03/06/2023). Avista document identification number 2023-0046.

[6] RivHab. 2023. Rattle Creek Site Walk (Meeting Dates: August 9-10, 2023). Technical Memorandum. Avista document identification number 2023-0216.

[7] RivHab. 2023. Rattle Creek Hydraulic Analysis and Wood Stability (November 29, 2023). Technical Memorandum. Avista document identification number 2023-0215.

[8] Avista. Database for Temperature Monitoring Data Compilation; for more information on this database contact Paul Kusnierz (Paul.Kusnierz@avistacorp.com).

[9] Jakubowski, R., A. L. Ransom, and B. Birdsall. 2023. Pend Oreille Basin Bull Trout Redd Monitoring. 2022 Annual Project Update. Avista document identification number 2023-0201.

6.2 Montana Tributary Habitat Acquisition and Recreational Fishery Enhancement Program (License Article 405 – CFSA Appendix B)

6.2.1 Purpose and Resource Benefit

The purpose of this program is to offset the impacts of the power peaking and reservoir operational impacts of the Clark Fork Project to native salmonids and recreational fisheries in Montana. This is achieved through a multiple-component program that includes the restoration and enhancement of Clark Fork River tributary watersheds, support of recreational fishery monitoring and management, and evaluation and implementation of recreational fishery enhancement projects. These programmatic efforts benefit tributary habitats within the project area and the native salmonid and recreational fisheries associated with them.

6.2.2 2023 Annual Implementation Plan Project Plans

Tributary Habitat Acquisition and Enhancement

- Habitat Restoration Monitoring and Native Salmonid Abundance Monitoring Plan
  - ***Variance*** [1, 2, 3]*; see Section 6.2.4*
- Redd Surveys in Montana Tributaries
  - ***Completed per 2023 AIP*** [1, 4]
- Stream Gage Monitoring
  - ***Completed per 2023 AIP*** [1, 5, 6, 7, 8, 9, 10]
- Crow Creek Bull Trout Investigation
  - ***Variance*** [1]*; see Section 6.2.4*
- Upper Prospect Creek LWD Project
  - ***Completed per 2023 AIP*** [1, 11]
- Lower Clark Fork Watershed Group Project Coordination
  - ***Variance*** [1]*; see Section 6.2.4*
- Habitat Restoration Monitoring, Maintenance, and Contingency Allocation
  - ***Variance*** [1]*; see Section 6.2.4*
- Habitat Restoration, Property Acquisition, and Conservation Easement Contingency Allocation
  - ***Completed per 2023 AIP*** [1]
- Prosect Creek Bull Trout Salvage Evaluation
  - ***Variance*** [1]*; see Section 6.2.4*

- Sims Meander Stream and Floodplain Restoration Project
  - ***Completed per 2023 AIP*** [1, 12]

- Vermilion River Restoration Projects 4 - 6 Survey and Design
  - ***Variance*** [1]*; see Section 6.2.4*

- St. Paul Trailhead Improvement Project
  - ***Variance*** [1]*; see Section 6.2.4*

Recreational Fishery Enhancement

- Cabinet Gorge and Noxon Reservoir Fisheries Monitoring Plan
  - ***Completed per 2023 AIP*** [1, 13]

- Mountain Lake Fisheries Monitoring Project
  - ***Variance*** [1]*; see Section 6.2.4*

- Lower Bull River Day Use Boat Access Site Operation
  - ***Completed per 2023 AIP*** [1, 14]

- Noxon Reservoir Boat Ramp Improvements
  - ***Variance*** [1]*; See Section 6.2.4*

- Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs
  - ***Completed per 2023 AIP*** [1, 15]

- Dreissenid Mussel Sampling on Noxon and Cabinet Gorge Reservoirs
  - ***Completed per 2023 AIP*** [1, 16]

- Noxon Reservoir Bathymetry Update
  - ***Completed per 2023 AIP*** [1, 17]

- Upper Thompson River Connectivity Project
  - ***Variance*** [1]*; See Section 6.2.4*

6.2.3 Other 2023 Activities

- No other activities to report.

6.2.4 Projects with Significant Variances

Project Plan	Variances
Habitat Restoration Monitoring and Native Salmonid Abundance Monitoring Plan	Only two (Graves Creek and the East Fork Bull River) Bull Trout spawning tributaries were surveyed for barriers in late August, due to resource constraints.
Crow Creek Bull Trout Investigation	The Project Completion Report was not completed by MFWP in 2023. This report has been rescheduled to be completed by December 31, 2024.
Lower Clark Fork Watershed Group Project Coordination	The Lower Clark Fork Stream Restoration Summary 1995–2021 review draft, maps, and final report were not completed in 2023. It is anticipated that the report work products will be completed in 2024. However, due to the technical expertise required to produce these maps, this component will most likely be completed in 2025.
Habitat Restoration Monitoring, Maintenance, and Contingency Allocation	Weed removal did not occur in 2023 due to Kootenai National Forest task prioritization. Efforts to complete this task will continue in 2024.
Prospect Creek Bull Trout Salvage Evaluation	The budget for the purchase of three submersible Biomark PIT antenna systems was overspent. There was a significant price increase between when quotes where obtained and when the antenna systems were purchased.
Vermilion River Restoration Projects 4 - 6 Survey and Design	The kickoff meeting was held on October 18 instead of the originally anticipated April 2023. The Lidar/Thermal IR flight was completed in late-September instead of the anticipated August timeframe. Installation of the groundwater monitoring network was completed in October as opposed the anticipated timeline of July 15–August 31. Presentation of proposed actions for each of the three restoration sites will not be completed on time. The USFS is awaiting deliverables from USGS to proceed with producing preliminary designs and cost estimates, which are anticipated in the spring of 2024.

Project Plan	Variances
St. Paul Trailhead Improvement Project	Target dates for receiving designs from the contractor were optimistic, which resulted in the delay of the USFS's ability to perform NEPA analysis and the dismantling of the existing vault toilet according to the original schedule. Communications between the USFS and the contractor indicate that the designs and NEPA analysis will be completed in the winter of 2023/2024. Trailhead relocation is anticipated for spring 2024.
Mountain Lake Fisheries Monitoring Project	The Comprehensive Project Report was not completed by MFWP on December 31, 2023. This report will be finalized by December 31, 2024.
Noxon Reservoir Boat Ramp Improvements	The Thompson Falls State Park access gates were not installed in 2023, due to a revised operation of the park. The access gates will be included in the 2024 Annual Implementation Plan process.
Upper Thompson River Connectivity Project	The Annual Project Update was not completed; however, the project plan mistakenly included this as a work product. There is no technical information to report for this acquisition.

6.2.5 Key 2023 References

[1] Rehm, T. 2023. Appendix B Montana Tributary Habitat Acquisition and Recreational Fishery Enhancement Program. 2023 Annual Work Summary. Avista document identification number 2023-0274.

[2] Rehm, T., and T. Tholl. 2023. Native Salmonid Abundance and Tributary Habitat Restoration Monitoring. 2022 Annual Project Update. Avista document identification number 2023-0203.

[3] Avista. Database for Temperature Monitoring Data Compilation; for more information on this database contact Paul Kusnierz (Paul.Kusnierz@avistacorp.com).

[4] Moran, S., and P. Kusnierz. 2023. Lower Clark Fork River, Montana – Avista Project Area – 2022 Annual Bull Trout and Brown Trout Redd Survey. 2022 Annual Project Update. Avista document identification number 2023-0052.

[5] USFS. 2023. Water - Temperature - Data Report, WY 2023, Bull River @ historic USGS Gaging Station – Noxon, Montana. Avista document identification number 2023-0246.

[6] USFS. 2023. Water - Temperature - Data Report, WY 2023, East Fork of the Bull River – Noxon, Montana. Avista document identification number 2023-0247.

[7] USFS. 2023. Water - Temperature - Data Report, WY 2023, Rock Creek at Hwy 200 – Noxon, Montana. Avista document identification number 2023-0249.

[8] USFS. 2023. Water – Sediment – Temperature – Data Report, WY 2023, Trout Creek at 214 bridge – Trout Creek, Montana. Avista document identification number 2023-0250.

[9] USFS. 2023. Water – Sediment - Temperature - Data Report, WY 2023, Vermilion River at red bridge – Trout Creek, Montana. Avista document identification number 2023-0251.

[10] USFS. 2023. Water - Temperature - Data Report, WY 2023, Graves Creek at Blue Slide Road – Thompson Falls, Montana. Avista document identification number 2023-0248.

[11] Brissette, C., T. Rehm, and S. Busmire. 2023. Upper Prospect Creek Large Wood Debris Project. Avista document number 2023-0270.

[12] Neesvig, C. 2023. Vermilion River Project #3 Sims Reach 2022 Post Run-off Monitoring Report. Avista document number 2023-0262.

[13] Rehm, T., J. Blakney, and T. Tholl. 2023. Cabinet Gorge and Noxon Reservoir Fisheries Monitoring. 2022 Annual Project Update. Avista document identification number 2023-0032.

[14] Pinnacle Research and Consulting. 2023. 2023 Clark Fork Recreation Site Visitation Noxon Rapids and Cabinet Gorge Hydroelectric Projects. Avista document identification number 2023-0255.

[15] Clean Lakes Inc. 2023. Noxon Rapids and Cabinet Gorge Reservoirs Sanders County, Montana. 2023 Aquatic Invasive Species (AIS) Aquatic Pesticide Application Report (APAR). Avista document identification number 2023-0263.

[16] Kusnierz, P. 2023. 2023 Dreissenid Mussel Sampling on Noxon and Cabinet Gorge Reservoirs. Memorandum. Avista document identification number 2023-0143.

[17] Avista. 2023. Internal-use ReefMaster map; for more information on this map contact Eric Oldenburg (Eric.Oldenburg@avistacorp.com).

6.3 Fish Passage/Native Salmonid Restoration Plan (License Article 406 – CFSA Appendix C)

6.3.1 Purpose and Resource Benefit

The purpose of the Fish Passage/Native Salmonid Restoration Plan is "…to mitigate the continuing effects of the project as obstructions to fish passage", and the resource benefit is "to increase the long-term population viability of native Salmonids in the Lake Pend Oreille (LPO)-lower Clark Fork River system" (FERC License Article 406). This goal is accomplished through the aggressive implementation of the Clark Fork River Native Salmonid Restoration Plan (NSRP).

6.3.2 2023 Annual Implementation Plan Project Plans

Annual Operations

- Upstream Fish Passage Program
  - ***Variance*** [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]*; see Section 6.3.4*
- Westslope Cutthroat Trout Transport Evaluation
  - ***Completed per 2023 AIP*** [1, 11]
- Native Salmonid Restoration Plan Five-Year Plan
  - ***Variance*** [1]*; see Section 6.3.4*
- Tributary Trapping and Downstream Juvenile Bull Trout Transport Program
  - ***Variance*** [1, 10, 12]*; see Section 6.3.4*
- PIT-Monitoring Station Operation and Maintenance
  - ***Completed per 2023 AIP*** [1]
- Graves Creek Bull Trout Translocation Project
  - ***Variance*** [1]*; see Section 6.3.4*

Facilities

- Fish Capture Facilities Operation, Development, and Testing
  - ***Variance*** [1, 8]*; see Section 6.3.4*
- Graves Creek Permanent Weir Trap Enhancements
  - ***Completed per 2023 AIP*** [1]

Cabinet Minor Modifications

- Cabinet Gorge Fish Passage Facility Minor Modifications
  - ***Completed per 2023 AIP*** [1]

6.3.3 Other 2023 Activities

- April 24, 2023, request for approval for an Upstream Fish Passage Program Project Plan Revision: Idaho Department of Fish and Game Westslope Cutthroat Trout Wild Broodstock Evaluation (CFSA Appendix C; approved May 11, 2023).
  - ***Completed per Consent Mail*** [1, 7]

- September 20, 2023 MC meeting approval of a $80,000 budget addition to cover additional maintenance costs at the CGFPF under Appendix C of the CFSA.
  - ***Completed*** [1, 8]

- September 20, 2023 MC meeting approval of a $10,000 budget addition to cover unanticipated costs associated with purchasing the Appendix C mobile fish handling trailer under Appendix C of the CFSA.
  - ***Completed*** [1, 8]

6.3.4 Projects with Significant Variances

Project Plan	Variances
Upstream Fish Passage Program	The CGFPF had three unforeseen shut down events due to mechanical and/or structural issues. The U. S. Fish and Wildlife Service and FERC were notified of these events. The genetic samples for Westslope Cutthroat Trout transported upstream of Cabinet Gorge Dam are being analyzed at the Eagle Genetics Lab in place of the Abernathy Fish Technology Center to save cost since two labs were scheduled to analyze these samples in 2023. One Bull Trout genetically assigned to Strong Creek, Idaho was mistakenly transported upstream to the East Fork Bull River in Montana. The Fish Passage Subgroup decided to transport Westslope Cutthroat Trout captured while night electrofishing when the CGFPF was shut down during high flows. Due to the CGFPF facing operational issues at the time the Cabinet Gorge Hatchery ladder started operating, the Fish Passage Subgroup decided to transport Bull Trout captured in the Cabinet Gorge Hatchery ladder.

Project Plan	Variances
	The Comprehensive Project Report was due on December 1 but was not completed due to personnel efforts being focused on facility operations. The new anticipated completion date is December 1, 2025. The Annual Project Update for 2022 was due on December 1 but was not completed due to personnel efforts being focused on facility operations. The new anticipated completion date is July 1, 2025.
Native Salmonid Restoration Plan Five-Year Plan	At the June kick-off meeting, the AIT (later approved by WRTAC) expanded the scope of the Five-Year Plan to incorporate all aquatic PM&Es. Therefore, the date for completion of this plan was adjusted from May 1 to November 1, 2024.
Tributary Trapping and Downstream Juvenile Bull Trout Transport Program	The Comprehensive Project Report including a Graves Creek Monitoring and Evaluation Plan Report (appendix within the former) was not completed. This report will be completed by July of 2024 and include data from 2023. The Graves Creek permanent weir trap Monitoring and Evaluation (M&E) Plan was not evaluated or modified by the AIT because 2023 was the final year the formal plan is proposed to be implemented.
Graves Creek Bull Trout Translocation Project	Montana Fish, Wildlife & Parks is currently investigating the translocation recipient system that will be utilized to evaluate potential translocation projects. Completion of the Bull Trout translocation plan, M&E objectives, and the M&E plan specific to this project are being intentionally delayed until the MFWP document is finalized.
Fish Capture Facilities Operation, Development, and Testing	Hydraulic monitoring of the CGFPF was scheduled to occur in 2023 but has been postponed until 2024 to allow time to secure a contractor and plan for specific river flows needed to complete the monitoring.

6.3.5 Key 2023 References

[1] Bernall, S. 2023. Appendix C Fish Passage/Native Salmonid Restoration Plan. 2023 Annual Work Summary. Avista document identification number 2023-0269.

[2] Adams, B., R. Headley, and J. VonBargen. 2023. Genetic Analysis of Native Salmonids from the Lake Pend Oreille and Clark Fork River System, Idaho and Montana. 2022 Annual Project Update. Avista document identification number 2023-0245.

[3] Sprague, L. 2023. Survey for Selected Fish Pathogens in the Lower Clark Fork River and Lake Pend Oreille in Idaho. 2022 Annual Project Update. Avista document identification number 2023-0146.

[4] Avista. 2023. Clark Fork Project, FERC Project No. 2058, Biological Opinion Condition 25, Report Regarding CG Fish Passage Facility Shutdown (May 1, 2023). FERC Submittal. Avista document identification number 2023-0059.

[5] Avista. 2023. Clark Fork Project, FERC Project No. 2058, Biological Opinion Condition 25, Report Regarding CG Fish Passage Facility Shutdown (August 18, 2023). FERC Submittal. Avista document identification number 2023-0131.

[6] Avista. 2023. Clark Fork Project, FERC Project No. 2058, Biological Opinion Condition 25, Report Regarding Cabinet Gorge Fish Passage Facility Shutdown (October 23, 2023). FERC Submittal. Avista document identification number 2023-0176.

[7] Avista. 2023. Consent Mail approval of Appendix C – Upstream Fish Passage Program Project Plan Protocol Revision: Idaho Department of Fish and Game Westslope Cutthroat Trout Wild Broodstock Evaluation (May 11, 2023). Avista document identification number 2023-0108.

[8] Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Record from September 20, 2023. Avista document identification number 2023-0260.

[9] Avista. Passive Integrated Transponder (PIT) Tag Database; for more information on this database contact Shana Bernall (Shana.Bernall@avistacorp.com).

[10] Avista. Database for Temperature Monitoring Data Compilation; for more information on this database contact Paul Kusnierz (Paul.Kusnierz@avistacorp.com).

[11] Kovach, R. 2023. Genetics letter to Montana Fish, Wildlife and Parks, T. Rehm, October 2. University of Montana Conservation Genetics Laboratory, College of Forestry and Conservation, University of Montana, Missoula, Montana 59812; for more information contact Travis Rehm (Travis.Rehm@mt.gov).

[12] River Design Group. 2023. East Fork Bull River Fish Passage Project Final Design Plan. Avista document identification number 2023-0252.

6.4 Bull Trout Protection and Public Education Project (License Article 407 – CFSA Appendix D)

6.4.1 Purpose and Resource Benefit

The purpose of this project is to protect Bull Trout, a federally listed species (threatened), through a combination of enhanced law enforcement efforts by the states of Idaho and Montana, coupled with a public education outreach program. This project will increase the numbers and population viability of Bull Trout by reducing intentional and incidental illegal harvest. In addition, the project increases public awareness on Bull Trout life history, habitat needs, identifying characteristics, and the potential for adverse impacts due to land use and other human activities.

6.4.2 2023 Annual Implementation Plan Project Plans

- Idaho Bull Trout Protection and Education Officer Support
  - ***Completed per 2023 AIP*** [1]
- Montana Bull Trout Education and Communication Support
  - ***Variance*** [1]*; see Section 6.4.4*
- Montana Bull Trout Education Outreach Support
  - ***Variance*** [1]*; see Section 6.4.4*
- Montana Game Warden Support
  - ***Variance*** [1]*; see Section 6.4.4*
- Trout Unlimited Bull Trout Education Outreach
  - ***Completed per 2023 AIP*** [1]
- Pend Oreille Water Festival
  - ***Completed per 2023 AIP*** [1]

6.4.3 Other 2023 Activities

- No other activities to report.

6.4.4 Projects with Significant Variances

Project Plan	Variances
Montana Bull Trout Education and Communication Support	The online Bull Trout identification test was not released to the public in 2023; it is anticipated that this test will be available in 2024. An attempt to post on social media was rejected by the host-site; however, the educational video was posted to the MFWP website in 2023. Efforts to post on social media will continue in 2024.

Project Plan	Variances
Montana Bull Trout Education Outreach Support	An "Anglers You're in Bull Trout Country" was not installed at the Highway 56 Bridge on the Bull River in 2023. The Highway Department has been contacted about permits required to install a sign, which is anticipated to be installed in 2024.
Montana Game Warden Support	Remote surveillance equipment was not available in 2023. Funding for the purchase of trail cameras will be included in the 2024 Annual Implementation Plan process.

6.4.5 Key 2023 References

[1] Moran, S. 2023. Appendix D Bull Trout Protection and Public Education Project. 2023 Annual Work Summary. Avista document identification number 2023-0224.

6.5 Watershed Councils Program (License Article 408 – CFSA Appendix E)

6.5.1 Purpose and Resource Benefit

The purpose of this program is to facilitate the protection and restoration of tributary stream habitat in the Lake Pend Oreille (LPO)-lower Clark Fork River watershed. This will improve conditions for aquatic life, including macroinvertebrate communities and native fish species (Bull Trout, Westslope Cutthroat Trout, and Mountain Whitefish). The associated protection and enhancement of tributary streams and the aquatic life inhabiting them will serve as mitigation and resource enhancements to offset impacts to aquatic life due to continued power peaking operation of the Cabinet Gorge and Noxon Rapids Projects.

6.5.2 2023 Annual Implementation Plan Project Plans

- Pack River Watershed Council, Bonner Soil and Water Conservation District
  - ***Variance*** [1, 2, 3]*; see Section 6.5.4*

- Lower Clark Fork Watershed Council Projects
  - ***Variance*** [1, 4]*; see Section 6.5.4*

6.5.3 Other 2023 Activities

- No other activities to report.

6.5.4 Projects with Significant Variances

Project Plan	Variances
Pack River Watershed Council, Bonner Soil and Water Conservation District	Due to a decrease in participation, the PRWC was unable to hold any meetings that involved private landowners in 2023. It is anticipated that meetings will be held in the future, as interest is stimulated by outreach efforts that include newsletter and website postings, and as requested by landowners.
Lower Clark Fork Watershed Council Projects	Due to a decrease in participation and staff turnover, the LCFWG cancelled the second bi-annual meeting of 2023. The LCFWG intends to hold formal bi-annual meetings in 2024.

6.5.5 Key 2023 References

[1] Moran, S. 2023. Appendix E Watershed Councils Program. 2023 Annual Work Summary. Avista document identification number 2023-0223.

[2] Pack River Watershed Council. 2023. The River Ranger. Volume 15, Issue 1. Avista document identification number 2023-0219.

[3] Erickson, J., and S. Garcia. 2023. Public webpage for the Pack River Watershed Council. www.bonnerswcd.org/pack-river-watershed-coucil (December 2023).

[4] Olson, B., and S. Busmire. 2023. Public webpage for the Lower Clark Fork Watershed Group. https://lowerclarkforkwatershedgroup.org/ (December 2023).

6.6 Clark Fork River Water Quality Monitoring Program (License Article 409 – CFSA Appendix F1)

6.6.1 Purpose and Resource Benefit

The purpose of this program is to provide for the systematic, long-term water quality monitoring of nutrients and metals in the Avista project area. Excessive nutrient loading and metals represent high-priority water quality concerns in the LPO-lower Clark Fork River system. Resource benefits are accomplished through providing valuable information on trends in water quality associated with the Project.

6.6.2 2023 Annual Implementation Plan Project Plans

- Clark Fork River Water Quality Monitoring Program
  - ***Variance*** [1, 2]*; see Section 6.6.4*

6.6.3 Other 2023 Activities

- No other activities to report.

6.6.4 Projects with Significant Variances

Project Plan	Variances
Clark Fork River Water Quality Monitoring Program	The Annual Project Update for 2022 was not completed in 2023. The Clark Fork Coalition left the Clark Fork River Water Quality Monitoring Committee at the end of 2022 and the responsibility for producing the report went to Montana Department of Environmental Quality. They have decided to no longer produce an annual report. This data collection will be reported in the 5-year reports; the next of which will be for the 2018–2022 time period and is due in 2025.

6.6.5 Key 2023 References

[1] Kusnierz, P. 2023. Appendix F1 Clark Fork River Water Quality Monitoring Program. 2023 Annual Work Summary. Avista document identification number 2023-0265.

[2] Osborne, L. 2023. Estimate of 2022 nutrient loads from the Clark Fork River into Lake Pend Oreille. Memorandum. Avista documentation identification number 2023-0076.

6.7 Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals (License Article 410 – CFSA Appendix F2)

6.7.1 Purpose and Resource Benefit

The purpose of this measure is to provide for monitoring of Noxon Reservoir during periods when reservoir stratification is possible. If the reservoir stratifies, the program will intensify monitoring of nutrient and metals levels. Resource benefits are accomplished through providing a better understanding of whether nutrients and/or metals in the reservoir sediments are released into the water during periods of low flow and/or high water temperature.

6.7.2 2023 Annual Implementation Plan Project Plans

- Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals
  - ***Completed per 2023 AIP*** [1, 2]

6.7.3 Other 2023 Activities

- No other activities to report.

6.7.4 Projects with Significant Variances

- No significant variances to report.

6.7.5 Key 2023 References

[1] Kusnierz, P. 2023. Appendix F2 Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals. 2023 Annual Work Summary. Avista document identification number 2023-0266.

[2] U.S. Geological Survey. 2023. National Water Information System. 12389000 Clark Fork near Plains MT. Available: https://waterdata.usgs.gov/monitoring-location/12389000/#parameterCode=00065&showMedian=false&startDT=2023-07-01&endDT=2023-09-30 (December 2023).

6.8 Aquatic Organism Tissue Analysis (License Article 411 – CFSA Appendix F3)

6.8.1 Purpose and Resource Benefit

The purpose of this PM&E measure is to ensure that resources are available to monitor aquatic organisms for the presence of heavy metals and/or other substances of concern. It provides funding to collect and analyze fish and other aquatic organism tissue samples. These samples are analyzed to determine the presence of heavy metals or other substances. Resource benefits are accomplished through providing information that can be used to develop and refine fish consumption advisories.

6.8.2 2023 Annual Implementation Plan Project Plans

- Noxon and Cabinet Gorge Reservoirs Fish Mercury Study
  - ***Variance*** [1]*; see Section 6.8.4*

6.8.3 Other 2023 Activities

- No other activities to report.

6.8.4 Projects with Significant Variances

Project Plan	Variances
Noxon and Cabinet Gorge Reservoirs Fish Mercury Study	The Comprehensive Project Report was not completed by MFWP on November 1, 2023. It is anticipated to be completed in 2024.

6.8.5 Key 2023 References

[1] Kusnierz, P. 2023. Appendix F3 Aquatic Organism Tissue Analysis. 2023 Annual Work Summary. Avista document identification number 2023-0267.

6.9 Water Quality Protection and Monitoring Plan for Maintenance, Construction and Emergency Activities (License Article 412 – CFSA Appendix F4)

6.9.1 Purpose and Resource Benefit

The purpose and resource benefit of this PM&E measure is to develop and implement a plan that minimizes or eliminates the effects of project-related maintenance, construction, and emergency activities on water quality, aquatic resources, and beneficial uses of the lower Clark Fork River. The Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities at the Cabinet Gorge and Noxon Rapids Hydroelectric Developments was developed in 2002 and updated in 2011. This plan has been continuously implemented since 2002 with case-specific protection measures developed with appropriate stakeholders.

6.9.2 2023 Annual Implementation Plan Project Plans

- Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities
  - ***Completed per 2023 AIP*** [1, 2, 3, 4]

6.9.3 Other 2023 Activities

- No other activities to report.

6.9.4 Projects with Significant Variances

- No significant variances to report.

6.9.5 Key 2023 References

[1] Oldenburg, E. W. 2023. Appendix F4 Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities. 2023 Annual Work Summary. Avista document identification number 2023-0256.

[2] Avista. 2023. Email exchange between Eric Oldenburg and Steve Lentini regarding compliance with the General Operating Limits in 2023. Avista document identification number 2023-0212.

[3] Avista. 2010. Water Quality Protection and Monitoring Plan for Maintenance, Construction and Emergency Activities. Avista document identification number 2010-0452.

[4] Avista. 2023. Designated contacts for notification purposes under the Water Quality Protection and Monitoring Plan (December 2023). Avista document identification number 2023-0207.

6.10 Dissolved Gas Supersaturation Control, Mitigation, and Monitoring (License Article 413 – CFSA Appendix F5)

6.10.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the study, control, mitigation, and monitoring of gas supersaturation and the associated impacts to biological resources in the LPO-lower Clark Fork River system related to spill at the Clark Fork Projects. Resource benefits are accomplished through reducing total dissolved gas (TDG) and mitigating for the potential effects of excess TDG on fish in the Clark Fork River downstream of Cabinet Gorge Dam and in LPO.

6.10.2 2023 Annual Implementation Plan Project Plans

Operations

- Operations
  - ***Completed per 2023 AIP*** [1, 2]

TDG Mitigation and Monitoring Program

- Total Dissolved Gas Monitoring
  - ***Variance*** [1, 2, 3]*; see Section 6.10.4*
- Project Scoping Allocation
  - ***Completed per 2023 AIP*** [1]
- Analysis of Gas Bubble Disease Monitoring Data
  - ***Completed per 2023 AIP*** [1]
- Mapping the Potential for Fish to Compensate for Total Dissolved Gas in the Lower Clark Fork River
  - ***Completed per 2023 AIP*** [1]
- Nutrient Level Impacts on Salmonid Populations in the Lower Clark Fork River
  - ***Variance*** [1]*; see Section 6.10.4*
- Temperature Monitoring Data Compilation
  - ***Variance*** [1, 3]*; see Section 6.10.4*
- Trophic Monitoring in Lake Pend Oreille and Pend Oreille River Idaho
  - ***Variance*** [1]*; see Section 6.10.4*
- Box Canyon Reservoir Northern Pike Suppression
  - ***Completed per 2023 AIP*** [1, 4]

- Lake Pend Oreille Experimental Walleye Angler Incentive Program
  - ***Completed per 2023 AIP*** [1, 5]

- Lake Pend Oreille/Clark Fork River Walleye Population Assessment
  - ***Variance*** [1, 5]*; see Section 6.10.4*

- Lake Pend Oreille Lake Trout Angler Incentive Program
  - ***Completed per 2023 AIP*** [1, 5]

- Lake Pend Oreille Lake Trout Netting Program
  - ***Completed per 2023 AIP*** [1, 5]

- Lake Pend Oreille Bull Trout Population Monitoring and Evaluation
  - ***Completed per 2023 AIP*** [1]

- Lake Pend Oreille Nearshore Index Netting
  - ***Completed per 2023 AIP*** [1, 6]

- Idaho Protection and Education Officer Support
  - ***Completed per 2023 AIP*** [1]

- Lake Pend Oreille Tributary PIT-Monitoring Station Installation
  - ***Completed per 2023 AIP*** [1]

- Lake Pend Oreille Tributary PIT-Monitoring Station Operation and Maintenance
  - ***Variance*** [1, 3]*; see Section 6.10.4*

- Clark Fork River Population Monitoring
  - ***Variance*** [1, 3, 7]*; see Section 6.10.4*

- Lower Clark Fork River Flow Model
  - ***Variance*** [1, 8, 9]*; see Section 6.10.4*

- Lake Pend Oreille and Pend Oreille River Creel Survey
  - ***Variance*** [1]*; see Section 6.10.4*

- Lower Clark Fork River Genetics Evaluation
  - ***Completed per 2023 AIP*** [1]

- Gas Supersaturation Control Program Total Dissolved Gas Abatement
  - ***Completed per 2023 AIP*** [1, 10]

6.10.3 Other 2023 Activities

- No other activies to report.

6.10.4 Projects with Significant Variances

Project Plan	Variances
Total Dissolved Gas Monitoring	The upgrade to the shore-based system did not occur in 2023 due to the contractor having other obligations. It is anticipated that this work will occur in 2024.
Nutrient Level Impacts on Salmonid Populations in the Lower Clark Fork River	The Project Completion Report was not completed by December 1, 2023 due to stakeholder reviews being delayed. It is anticipated to be completed in 2024.
Temperature Monitoring Data Compilation	The lower Pack River temperature logger was not installed in 2023. It is anticipated to be installed in 2024.
Trophic Monitoring in Lake Pend Oreille and Pend Oreille River Idaho	Hydrolab sonde issues resulted in some data not being collected. Idaho DEQ is currently working on acquiring funding to replace aging multiparameter sondes. Due to safety concerns in windy conditions, Idaho DEQ was unable to visit Lakeview and Idlewilde Bay in the month of August. Idaho DEQ started to secure funding for a new boat that will be suitable for all weather conditions.
Lake Pend Oreille/Clark Fork River Walleye Population Assessment	No new acoustic transmitters were implanted in Walleye during 2023. Idaho Department of Fish and Game found the current sample size of about 45 tagged fish to be sufficient to effectively monitor Walleye locations.
Lake Pend Oreille Tributary PIT-Monitoring Station Operation and Maintenance	The lower Pack River temperature logger was not installed in 2023. It is anticipated to be installed in 2024.
Clark Fork River Population Monitoring	The Comprehensive Project Report was not completed by IDFG on November 1, 2023. It is currently in progress and is anticipated to be completed by November 1, 2024.
Lower Clark Fork River Flow Model	Increased model development costs precluded extracting the fish habitat availability data, thus the report did not include it. Fish habitat availability will be addressed in future question-specific project plans.
Lake Pend Oreille and Pend Oreille River Creel Survey	The Comprehensive Project Report was not completed by IDFG on November 1, 2023. It is anticipated to be completed by November 1, 2024.

6.10.5 Key 2023 References

[1] Kusnierz, P., and K. Bouwens, K. 2023. Appendix F5: Dissolved Gas Supersaturation Control, Mitigation, and Monitoring. 2023 Annual Work Summary. Avista document identification number 2023-0268.

[2] Kusnierz, P. 2023. Total Dissolved Gas Monitoring 2023 Cabinet Gorge and Noxon Rapids Dams. Memorandum to the Gas Supersaturation Subcommittee, September 8, 2023. Avista document identification number 2023-0144.

[3] Avista. Database for Temperature Monitoring Data Compilation; for more information on this database contact Paul Kusnierz (Paul.Kusnierz@avistacorp.com).

[4] Harvey, S., and N. Bean. 2023. Box Canyon Reservoir Northern Pike Suppression Project. 2023 Annual Project Update. Avista document identification number 2023-0220.

[5] Bouwens, K. A., J. Strait, E. Geisthardt, A. L. Ransom, and R. Jakubowski. 2023. Lake Pend Oreille Predator Management Program. 2022 Annual Project Update. Avista document identification number 2023-0097.

[6] Birdsall, B. D., and A. L. Ransom. 2023. Lake Pend Oreille Nearshore Index Netting 2015–2022. Comprehensive Project Report. Avista document identification number 2023-0178.

[7] Birdsall, B. D., and M. Woodruff. 2023. Lower Clark Fork River Population Monitoring. 2022 Annual Project Update. Avista document identification number 2023-0190.

[8] Avista. Lower Clark Fork River Model Files; for more information on these files contact Paul Kusnierz (Paul.Kusnierz@avistacorp.com).

[9] RivHab. 2023. Lower Clark Fork River Hydraulic Modeling Report Bonner County Idaho (December 11, 2023). RivHab. Avista document identification number 2023-0254.

[10] Avista. 2023. Gas Supersaturation Subcommittee Meeting Notes from August 28, 2023. Avista document identification number 2023-0177.

6.11 Project Operations Package (License Article 429/430/431 – CFSA Appendix T)

6.11.1 Purpose and Resource Benefit

The purpose of this PM&E measure package is to mitigate for the impacts of maintaining flexibility of project operations. This is to be accomplished by implementing measures that enhance native salmonids and provide recreational fishery opportunities. Most of these implementation measures are addressed in other sections of this report; they primarily concern PM&E measures identified in CFSA appendices A, B, D, and E.

The Project Operations Package also establishes general operating limits for the Clark Fork Project and requires Avista to communicate to Albeni Falls, a downstream U.S. Army Corps of Engineers project, forecasts of daily discharge from Cabinet Gorge Dam.

6.11.2 2023 Annual Implementation Plan Project Plans

- Project Operations and Coordination
  - ***Completed per 2023 AIP*** [1, 2, 3, 4, 5, 6, 7, 8]

- Cabinet Gorge Fish Hatchery Spring Water Collection System Upgrade
  - ***Completed per 2023 AIP*** [1, 9]

6.11.3 Other 2023 Activities

- No other activities to report.

6.11.4 Projects with Significant Variances

- No significant variances to report.

6.11.5 Key 2023 References

[1] Oldenburg, E. 2023. Appendix T Project Operations Package. 2023 Annual Work Summary. Avista document identification number 2023-0273.

[2] U.S. Geological Survey. 2023. National Water Information System. 12391950 Clark Fork River below Cabinet Gorge Dam ID. 2023. National Water Information System. 12391950 Clark Fork River below Cabinet Gorge Dam ID. Available: Clark Fork River Below Cabinet Gorge Dam ID - USGS Water Data for the Nation (December 2023).

[3] Avista. 2010. Water Quality Protection and Monitoring Plan for Maintenance, Construction and Emergency Activities. Avista document identification number 2010-0452.

[4] FERC. 2019. Order Amending License and Approving Exhibits A and F (August 8, 2019). Avista document identification number 2019-0175.

[5] Avista. 2017. Letter outlining the one-time Avista funding commitment to CFSA Appendix T. Avista document identification number 2017-0432.

[6] FERC. 2017. Order amending minimum flow pursuant to Article 429. Avista document identification number 2017-0382.

[7] Avista. 2023. Email exchange between Eric Oldenburg and Steve Lentini regarding communication with the USACE at Albeni Falls in 2023. Avista document identification number 2023-0217.

[8] Avista. 2023. Email exchange between Eric Oldenburg and Steve Lentini regarding compliance with the General Operating Limits in 2023. Avista document identification number 2023-0212.

[9] Muth Engineering. 2024. As-built drawings for the Cabinet Gorge Fish Hatchery Spring Water Collection System Upgrade Project; for more information on this document contact Shana Bernall (Shana.Bernall@avistacorp.com).

Section 7: Terrestrial Resources PM&E Measures Implementation Efforts

7.1 Implementation of Land Use Management Plan (License Article 414 – CFSA Appendix G)

7.1.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the long-term protection and maintenance of sensitive and important resources on Avista-owned project lands, including the existing rural and semi-remote character of the shoreline, through the implementation of the Land Use Management Plan (LUMP). Avista project lands are managed to protect these qualities while still allowing for reasonable public access and other compatible uses.

7.1.2 2023 Annual Implementation Plan Project Plans

- Administration of the LUMP
  - ***Variance*** [1, 2, 3, 4, 5, 6, 7, 8]*; see Section 7.1.4*
- Monitoring Associated with the LUMP
  - ***Completed per 2023 AIP*** [1]
- Enforcement Associated with the LUMP
  - ***Completed per 2023 AIP*** [1]
- Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs
  - ***Completed per 2023 AIP*** [1]

7.1.3 Other 2023 Activities

- No other activities to report.

7.1.4 Projects with Significant Variances

Project Plan	Variances
Administration of the LUMP	Recreation permit site identification markers were not replaced in 2023. This work will be initiated in 2024. The 5-year review of the LUMP was not completed by the Land Use Subgroup in 2023. The document will be reviewed and updated as necessary in 2024 in conjunction with the RRMP and AMP.

7.1.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

[2] Avista. 2010. Avista Utilities Clark Fork Project Land Use Management Plan (revised December 17, 2003 and February 28, 2010). Avista document identification number 2010-0508.

[3] Avista. 2002. Pesticide and Herbicide Use Plan for the Clark Fork Project, FERC Project No. 2058. Avista document identification number 2002-0020.

[4] Avista. 2023. Pesticide/Herbicide Application Summary for Clark Fork Project 2023. Avista document identification number 2023-0240.

[5] Avista. 2023. Avista Property Use Permits Dock Map 2023. Avista document identification number 2023-0258.

[6] Drumheller, S., and K. McMahon. 2023. Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs. 2023 Annual Work Summary. Avista document identification number 2023-0257.

[7] Avista. 2023. Terrestrial Resources Technical Advisory Committee (TRTAC) January 19, 2023. Avista document identification number 2023-0048.

[8] Avista. 2023. Terrestrial Resources Technical Advisory Committee Meeting Packet from August 31, 2023. Avista document identification number 2023-0272.

7.2 Implementation of the Recreation Resource Management Plan (License Article 415 – CFSA Appendix H)

7.2.1 Purpose and Resource Benefit

The purpose of this measure is to provide for appropriate and adequate recreational opportunities and facilities associated with the Clark Fork Project through implementation of the Recreation Resource Management Plan (RRMP). The Land Use, Recreation, and Aesthetics Work Group developed the plan and identified seven goals to be met through its implementation:

- Manage existing recreation resource needs.
- Manage future recreation resource needs.
- Provide adequate and safe public access.
- Preserve recreation resources.
- Coordinate recreation planning and needs.
- Provide cost-effective and desirable recreation opportunities.
- Provide compatible recreation opportunities.

7.2.2 2023 Annual Implementation Plan Project Plans

- RRMP – Administration and Resource Integration
  - ***Completed per 2023 AIP*** [1]

- RRMP – Monitoring
  - ***Variance*** [1, 2, 3, 4, 5]*; see Section 7.2.4*

- RRMP – Operation and Maintenance
  - ***Variance*** [1]*; see Section 7.2.4*

- RRMP – Interpretation and Education
  - ***Completed per 2023 AIP*** [1]

- RRMP – Recreation Facility Development
  - ***Variance*** [1, 7]*; see Section 7.2.4*

7.2.3 Other 2023 Activities

- June 15, 2023 request for approval for the Facilities Fund Budget Allocation for Two Rivers RV Park (CFSA Appendix H; approved on June 30, 2023)
  - ***Completed per Consent Mail*** [1, 6]

- November 27, 2023 request for approval of the Facilities Fund Budget Allocation for Pilgrim Creek Park Baseball Field Improvements (CFSA Appendix H; approved on December 12, 2023).
  - ***Completed per Consent Mail*** [1, 7]

- November 27, 2023 request for approval of the Facilities Fund Budget Allocation for Trout Creek Boat Ramp Improvements (CFSA Appendix H; approved on December 12, 2023).

- ***Variance*** [1, 7]*; see Section 7.2.4*

7.2.4 Projects with Significant Variances

Project Plan	Variances
RRMP – Monitoring	The Recreation Resources Subgroup did not meet in 2023; however, MFWP, USFS, Avista, and other stakeholders compiling the subgroup will revisit the status of the electronic site evaluation form program in 2024 for potential implementation.
RRMP – Operation and Maintenance	Activities associated with operation and maintenance of Avista recreation sites exceeded the approved budget. The 2024 budget estimate will be reevaluated to forecast labor costs more accurately.
RRMP – Recreation Facility Development	Improvements to the Trout Creek Boat Ramp were unable to be completed in 2023 due to materials availability and the contractor's schedule. The project will be completed in early 2024.

7.2.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

[2] Pinnacle Research and Consulting. 2017. Clark Fork Project Recreation Resource Management Plan, Interim Update. Avista document identification number 2017-0410.

[3] Pinnacle Research and Consulting. 2023. 2023 Clark Fork Recreation Site Visitation. Avista document identification number 2023-0255.

[4] Avista. 2023. Avista Property Use Permits Dock Map 2023 (showing dock densities per 0.5-mile segments of shoreline). Avista document identification number 2023-0258.

[5] Pinnacle Research and Consulting. 2023. 2023 Comprehensive Recreation Survey. Avista document identification number 2023-0244.

[6] Avista. 2023. Consent Mail approval of Appendix H – Facilities Fund Budget Allocation for Two Rivers RV Park (June 30, 2023). Avista document identification number 2023-0110.

[7] Avista. 2023. Consent Mail approval of Appendix H – Facilities Fund Budget Allocation for Pilgrim Creek Park Baseball Field Improvements and Appendix H – Facilities Fund Budget Allocation for Trout Creek Boat Ramp Improvements (December 12, 2023). Avista document identification 2023-0226.

7.3 Implementation of the Aesthetics Management Plan (License Article 416 – CFSA Appendix I)

7.3.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the protection and enhancement of aesthetic resources associated with Avista's Clark Fork Project and to mitigate for project related impacts to those resources through the implementation of the Aesthetics Management Plan (AMP). Aesthetic guidelines and considerations of the Aesthetics Management Plan are implemented by permit standards and land use classifications of the Land Use Management Plan (LUMP), site design and monitoring in the Recreation Resources Management Plan (RRMP), and shoreline stabilization guidelines of the Shoreline Stabilization Guidelines Program. Ongoing coordination with other interest groups and agencies will occur as described in the Aesthetics Management Plan.

7.3.2 2023 Annual Implementation Plan Project Plans

- Monitor recreation, land management, erosion, and facility construction programs to ensure AMP guidelines are considered.
  - ***Completed per 2023 AIP*** [1]

- Continue to investigate measures to restore views and remove vegetation as needed, also addressing any identified issue from the 2018 re-inventory of 41 key viewpoints. Sites will be revisited again in 2023 to take photos to compare to past inventories.
  - ***Completed per 2023 AIP*** [1]

7.3.3 Other 2023 Activities

- No other activities to report.

7.3.4 Projects with Significant Variances

- No significant variances to report.

7.3.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.4 Implementation of the Wildlife, Botanical, and Wetland Management Plan (License Article 417 – CFSA Appendix J)

7.4.1 Purpose and Resource Benefit

The purpose of this resource protection, mitigation, and enhancement measure is to provide for the organization and presentation of the various wildlife, botanical and wetland management activities and site-specific plans within a single, comprehensive management plan document. The goal is to have a dynamic reference document that the in-field staff, technical advisory committees, and Management Committee can utilize and refer to for guidance in implementing the required PM&Es and overall wildlife, botanical, and wetland resource management program for the Clark Fork Project.

7.4.2 2023 Annual Implementation Plan Project Plans

- Utilize the Wildlife, Botanical and Wetland Management Plan to help guide implementation of Wildlife, Botanical, and Wetland Protection, Mitigation, and Enhancement programs.
  - ***Completed per 2023 AIP*** [1]

- Continue to update the habitat protection spreadsheet as acquisitions are completed.
  - ***Completed per 2023 AIP*** [1, 2, 3]

- As approved by the Management Committee at their March 15, 2016 meeting, observations regarding bald eagles, peregrine falcons, and common loons will be reported here annually.
  - ***Completed per 2023 AIP*** [1]

7.4.3 Other 2023 Activities

- No other activities to report.

7.4.4 Projects with Significant Variances

- No significant variances to report.

7.4.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

[2] Avista. 2023. Habitat protected through CFSA Activities 2000–2023. Avista document identification number 2023-0241.

[3] Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Record from September 20, 2023. Avista document identification number 2023-0260.

7.5 Wildlife Habitat Acquisition, Enhancement, and Management Program (License Article 418 – CFSA Appendix K)

7.5.1 Purpose and Resource Benefit

The purpose of this program is to mitigate for the potential effects to wildlife resources and habitat due to the continued operation of the Clark Fork Project. The program will focus on the types of habitat most significantly affected, such as wetland and riparian habitat. The goal is to provide for a continuing source of financial resources that will be used to acquire, protect, enhance, and/or manage important wildlife habitat in the vicinity of the project.

7.5.2 2023 Annual Implementation Plan Project Plans

- Operation and Maintenance of Acquired Property and Contingency Fund
  - ***Completed per 2023 AIP*** [1]
- Habitat Acquisition and Conservation and Contingency Fund
  - ***Completed per 2023 AIP*** [1]
- Wood Duck Re-vegetation Maintenance
  - ***Completed per 2023 AIP*** [1]

7.5.3 Other 2023 Activities

- No other activities to report.

7.5.4 Projects with Significant Variances

- No significant variances to report.

7.5.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.6 Black Cottonwood Habitat Protection and Enhancement (License Article 419 – CFSA Appendix L)

7.6.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the protection of black cottonwood trees and stands on Avista owned project lands through the development of site-specific management and enhancement plans for three specific cottonwood sites identified by the Wildlife, Botanical, and Wetlands Work Group. Additionally, existing stands and trees are protected through the implementation of land use classifications in the Land Use Management Plan (LUMP).

7.6.2 2023 Annual Implementation Plan Project Plans

- Continue to protect black cottonwood stands along the Clark Fork Project through the implementation of the LUMP.
  - ***Completed per 2023 AIP*** [1]

- Continue to monitor and maintain the exclosures at Hereford Slough.
  - ***Completed per 2023 AIP*** [1]

7.6.3 Other 2023 Activities

- No other activities to report.

7.6.4 Projects with Significant Variances

- No significant variances to report.

7.6.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.7 Wetlands Protection and Enhancement Program (License Article 420 – CFSA Appendix M)

7.7.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the protection of wetlands occurring on Avista-owned project lands, and for the evaluation and potential enhancement of selected wetland areas. The overall goal is to ensure no net loss of wetlands, or of wetland function and values in certain high-priority wetland areas while also evaluating opportunities for enhancements.

7.7.2 2023 Annual Implementation Plan Project Plans

- Continue to explore potential wetland enhancement for the 2016 Twin Creek acquisition.
  - ***Competed per 2023 AIP*** [1]

- Monitor enhancements previously completed at Hereford Slough, McKay Creek, Finley Flats, and Blacktail Bay/Islands.
  - ***Completed per 2023 AIP*** [1]

7.7.3 Other 2023 Activities

- No other activities to report.

7.7.4 Projects with Significant Variances

- No significant variances to report.

7.7.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.8 Forest Habitat Protection and Enhancement (License Article 425 – CFSA Appendix P)

7.8.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the protection and enhancement of specific forest habitat parcels of Avista project land along the reservoirs. The Wildlife, Botanical, and Wetland Work Group identified these parcels as having significant wildlife habitat value.

7.8.2 2023 Annual Implementation Plan Project Plans

- Continue to manage those areas that have been classified as Conservation 1, and as such are afforded the maximum protection provided through the Land Use Management Plan.
  - ***Completed per 2023 AIP*** [1]

- Honey Flats is being managed to minimize impacts to the site (e.g., no motorized vehicles, no timber harvest, and minimize human use of site). The Confederated Salish and Kootenai Tribe and CRMG have expressed an interest in having this site managed for traditional plants and uses. Continue to work with the Confederated Salish and Kootenai Tribe to define management options.
  - ***Completed per 2023 AIP*** [1]

- Continue to monitor and enforce the road closure to Stevens Creek Point (closure was instituted in 2001).
  - ***Completed per 2023 AIP*** [1]

- Continue to prohibit motorized use of Finley Flats Point.
  - ***Completed per 2023 AIP*** [1]

- Continue to utilize the Montana Fish Wildlife and Parks Block Management Program to provide hunter access to the Tuscor, South Fork Bull River, and Wood Duck properties.
  - ***Completed per 2023 AIP*** [1]

- Continue weekly patrols of the forested lands surrounding the State Shop property and continue to reduce the amount of disturbance and litter in this area.
  - ***Completed per 2023 AIP*** [1]

- Initiate timber stand improvement efforts in stands that have disease (beetle kill, root rot, mistletoe, etc.), high fire danger or other problems. This work will be evaluated on a case-by-case basis and specific proposals will be presented to the TRTAC and MC as they are developed.
  - ***Completed per 2023 AIP*** [1]

7.8.3 Other 2023 Activities

- No other activities to report.

7.8.4 Projects with Significant Variances

- No significant variances to report.

7.8.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.9 Reservoir Island Protection (License Article 426 – CFSA Appendix Q)

7.9.1 Purpose and Resource Benefit

The purpose of this measure is to provide for the protection of islands owned by Avista in the project reservoirs. The goal is to maintain the unique and high-quality wildlife habitat functions and values of these islands.

7.9.2 2023 Annual Implementation Plan Project Plans

- Continue to ensure restrictions developed for the protection of these areas utilizing the land use classifications described in the LUMP.
  - ***Completed per 2023 AIP*** [1]

7.9.3 Other 2023 Activities

- No other activities to report.

7.9.4 Projects with Significant Variances

- No significant variances to report.

7.9.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

7.10 Erosion Fund and Shoreline Stabilization Guidelines Program (License Article 428 – CFSA Appendix S)

7.10.1 Purpose and Resource Benefit

The purpose of this measure is to address impacts to resources of interest caused by erosion attributed to the continued operation of the Clark Fork Project. Resources of interest include important cultural or natural resources, and private or public property not covered by applicable easement.

7.10.2 2023 Annual Implementation Plan Project Plans

- Address erosion concerns identified by the Cultural Resources Management Group (CRMG).
  - ***Completed per 2023 AIP*** [1]

- Utilize a geotechnical contractor to assist with evaluating erosion control proposals received by Avista.
  - ***Completed per 2023 AIP*** [1]

7.10.3 Other 2023 Activities

- No other activities to report.

7.10.4 Projects with Significant Variances

- No significant variances to report.

7.10.5 Key 2023 References

[1] Avista. 2023. Terrestrial Resources Program. 2023 Annual Work Summary. Avista document identification number 2023-0276.

Section 8: Other Clark Fork License Articles

This section specifically addresses annual compliance with articles 432 through 443 of the Clark Fork Project License.

8.1 Threatened and Endangered Species Plan and Annual Report (License Article 432 – Amended June 13, 2003)

8.1.1 Purpose

Article 432 of the Federal Energy Regulatory Commission (FERC) License requires that Avista file a Threatened and Endangered Species Plan (T&E Plan) and Annual Report for Commission approval before April 15 of each year, after consultation with the Management Committee (MC). The T&E Plan must address compliance with the Reasonable and Prudent Measures (RPMs) and implementing terms and conditions of the incidental take statement issued by the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act. The USFWS issued a biological opinion and incidental take statement with regard to Project relicensing on August 23, 1999, and it was attached as Appendix D to the FERC License Order.

On March 28, 2018, the FERC requested formal consultation with the USFWS under Section 7 of the Endangered Species Act regarding Avista's proposed License Amendment to construct and operate a permanent upstream fish passage facility at Cabinet Gorge Dam [Cabinet Gorge Fish Passage Facility (hereafter, "CGFPF" or "CGDF")]. Subsequently, on February 1, 2019, the USFWS issued a new biological opinion and incidental take statement analyzing the CGFPF as well as Avista's continued operation of the Project. This 2019 biological opinion updated and superseded the USFWS's 1999 biological opinion for the Project. The 2019 biological opinion included an incidental take statement, which was incorporated into the August 8, 2019 FERC License Order approving construction and operation of the CGFPF. Compliance with the RPMs, and implementing terms and conditions, in the February 1, 2019 incidental take statement will be reported in this T&E Plan and Annual Report. References herein to an "incidental take statement" are to the statement that was issued as part of the 2019 biological opinion.

In 2002, Avista and the USFWS agreed that Article 432's T&E planning requirement, as well as Avista's annual reporting and consultation requirements for several Protection, Mitigation and Enhancement (PM&E) measures, are adequately addressed through the Annual Implementation Plans (AIPs), which are approved by the MC, and by providing the annual activity summaries contained in this section of the Annual Report. Those PM&E measures are:

- Idaho and Montana Tributary Habitat Acquisition and Fishery Enhancement Programs (License Articles 404 and 405).
- Fish Passage/Native Salmonid Restoration Plan (License Article 406).
- Bull Trout Protection and Public Education Project (License Article 407).
- Watershed Councils Program (License Article 408).
- Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities (License Article 412).
- Dissolved Gas Supersaturation Control, Mitigation, and Monitoring (License Article 413).
- Project Operations Package (License Articles 429, 430, and 431).

Section 8.1.2 below provides the 2023 activity report for the PM&E measures listed above, which comprises Avista's T&E Plan and is intended to satisfy Avista's annual reporting requirement for these measures. To assist the Commission and USFWS in evaluating compliance with USFWS's RPMs and their associated terms and conditions, Section 8.1.2 is organized by RPM.

8.1.2 2023 Activity Summary

8.1.2.1 Terms and Conditions to Implement RPM #1 and Corresponding Activities

The incidental take statement's RPM #1 states:

Identify adult bull trout attempting to migrate upstream of Cabinet Gorge and/or Noxon Rapids Dams, and in a manner agreed to by the Service and consistent with the Clark Fork Settlement Agreement (as amended), provide safe, timely and effective fish passage.

The four terms and conditions (1–4) and corresponding 2023 activities implementing RPM #1 are listed below.

1) The likely natal origin of adult bull trout captured downstream of Cabinet Gorge Dam shall be determined using genetic testing, or other methods deemed appropriate by the Service.

Genetic sampling and testing to determine the likely natal origin of adult Bull Trout was initiated in 1999 and is an ongoing activity for all adult Bull Trout captured downstream of Cabinet Gorge Dam in the lower Clark Fork River. Genetic sample collection and testing in 2023 was approved by the MC, including the USFWS. In 2023, 60 individual adult Bull Trout (≥300 mm in length) were captured downstream of Cabinet Gorge Dam. Fifty-two of these individual fish required rapid-response genetic analysis while the other eight Bull Trout had been captured in previous years and had already been genetically tested. Capture histories and genetic analysis results for these fish were then used to make upstream transport decisions. Juvenile Bull Trout fin tissue samples were also collected from tributaries to the Clark Fork River and Lake Pend Oreille (LPO) to allow for an improvement in the accuracy of the genetic baseline that is used to determine transport locations.

2) A permanent fish tagging system shall be implemented for all bull trout handled during monitoring and other fisheries investigation activities in the project area. The tagging system shall have the capability to positively identify bull trout originating from spawning tributaries above Cabinet Gorge and/or Noxon Rapids Dams.

A permanent fish tagging system, utilizing Passive Integrated Transponder (PIT) tags, was utilized again in 2023 as approved by the MC and the USFWS. All Bull Trout ≥100 mm in length captured during the implementation of Clark Fork Settlement Agreement (CFSA) projects were implanted with PIT tags. A PIT-tag database, originally developed in 2000, continued to be utilized in 2023 to house information on all Bull Trout PIT tagged in the Project area. Data from 2023 PIT tagging events were recorded in the PIT-tag database. The PIT-tag database is updated annually, and data requests are processed upon request.

3) A program to capture and transport adult bull trout originating from tributaries above Cabinet Gorge and/or Noxon Rapids Dams shall be implemented to provide safe, timely and effective upstream fish passage, and shall be implemented in a manner consistent with the Native Salmonid Restoration Plan and the Clark Fork Settlement Agreement (as amended).

Protocols for capture, transport, and release of Bull Trout were approved by the MC, including the USFWS, in March of 2023.

Fish Capture:
Construction of the CGFPF was complete in 2022; although, there were several modifications that were identified during initial start-up that were completed in 2023. These modifications included installation of panels to prevent fish from getting behind the holding pool and entrance pool auxiliary water supply panels, replacement of the position indicators for the dissipation valves, improving the Vee trap area to allow easy lifting of the device, adding rubber to areas of the fish trap to prevent fish impingement, adding additional siphon pipe supports, and adding the final section of debris boom to prevent debris from entering the siphon intake pipes. Several contractor warranty items were also identified in 2023 and have either been addressed or will be addressed in the near future. These items include issues with the magnetic reed switches on the intake screens, entrance pool level transducer failure, redesign of siphon pipe supports, water in the brail crowder gear box, replacement of indicators for entrance gate 2 and 3 positions, and a cracked valve on the fish truck tank.

During 2023, the CGFPF subgroup identified and approved funding for six minor modifications to the CGFPF. Four of these modifications were completed in 2023 including the purchase of additional stop logs to protect the swing gate during spill, installation of an uninterrupted power supply for the air compressor to keep it from faulting when the emergency generator kicks on, installation of snow brakes on the monorail crane roof to increase safety at the site, and installation of a new tow arm for the festoon cable on the monorail crane to improve reliability of that crane. The feasibility of adding cold water to the holding pool and installation of a new underwater camera system to obtain more information on Bull Trout behavior in the CGFPF are ongoing tasks that will be completed in 2024.

The CGFPF was operated from April 5 through October 13, with a few exceptions. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the USFWS and other management agencies within 24 hours, as well as FERC within 30 days of the event. The first shutdown event occurred on April 6 and lasted five days, the second shutdown occurred on July 31 and lasted 16 days and the last event occurred on October 6 and lasted four days. The CGFPF was also shut down on May 4 when lower Clark Fork River flows exceeded 52,000 cfs and remained shut down until maximum daily flows receded below 52,000 cfs on May 31. There was a slight delay in the CGFPF start-up after spill, due to an entrance gate hydraulic hose leak that was addressed. As a result, siphon start-up post spill occurred on June 7.

Sixty individual adult Bull Trout were captured downstream of Cabinet Gorge Dam in 2023 (Table 1). Thirteen were captured in the CGFPF (including two that had been captured night electrofishing earlier in the year), eight were captured night electrofishing, and 41 were captured in the Cabinet Gorge Hatchery (CGH) ladder trap.

Table 1. Number of adult Bull Trout (≥300 mm in length) captured downstream of Cabinet Gorge Dam under the Upstream Fish Passage Program in 2023 (including within year recaptures).

Method of Capture	Dates of Operation	Bull Trout Handling Events	Adult Bull Trout Transported
CGH Ladder Trap	September 1–October 13	41	38
Electrofishing	April 11–August 31	8	0
Twin Creek Weir	September 1–October 13	0	0
CGFPF	April 5–October 13	13	12
	Total	62	50

The original plan for 2023 was to only transport Montana origin Bull Trout captured in the CGFPF upstream to Montana. Adult Bull Trout captured using other methods [as described in the "Cabinet Gorge Fish Passage Facility Monitoring and Evaluation Plan (M&E Plan)"] were to be PIT tagged and released near their capture location to assist in evaluating the capture efficiency of the CGFPF. Due to the CGFPF facing operational issues at the time the CGH ladder trap started operating, the CGFPF subgroup decided to transport Bull Trout captured in the CGH ladder trap on September 5. The MC approved the CGFPF subgroup's authority to make changes to the M&E Plan at the March 2023 meeting. Some portions of the M&E Plan were modified during operation of the CGFPF based on observations. The CGFPF subgroup provided direction to make changes in holding pool flow based on information that was learned during the first months of operation. Data collected during 2023 is being compiled and will be presented in the Annual Project Update.

As part of the CGFPF M&E Plan five 3'circular PIT antennas were deployed in the lower Clark Fork River to provide information on Bull Trout presence downstream of Cabinet Gorge Dam. These antennas were deployed in March and operated through early November yielding 24,324 unique detections of 70 individual Bull Trout and 1,135 unique detections of 40 individual Westslope Cutthroat Trout.

Seventy-six Bull Trout genetically assigning to Montana populations were detected and/or captured downstream of Cabinet Gorge Dam. Based off detection criteria, 50 of the 76 Bull Trout detected downstream of Cabinet Gorge Dam were used to evaluate CGFPF attraction efficiency. Of the 50 individuals used, 37 were detected entering the CGFPF entrance pool. Thus, 74% of Montana origin Bull Trout known to be downstream of Cabinet Gorge Dam were detected entering the CGFPF entrance pool. Of the 50 individuals used, 27 were detected in the Vee trap (entrance to the holding pool) and 11 were captured. Thus, 54% of Montana origin Bull Trout that entered the CGFPF then approached the CGFPF holding pool and 22% of them were captured. During trapping operations, Bull Trout were most frequently detected at the CGFPF in late June-early July and the month of September.

No new work was proposed or conducted for the Noxon Rapids Dam Permanent Fishway and proposed fish handling facility project in 2023. Based on agreements made in Amendment No. 1 to the CFSA, final design and construction of the Noxon Rapids Dam Permanent Fishway shall be

deferred for an interim period ending no sooner than December 31, 2021. With 2023 being the first full year of operation of the CGFPF and continuing to refine capture and transport of juvenile Bull Trout from Montana tributaries, discussion of a fish collection facility at Noxon Rapids Dam was not reinitiated in 2023. Rather it was postponed to a future date, once there is a better understanding of the effectiveness of the ongoing activities. In the interim, a proposal will be made to the MC at the March 2024 meeting to discuss this topic annually. Three submersible circular PIT antennas were purchased and deployed downstream of Noxon Rapids Dam from July 27 to November 8 to learn more about fish presence below Noxon Rapids Dam. Three fish (one Walleye, one Brown Trout and one Rainbow Trout) were detected on these antennas for a total of eight unique detections.

Fish Transport:

Fifty adult Bull Trout were transported to Montana based on either genetic assignment, previous capture history or other approved criteria (Table 2). Fish were released directly into the tributary they genetically assigned to within each region.

Table 2. Release regions for individual adult Bull Trout captured downstream of Cabinet Gorge Dam and either released in Idaho or transported upstream to Montana in 2023 (not including within year recaptures).

Release Region	Adult Bull Trout
Lower Clark Fork River (Region 1)	10
Cabinet Gorge Reservoir (Region 2)	14
Noxon Reservoir (Region 3)	35
Thompson Falls Reservoir (Region 4)	1
Total	60

Fish Pathogens:

Avista is required by the CFSA Amendment No. 1 to collect 60 Bull Trout downstream of Cabinet Gorge Dam and test them for pathogens prior to the issuance of a Montana Fish, Wildlife and Parks (MFWP) import permit. There were no pathogens of concern detected in the group of Bull Trout (captured as bycatch from the LPO Lake Trout Netting Program) tested in 2022, which allowed for the upstream transport of Bull Trout in 2023. In 2023, 60 adult Bull Trout were again collected and analyzed for pathogens. No pathogens of concern were detected, and these results will be used to apply for a 2024 MFWP import permit.

4) ***The upstream capture and transport program shall be adaptively managed, with approval from the Service, in a manner that places priority on maintaining and restoring adfluvial bull trout local populations above Cabinet Gorge and/or Noxon Rapids Dams.***

The Appendix C Fish Passage/Native Salmonid Restoration Plan AIP, including the Upstream Fish Passage Program Project Plan, for 2023 was reviewed and approved by the Water Resources Technical Advisory Committee and MC, including a representative from the USFWS. The Upstream Fish Passage Program Project Plan describes activities related to Bull Trout including upstream transport and release protocols. The USFWS also has a representative on the Aquatic Implementation Team, which is a sub-group that reviews AIPs and the progress of projects on a monthly basis to determine if efforts are in line with agency requirements and guidelines. The USFWS is also a member of the CGFPF subgroup designated by the MC to provide direction on operation and monitoring and evaluation of the CGFPF. This group meets monthly during periods when the CGFPF is in operation. These annual and monthly review processes allow for adaptive management of local Bull Trout populations above Cabinet Gorge and Noxon Rapids dams.

8.1.2.2 Terms and Conditions to Implement RPM #2 and Corresponding Activities

The incidental take statement's RPM #2 states:

Identify juvenile bull trout attempting to migrate downstream to Lake Pend Oreille, and in a manner agreed to by the Service and consistent with the Clark Fork Settlement Agreement (as amended), provide safe, timely and effective fish passage.

The two terms and conditions (5 and 6) and corresponding 2023 activities implementing RPM #2 are listed below.

5) ***A program to trap and transport juvenile bull trout from tributaries above Cabinet Gorge and/or Noxon Rapids Dams shall be implemented to provide safe, timely and effective downstream fish passage, and shall be implemented in a manner consistent with the Native Salmonid Restoration Plan and the Clark Fork Settlement Agreement (as amended).***

Term and Condition 5 of RPM #2 was fulfilled through the adaptively managed Tributary Trapping and Downstream Juvenile Bull Trout Transport Program.

There were a total of 246 capture events of 245 individual juvenile (i.e., <300 mm) Bull Trout during 2023. A total of 217, 120–300 mm, Bull Trout were captured in Montana tributaries and transported to Idaho during 2023 (Table 3). An additional 25 juvenile Bull Trout were captured and released on site because they did not meet one or more of the transport criteria (i.e., fish length or direction of travel). There were four juvenile Bull Trout mortalities observed in 2023. The mortalities were caused by merganser predation, cannibalism, an injury sustained electrofishing, and an injury sustained in the flume at Graves Creek (see discussion pertaining to Term and Condition 20). Following capture, fish were measured (length and weight) and implanted with a PIT tag if they were greater than 99 mm and if a PIT tag was not already present. All juvenile transports were released in the lower Clark Fork River at the Cabinet Gorge Fish Hatchery site.

There were 24 capture events of 24 individual adult Bull Trout in tributary traps during 2023. Eighteen of these individuals were transported back to the Clark Fork River downstream of Cabinet Gorge Dam and six were released on site. The six fish were reduced on site for one of two reasons: (1) they were captured prior to the management agency decision to transport all post-spawn adults to Lake Pend Oreille, or (2) the fish had spawning-related injuries and were released on site to avoid additional handling- and transport-related stress.

Table 3. Tributary and method of capture for juvenile Bull Trout transported to Idaho under the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program in 2023.

Tributary	Method	Bull Trout Transported
Graves Creek	Permanent Weir	127
East Fork Bull River	Weir/Screw Trap/Stream Electrofishing	67
Vermilion River	Stream Electrofishing	23
	Total	217

6) The downstream trap and transport program shall be adaptively managed, with approval from the Service, in a manner that places priority on maintaining and restoring adfluvial bull trout local populations above Cabinet Gorge and/or Noxon Rapids Dams.

Avista works closely with the USFWS through the CFSA process to adaptively manage trapping protocols on an inter- and intra-annual basis. The Appendix C Fish Passage/Native Salmonid Restoration Plan AIP, including the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program project plan, for 2023 was reviewed and approved by the Water Resources Technical Advisory Committee and MC, including a representative from the USFWS. The project plan describes activities related to Bull Trout including protocols. The USFWS also has a representative on the Aquatic Implementation Team, which is a sub-group that reviews AIPs and the progress of projects on a monthly basis to determine if efforts are in line with agency requirements and guidelines. These annual and monthly review processes allow for adaptive management of local Bull Trout populations.

Based on information gathered largely through CFSA programs, it is believed that Graves Creek, East Fork Bull River, and the Vermilion River are the only three Montana tributaries to the Clark Fork River within the Avista Project area where meaningful numbers of Bull Trout naturally exhibit a migratory life history. In light of this, the USFWS and MFWP have collectively agreed that juvenile transport efforts should be limited to these three drainages and that these efforts should be, “aggressive but prudent”.

8.1.2.3 Terms and Conditions to Implement RPM #3 and Corresponding Activities

The incidental take statement’s RPM #3 states:

Implement a dissolved gas supersaturation control, mitigation, and monitoring program.

The three terms and conditions (7–9) and corresponding 2023 activities implementing RPM #3 are listed below.

7) The Gas Supersaturation and Control Program (and 2009 Addendum), shall be implemented in a manner consistent with the Clark Fork Settlement Agreement (as amended).

The Gas Supersaturation Control Program and 2009 Addendum were followed in a manner consistent with the CFSA. In addition, funding for Appendix F5 (Dissolved Gas Supersaturation Control, Mitigation, and Monitoring) of the CFSA was made available as described in the Final 2022 Phase III of the Final Gas Supersaturation Control Program Addendum for the Clark Fork Project. In 2023, high-flow spill protocols were followed as described under Term and Condition 8 and total dissolved gas monitoring occurred at two established sites as described under Term and Condition 9.

8) High-flow spill protocols shall be finalized and implemented to address total dissolved gas production and shall be consistent with the Clark Fork Settlement Agreement (as amended).

Interim spillgate procedures were formalized in the GSCP approved by the FERC on January 11, 2005 and the GSCP Addendum approved by the FERC on February 19, 2010. Spillway operations at Cabinet Gorge Dam were amended to include the use of spillway 2 in 2014, spillways 4 and 5 in 2016, and spillways 1 and 3 in 2018 after modifications were made to these spillways to reduce total dissolved gas (TDG). The purpose of these spillgate procedures is to achieve the CFSA Appendix F5 requirement to control (i.e., reduce) the amount of TDG produced at Noxon Rapids and Cabinet Gorge dams and reduce potential effects to aquatic organisms downstream.

The spillgate procedures were followed to the extent practicable in 2023; however, FERC-required testing resulted in a variance of the spill protocol. Effects to TDG levels were minimal. At Noxon Rapids Dam, in addition to the spill that resulted due to flow conditions, all eight gates were opened to one foot on May 31 meeting the FERC requirement for annual spillway gate operation tests. Full height gate tests did not occur at Noxon Rapids Dam in 2023; however, full height gate tests are required once every five years and the most recent tests occurred in 2020 for gates 1, 3, and 5 and 2022 for gates 2, 4, and 6–8. At Cabinet Gorge Dam, gates 1–8 were opened to a height of one foot on April 10, meeting FERC annual gate operation testing requirements. Full height gate tests did not occur at Cabinet Gorge Dam in 2023; however, full height gate tests are required once every five years and the most recent tests occurred for all gates in 2022.

9) Total dissolved gas monitoring shall be done at established sites and shall be conducted in a manner that is consistent the Gas Supersaturation and Control Program (and 2009 Addendum), and the Clark Fork Settlement Agreement (as amended).

Prior to deployment in 2023, TDG monitoring equipment was sent to the manufacturer for annual maintenance and calibration. Consistent with the GSCP and CFSA, Avista personnel deployed a TDG probe in the Cabinet Gorge Dam forebay and a TDG probe approximately one mile downstream of Cabinet Gorge Dam on March 8. The Cabinet Gorge Dam Forebay operated continuously until November 9. The Downstream Cabinet Gorge station operated until June 8,

after sustained spilling had ceased and then from August 10 to September 17.

Downstream of Noxon Rapids Dam, from May 5 to May 31 (when sustained spill occurred at Noxon Rapids Dam), TDG in the Cabinet Gorge Dam Forebay had a mean of 107.2% saturation with a minimum of 102.6% and a maximum of 111.2%. Downstream of Cabinet Gorge Dam, from May 3 to June 1 (when sustained spill occurred at Cabinet Gorge Dam), TDG at the Downstream Cabinet Gorge station, had a mean of 111.1% saturation with a minimum of 103.2% and a maximum of 128.0%. Of the 30 days from May 3 to June 1, TDG downstream of Cabinet Gorge Dam exceeded 110% saturation on 22 days, exceeded 120% on 2 days, and never exceeded 130%.

No TDG-reducing modifications were made to Cabinet Gorge Dam in 2023. Proposals for future modifications (if warranted) will be outlined in a future project plan for Appendix F5 through the AIP process.

8.1.2.4 Terms and Conditions to Implement RPM #4 and Corresponding Activities

The incidental take statement's RPM #4 states:

Maintain sufficient in-stream flow downstream of Cabinet Gorge Dam.

The two terms and conditions (10 and 11) and corresponding 2023 activities implementing RPM #4 are listed below.

10) From September 15 through October 31, the instantaneous minimum flow below Cabinet Gorge Dam shall be maintained at 5,000 cubic feet per second or greater.

Clark Fork River discharge (i.e., "flow") is estimated both through the dams as well as at the U.S. Geological Survey gage station located approximately 500 m downstream of Cabinet Gorge Dam. Computers in the Cabinet Gorge Dam control room constantly monitor discharge through turbines and spillgates. Accusonic flow meters located in the penstocks relay individual unit discharge to the control room computers. The Cabinet Gorge Dam minimum flow General Operating Limit was modified in late 2017 and is 3,000 cfs during the period from November 1 through September 14 and 5,000 cfs from September 15 through October 31. The 5,000 cfs minimum flow was maintained from September 15 through October 31, 2023.

11) From November 1 through September 14, the instantaneous minimum flow below Cabinet Gorge Dam shall be maintained at 3,000 cubic feet per second or greater.

The 3,000 cfs minimum flow was maintained from November 1, 2022 through September 14, 2023.

8.1.2.5 Terms and Conditions to Implement RPM #5 and Corresponding Activities

The incidental take statement's RPM #5 states:

Implement a program that manages non-native species in a manner that is beneficial for bull trout.

The two terms and conditions (12 and 13) and corresponding 2023 activities implementing RPM #5 are listed below.

12) Non-native fish management programs shall be implemented in the Clark Fork Project action area for the benefit of bull trout and shall be implemented in a manner consistent with the Native Salmonid Restoration Plan and the Clark Fork Settlement Agreement (as amended).

In 2018, the MC approved the Clark Fork River Native Salmonid Restoration Plan (NSRP) Five-Year Plan for the 2019 through 2023 time period, consistent with the CFSA and RPM #5. This update highlighted numerous potential actions and data needs for developing non-native species management plans for future implementation. Efforts undertaken in 2023 in accordance with this direction included Lake Trout angler incentive and gill net suppression programs in LPO, assessing the Walleye population and feasibility of Walleye suppression through an angler incentive program on the LPO-lower Clark Fork River, suppression of Northern Pike in Box Canyon Reservoir, and continuation of less intensive actions to suppress non-native fish in the East Fork Bull River. The details of these activities are described below.

Lake Pend Oreille Lake Trout Angler Incentive Program:
This program has been implemented annually since 2006 to reduce predator, specifically Lake Trout, abundance in LPO. In 2023, funding of the LPO Angler Incentive Program continued. Anglers participating in the program turned in Lake Trout heads along with information cards at freezers maintained at access points around LPO. In 2023, anglers turned in 2,677 Lake Trout (Table 4), which was slightly less than the 2,682 turned in during 2022.

Lake Pend Oreille Lake Trout Angler Incentive Program funds were also used to sponsor angling derbies on LPO. Sponsorship dollars were used to encourage additional anglers to participate in harvest-oriented angling of LPO Lake Trout and to encourage Bull Trout education. In 2023, eight LPO derbies were recipients of sponsorship funding.

Lake Pend Oreille Lake Trout Netting Program:
Reducing predatory fish abundance in LPO is beneficial to Bull Trout because it reduces piscivory by Lake Trout, reduces competition for food, and increases kokanee (a primary prey for Bull Trout) abundance. The focus of this program is Lake Trout reduction and the program has been implemented annually, in conjunction with the LPO Angler Incentive Program, since 2006.

In 2023, the LPO Lake Trout Netting Program was implemented for the eighteenth year and removed 9,241 Lake Trout (Table 4). Since 2006, a combination of angling and netting has removed almost 271,000 Lake Trout. Netting catch rates for Lake Trout have declined substantially since the program was initiated.

Table 4. Lake Trout harvested and removed from LPO, Idaho in 2023 by collection method.

Collection Method	Lake Trout Harvested
Angling	2,677
Netting	9,241
Total	11,918

An increase in the kokanee population has been associated with the reduction in the Lake Trout population. Age-specific abundance estimates are not yet finalized for 2023. Kokanee abundance increased from about 2010–2013 and, with minor fluctuations, has generally maintained at a high level since.

The Bull Trout population has remained robust in the Idaho portion of the LPO core area. Idaho Department of Fish and Game continues to observe high Bull Trout catch and low mortality in gill-netting operations. The responses observed to date suggest that suppression of Lake Trout can be achieved and provide benefits for both kokanee and Bull Trout. Lake Pend Oreille predator removal success will continue to be monitored by evaluating the population response of Lake Trout, Bull Trout, and kokanee.

Lake Pend Oreille/Clark Fork River Walleye Population Assessment:
Walleye, which were illegally introduced into Noxon Reservoir approximately 30 years ago, have become well established throughout Noxon and Cabinet Gorge reservoirs and have reached LPO. An expanding Walleye population has the potential to put several fish populations in LPO at risk through direct predation and competition. This project was first implemented in 2018 to collect fundamental information to help assess the current status of the Walleye population in LPO, to evaluate the opportunities for management (suppression), and estimate the likely scope of their influence on the current fish community in LPO.

Telemetry efforts (tracking acoustic- and radio-tagged Walleye) were used to inform netting locations and strategies as well as inform anglers participating in the LPO Experimental Walleye Angler Incentive Program. Walleye were concentrated in relatively shallow water and gill-net catch rates were relatively high while bycatch was reasonably low. A total of 449 Walleye were removed in 2023 (Table 5).

Lake Pend Oreille Experimental Walleye Angler Incentive Program:
This program was first implemented in 2019 to evaluate the potential to reduce the Walleye abundance in LPO through angling. Anglers participating in the program turned in Walleye heads along with information cards at freezers maintained at access points around LPO. In 2023, anglers turned in 3,194 Walleye (Table 5), almost triple the number turned in during 2022.

Table 5. Walleye harvested and removed from LPO, Idaho in 2023 by collection method.

Collection Method	Walleye Harvested
Angling	3,194
Netting	449
Total	3,643

Box Canyon Reservoir Northern Pike Suppression:
Northern Pike (NP) were illegally introduced in the Clark Fork drainage in Montana and have expanded to the Pend Oreille River, where they have caused declines in native species and game fish being managed by the Kalispel Tribe Natural Resources Department (KNRD), Washington Department of Fish and Wildlife (WDFW), and IDFG. Northern Pike range expansion threatens recovery efforts for Bull Trout and Westslope Cutthroat Trout, as well as other native salmonids, minnows, suckers and introduced game fish within the watershed. Reducing the predatory effect of NP on Bull Trout increases the probability that entrained fish are collected and transported upstream of Albeni Falls Dam.

After being detected in 2004, the NP population grew exponentially in Box Canyon Reservoir to over 5,500 in 2010. In 2012, KNRD supported by WDFW, and funded in part by Avista under the CFSA, initiated a mechanical suppression program to reduce the population of NP within Box Canyon Reservoir. This suppression has been successful in significantly reducing the NP in Box Canyon Reservoir and efforts since 2015 have been focused on maintaining this greatly reduced NP population. The objective of NP suppression is to maintain the abundance of NP in Box Canyon Reservoir at or below the target of <1.73 NP/net night in the southern half of Box Canyon Reservoir and <0.5 NP/net night in the north as monitored in the annual Spring Pike Index Netting (SPIN) survey. Based on 2023 SPIN results, the adult population relative abundance in the core area has been reduced by more than 93% after multiple years of mechanical suppression.

Non-native Fish Suppression Project in the East Fork Bull River:
The eight-year non-native fish suppression project in the East Fork Bull River was implemented from 2007 through 2014. Based on the results of this project, less intensive suppression methods were implemented from 2015 through 2023. The less intensive methods of suppression included the transport and release of non-native trout captured in fish traps to the lower Bull River and the excavation and genetic analysis of eggs from putative Brown Trout redds.

Efforts to remove non-native trout in 2023 began with the April 26 installation of fish traps in the lower East Fork Bull River under the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program. In 2023, a total of 49 non-native salmonids were captured in all traps, with 38 Brown Trout (plus 4 mortalities), 6 Brook Trout, and 1 Rainbow Trout being transported and released in the lower Bull River. Excavation of Brown Trout redds to subsample eggs for genetic analysis occurred on November 15, 2023. Low streamflow and, for the most part, weir integrity at the traps appeared to have impeded upstream access to spawning Brown Trout. Four redds were observed, with two being found upstream of the weir trap that was disabled for ten days in late-October to early November. Eggs were collected from these redds, and genetic results are expected in the spring of 2024.

13) Non-native fish management programs shall be adaptively managed, with approval from the Service, in a manner that places priority on maintaining and restoring adfluvial bull trout local populations within the Lake Pend Oreille Core Area.

The MC, including the USFWS, approved an updated NSRP Five-Year Plan in 2018. The purpose of this NSRP Five-Year Plan is to provide continued and consistent guidance of implementation of key aquatic PM&Es for the 2019 through 2023 time period. This includes implementation of CFSA appendices A, B, C, and F5 and denotes a need to identify, evaluate, and if appropriate, address non-native species concerns. More specifically, under Appendix C of the NSRP Five-Year Plan, there is agreement that management efforts should be concentrated on those streams known to be utilized by migratory native salmonids (i.e., East Fork Bull River, Vermilion River, and Graves Creek). In 2022, a report was finalized that summarized non-native salmonid distribution and abundance in these priority streams and developed a prioritized list of potential actions to potentially address these impacts.

The NSRP Five-Year Plan will be updated again in 2024 with input and approval from all stakeholders including the USFWS. During the initial meetings for drafting the next Five-Year Plan, it was proposed to include all aquatic PM&Es (i.e., adding sections for CFSA Appendices D, E, F1 – F4) in its next form. Additionally, all non-native fish management project plans are reviewed and approved by the Water Resources Technical Advisory Committee and the MC, including a representative from the USFWS. The USFWS also has a representative on the Aquatic Implementation Team, which is a sub-group that reviews AIPs and the progress of projects on a monthly basis to determine if efforts are in line with agency requirements and guidelines.

8.1.2.6 Terms and Conditions to Implement RPM #6 and Corresponding Activities

The incidental take statement's RPM #6 states:

Implement the Native Salmonid Restoration Plan and Clark Fork Settlement Agreement (as amended) in a manner consistent with the Final Bull Trout Recovery Plan and Columbia Headwaters Recovery Unit Implementation Plan.

The term and condition (14) and corresponding 2023 activities implementing RPM #6 are listed below.

14) Tributary enhancement programs shall be adaptively managed, with approval from the Service, in a manner that places priority on maintaining and restoring adfluvial bull trout local populations within the Lake Pend Oreille Core Area.

Bull Trout upstream and downstream transport programs were implemented in 2023, as described in RPM #1 and #2, above. These programs are implemented annually to restore adfluvial Bull Trout populations in the lower Clark Fork River–Lake Pend Oreille watershed consistent with the intent of the NSRP and CFSA. The NSRP is updated every five years to reflect new information learned and guide the next five years of native salmonid restoration. All Annual Implementation Plans for tributary enhancement projects are reviewed and approved by the Water Resources

Technical Advisory Committee and MC. The Aquatic Implementation Team is a sub-group of the WRTAC that reviews AIPs and the progress of projects on a monthly basis to determine if efforts are in line with agency requirements and guidelines. These annual and monthly review processes allow for adaptive management of all tributary enhancement projects.

Coordination and outreach to inform and facilitate both the public and cooperating agencies' involvement in tributary habitat protection and enhancement efforts is the principal consideration of the Watershed Councils Program (CFSA Appendix E). Efforts in Idaho and Montana in 2023 included holding meetings between Watershed Council groups and cooperators, the distribution of outreach materials including websites, and assisting with the administration required to help develop watershed restoration plans, secure grants, and execute contracting and permitting necessary for implementing stream enhancement and restoration efforts.

Tributary habitat protection and enhancement to benefit native salmonids is the principal consideration of the Idaho and Montana Tributary Habitat Acquisition and Fishery Enhancement Programs (CFSA appendices A and B). Specific efforts undertaken in 2023 for the furthering of these efforts in Idaho included the continued cooperative development of stream habitat prioritization evaluations for critical native salmonid tributaries in the Pack River drainage, planning a project to reintroduce large woody debris into Rattle Creek to enhance Bull Trout spawning and rearing conditions, investigating a project to re-connect the flowing waters of Strong Creek to Lake Pend Oreille for migratory adult Bull Trout under low flow conditions, and the purchase and transfer to the Kalispel Tribe of property at the mouth of Trestle Creek.

In Montana, efforts undertaken in 2023 included the continuation of riparian reforestation efforts along the Bull River and adjacent areas of the lower East Fork Bull River, and an extensive pre-construction survey to inform an upcoming channel reconstruction project in the Vermilion River. A recently enacted habitat enhancement project in upper Prospect Creek was further monitored through the collection of physical habitat measurements in 2023, and a Bull Trout redd was observed in gravel retained by recently installed large woody debris. As part of a study to investigate channel morphology, the effects of beaver activity, revegetation, and other aspects of the split channels of the lower East Fork Bull River, a beaver management plan, and a preliminary hydrologic design were completed in 2022, while revegetation work continued and the hydrologic design set was completed in 2023. This effort will help ensure connectivity and enhance habitat to benefit native salmonids in this important Bull Trout rearing tributary. In 2023 $250,000 was approved towards the purchase of a large Conservation Easement in the Thompson River drainage. This protection of over 45,000 acres of recently purchased private timberlands from excessive development was the highest ranked Conservation Easement project in the country. Annual fisheries monitoring is conducted under both the Idaho and Montana programs to inform cooperators of the status, abundance, and distribution of species of special concern, non-native species abundance and distribution, and through redd surveys, monitoring trends in Bull Trout spawning effort.

8.1.2.7 Terms and Conditions to Implement RPM #7 and Corresponding Activities

The incidental take statement's RPM #7 states:

Implement reporting and consultation requirements as outlined in the terms and conditions below in order to minimize take of bull trout related to implementation of the Native Salmonid Restoration Plan and other fisheries monitoring activities.

The six terms and conditions (15 through 20) and corresponding 2023 activities implementing RPM #7 are listed below.

15) An annual assessment of bull trout populations in the Lake Pend Oreille Core Area shall be prepared and submitted to the Service. The assessment shall be conducted in a manner consistent with the Clark Fork Settlement Agreement (as amended), and use the best available information (e.g., tributary redd counts).

Bull Trout Redd Surveys and Abundance Monitoring in LPO Core Area Tributaries:
The 2023 Idaho annual redd count table was provided, by email, to the USFWS from IDFG on October 27, 2023. Bull Trout redd numbers were the lowest observed since the collection of these data began in 1984. Following consolidation of Bull Trout and Brown Trout redd information, redd survey information from Montana tributaries will be included in an annual project update to be forwarded to the USFWS from Avista in early 2024.

Twenty-two electrofishing surveys were conducted on tributaries to LPO and the Clark Fork River in 2023. Bull Trout juveniles were sampled in Mosquito Creek and Spring Creek for the first time since the tributary sampling was instituted. Bull Trout x Brook Trout hybrid juveniles were sampled in Berry Creek, which is the first documented evidence of Bull Trout in Berry Creek.

Lake Pend Oreille Bull Trout Population Monitoring and Evaluation:
This is a continuing activity that was first approved by the MC in 2021. This project replaces the "Lake Pend Oreille Bull Trout Survival Study" (completed in 2021) and will provide a mechanism to combine the unique and valuable data that has been collected through CFSA projects into one integrated monitoring program. Many of these data sets have been collected through previous CFSA-supported projects but also include data collected via other funding mechanisms. Specifically, Bull Trout-specific data collected from the LPO netting programs (Lake Trout and Walleye), angler incentive programs, tributary monitoring, PIT antennas, and redd counts will be evaluated together in this project. These data will be utilized together to evaluate the LPO Bull Trout metapopulation. In 2023, most of the work consisted of data compilation, Bull Trout age determination, and data analysis. The information associated with this project is available through CFSA project plans and reports.

16) An assessment of Lake Pend Oreille prey base population trends shall be prepared and submitted to the Service. The assessment shall be conducted in a manner consistent with the Clark Fork Settlement Agreement (as amended), be based on the best available information, and evaluate the need for measures to benefit bull trout prey species in Lake Pend Oreille.

Idaho Department of Fish and Game continued annual monitoring and assessment of LPO prey base population trends. Based upon 2003 interagency discussions and IDFG management actions, IDFG, in consultation with Avista and USFWS, conducted the eighteenth season of a large-scale spring and fall netting operation on LPO in 2023. Periodic updates of this netting operation are provided to both Avista and USFWS, through email, by IDFG. These program updates constitute Avista's "assessment" and "evaluation of need" for 2023. Annual kokanee total abundance estimates associated with the LPO Lake Trout Netting Program provide further insight into the LPO prey base.

17) An annual report shall be submitted to the Service indicating the actual number of bull trout taken, if any, as well as any relevant biological/habitat data or other pertinent information on bull trout that was collected. This report shall be submitted to the Service by March 31st each year.

This annual report satisfies this Term and Condition. During field activities conducted in 2023, the total number of Bull Trout handled and "the extent of intentional and incidental take" for Bull Trout is described in Table 6. The number of Bull Trout proposed to be intentionally "taken" by each activity in 2024 is also outlined in Table 6. In addition to this annual report, numerous technical reports are completed through CFSA activities annually and provided to the Service that include additional relevant biological/habitat information.

There were a total of 1,327 Bull Trout capture events during implementation of CFSA Appendix F5 LPO Lake Trout Netting and LPO Angler Incentive programs in 2023, which includes 319 mortalities, and is covered under a separate Section 6 Agreement between the USFWS and IDFG. There were 19 Bull Trout handling events during gill-netting efforts targeting Walleye in LPO under the CFSA Appendix F5 LPO/Clark Fork River Walleye Population Assessment program with 6 incidental Bull Trout mortalities. These mortalities are also reported under the Section 6 agreement between the USFWS and IDFG. There were likely instances where Bull Trout were handled multiple times under the programs described previously and some of these Bull Trout may have been handled during implementation of CFSA Appendix C programs in 2023.

Bull Trout "take" numbers for CFSA Appendix A and Appendix B programs are also reported by IDFG and MFWP personnel as part of their reporting requirements. These numbers are included with CFSA Appendix C Bull Trout "take" numbers in Table 6. There were a total of 257 Bull Trout captured under Appendix A, and none were recaptured in 2023. Appendix B project implementation resulted in the intentional take of 219 unique Bull Trout. A total of 308 unique Bull Trout were handled during CFSA Appendix C program implementation. Twenty of these fish were captured twice and two were captured three times during 2023. Nineteen were adult Bull Trout transported upstream of Cabinet Gorge Dam in 2023 and later captured in the Graves Creek permanent weir trap.

Table 6. Bull Trout take and mortalities reported in 2023 along with proposed intentional take for 2024.

CFSA Program	Capture Events	Unique Bull Trout	Bull Trout Mortalities	Proposed 2024 Bull Trout Take
Appendix A	257	257	0	600
Appendix B	219	219	0	350
Appendix C	332	308	4	1,300
Total	808	784	4	2,250

18) An annual report shall be prepared and submitted to the Service that details the next year's proposed activities under the Native Salmonid Restoration Plan and other fisheries monitoring that may result in intentional as well as incidental take of bull trout. The report shall quantify the number of bull trout proposed to be intentionally "taken" by each activity and summarize the extent of intentional take from all previous year's activities. This report shall be submitted to the Service by March 31st each year.

The USFWS, as a member of the MC, reviews and approves AIPs for the NSRP and other fisheries monitoring plans that have the potential to result in take of Bull Trout. This review process begins at the technical level with the Aquatic Implementation Team and continues through the Water Resources Technical Advisory Committee, with final approval of all proposed AIPs occurring at the March MC meeting.

The USFWS also verified that the information reported in this Annual Report is sufficient to cover the requirement for a report quantifying the number of Bull Trout proposed to be intentionally "taken" (see Table 6, above) and summarizing the extent of intentional take from all previous year's activities.

19) During project implementation the FERC or licensee shall promptly notify the Service of any emergency or unanticipated situations arising that may be detrimental for bull trout relative to the proposed activity.

No emergency or unanticipated situations arose during 2023 beyond those described regarding the reporting of dead or injured Bull Trout described in Term and Condition 20 below.

20) Upon locating dead or injured bull trout, or upon observing destruction of bull trout redds, the FERC or licensee shall notify the Service within 24 hours. The FERC or licensee shall record information relative to the date, time, and location of dead or injured bull trout when found, and possible cause of injury or death of each fish and provide this information to the Service.

As directed by the USFWS, notifications of all dead or injured Bull Trout were sent to the USFWS representatives Carter Fredenberg and Ben Conard. Bull Trout mortalities were reported to the USFWS on four occasions during 2023. The first report was submitted to the USFWS on September 29, 2023. This report pertained to one juvenile Bull Trout mortality that was observed

in the Graves Creek permanent weir trap box and was likely a fish that was predated on by a merganser and regurgitated in the box. The second report was submitted to the USFWS on October 12, 2023 and pertained to two adult Bull Trout observed as mortalities during the East Fork Bull River redd walk. The third report was submitted to the USFWS on October 16, 2023 pertaining to a juvenile Bull Trout that became impinged between the ramp weir and the flume wall in the Graves Creek permanent weir trap. Two reports were submitted to the USFWS on October 24, 2023. The first was for a juvenile Bull Trout mortality observed while stream electrofishing in the East Fork Bull River (likely stepped on). The second October 24 report pertained to a juvenile Bull Trout that was cannibalized in the holding bucket during Vermilion River electrofishing efforts. All of the above reports were submitted to the FERC on October 27, 2023.

8.1.2.8 Terms and Conditions to Implement RPM # 8 and Corresponding Activities

The incidental take statement's RPM #8 states:

Construct and operate the CGFPF consistent with Amendment #1 of the Clark Fork Settlement Agreement, and the Clark Fork Project License (including amendments).

The five terms and conditions (21 through 25) and corresponding 2023 activities implementing RPM #8 are listed below.

21) The FERC or licensee shall ensure that construction, operation, and maintenance of the CGDF remain consistent with the proposed action described in the final Biological Assessment (Avista and FERC 2017). The Service shall be promptly notified of any changes to construction, operations or maintenance activities.

Avista completed construction of the CGFPF in 2022. Avista operated and maintained the CGFPF consistent with the proposed action described in the final Biological Assessment. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the USFWS and other management agencies within 24 hours, as well as FERC within 30 days of the event. More detail on these shutdown events are included in the discussion under Term and Condition 25.

22) The fish salvage plan shall be completed and approved by the Service prior to construction of the cofferdam.

The USFWS approved the CGFPF Fish Salvage Plan on February 12, 2019; followed by approval by the FERC on November 19, 2019.

23) The FERC or licensee shall provide an annual report to the Service detailing the progress of CGDF construction. This report shall be submitted to the Service by March 31st each year.

Avista completed construction of the CGFPF in 2022. This annual report, including the discussion under Term and Condition 3, satisfies this requirement.

24) The FERC or licensee shall provide an annual report to the Service detailing the past year's operation of the CGDF, including the number of bull trout that interacted with the CGDF and any mortality. This information can be included in the annual report required under T&C 17 above and shall be submitted to the Service by March 31st each year.

This annual report, including the discussion under Term and Conditions 3 and 17, satisfies this requirement.

25) Any shut-downs of the CGDF during normal operating conditions, as agreed to in the Clark for Settlement Agreement (as amended), shall be reported within 24 hours to the Service.

The CGFPF was operated from April 5 through October 13, with a few exceptions. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the USFWS and other management agencies within 24 hours, as well as FERC within 30 days of the event. The first shutdown event occurred on April 6 and lasted five days, the second shutdown occurred on July 31 and lasted 16 days and the last event occurred on October 6 and lasted four days.

8.1.3 Key 2023 References

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8.2 Fishway Plan and Annual Report (License Article 433 – Amended June 13, 2003)

8.2.1 Purpose

Article 433 of the FERC License (License) requires that, on or before April 15 of each year and after consultation with the MC, the Licensee file for Commission approval a Fishway Plan and Annual Report. The Plan must address the Licensee's compliance with the USFWS Section 18 fishway prescriptions contained in CFSA Appendix C to the License, including a detailed description of any fish passage devices or measures and any proposed modifications to project facilities or operations; documentation of any consultations; copies of comments and recommendations received on the completed plan; and specific descriptions of how entities' comments are accommodated by the Plan or Avista's reasons for not including such comments, based on Project-specific information.

In 2002, Avista and USFWS agreed that the Article 433 Fishway Plan requirement, as well as Avista's annual reporting and consultation requirements for CFSA appendices A, B, and C (License Articles 404, 405, and 406) are adequately addressed through the AIPs, which are approved by the MC, and by providing the annual activity summaries contained in this section of the Annual Report. Section 8.2.2 below provides the 2023 activity report for these PM&E measures, which comprises Avista's Fishway Plan and is intended to satisfy Avista's annual reporting requirement for these measures.

8.2.2 2023 Activity Summary

8.2.2.1 Prescription 1 Conditions and Corresponding Activities

Prescription 1 Description

USFWS's Section 18 Prescription 1 states the following:

The licensee shall assess, plan, design, construct, operate, and maintain upstream fishway devices or measures and downstream fish protection devices or measures in accordance with the Native Salmonid Restoration Plan (Plan) (License Application Volume IV.A). Construction, operation, and maintenance of fishways will proceed in a stepwise manner, beginning at the effective date of the Settlement Agreement (License Application Volume III), utilizing the principles of adaptive management (i.e., the ability to change program direction based on new information provided by monitoring and evaluation of experimental measures). Following initial feasibility assessments, and within one year of the effective date of the Settlement Agreement, an experimental fish trap and truck program for the purpose of moving bull trout from below Cabinet Gorge Dam to the Cabinet Gorge Reservoir pool shall be constructed, operated, and maintained. Assessment and implementation of other fish stock enhancement measures shall begin at the effective date of the Settlement Agreement, as described in the Plan. Evaluation of the effectiveness of the fish trap and truck program below Cabinet Gorge, and evaluation of other stock enhancement measures will determine the timing of construction, operation, and maintenance of other upstream fishway

facilities and measures and downstream fish entrainment protection devices at Cabinet Gorge and Noxon Rapids Dams.

2023 Activities Associated with Prescription 1

Cabinet Gorge Fish Passage Facility:
Construction of the CGFPF was complete in 2022; although, there were several modifications that were identified during initial start-up that were completed in 2023. These modifications included installation of panels to prevent fish from getting behind the holding pool and entrance pool auxiliary water supply panels, replacement of the position indicators for the dissipation valves, improving the Vee trap area to allow easy lifting of the device, adding rubber to areas of the fish trap to prevent fish impingement, adding additional siphon pipe supports, and adding the final section of debris boom to prevent debris from entering the siphon intake pipes. Several contractor warranty items were also identified in 2023 and have either been addressed or will be addressed in the near future. These items include issues with the magnetic reed switches on the intake screens, entrance pool level transducer failure, redesign of siphon pipe supports, water in the brail crowder gear box, replacement of indicators for entrance gate 2 and 3 positions, and a cracked valve on the fish truck tank.

During 2023, the CGFPF subgroup identified and approved funding for six minor modifications to the CGFPF. Four of these modifications were completed in 2023 including the purchase of additional stop logs to protect the swing gate during spill, installation of an uninterrupted power supply for the air compressor to keep it from faulting when the emergency generator kicks on, installation of snow brakes on the monorail crane roof to increase safety at the site, and installation of a new tow arm for the festoon cable on the monorail crane to improve reliability of that crane. The feasibility of adding cold water to the holding pool and installation of a new underwater camera system to obtain more information on Bull Trout behavior in the CGFPF are ongoing tasks that will be completed in 2024.

The CGFPF was operated from April 5 through October 13, with a few exceptions. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the USFWS and other management agencies within 24 hours, as well as FERC within 30 days of the event. The first shutdown event occurred on April 6 and lasted five days, the second shutdown occurred on July 31 and lasted 16 days and the last event occurred on October 6 and lasted four days. The CGFPF was also shut down on May 4 when lower Clark Fork River flows exceeded 52,000 cfs and remained shut down until maximum daily flows receded below 52,000 cfs on May 31. There was a slight delay in the CGFPF start-up after spill, due to an entrance gate hydraulic hose leak that was addressed. As a result, siphon start-up post spill occurred on June 7.

Adult Bull Trout Capture, Transport and Detection:
Sixty individual adult Bull Trout were captured downstream of Cabinet Gorge Dam in 2023. Thirteen were captured in the CGFPF (including two that had been captured night electrofishing earlier in the year), eight were captured night electrofishing, and 41 were captured in the CGH ladder trap. Fifty adult Bull Trout were transported to Montana based on either genetic assignment, previous capture history or other approved criteria.

The original plan for 2023 was to only transport Montana origin Bull Trout captured in the CGFPF upstream to Montana. Adult Bull Trout captured using other methods [as described in the "Cabinet Gorge Fish Passage Facility M&E Plan"] were to be PIT tagged and released near their capture location to assist in evaluating the capture efficiency of the CGFPF.

Due to the CGFPF facing operational issues at the time the CGH ladder trap started operating, the CGFPF subgroup decided on September 5 to transport Bull Trout captured in the CGH ladder trap. The MC approved the CGFPF subgroup's authority to make changes to the M&E Plan at the March 2022 meeting. Some portions of the M&E Plan were modified during operation of the CGFPF based on observations. The CGFPF subgroup provided direction to make changes in holding pool flow based on information that was learned during the first months of operation. Data collected during 2023 is being compiled and will be presented in the Annual Project Update.

As part of the CGFPF M&E Plan five 3'circular PIT antennas were deployed in the lower Clark Fork River to provide information on Bull Trout presence downstream of Cabinet Gorge Dam. These antennas were deployed in March and operated through early November yielding 24,324 unique detections of 70 individual Bull Trout and 1,135 unique detections of 40 individual Westslope Cutthroat Trout.

Seventy-six Bull Trout genetically assigning to Montana populations were detected and/or captured downstream of Cabinet Gorge Dam. Based off detection criteria, 50 of the 76 Bull Trout detected downstream of Cabinet Gorge Dam were used to evaluate CGFPF attraction efficiency. Of the 50 individuals used, 37 were detected entering the CGFPF entrance pool. Thus, 74% of Montana origin Bull Trout known to be downstream of Cabinet Gorge Dam were detected entering the CGFPF entrance pool. Of the 50 individuals used, 27 were detected approaching the holding pool and 11 were captured. Thus, 54% of Montana origin Bull Trout that entered the CGFPF then approached the CGFPF holding pool and 22% of them were captured. During trapping operations, Bull Trout were most frequently detected at the CGFPF in late June-early July and the month of September.

Westslope Cutthroat Trout Experimental Transport:

The management goal for Westslope Cutthroat Trout passage is to reestablish connectivity and increase the number of large migratory Westslope Cutthroat Trout available to spawn in Montana tributaries. This was the nineth year Westslope Cutthroat Trout were captured downstream of Cabinet Gorge Dam and transported upstream to Cabinet Gorge Reservoir. The CGFPF and night electrofishing were utilized to capture 14 fish for upstream transport. Fish were transported upstream from mid-April through mid-June and were released at the Big Eddy Recreation Area boat ramp in Cabinet Gorge Reservoir. Five fish were detected entering the Bull River drainage during the spring spawning time period.

A project was initiated in 2022 to evaluate the reproductive success of Westslope Cutthroat Trout transported upstream of Cabinet Gorge Dam. Genetic fin tissue samples were collected from juvenile and adult Westslope Cutthroat Trout captured during electrofishing and hook-and-line sampling efforts in the Bull River drainage. These genetic samples were shipped to a genetics lab where an analysis will be conducted to determine if any of those fish are offspring of a Westslope Cutthroat Trout transported upstream of Cabinet Gorge Dam in previous years. The results of this

analysis will be available in a final comprehensive report anticipated to be available in 2024. Preliminary results from the first year of analysis have shown successful reproductive of Westslope Cutthroat Trout transported upstream of Cabinet Gorge Dam over multiple years.

Noxon Rapids Dam Permanent Fishway:

No new work was proposed or conducted for the Noxon Rapids Dam Permanent Fishway and fish handling facility project in 2023. Based on agreements made in Amendment No. 1 to the CFSA, final design and construction of the Noxon Rapids Dam Permanent Fishway shall be deferred for an interim period ending no sooner than December 31, 2021. With 2023 being the first full year of operation of the CGFPF and continuing to refine capture and transport of juvenile Bull Trout from Montana tributaries, discussion of a fish collection facility at Noxon Rapids Dam was not reinitiated in 2023. Rather, it was postponed to a future date, once there is a better understanding of the effectiveness of the ongoing activities. In the interim, a proposal will be made to the MC at the March 2024 meeting to discuss this topic annually. Three submersible circular PIT antennas were purchased and deployed downstream of Noxon Rapids Dam from July 27 to November 8 to learn more about fish presence below Noxon Rapids Dam. Three fish (one Walleye, one Brown Trout and one Rainbow Trout) were detected on these antennas for a total of eight unique detections.

Downstream Fish Passage:

Safe downstream passage of Bull Trout is addressed through the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program. Under this program, juvenile Bull Trout are captured in traps during their outmigrations, or through targeted stream electrofishing efforts. Following capture, juvenile Bull Trout are measured, implanted with a PIT tag, and transported to the Clark Fork River downstream of Cabinet Gorge Dam where they are released. In addition, adult Bull Trout that were previously transported upstream and are recaptured in tributaries following the spawn are transported back to the Clark Fork River downstream of Cabinet Gorge Dam. In consultation with the USFWS, the decision was made to release one-half of the post-spawn adults captured within Graves Creek on site so that the benefits and limitations of this strategy can be directly evaluated. The evaluation was completed in October 2023 and, in consultation with the USFWS, the decision was made to transport all post-spawn adults back to Lake Pend Oreille.

Fish trapping and transport for 2023 was conducted from March 29 through June 30 and September 6 through November 22 in Graves Creek. Volitional upstream passage was provided at Graves Creek on alternating weeks through October 23. The East Fork Bull River was trapped from April 26 through June 30 and September 5 through November 21. East Fork Bull River stream electrofishing was conducted during five days from October 17 through October 31. Vermilion River electrofishing occurred on six days from October 216 through October 24.

There were a total of 246 capture events of 245 individual juvenile (i.e., <300 mm) Bull Trout during 2023. A total of 217, 120–300 mm, Bull Trout were captured in Montana tributaries and transported to Idaho during 2023 (Table 1). An additional 25 juvenile Bull Trout were captured and released on site because they did not meet one or more of the transport criteria (i.e., fish length or direction of travel). There were four juvenile Bull Trout mortalities observed in 2023. The mortalities were caused by merganser predation, cannibalism, an injury sustained electrofishing,

and an injury sustained in the flume at Graves Creek (see Section 8.1 discussion pertaining to Term and Condition 20). Following capture, fish were measured (length and weight) and implanted with a PIT tag if they were greater than 99 mm and if a PIT tag was not already present. All juvenile transports were released in the lower Clark Fork River at the Cabinet Gorge Fish Hatchery site.

There were 24 capture events of 24 individual adult Bull Trout in tributary traps during 2023. Eighteen of these individuals were transported back to the Clark Fork River downstream of Cabinet Gorge Dam and six were released on site.

Table 1. Tributary and method of capture for juvenile Bull Trout transported to Idaho under the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program in 2023.

Tributary	Method	Bull Trout Transported
Graves Creek	Permanent Weir	127
East Fork Bull River	Weir/Screw Trap/Stream Electrofishing	67
Vermilion River	Stream Electrofishing	23
	Total	217

Following a feasibility investigation, Avista constructed a concrete-bedded weir trap (permanent weir trap) on lower Graves Creek in late 2012 and initiated operation in 2013. Operation of the permanent weir trap was anticipated to facilitate higher capture efficiencies for outmigrating juvenile Bull Trout, particularly during periods of higher streamflow that proved difficult to trap with existing methodologies. The Graves Creek Permanent Weir Trap Monitoring and Evaluation Plan was completed in 2013 and was designed to evaluate the operation and fish capture effectiveness of the permanent weir trap. The plan was updated during 2017 and continues to be implemented.

From the inception of permanent weir operation through 2018, a number of issues were identified and iteratively addressed by Avista, MFWP, and USFWS. After careful consideration and extensive testing of a prototype, an engineering firm was hired to design substantial enhancements to the permanent weir trap. Design was finalized in 2020 and construction of the enhancements occurred in the summer and fall of 2021. The enhancements became operational on November 3, 2021 and preliminary results suggest the new trap meets and exceeds the various goals and expectations that warranted the change. In addition, due to the marked increase in the number of juvenile Bull Trout being handled during 2019 and 2020, Avista constructed a fish handling facility near the permanent weir trap that also became operational in 2021. This facility provides protected, flow-through stream water to minimize stress while holding and working up fish prior to transport or release.

8.2.2.2 Prescription 2 Conditions and Corresponding Activities

Prescription 2 Description

USFWS's Section 18 Prescription 2 states the following:

At the effective date of the Settlement Agreement (License Application Volume III), the licensee shall develop and implement a fish passage program in accordance with the terms of the Clark Fork Settlement Agreement and the Native Salmonid Restoration Plan (License Application Volume IV.A). Implementation of the Plan shall include initial project scoping activities resulting in goals and objectives; background information, compilation and updating in areas of fish genetics, fish pathogens, exotic fish control, existing fish populations, stream and mainstem habitat conditions; assessment of suitable fish stock availability, fish transfer options, and fish hatchery options; and implementation of experimental and comprehensive fish passage measures, as appropriate, and a monitoring program to assess the effectiveness of fishways and other measures.

2023 Activities Associated with Prescription 2

Avista continued to provide safe, timely, and efficient fish passage in 2023, adaptively managed in consultation with USFWS and other MC members. Following approval of the CFSA Amendment by the MC, Avista and stakeholders reinitiated development of the next NSRP Five-Year Plan. The updated NSRP Five-Year Plan for the 2019–2023 time period was approved at the September 25, 2018 MC meeting. In 2023, the USFWS reviewed and approved AIPs, including those related to Bull Trout passage and stakeholders initiated an update to the NSRP Five-Year Plan. The USFWS received the project plans that were approved by the MC, which the USFWS is a member of, in April 2023. The pertinent project plans include:

- Upstream Fish Passage Program
- Westslope Cutthroat Trout Transport Evaluation
- Tributary Trapping and Downstream Juvenile Bull Trout Transport Program
- Native Salmonid Restoration Plan Five-Year Plan
- Redd Surveys in Montana Tributaries
- Fish Capture Facilities Operation, Development, and Testing
- Graves Creek Permanent Weir Trap Enhancements

Assessing and/or improving stream and mainstem habitat conditions and the implementation of a monitoring program to assess the effectiveness of fishways and other measures are activities addressed through the coordinated implementation of CFSA appendices A, B, C, and F5.

8.2.3 Key 2023 References

Adams, B., R. Headley, and J. VonBargen. 2023. Genetic Analysis of Native Salmonids from the Lake Pend Oreille and Clark Fork River System, Idaho and Montana. 2022 Annual Project Update. Avista document identification number 2023-0245.

Aquatic Implementation Team. 2018. Clark Fork River Native Salmonid Restoration Plan. Five-Year Plan (2019–2023). Avista document identification number 2018-0318.

Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Notes from March 14, 2023. Avista document identification number 2023-0098.

Avista. 2023. Clark Fork Settlement Agreement Management Committee Meeting Record from September 20, 2023. Avista document identification number 2023-0260.

Bernall, S. 2023. Appendix C Fish Passage/Native Salmonid Restoration Plan. 2023 Annual Work Summary. Avista document identification number 2023-0269.

FERC. 2000. Order Issuing New License for Clark Fork Project No. 2058, effective date March 1, 2001. Avista document identification number 2000-0047.

FERC. 2019. Order Amending License and Approving Exhibits A and F (August 8, 2019). Avista document identification number 2019-0175.

FERC. 2023. Order Approving 2022 Annual Report and 2023 Implementation Plans Per Article 402, Annual Threatened and Endangered Species Plan Per Article 432, and Annual Fishway Plan Per Article 433 (May 24, 2023). FERC Order. Avista document identification number 2023-0068.

Moran, S., and P. Kusnierz. 2023. Lower Clark Fork River, Montana – Avista Project Area – 2022 Annual Bull Trout and Brown Trout Redd Survey. 2022 Annual Project Update. Avista document identification number 2023-0052.

USFWS. 2019. Endangered Species Act Section 7 Consultation Biological Opinion. Avista document identification number 2019-0026.

8.3 Other Clark Fork License Articles

8.3.1 Purpose

This section of the Annual Report highlights any annual activities (Section 8.3.2) that occurred in 2023 associated with other License Articles for the Clark Fork Project No. 2058 that do not directly tie to a specific CFSA PM&E measure.

8.3.2 2023 Activity Table

License Article Number	License Article Description	2023 Activity
438	Dispute Resolution	No activity occurred
439	Rock Creek Mine Discharge Facility	No activity occurred
440	Revised License Exhibit G	No activity occurred
441	Alterations per Fish and Wildlife Program	No activity occurred
442	Permission for Use and Occupancy of Project Lands and Waters	See Section 8.3.2.1
443	Construction, Operation, and Maintenance of Fishways	See Section 8.2.2.1

8.3.2.1 Permission for use and Occupancy of Project Lands and Waters

In 2023, Avista granted permission for certain, allowable types of use and occupancy of Project lands and waters to comply with CFSA Appendices G and H (License Articles 414 and 415). Uses and occupancy information is included in sections 7.1 and 7.2 of this report. Avista conveyed no new easements in 2023. Avista terminated a lease agreement following the death of the lessee at a house located on Elk Creek Bay in Heron, Montana and maintained ownership of the parcel.

8.3.3 Key 2023 References

Avista. 2023. Avista Property Use Permits, 2023. Avista document identification number 2023-0258.

Section 9: FERC Submittals and Actions

9.1 Purpose

The purpose of this section is to provide a succinct record of the 2023 submittals under the Clark Fork License No. 2058 and any items requiring FERC action through December 31, 2023. The FERC-related activities for 2023 (such as FERC filings, FERC orders, and FERC correspondence), and FERC awareness items (such as Clark Fork Settlement Agreement PM&E measure modifications and clarifications and specific issues of interest) are included in this section of the Annual Report.

9.2 FERC Activities/Awareness

In 2023, FERC activities related to the Clark Fork Project included the following:

- FERC's January 30, 2023 Order Approving the Cabinet Gorge Dam Fishway Operations Plan and Order Amending License and Approving Exhibits A and F.
- Avista's March 31, 2023 submittal of the 2022 Clark Fork Annual Report and the 2023 Clark Fork Annual Implementation Plans.
- Avista's May 1, 2023 submittal of Report of Cabinet Gorge Dam Fish Passage Facility April 6, 2023 Shutdown.
- FERC's May 22, 2023 letter regarding the Notification of Cabinet Gorge Dam Fish Passage Facility April 6, 2023 Shutdown.
- FERC's May 24, 2023 Order Approving 2022 Annual Report and 2023 Annual Implementation Plans Per Article 402, Annual Threatened and Endangered Species Plan Per Article 432, and Annual Fishway Plan Per Article 433.
- FERC's June 6, 2023 Order Approving Revised Cabinet Gorge Exhibit F Drawings Sheets F-8 and F-11.
- Avista's July 18, 2023 submittal of the Cabinet Gorge Dam Fishway Exhibit Drawings F-8 and F-11.
- Avista's August 18, 2023 submittal of Notification of Cabinet Gorge Dam Fish Passage Facility July 31, 2023 Shutdown.
- Avista's October 23, 2023 submittal of Notification of Cabinet Gorge Dam Fish Passage Facility October 6, 2023 Shutdown.
- Avista's October 27, 2023 submittal of a Biological Opinion Condition 20 Report regarding six Bull Trout mortalities for September and October 2023.

9.3 Key 2023 References

FERC. 2023. Order Modifying and Approving Cabinet Gorge Dam Fishway Operations Plan (January 30, 2023). FERC Order. Avista document identification number 2023-0013.

Avista. 2023. 2022 Clark Fork Annual Report and 2023 Clark Fork Annual Implementation Plans (March 31, 2023). FERC Submittal. Avista document identification number 2023-0040.

Avista. 2023. Report Regarding CG Fish Passage Facility Shutdown (May 1, 2023). FERC Submittal. Avista document identification number 2023-0059.

FERC. 2023. FERC Letter Regarding Fishway Outage Notification (May 22, 2023). FERC Issuance. Avista document identification number 2023-0066.

FERC. 2023. Order Approving 2022 Annual Report and 2023 Implementation Plans Per Article 402, Annual Threatened and Endangered Species Plan Per Article 432, and Annual Fishway Plan Per Article 433 (May 24, 2023). FERC Order. Avista document identification number 2023-0068.

FERC. 2023. Order Approval Cabinet Gorge Exhibit F Drawings, Exhibit Drawings F-8 and F-11 (June 6, 2023). FERC Order. Avista document identification number 2023-0077.

Avista. 2023. Approved Exhibit Drawings F-8 and F-11 (July 18, 2023). FERC Submittal. Avista document identification number 2023-0102.

Avista. 2023. Notification of Cabinet Gorge Dam Fish Passage Facility July 31, 2023 Shutdown (August 18, 2023). FERC Submittal. Avista document identification number 2023-0131.

Avista. 2023. Notification of Cabinet Gorge Dam Fish Passage Facility October 6, 2023 Shutdown (October 23, 2023). FERC Submittal. Avista document identification number 2023-0176.

Avista. 2023. Biological Opinion Condition 20 Report Regarding Bull Trout (October 27, 2023). FERC Submittal. Avista document identification number 2023-0184.

Section 10: Amendments, Modifications, and Clarification of License Articles

10.1 Purpose

This portion of the Annual Report highlights and summarizes all amendments, modifications, and/or clarifications (other than one-time filing extensions or Exhibits and annual approvals) made to the License for Clark Fork Project No. 2058, through December 31, 2023. Note that terms and conditions of the original license took effect on March 1, 2001.

Each FERC amendment, modification, or clarification to/of an existing license article are included in Section 10.2. The date of each amendment, modification, or clarification is also documented. There were two activities in 2023 (see Section 9.2).

10.2 Amendments/Modifications/Clarifications of License Articles for Clark Fork Project No. 2058

Article Number	Description	Date Amended or Clarified
L-2	Exhibit Drawings	10/29/2013
201	Authorized Installed Capacity and Annual Charges	07/13/2006
201	Authorized Installed Capacity and Annual Charges	10/10/2006
201	Annual Charges and Exhibit A	06/15/2007
201	Authorized Installed Capacity and Annual Charges	04/10/2008
201	Exhibit G Drawings and Annual Charges	02/10/2009
201	Exhibit G Drawings and Annual Charges	10/09/2014
204	Exhibit F and Exhibit G Drawings	01/09/2002
406	Cabinet Gorge Dam Fishway Operations Plan	01/30/2023
412	Water Quality Protection and Monitoring Plan	12/10/2002
412	Water Quality Protection and Monitoring Plan	06/23/2011
413	Exhibit F Drawings	11/18/2016
413	Exhibit F Drawings	03/01/2018
413	Exhibit A and Exhibit F Drawings	08/08/2019
413	Exhibit A and Exhibit F Drawings	06/06/2023
427	Programmatic Agreement	10/30/2000
429	Minimum Flows	12/18/2017
431	Coordination of Flows with Albeni Falls	11/22/2002
432	Threatened and Endangered Species Plan	06/13/2003
433	Fishway Plan	06/13/2003
434	Erosion Plan	03/04/2003
435	Solid Waste and Waste Water Plan	12/10/2002
436	Oil and Hazardous Substance Plan	12/10/2002
437	Pesticide & Herbicide Use Plan	11/22/2002
438	Dispute Resolution	10/30/2000
438	Dispute Resolution	11/22/2002
442	Use and Occupancy of Project Lands and Waters	11/22/2002
443	Fishway Prescriptions	10/30/2000
n/a	Approval to Replace Transmission Lines	03/05/2014

Section 11: Clarifications and Modifications to Clark Fork Settlement Agreement and PM&E Measures

11.1 Purpose

This portion of the Annual Report highlights and summarizes all clarifications and modifications to the CFSA and PM&E measures.

Each clarification or modification document are included in Section 11.2, with the date of MC (or, in the case of the Programmatic Agreement, CRMG) approval. There were no activities in 2023.

11.2 Clarifications/Modifications to Clark Fork Settlement Agreement and PM&E Measures

Document or Appendix	Document Title	Date Approved
CFSA ¶ 26	Cost Over-Run Guidelines	09/27/2000
CFSA ¶ 26	Management Committee Membership Application	12/29/2000
CFSA ¶ 26	Management Committee Procedures	09/30/2003
CFSA	Amendment No. 1	09/26/2017
CFSA Appendix C	Clarification of Usage of Funding Sources	09/30/2003
CFSA Appendix C	Joint Agreement Regarding Fish Passage	03/16/2010
CFSA Appendix C	Resolution of O&M Funding for CGDF	09/26/2017
CFSA Appendix F1	Title Revised	10/26/2016
CFSA Appendix N1	Obligation Fulfilled	10/26/2016
CFSA Appendix N2	Obligation Fulfilled	10/26/2016
CFSA Appendix N3	Obligation Fulfilled	10/26/2016
CFSA Appendix O	Obligation Fulfilled	10/26/2016
CFSA Appendix T	Project Operations during Low Inflows	09/26/2001
CFSA Appendix V	Guidelines for Acquisition of Land Interests	03/26/2010
PA	Programmatic Agreement (CRMG) Reporting	04/12/2001
PA	Programmatic Agreement (CRMG) Reporting	11/23/2004

Section 12: Annual Budget and Grant Summary

12.1 Budget Summary

On the following page is a spreadsheet summary of budget activities for each of the PM&E measures for the 2023 calendar year (January – December). The MC approved activity year is from April through March therefore, the following budget spreadsheet summary includes the fourth quarter of 2022 approved activities and the first through third quarters of the 2023 approved activities.

The "2022 Carryover Funding" column in the budget spreadsheet shows funding obligations carried over from 2022 (4.73% int). Total carryover was $14,307,537. Note that this differs from the 2022 carryover dollars that were reported in the 2022 annual budget report. In 2022 expenditures did not include end-of-year accounting accruals. This resulted in an artificial inflation of the carryover dollars by $174,462.

2022 Carryover dollars where adjusted from the 2022 carryover amount described in the 2022 Annual Report Budget Table to account for a reporting error in 2022 of total expenditures. Expenditures were reduced by accounting accrual amounts resulting in an artificial inflation of the carryover dollars. This resulted in a reduction $174,462 to the 2022 Carryover Funding.

The "2023 Funding Obligation w/GDP" column, totaling $5,849,252, details Avista's annual funding obligation per Appendix U (Funding Summary Table) of the CFSA plus an additional $265,440 "GDP" (Gross Domestic Product) escalation for inflation (7.15% GDP) under terms of Paragraph 23 of the CFSA.

The "Total Funding Obligation" column is the sum of the "2022 Carryover Funding" column, plus the "2023 Funding Obligation" column. For 2023, the "Total Funding Obligation" was $20,095,397. Note that the MC approved the removal of CFSA appendices N1, N2, N3, and O from the ongoing list of CFSA PM&E measures, as Avista has met the obligation under these appendices for the remainder of the current FERC license.

The "2023 Annual Implementation Plan Budget" column, totaling $12,396,654, shows the implementation budget amounts determined by the TRTAC and WRTAC and approved by the MC. Note that, due to TRTAC, WRTAC, and MC decisions, some 2023 AIP budgets were more or less than the actual 2023 funding obligations.

The "Total 2023 Expenditures" column shows expenditures for each of the PM&E measures, totaling $6,911,852.

The "Unspent Dollars" column shows the amount of unspent dollars for certain annual funding obligations totaling $13,891,952. In 2012, expenditures from CFSA Appendix C (Annual Facilities Obligation) Fund exceeded the annual obligation and all carryover dollars were depleted. Since then the dollar amounts represented in the "Appendix C Facilities" row have been represented as negative amounts. The negative amounts accurately reflect the expenditures above and beyond the sum of annual obligation to date.

Under terms of Paragraph 23 of the CFSA, the Treasury constant maturity 1-year, (1.048% for 2023) is added to the unspent dollars noted as "Fund" or "Budget" and equates to an additional

$113,687. The final column on the spreadsheet is the “2023 Carryover Funding”. Total 2023 end-of-year carryover, plus interest, is $13,967,473.

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App.	PM&E Funds	2022 Carryover Funding	Notes	Fund	2023 Funding Obligation w/GDP	Total Funding Obligation	2023 Annual Implementation Plan Budget	Budget Additions	Total 2023 Expenditures	Unspent Dollars	2023 Carryover Funding w/INT
A	ID Trib. Habitat, Acquisition & Fishery Enhance Prgm										
	Tributary Habitat Acquisition & Enhancement	$3,341,481		Fund	$661,046	$4,002,527	$2,421,470	2	$2,084,162	$1,918,365	$1,928,459
	Fishery Resource Monitoring, Enhancement & Mgmt	$0	1	Budgeted	$57,074	$57,074	$118,000		$66,984	-$9,910	$0
B	MT Trib. Habitat Acquisition & Rec. Fish Enhance Prgm										
	Tributary Habitat Acquisition & Enhancement	$2,525,063		Fund	$470,996	$2,996,059	$470,167		$320,859	$2,675,200	$2,703,241
	Recreational Fishery Enhancement	$1,606,761		Fund	$313,994	$1,920,755	$467,037		$323,531	$1,597,224	$1,613,966
C	Fish Passage/Native Salmonid Restoration Plan										
	Annual Operations	$1,477,304		Budgeted	$910,589	$2,387,893	$1,734,554	3,4	$1,057,296	$1,330,597	$1,344,544
	Facilities	-$37,464,332	2	Fund	$661,048	-$36,803,284	$1,618,988		$650,652	-$37,453,937	-$37,846,529
	Cabinet Minor Modifications		3	Other	$938,751	$938,751	$500,000		$41,273	$897,478	$897,478
D	Bull Trout Protection & Public Education Project	$192,075		Budgeted	$203,824	$395,899	$258,740		$165,803	$230,096	$232,508
E	Watershed Council Program	$20,000	4	Budgeted	$16,305	$36,305	$17,535		$14,932	$21,373	$20,000
F1	Clark Fork River Water Quality Monitoring Program										
	Annual Monitoring	$16,749		Budgeted	$24,460	$41,209	$34,338		$19,142	$22,067	$22,298
	5yr intensive monitoring	$10,000	5	Periodic		$10,000	$10,000		$0	$10,000	$10,000
F2	Noxon Res Stratification & Sediment Nutrient/Metals			Estimated			$71,107		$32,854	$38,253	
F3	Aquatic Organism Tissue Analysis	$15,000	6	Periodic		$15,000	$10,000		$3,080	$11,920	$11,920
F4	Water Quality Protection & Monitoring Plan		7								
F5	Dissolved Gas Supersaturation Control, Mit. & Mon.										
	Section 3.1 Funding	$1,352,342		Fund	$669,688	$2,022,030	$2,468,175		$1,412,803	$609,227	$615,613
	Section 3.2 Funding	$932,612	8	Other	$932,612	$1,865,224			$0	$1,865,224	$1,865,224
G	Land Use Management Plan (LUMP)			Estimated			$167,500		$131,238	$36,262	
H	Recreation Resource Mgmt Plan (RRMP)										
	Management Fund			Estimated			$379,800		$319,741	$60,059	
	Facilities Fund	$579,830		Fund	$252,104	$831,935	$660,000	1,5,6	$289,408	$542,527	$548,214
I	Aesthetics Management Plan			Estimated			$7,000		$0	$7,000	
J	Wildlife, Botanical, & Wetland Management Plan			Estimated			$5,000		$0	$5,000	
K	Wildlife Habitat Acquisition, Enhancement, & Mgmt	$1,122,272		Fund	$328,407	$1,450,680	$103,000		$1,777	$1,448,903	$1,464,090
L	Black Cottonwood Habitat Protection & Enhancement	$109,500		Budgeted	$8,010	$117,509	$15,000		$0	$117,509	$118,741
M	Wetlands Protection & Enhancement Program	$142,883		Budgeted		$142,883	$12,000		$0	$142,883	$144,381
P	Forest Habitat Protection & Enhancement	$226,796	9	Other		$226,796	$5,000		$0	$226,796	$226,796
Q	Reservoir Islands Protection		10								
R	Clark Fork Heritage Resource Program			Estimated			$78,000		$42,796	$35,204	
S	Erosion Fund & Shoreline Stabilization Guidelines Prgm	$200,000	11	Fund	$61,392	$200,000	$58,000		$100	$199,900	$200,000
T	Project Operations Package	$436,869	12	Other		$436,869	$706,243		$584,075	-$147,205	
	Total	$14,307,537	13		$5,849,252	$20,095,397	$12,396,654		$6,911,852	$13,891,952	$13,967,473

NOTES

1	In 2019 the MC approved the funding obligation for Fish Resource Monitoring, Enhancement and Management be permanently increased to $96,000. The additional funding will continue to be transferred from the Tributary Habitat and Acquisition and Enhancement Fund. The transfer will be occur at the end of the year when actual expenditures are finalized. The actual amount transferred will be the difference between actual expenditures and the annual contribution.
2	Negative figures represent the amount that Avista has spent in excess of the sum of the annual contributions to date. Pursuant to the CFSA, Avista will fund the actual cost of the permanent fish passage facility construction in the event the Facilities budget is not adequate.
3	A one-time commitment of up to $938,751 made available beginning in 2023 and not subject to GDP inflation or interest.
4	Pursuant to the CFSA, carryover funding with interest in any one year shall not exceed $20,000.
5	The Appendix F1 periodic contribution is made available once every five years. This funding is for a private sector consultant to assist in evaluating the monitoring results. For the current 5-year period (2023-2027), this money was made available through the 2022 AIP process so that work could commence in early 2023.
6	Avista will pay the actual costs in an amount not to exceed $15,000 during any five-year period, as defined in the CFSA. The $15,000 for the current five-year cycle (2020-2024) was first made available in 2020.
7	Cost associated with monitoring and best management practices implementation will be borne by Avista.
8	Section 3.2 funding refers to the funding mechanism defined in Section 3.2 of the Phase III agreement. The annual contribution associated with this funding is not subject GDP inflation and unexpended funds are not subjected to interest. Pursuant to the Phase III agreement, all appendix F5 project will be funded through Section 3.1. If the "Total Funding Obligation" Section 3.1 funds are exceeded during any given year, the balance will be funded through Section 3.2 funding.
9	Cost associated with implementing projects are generally funded by Timber Sale Revenue. Pursuant to the CFSA, some costs are covered through administration of the Land Use Management Plan (App G).
10	Pursuant to the CFSA, costs associated with Reservoir Island Protection are covered administration of the Land Use Management Plan (App G).
11	Annual contributions of $40k plus GDP inflation are contributed to this fund until reaching the $200k cap.
12	A one-time $1M allocation made available in 2018 and not subject to GDP escalation, unexpended funds carryover without interest. If actual expenditures exceed $1M the balance will be funded equally between App C Facilities and App F5. This transaction will occur at the end of the 2024 calendar year.
13	App C Facilities was removed from the totals because expenditures to date have greatly exceeded the sum of the annual contributions to date.

FUND

Fund	Refers to dollars that are made available annually. These funds are adjusted annually by the percentage change of the GDP-IDP as reported by the Bureau of Economic Analysis. Unused funds are carried forward to the next year and increased by the yield in percent as reported in the Federal Reserve Statistical Release H-15 of US treasury securities as a constant maturity.
Estimated	Refers to dollars that are projections made now however; Avista will pay the actual costs of implementation. Unused funds are not carried forward to the next year.
Budgeted	Refers to dollars that support initiatives within programs that are the responsibility of other parties. Avista will pay the actual costs in an amount not to exceed the agreed budget. Unused funds are carried forward to the next year and increased by the yield in percent as reported in the Federal Reserve Statistical Release H-15 of the US treasury securities as a constant maturity.
Periodic	Refers to dollars that are periodic or a one-time cost. Avista will pay the actual costs in an amount not to exceed the specified budget.

BUDGET ADDITIONS

1	App H Facilities Fund, $22k for Two Rivers RV Park Host Deck. 6/15/23 Consent Mail
2	App A Tributary Habitat Fund, $2.2 Million for acquisition at the mouth of Trestle Creek. 9/20/23 MC Mtg.
3	App C Annual Operations Upstream Fish Passage Program, $80k for Operations & Maintenance at the Cabinet Gorge Fish Passage Facility. 9/20/23 MC Mtg
4	App C Annual Operations Tributary Trap and downstream Juvenile Bull Trout program, $10k for Mobile Fish Handling Trailer. 9/20/23 MC Mtg
5	App H Facilities Fund, $16k for Pilgrim Creek Park Baseball Field dirt mix. 11/27/23 Consent Mail
6	App H Facilities Fund, $90k for Trout Creek Boat Ramp repairs and improvements. 11/27/23 Consent Mail

12.2 Grant Summary

Appendices B and H of the CFSA included a provision intended to leverage PM&E funds through grants. Avista has employed a grant writer who pursues creative funding opportunities to match and enhance the PM&E funds. It is important to note that any funding received through grants does not reduce Avista's contribution to the implementation effort; rather, the funds create additional protection, mitigation, and enhancement opportunities.

The grant writer coordinates with program leaders, technical committees, MC members, and other local constituencies to identify projects for grant funding, research funding sources, prepare grant applications, and conduct grant project follow-up and reporting.

Since inception of the grant writing program in 1999, a total of $13,390,744 in federal, state, and private foundation grants has been acquired. In 2023, the grant writing team secured $114,200 in grants for a variety of projects. One grant request submitted in December for $299,158 was still pending at the end of 2023.

Staff from USGS and LCFWG install wells for monitoring the Vermilion River.

Grants received in 2023 helped carry out the following CFSA projects in Montana:

Vermillion River Restoration Projects 4-6 Survey and Design

The Lower Clark Fork Watershed Group (LCFWG) received a $25,000 grant from the Sanders County Resource Advisory Committee (RAC) to assist project partners with development and implementation of a monitoring system for restoration work planned for three reaches of the Vermilion River. The Sanders County RAC funding was used specifically for LIDAR and thermal infrared flights needed for the design of the project. The overall budget for the survey and design work, including the establishment of the monitoring network, was $302,625. Of this, the CFSA contributed $110,125. Other funding was provided through a $50,000 Planning Grant from Montana Department of Natural Resources and Conservation (DNRC) awarded in 2022; $60,000 cooperative matching funds from the U.S. Geological Survey; $25,000 matching funds from the U.S. Forest Service (USFS); and $32,500 in-kind match from the USFS Cabinet Ranger District. These funds will be leveraged to help secure additional grants, such as through the federal Inflation Reduction Act, that are devoted to aquatic habitat restoration.

Lower Clark Fork Watershed Group Projects

The LCFWG utilized grant funds to continue to expand its signature program: working with private landowners and other partners to improve riparian health and function in the Bull River watershed. A $30,000 grant from the Montana Fish, Wildlife & Parks (MFWP) Future Fisheries Improvement Program supported this work. The MFWP grant specifically funded the planting of native riparian vegetation along the banks of the Bull River, an important Bull Trout migration

corridor. The total project budget was $234,634. Of that, $67,502 were CFSA funds; $63,360 were from Montana Department of Environmental Quality (MDEQ) grant funds awarded in 2022; $56,960 were contributions from the Natural Resources Conservation Service (NRCS); $10,812 were from DNRC grants awarded in 2022; and $6,000 in volunteer labor from multiple sources, including Project Ascent, a local nonprofit. LCFWG also expanded its riparian revegetation efforts this year into the Beaver Creek watershed and received initial funding support for this start-up effort through a $5,000 grant from the Yellowstone to Yukon (Y2Y) Conservation Initiative (Y2Y), and a $7,000 grant from the Montana Watershed Coordination Council. Other funds for the Beaver Creek project, made possible through cooperation with a private landowner, came from the NRCS and MDEQ. Additionally, LCFWG received a $7,200 from the Montana Watershed Coordinating Council to help cover costs to employ a Big Sky Watershed Corps member in 2024 to conduct landowner outreach and field work. Two grant proposals for LCFWG re-vegetation work were not funded in 2023. These consisted of a $15,000 request to the Cinnabar Foundation and a $9,826 request to the Sanders County RAC. Funds would have been used to support LCFWG's riparian revegetation work in the Bull River and Beaver Creek watersheds in 2024.

Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs

A $40,000 grant was awarded to Sanders County from Montana's Aquatic Invasive Species for continuation of its Eurasian Watermilfoil (EWM) control program. The overall program budget was $107,500, which included control of EWM through herbicides, education and outreach; facilitation of the Sanders County Aquatic Plant Task Force; and administration of the program. Grant funds were used to fund the control measures, while $67,500 in CFSA funds contributed to control measures and managing the program.

Potential 2024 Lower Clark Fork Watershed Group Project Coordination

At the end of the year, a grant proposal submitted by LCFWG for $299,158 to the WaterSMART Cooperative Watershed Management Program, through the U. S. Bureau of Reclamation, was pending. If received, funds would be used over a 3-year period to develop shovel-ready projects focused on water quality and aquatic resiliency in key tributaries of the Lower Clark Fork watershed.

2023 GRANTS SUMMARY			
GRANTS RECEIVED IN 2023			
AMOUNT	**PROJECT**	**SPONSOR**	**FUNDER**
$30,000	Bull River Revegetation	LCFWG	MFWP Future Fisheries
$5,000	Beaver Creek Revegetation	LCFWG	Y2Y Partner Grant Program
$40,000	Sanders County EWM Program	Sanders County	Montana AIS Grant Program
$25,000	Vermilion River Planning	LCFWG	Sanders County RAC
$7,000	BCWC support/Beaver Creek	LCFWG	MT Watershed Coordinating Council
$7,200	BSWC Support for 2024	LCFWG	MT Watershed Coordinating Council
$114,200	TOTAL RECEIVED		
GRANTS PENDING AT YEAR'S END			
$299,158	LCF Project Planning	LCFWG	BOR Co-op Watershed Management
$299,158	TOTAL PENDING		
GRANTS NOT RECEIVED 2023			
$15,000	Bull R/Beaver Crk Revegetation	LCFWG	Cinnabar Foundation Challenge
$9,826	Bull River Revegetation	LCFWG	Sanders County RAC
$24,826	TOTAL NOT RECEIVED 2023		