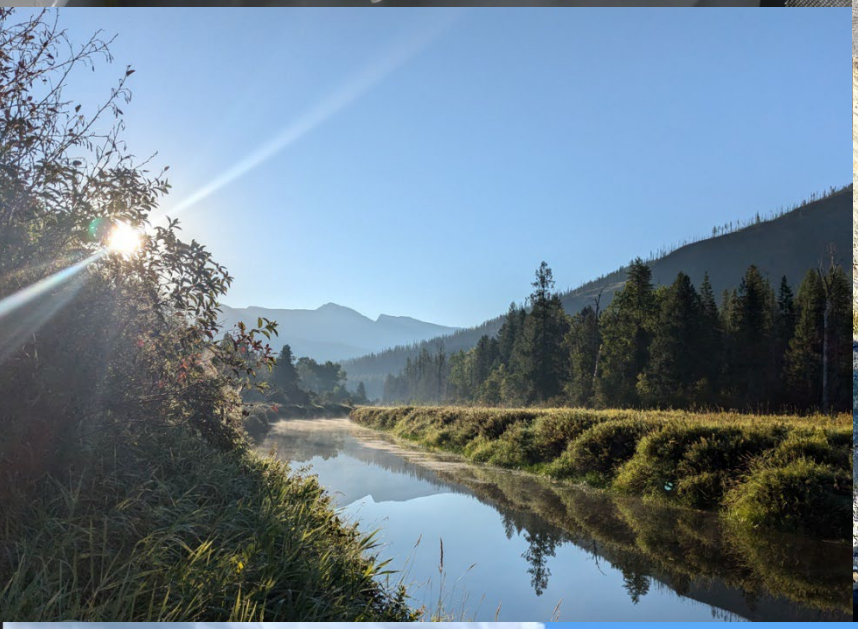
The Clark Fork Project
FERC Project No. 2058

2024 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 (AIP) for PM&E measures in a separate document on or before April 15.

In addition, the following 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.

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

This 2024 Annual Report documents the twenty-sixth consecutive year of implementation of the CFSA and twenty-fourth year of the License. In 2024, 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 2024.

Appendix F2 of the CFSA required three water quality monitoring events that were to be conducted on Noxon reservoir, triggered by specific environmental conditions. The purpose was to assess whether stratification in the reservoir would mobilize nutrients and heavy metals from the sediment. The monitoring was completed in 2023 and the final report provided to

stakeholders for review, satisfying the requirements of the PM&E measure. During the fall 2024 MC meeting there was consensus agreement that the Appendix F2, "Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals" obligation has been met for the term of the License. Further, Appendix F2 will be omitted from future AIPs and Annual Reports beginning in 2025.

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 2024 efforts.

Avista, through CFSA Appendix R, continued to work with Idaho and Montana State Historic Preservation offices, the U.S. Forest Service (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 2024, the Avista Cultural Resource Specialist and/or the CRMG reviewed 63 CFSA-related projects with proposed ground disturbance and/or projects related to the Noxon Rapids and Cabinet Gorge HEDs.

Cabinet Gorge Hatchery Ladder Trap including experimental elements for evaluating FRD performance.

Avista has utilized Passive Integrated Transponder (PIT) technology to monitor fish movement and evaluate performance of fish traps since 2001. In the last decade, investment in PIT monitoring systems expanded with the installation, and/or improvement, of 11 stations in western Montana and northern Idaho tributaries. In addition, PIT systems have been installed in the Cabinet Gorge Fish Passage Facility (CGFPF), in the Cabinet Gorge Hatchery (CGH) Ladder Trap approximately one mile downstream of Cabinet Gorge Dam, and submersible antennas are deployed throughout the lower Clark Fork River and tributaries. This PIT technology allows Avista and partners to evaluate fish movement by detecting tags implanted in fish. These PIT antennas emit an electromagnetic field that charges implanted tags in fish swimming through it, sending an identification code to a reader that transmits the code and time stamp to a cloud-based server. This detection data can be viewed remotely with browser-based software to track fish movement in real time.

Fish Retention Device.

The CGFPF PIT system and submersible antennas help evaluate the performance of the CGFPF which can help optimize that trap and in turn, catch more fish. The CGH Ladder Trap PIT system

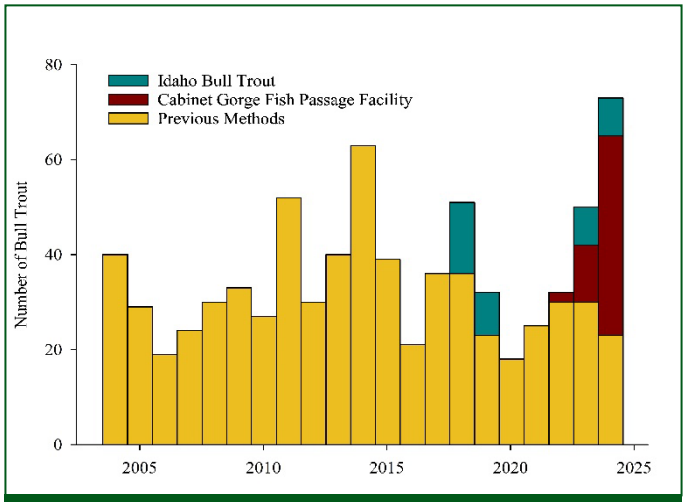
has improved the understanding of that trap's performance and more specifically the efficacy of a recently developed Fish Retention Device (FRD) that could further improve catch rates.

Research of FRDs has been ongoing since 2022, leading to a study in the CGH Ladder Trap in 2024. The goal of the study was to determine if a FRD could improve fish retention without precluding fish from entering the trap. A PIT system installed in the ladder, comprised of three antennas and a reader, evaluated the efficacy of the FRD. Preliminary results show that the FRD did not preclude fish from entrancing the trap and was 100% effective at retaining Bull Trout.

Adult Bull Trout being held at the Fish Handling Facility prior to transport.

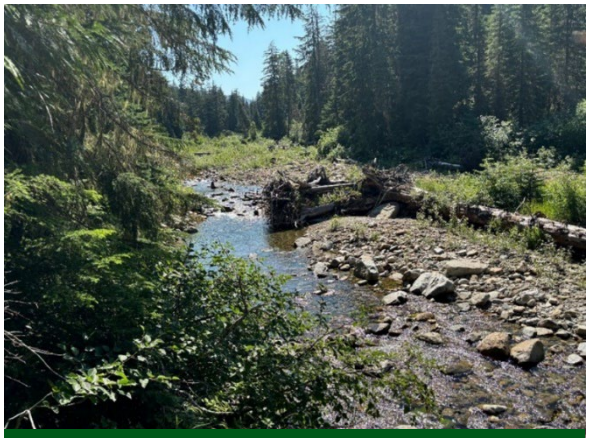
A total of 104 Montana origin adult Bull Trout were captured and/or detected downstream of Cabinet Gorge Dam in 2024. Eighty (77%) of these Montana-origin Bull Trout were captured in either the CGFPF ($N = 43$) or CGH Ladder Trap ($N = 37$). Sixty-five of these Bull Trout were transported upstream to Montana which is a new record for upstream transport. The previous record occurred in 2014 with 63 transports. Fourteen Montana-origin Bull Trout captured in the CGH Ladder Trap were released back into the river to help evaluate the performance of the CGFPF and one Bull Trout died a few days after capture.

Thirty-six of the 65 Montana-origin transports genetically assigned and were transported to Graves Creek, a tributary to Noxon Reservoir. This was a record number for Graves Creek upstream transport. Thirty of these 36 fish were previously captured as juveniles in Graves Creek, transported downstream, and were recaptured in 2024 while attempting to return upstream to spawn.



Yearly Bull Trout transport numbers including Bull Trout transported from the CGFPF, utilizing previous methods (Night Electrofishing, CGH Ladder Trap, Angling or Twin Creek Weir), and genetically assigning to Idaho tributaries that were transported to Montana.

Fourteen additional adult Bull Trout were captured downstream of Cabinet Gorge Dam and genetically assigned to tributaries in Idaho. Eight of these fish genetically assigned to Lightning Creek tributaries (Idaho tributaries located downstream of Cabinet Gorge Dam) and were transported to the East Fork Bull River, a tributary to Cabinet Gorge Reservoir, once the mouth of Lightning Creek became dry.

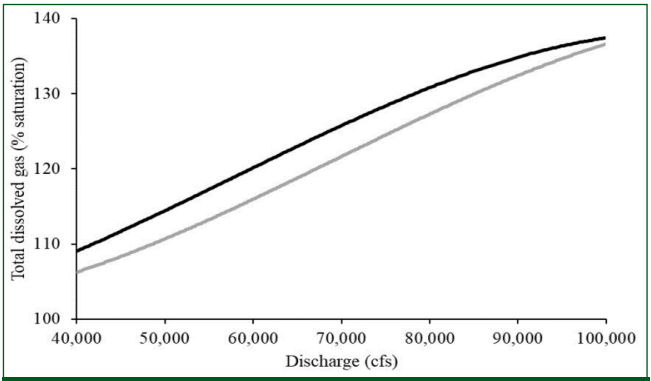


Rattle Creek before tree felling.

Rattle Creek after trees were felled into the channel.

In early July 2024, Avista, Idaho Department of Fish and Game (IDFG), and USFS personnel collected stream habitat data from Rattle Creek, a tributary to Lightning Creek. The purpose of this data is to serve as a baseline to evaluate how the stream channel changes over time. These changes are anticipated to result from the addition of more than 170 trees to the Rattle Creek stream channel by USFS sawyers later in July. The hope is that the addition of the trees will result in a more varied stream bottom, more pools, and increased surface water flow for native salmonid species and stream functionality. Stream habitat data is planned to be collected again in one year, three years, five years, and ten years and will be used along with LiDAR and aerial imagery to gain an understanding of the magnitude of the changes these trees make to the stream channel and how long the changes last. The results of this work will inform future stream restoration work in the Clark Fork River – Lake Pend Oreille basin.

In 2024, an analysis was performed to determine the relationship between total dissolved gas (TDG) and discharge at Cabinet Gorge Dam both prior to the modification of the spillway crests on Cabinet Gorge Dam and after. These relationships were then used to evaluate the anticipated observation of gas bubble disease (GBD) on fish in the lower Clark Fork River. The results indicated that TDG production is lower since modification with the discharge now being 7,000 cfs higher before 110% (the Idaho water quality criterion) and 120% saturation (the interim target used to evaluate the effectiveness of the modifications) are exceeded. In addition, the number of days each season with elevated TDG has decreased. A lack of pre-modification GBD data and varying operational conditions during years in which GBD data were collected limited our ability to perform a before and after analysis. However, because TDG production has been reduced in the lower Clark Fork River and higher TDG results in more GBD, it is likely that less



The relationship between total dissolved gas and discharge at Cabinet Gorge Dam during spill conditions before modification of the spillway crests (black line) and after (dark gray line).

GBD now occurs each spring. Overall, the results indicate that the modifications have resulted in improved conditions for fish downstream of Cabinet Gorge Dam during the spill season.

New infield dirt being added to the baseball field at Pilgrim Creek Park.

In 2023, Noxon High School approached Avista for help in creating a regulation baseball field for their new baseball team, set to debut in spring of 2024. The existing field at Pilgrim Creek Park was found to be substandard, with poor-quality infield dirt. Noxon Youth Baseball also raised concerns about the field's condition. The project required removing sod, adding a specialty dirt mix, grading, compacting, and rebuilding the pitching mound with clay and infield dirt mix. Avista bought 335 cubic yards of baseball field dirt from Polson, Montana. With help from baseball program volunteers, they completed field enhancements in March and April 2024. The upgrades were finished in time for Noxon High School's first spring game, allowing them to host several games at Pilgrim Creek Park during their inaugural season. These improvements also benefited Noxon Youth Baseball, enhancing the facility for Babe Ruth League players.

Noxon High School baseball team playing one of their first home games.

Increased angler interest in the upper Noxon Reservoir during early spring raised concerns about boat access at low water levels. A project under the Appendix B Montana Recreational Fishery Enhancement Program of the CFSA aimed to improve low-water access. Avista and MFWP planned to extend the Thompson Falls State Park boat ramp and resume periodic dredging at the Flat Iron Boat Ramp.

A concrete extension was added to the State Park ramp in 2021, followed by a steel extension in 2022. Dredging at Flat Iron, last done in 2015, required permits and sediment testing. Coordination with Avista staff allowed for sediment removal, and over 600 cubic yards were dredged on February 21, 2024. This project was funded by CFSA Appendix H, which will also support

Flat Iron Boat Ramp during dredging; February 2024.

Conceptual design options for the redevelopment of the North Shore Recreation Area.

model for future CFSA projects.

future low-water ramp extensions and dredging at Flat Iron.

In 2023, Avista and the USFS Cabinet Ranger District began discussing redevelopment and expansion of the North Shore Recreation Area due to limited parking, increased visitor numbers, and potential public safety issues. Key redevelopment items include expanding parking, relocating the swimming area, and repositioning the boat ramp for low water launch. In 2024, an engineering design firm was hired to create a site plan that meets the needs of all stakeholders.

Avista and USFS staff worked closely with design engineers during the conceptual design development, providing essential site information and key design features. By fall 2024, a site plan that meets current needs and allows for future expansion was developed. In 2025, Avista plans to complete due diligence, acquire the adjoining acreage needed for the expansion, and solicit bids for engineering drawings. This redevelopment will offer the public safe and reasonable access to the Noxon Reservoir, alleviate traffic at other boat launches, and serve as a

1.3 Acronyms and Abbreviations

AIP	Annual Implementation Plan
AIS	Aquatic Invasive Species
BNSF	Burlington Norther Santa Fe
CFSA	Clark Fork Settlement Agreement
CGDF *or* CGFPF	Cabinet Gorge Fish Passage Facility
CGH	Cabinet Gorge Hatchery
CRMG	Cultural Resources Management Group
EWM	Eurasian Watermilfoil
FRD	Fish Retention Device
FERC	Federal Energy Regulatory Commission
GBD	Gas Bubble Disease
GDP	Gross Domestic Product
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
NFWF	National Fish and Wildlife Foundation
NSRP	Native Salmonid Restoration Plan
PIT	passive integrated transponder
PM&E	protection, mitigation, and enhancement
PRWG	Priest River Watershed Group
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 2024, 23 of the 27 Parties of the CFSA had designated MC representatives. Representatives are verified bi-annually through the sign-in sheet distributed at each MC meeting. The 2024 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	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
Montana State Historic Preservation Office	Jessica Bush
Noxon-Cabinet Shoreline Coalition	Rick Robinson
Panhandle Chapter Trout Unlimited	Loren Albright
Rock Creek Alliance	Diane Williams
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 2024:

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 2024 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 60th and 61st meetings of this group since the signing of the CFSA. The first meeting of 2024 consisted of sending all members copies of the 2024 AIPs and holding a meeting on March 12, 2024. Through this process all 2024 AIPs were approved as presented by consensus. The MC also reviewed the 2023 Annual Report and approved the budget sheet.

The second meeting of the MC was held in-person on September 24, 2024 and provided updates on the implementation of the 2024 AIPs. The MC reviewed four 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 agreed by consensus that the Appendix F2 "Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals" obligation has been met for the term of the License and approved Appendix F2 to be omitted from future AIPs and Annual Reports, beginning in 2025. On September 25, 2024, MC members toured current and proposed CFSA project sites in Montana 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. The AIPs and project updates were provided to the MC and anyone that requested them.

2.3.1 2024 Consent Mails

Throughout 2024, 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:

- July 16, 2024 request for approval for additional funding for North Shore Expansion Due Diligence (CFSA Appendix H; approved on July 29, 2024)
- July 16, 2024 request for approval for Swan Creek Conservation Easement funding (CFSA Appendix K; approved on July 29, 2024)
- October 15, 2024 request for approval for Peterson Conservation Easement (CFSA Appendix K; approved on October 22, 2024)
- November 18, 2024 request for approval of Appendix B – Land Use of Lower Bull River Site Request (CFSA Appendix B; approved on December 2, 2024).

2.4 Key 2024 References

Avista. 2024. Consent Mail approval of Appendix H – Additional Funding for North Shore Expansion Due Diligence Project and Appendix K – Swan Creek Conservation Easement (July 29, 2024). Avista document identification number 2024-0231.

Avista. 2024. Consent Mail approval of Appendix K – Peterson Conservation Easement (October 22, 2024). Avista document identification number 2024-0232.

Avista. 2024. Consent Mail approval of Appendix B – Land Use of Lower Bull River Site Request (December 2, 2024). Avista document identification number 2024-0305.

Avista. 2024. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2024).

Avista. 2024. Clark Fork Settlement Agreement Management Committee Meeting Record from March 12, 2024. Avista document identification number 2024-0151.

Avista. 2024. Clark Fork Settlement Agreement Management Committee Meeting Record from September 24, 2024. Avista document identification number 2024-0311.

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 2024 representatives are listed below:

Avista	Eric Oldenburg
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	Joe Maroney

Kootenai Tribe of Idaho	Shawn Young/Nate Jensen
Lake Pend Oreille Idaho Club	David Gillespie
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 2024:

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

3.4 Meeting and Activity Summary

The WRTAC met twice in 2024, on January 16 and August 27. 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 16 meeting.

3.5 Key 2024 References

Avista. 2024. Water Resources Technical Advisory Committee Meeting Packet from January 16, 2024. Avista document identification number 2024-0173.

Avista. 2024. Water Resources Technical Advisory Committee Meeting Packet from August 27, 2024. Avista document identification number 2024-0280.

Avista. 2024. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2024).

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 2024 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
Kalispel Tribe	Kevin Lyons
Kootenai Tribe of Idaho	Scott Soults
Montana Bass Federation	Bob Beberg
Montana Department of Environmental Quality	Craig Jones

Montana Fish, Wildlife and Parks	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

The following parties to the CFSA did not designate TRTAC representatives in 2024:

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 2024, on January 17 and August 28. 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 2024 AIPs and provided recommendations for the MC. The August meeting consisted of project updates for the 2024 project plans.

4.5 Key 2024 References

Avista. 2024. Terrestrial Resources Technical Advisory Committee Meeting Packet from January 17, 2024. Avista document identification number. 2024-0172.

Avista. 2024. Terrestrial Resources Technical Advisory Committee Meeting Packet from August 28, 2024. Avista document identification number 2024-0281.

Avista. 2024. Public webpage for the Clark Fork Project. https://www.myavista.com/about-us/celebrate-our-rivers/federal-licensing (December 2024).

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 February 29, 2024, the CRMG held a hybrid meeting to discuss the 2024 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, 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 2024 Annual Implementation Plan Project Plan

- Clark Fork Heritage Resource Program
  - ***Completed per 2024 AIP*** [1,2]

5.3.1 Other 2024 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

- No significant variances to report.

5.4 Key 2024 References

[1] Johnson, L. 2024. Appendix R Clark Fork Heritage Resource Program. 2024 Annual Work Summary. Avista document identification number 2024-0323.

[2] Avista. 2023. CRMG Meeting Summary (Public Version) from March 2, 2023. Avista document identification number 2023-0305.

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 2024 Annual Implementation Plan Project Plans

Tributary Habitat Acquisition and Enhancement

- Habitat Restoration Scoping Allocation
  - ***Completed per 2024 AIP*** [1]
- Habitat Restoration and Acquired Property Maintenance and Monitoring Allocation
  - ***Completed per 2024 AIP*** [1, 2]
- Priority Native Salmonid Habitat Acquisition and Conservation Allocation
  - ***Completed per 2024 AIP*** [1]
- Idaho Field Station Operation and Maintenance
  - ***Completed per 2024 AIP*** [1]
- Pack River Watershed Management Plan Addendum
  - ***Variance*** [1]*; see Section 6.1.4*
- Trestle Creek Habitat Enhancement Project Phase I
  - ***Completed per 2024 AIP*** [1]
- Rattle Creek Habitat Enhancement Project
  - ***Variance*** [1, 3, 4]*; see Section 6.1.4*
- Grouse Creek Stream Channel Restoration Project
  - ***Variance*** [1]*; see Section 6.1.4*

Fishery Resource Monitoring, Enhancement, and Management

- Fish Resource Monitoring, Enhancement, and Management Plan
  - ***Variance*** [1, 5, 6, 7]*; see Section 6.1.4*

6.1.3 Other 2024 Activities

- No other activities to report.

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, 2024, due date. The new completion date for this document is November 1, 2025.
Rattle Creek Habitat Enhancement Project	The annual project update for 2024 was not produced and instead basic monitoring data was presented in the Annual Work Summary. This project is anticipated to be modified in 2025 so that field data are reported in the Annual Work Summary each year that data is collected. In addition, it is anticipated that a Comprehensive Project Report will be produced in 2030 (with project data for years 0–5) and a Project Completion Report in 2035 (for years 0–10).
Grouse Creek Stream Channel Restoration Project	The project was delayed one year due to lack of contractor availability in 2024. This resulted in a delay in permits being issued. A contractor has been selected and all aspects of the project have been rescheduled. Implementation of the project is anticipated in 2025 with all reporting dates adjusted accordingly.
Fish Resource Monitoring, Enhancement, and Management Plan	The Comprehensive Project Report summarizing 2009–2023 tributary monitoring data was not completed by the December 1, 2024, due date. The report is anticipated to be completed by December 1, 2025.

6.1.5 Key 2024 References

[1] Bouwens, K. 2024. Appendix A Idaho Tributary Habitat Acquisition and Fishery Enhancement Program. 2024 Annual Work Summary. Avista document identification number 2024-0317.

[2] Avista. 2024. Pesticide/Herbicide Application Summary for Clark Fork Project 2024. Avista document identification number 2024-0264.

[3] Kusnierz, P. 2024. Rattle Creek Wood Addition Project Habitat, aerial imagery, and LIDAR sampling: identification of parameters and use and habitat data collection protocols. Avista document identification number 2024-0222.

[4] RivHab. 2024. Rattle Creek Monitoring Report Bonner County, Idaho. Report to Avista and Idaho Department of Fish and Game. Avista document identification number 2024-0255.

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

[6] Birdsall, B. D. 2024. Idaho Tributary Monitoring. 2023 Annual Project Update. Avista document identification number 2024-0022.

[7] Jakubowski, R., B. Birdsall, and K. A. Bouwens. 2024. Pend Oreille Basin Bull Trout Redd Monitoring. 2023 Annual Project Update. Avista document identification number 2024-0074.

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 2024 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 2024 AIP*** [1, 4]
- Stream Gage Monitoring
  - ***Variance*** [1, 5, 6, 7, 8, 9, 10]*; see Section 6.2.4*
- Crow Creek Bull Trout Investigation
  - ***Variance*** [1]*; see Section 6.2.4*
- 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 2024 AIP*** [1]
- Prospect Creek Bull Trout Salvage Evaluation
  - ***Completed per 2024 AIP*** [1]
- Vermilion River Restoration Projects 4 - 6 Survey and Design
  - ***Variance*** [1, 11]*; 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
  - ***Variance*** [1, 3, 12]*; see Section 6.2.4*

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

- Lower Bull River Day Use Boat Access Site Operation
  - ***Completed per 2024 AIP*** [1, 13, 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 2024 AIP*** [1, 15]

- Dreissenid Mussel Sampling on Noxon and Cabinet Gorge Reservoirs
  - ***Completed per 2024 AIP*** [1, 16]

- Noxon Reservoir Bathymetry Update
  - ***Completed per 2024 AIP*** [1, 17]

- Lower Clark Fork River Pathogen Survey
  - ***Completed per 2024 AIP*** [1, 18]

6.2.3 Other 2024 Activities

- November 18, 2024 request for approval of Appendix B – Land Use of Lower Bull River Site Request (CFSA Appendix B; approved on December 2, 2024).
  - ***Completed per Consent Mail*** [1, 14]

6.2.4 Projects with Significant Variances

Project Plan	Variances
Habitat Restoration Monitoring and Native Salmonid Abundance Monitoring Plan	Monitoring did not occur in Lower Prospect Creek or Lower Vermilion River due to equipment malfunction; these sites will be sampled in 2025. In lieu of the above sampling, monitoring occurred in West Fork Pilgrim Creek, Demont Creek, Twenty-four Mile Creek, Glidden Gulch, Upper Prospect Creek, and Tuscor Creek.
Stream Gage Monitoring	The MC approved $10,903 for Stream Gage Monitoring in 2023. The U.S. Forest Service did not invoice Avista for this work during 2023 and the MC-approved dollars were not carried over in 2024. During 2024, Avista was billed for both the 2023 and 2024 work. As a result, 2024 expenditures for Stream Gage Monitoring appear to be $10,291 over budget. Note that Stream Gage Monitoring was a cost share with the Appendix C Annual Operations Fund; however, this is only being reported as a variance in this location.
Crow Creek Bull Trout Investigation	The Project Completion Report was not completed by MFWP in 2024. This report has been rescheduled to be completed by July 1, 2025.
Lower Clark Fork Watershed Group Project Coordination	The Lower Clark Fork Stream Restoration Summary 1995–2022 review draft and final report were not completed in 2024. It is anticipated that the report will be completed in 2025. There was a budget exceedance of $2,542 in 2024 for labor on the Lower Clark Fork Stream Restoration Summary 1995–2022. The GIS database/Google Earth file and/or an ArcGIS Story Map was not completed in 2024 due to the delay in completing the Lower Clark Fork Stream Restoration Summary. Due to the technical expertise required to produce these maps, this component will most likely be completed in 2026.
Habitat Restoration Monitoring, Maintenance, and Contingency Allocation	Weed removal did not occur in 2024 due to Kootenai National Forest task prioritization. Efforts to complete this task will continue in 2025.
Vermilion River Restoration Projects 4 - 6 Survey and Design	Tasks 2, 6, and 7 from the project plan were not fully completed. Design for Grouse Reach (Reach 4) has been completed. Design for 100 Ton (Reach 5) and Rocker Reach (Reach 6) were not completed and will not be completed through this project plan. This project plan is being closed and any future work will be proposed through future project plans or otherwise funded and implemented.

Project Plan	Variances
St. Paul Trailhead Improvement Project	The National Environmental Policy Act (NEPA) analysis was delayed from February to August 2024. Final designs and implementation were not completed and are anticipated to be complete in spring 2025.
Cabinet Gorge and Noxon Reservoir Fisheries Monitoring Plan	The Kid's Fishing Day at Thompson Falls State Park Pond was not held in 2024 due to low attendance in past years. Future use of this venue for hosting a Kid's Fishing Day is dependent on increased interest.
Mountain Lake Fisheries Monitoring Project	The Comprehensive Project Report was not completed by MFWP on December 31, 2024. This report will be finalized by December 31, 2025.
Noxon Reservoir Boat Ramp Improvements	The Thompson Falls State Park access gates were not installed in 2024, due to difficulty in procuring materials. Access gating will be installed in 2025. The state management plan addendum describing the need for gating was not completed in 2024 but is anticipated in the spring of 2025.

6.2.5 Key 2024 References

[1] Rehm, T. 2024. Appendix B Montana Tributary Habitat Acquisition and Recreational Fishery Enhancement Program. 2024 Annual Work Summary. Avista document identification number 2024-0326.

[2] Rehm, T., A. Mueller, and T. Tholl. 2024. Native salmonid abundance and tributary habitat restoration monitoring. 2023 Annual Project Update. Avista document identification number 2024-0196.

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

[4] Moran, S. 2024. Lower Clark Fork River, Montana – Avista Project Area – 2023 Annual Bull Trout and Brown Trout Redd Survey. 2023 Annual Project Update. Avista document identification number 2024-0136.

[5] USFS. 2024. Water - Temperature - Data Report, WY 2024, Bull River @ historic USGS Gaging Station – Noxon, Montana. Avista document identification number 2024-0271.

[6] USFS. 2024. Water - Temperature - Data Report, WY 2024, East Fork of the Bull River – Noxon, Montana. Avista document identification number 2024-0272.

[7] USFS. 2024. Water - Temperature - Data Report, WY 2024, Rock Creek at Hwy 200 – Noxon, Montana. Avista document identification number 2024-0273.

[8] USFS. 2024. Water - Sediment - Temperature - Data Report, WY 2024, Trout Creek at 214 bridge – Trout Creek, Montana. Avista document identification number 2024-0274.

[9] USFS. 2024. Water - Sediment - Temperature - Data Report, WY 2024, Vermilion River at red bridge – Trout Creek, Montana. Avista document identification number 2024-0275.

[10] USFS. 2024. Water - Temperature - Data Report, WY 2024, Graves Creek at Blue Slide Road – Thompson Falls, Montana. Avista document identification number 2024-0276.

[11] Neesvig, C. 2024. Vermilion River Restoration - Project #4 - Grouse Reach Existing and Design Planform Maps. Avista document identification number 2024-0296.

[12] Rehm, T., J. Blakney, and T. Tholl. 2024. Cabinet Gorge and Noxon Reservoir Fisheries Monitoring. 2023 Annual Project Update. Avista document identification number 2024-0020.

[13] Pinnacle Research and Consulting. 2024. 2024 Clark Fork Recreation Site Visitation Noxon Rapids and Cabinet Gorge Hydroelectric Projects. Avista document identification number 2024-0314.

[14] Avista. 2024. Consent Mail approval of Appendix B – Land Use of Lower Bull River Site Request (December 2, 2024). Avista document identification number 2024-0305.

[15] Clean Lakes Inc. 2024. 2024 Aquatic Invasive Species (AIS) Aquatic Pesticide Application Report (APAR). Avista document identification number 2024-0313.

[16] Kusnierz, P. 2024. 2024 Dreissenid Mussel Sampling on Noxon and Cabinet Gorge Reservoirs. Memorandum. Avista document identification number 2024-0212.

[17] Avista. 2024. Internal-use ReefMaster map; for more information on this map contact Eric Oldenburg (Eric.Oldenburg@avistacorp.com).

[18] Staigmiller, K. 2024. Fish Health Inspection Report. Avista document identification number 2024-0288.

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 2024 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 2024 AIP*** [1]
- 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]*; see Section 6.3.4*
- PIT-Monitoring Station Operation and Maintenance
  - ***Completed per 2024 AIP*** [1]
- Graves Creek Bull Trout Translocation Project
  - ***Variance*** [1]*; see Section 6.3.4*

Facilities

- Fish Capture Facilities Operation, Development, and Testing
  - ***Completed per 2024 AIP*** [1, 11, 12]
- Graves Creek Permanent Weir Trap Enhancements
  - ***Variance*** [1]*; see Section 6.3.4*

Cabinet Minor Modifications

- Cabinet Gorge Fish Passage Facility Minor Modifications
  - ***Completed per 2024 AIP*** [1]

6.3.3 Other 2024 Activities

- No other activities to report.

6.3.4 Projects with Significant Variances

Project Plan	Variances
Upstream Fish Passage Program	The CGFPF had three unforeseen shutdown events due to mechanical and/or structural issues. The U.S. Fish and Wildlife Service and FERC were notified of these events within the required timelines. The Annual Project Update for 2023 was due on December 1 but was not completed due to personnel efforts being focused on monitoring and evaluation of the CGFPF.
Native Salmonid Restoration Plan Five-Year Plan	The draft plan was not completed in time for MC review. The final plan deadline has been extended to November 1, 2025. Staff time charged to drafting the plan in 2024 exceeded the approved budget by $1,106. An additional $3,000 to complete the plan is included in the 2025 Project Plan.
Tributary Trapping and Downstream Juvenile Bull Trout Transport Program	The Comprehensive Project Report was not completed in 2024. Progress has been made on the report and it is anticipated to be completed in the summer of 2025 and includes the final Graves Creek Monitoring and Evaluation Plan report.
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 intentionally delayed until the MFWP investigation is completed.
Graves Creek Permanent Weir Trap Enhancements	Upon working with a travelling screen engineering firm, it was determined it would not be feasible to integrate a traveling screen into the trap box. The WRTAC agreed with this conclusion. The traveling screen component of the project was cancelled, and the overall project is now complete.

6.3.5 Key 2024 References

[1] Bernall, S. 2024. Appendix C Fish Passage/Native Salmonid Restoration Plan. 2024 Annual Work Summary. Avista document identification number 2024-0339.

[2] Adams, B., R. Headley, and J. VonBargen. 2024. Genetic Analysis of Native Salmonids from the Lake Pend Oreille and Clark Fork River System, Idaho and Montana. 2023 Annual Project Update. Avista document identification number 2024-0223.

[3] Sprague, L. 2024. Survey for Selected Fish Pathogens in the Lower Clark Fork River and Lake Pend Oreille in Idaho. 2023 Annual Project Update. Avista document identification number 2024-0109.

[4] Avista. 2024. Biological Opinion Condition 20 Report Regarding Bull Trout (June 25, 2024). FERC Submittal. Avista document identification number 2024-0121.

[5] Avista. 2024. Notification of Cabinet Gorge Fish Passage Facility May 5, 2024 Shutdown (June 4, 2024). FERC Submittal. Avista document identification number 2024-0105.

[6] Avista. 2024. Notification of Cabinet Gorge Dam Fish Passage Facility August 14, 2024 Shutdown (September 12, 2024). FERC Submittal. Avista document identification number 2024-0186.

[7] Avista. 2024. Notification of Cabinet Gorge Dam Fish Passage Facility September 20, 2024 Shutdown (October 15, 2024). FERC Submittal. Avista document identification number 2024-0209.

[8] Zumwalt, T. and S. Bernall. 2024. Cabinet Gorge Fish Passage Facility Monitoring and Evaluation Plan Year 1 Update. 2023 Annual Project Update. Avista document identification number 2024-0254

[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] Stang, D., M. Weiland, and P. Mugunthan. 2025. Cabinet Gorge Fish Passage Facility Hydraulic Evaluation. Project Completion Report. Avista document identification number 2025-0005.

[12] Stantec. 2024. Release and Settlement. Avista document identification number 2024-0291.

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 2024 Annual Implementation Plan Project Plans

- Idaho Bull Trout Protection and Education Officer Support
  - ***Completed per 2024 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
  - ***Completed per 2024 AIP*** [1]
- Trout Unlimited Bull Trout Education Outreach
  - ***Completed per 2024 AIP*** [1]
- Pend Oreille Water Festival
  - ***Completed per 2024 AIP*** [1]

6.4.3 Other 2024 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 2024. Provided internal MFWP review is completed, it is anticipated that this test will be available in 2025.

Project Plan	Variances
Montana Bull Trout Education Outreach Support	An "Anglers You're in Bull Trout Country" sign was not installed at the Highway 56 Bridge on the Bull River in 2024. The Highway Department has been contacted about permits required to install a sign, which is anticipated to be installed in 2025. The Kid's Fishing Day at Thompson Falls State Park Pond was not held in 2024 due to low attendance in past years. Future use of this venue for hosting a Kid's Fishing Day is dependent on increased interest.

6.4.5 Key 2024 References

[1] Moran, S. 2024. Appendix D Bull Trout Protection and Public Education Project. 2024 Annual Work Summary. Avista document identification number 2024-0324.

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 2024 Annual Implementation Plan Project Plans

- Pack River Watershed Council, Bonner Soil and Water Conservation District
  - ***Completed per 2024 AIP*** [1,2,3]

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

6.5.3 Other 2024 Activities

- No other activities to report.

6.5.4 Projects with Significant Variances

Project Plan	Variances
Lower Clark Fork Watershed Council Projects	Only one LCFWG member meeting was held in 2024 because of timing of field work and planning for other projects, which required significant stakeholder engagement.

6.5.5 Key 2024 References

[1] Moran, S. 2024. Appendix E Watershed Councils Program. 2024 Annual Work Summary. Avista document identification number 2024-0325.

[2] Pack River Watershed Council. 2024. The River Ranger. Volume 16, Issue 1. Avista document identification number 2024-0297.

[3] Erickson, J., and S. Garcia. 2024. Public webpage for the Pack River Watershed Council. www.bonnerswcd.org/pack-river-watershed-council (December 2024).

[4] Poiesz, S. 2024. Public webpage for the Lower Clark Fork Watershed Group www.lowerclarkforkwatershedgroup.org (December 2024).

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 2024 Annual Implementation Plan Project Plans

- Clark Fork River Water Quality Monitoring Program
  - ***Completed per 2024 AIP*** [1, 2, 3]

6.6.3 Other 2024 Activities

- No other activities to report.

6.6.4 Projects with Significant Variances

- No significant variances to report.

6.6.5 Key 2024 References

[1] Kusnierz, P. 2024. Appendix F1 Clark Fork River Water Quality Monitoring Program. 2024 Annual Work Summary. Avista document identification number 2024-0318.

[2] Osborne, L. 2024. Lower Clark Fork River Water Quality Monitoring Program field audit. Memorandum. Avista documentation identification number 2024-0197.

[3] Osborne, L. 2024. Estimate of 2023 nutrient loads from the Clark Fork River into Lake Pend Oreille. Memorandum. Avista documentation identification number 2024-0207.

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 2024 Annual Implementation Plan Project Plans

- Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals
  - ***Completed per 2024 AIP*** [1, 2, 3]

6.7.3 Other 2024 Activities

- September 24, 2024 MC meeting approval that the Appendix F2, "Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals" obligation has been met for the term of the License and for Appendix F2 to be omitted from future AIPs and Annual Reports beginning in 2025.
  - ***Completed*** [1, 3]

6.7.4 Projects with Significant Variances

- No significant variances to report.

6.7.5 Key 2024 References

[1] Kusnierz, P. 2024. Appendix F2 Monitoring of Noxon Reservoir Stratification and Mobilization of Sediment Nutrients/Metals. 2024 Annual Work Summary. Avista document identification number 2024-0320.

[2] HydroSolutions. 2024. Noxon Reservoir stratification and mobilization 2023 stratification sampling results. Comprehensive Project Report. Avista documentation identification number 2024-0208.

[3] Avista. 2024. Clark Fork Settlement Agreement Final Management Committee Meeting Record from September 24, 2024. Avista document identification number 2024-0311.

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 2024 Annual Implementation Plan Project Plans

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

6.8.3 Other 2024 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 by November 1, 2024. It is anticipated to be completed in 2025. The mercury data have not yet been incorporated into Montana's fish consumption guidelines. It is anticipated that this will be done in 2025 following the completion of the Comprehensive Project Report.

6.8.5 Key 2024 References

[1] Kusnierz, P. 2024. Appendix F3 Aquatic Organism Tissue Analysis. 2024 Annual Work Summary. Avista document identification number 2024-0319.

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 2024 Annual Implementation Plan Project Plans

- Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities
  - ***Completed per 2024 AIP*** [1, 2, 3, 4]

6.9.3 Other 2024 Activities

- No other activities to report.

6.9.4 Projects with Significant Variances

- No significant variances to report.

6.9.5 Key 2024 References

[1] Kusnierz, P. 2024. Appendix F4 Water Quality Protection and Monitoring Plan for Maintenance, Construction, and Emergency Activities. 2024 Annual Work Summary. Avista document identification number 2024-0321.

[2] Avista. 2024. Email exchange between Paul Kusnierz and Steve Lentini regarding compliance with the General Operating Limits in 2024. Avista document identification number 2024-0258.

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

[4] Avista. 2024. Designated contacts for notification purposes under the Water Quality Protection and Monitoring Plan (December 2024). Avista document identification number 2024-0287.

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 2024 Annual Implementation Plan Project Plans

Operations

- Operations
  - ***Completed per 2024 AIP*** [1, 2]

TDG Mitigation and Monitoring Program

- Total Dissolved Gas Monitoring
  - ***Completed per 2024 AIP*** [1, 2, 3]
- Project Scoping Allocation
  - ***Completed per 2024 AIP*** [1]
- Analysis of Gas Bubble Disease Monitoring Data
  - ***Completed per 2024 AIP*** [1]
- Mapping the Potential for Fish to Compensate for Total Dissolved Gas in the Lower Clark Fork River
  - ***Completed per 2024 AIP*** [1,4,5]
- Nutrient Level Impacts on Salmonid Populations in the Lower Clark Fork River
  - ***Completed per 2024 AIP*** [1, 6]
- Temperature Monitoring Data Compilation
  - ***Completed per 2024 AIP*** [1, 3]
- Trophic Monitoring in Lake Pend Oreille and Pend Oreille River Idaho
  - ***Variance*** [1, 7]*; see Section 6.10.4*
- Box Canyon Reservoir Northern Pike Suppression
  - ***Variance*** [1, 8]*; see Section 6.10.4*
- Lake Pend Oreille Walleye Angler Incentive Program
  - ***Completed per 2024 AIP*** [1, 9]

- Lake Pend Oreille/Clark Fork River Walleye Population Assessment
  - ***Completed per 2024 AIP*** [1, 9]

- Lake Pend Oreille Lake Trout Angler Incentive Program
  - ***Completed per 2024 AIP*** [1, 9]

- Lake Pend Oreille Lake Trout Netting Program
  - ***Completed per 2024 AIP*** [1, 9]

- Lake Pend Oreille Bull Trout Population Monitoring and Evaluation
  - ***Variance*** [1]*; see Section 6.10.4*

- Idaho Protection and Education Officer Support
  - ***Completed per 2024 AIP*** [1]

- Lake Pend Oreille Tributary PIT-Monitoring Station Operation and Maintenance
  - ***Completed per 2024 AIP*** [1, 3]

- Clark Fork River Population Monitoring
  - ***Variance*** [1, 3, 4, 5, 10]*; 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
  - ***Variance*** [1]*; see Section 6.10.4*

- Gas Supersaturation Control Program Total Dissolved Gas Abatement
  - ***Completed per 2024 AIP*** [1, 11, 12, 13]

6.10.3 Other 2024 Activities

- No other activities to report.

6.10.4 Projects with Significant Variances

Project Plan	Variances
Trophic Monitoring in Lake Pend Oreille and Pend Oreille River Idaho	The Idaho DEQ boat experienced mechanical problems as the summer season progressed resulting in only 8 of the 12 sites being sampled in September.
Box Canyon Reservoir Northern Pike Suppression	The Comprehensive Project Report 2012–2024 was completed in 2024 and included 2024 netting data; therefore, the Annual Project Update for 2024 was not required or produced.
Lake Pend Oreille Bull Trout Population Monitoring and Evaluation	The Comprehensive Project Report was not completed in 2024. It is anticipated to be completed by November 1, 2025.
Clark Fork River Population Monitoring	The Comprehensive Project Report was not completed in 2024. It is anticipated to be completed by November 1, 2025.
Lake Pend Oreille and Pend Oreille River Creel Survey	The Comprehensive Project Report was not completed in 2024. The Comprehensive Project Report is anticipated to be a chapter within a larger IDFG-produced report. It is anticipated to be completed by November 1, 2025.
Lower Clark Fork River Genetics Evaluation	The Comprehensive Project Report was not completed in 2024. Initial analysis spurred additional opportunities to understand which strains of Rainbow Trout are hybridizing with Westslope Cutthroat Trout and the reporting was delayed allowing this work to be completed. The Comprehensive Project Report is anticipated to be a chapter within a larger IDFG-produced report. It is anticipated to be completed by November 1, 2026.

6.10.5 Key 2024 References

[1] Bouwens, K., and P. Kusnierz. 2024. Appendix F5 Dissolved Gas Supersaturation Control, Mitigation, and Monitoring. 2024 Annual Work Summary. Avista document identification number 2024-0322.

[2] Kusnierz, P. 2024. Total Dissolved Gas Monitoring 2024 Cabinet Gorge and Noxon Rapids Dams. Memorandum to the Gas Supersaturation Subcommittee, September 11, 2024. Avista document identification number 2024-0182.

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

[4] Marschner, C., R. Zabrowksi, and J. McFall. 2024. Lower Clark Fork Hydraulic Model Refinement and Data Postprocessing. Memorandum. Avista document identification number 2024-0256.

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

[6] Kusnierz, P. C. 2024. Nutrient Level Effects on Salmonid Populations in the Lower Clark Fork River. Project Completion Report. Avista document identification number 2024-0130.

[7] Higens, T. 2024. Lake Pend Oreille Ten Year Trophic Trend Report. Avista document identification number 2024-0259.

[8] Harvey, S., and N. Bean. 2024. Box Canyon Reservoir Northern Pike Suppression Project 2012–2024. Comprehensive Project Report. Avista document identification number 2024-0265.

[9] Bouwens, K. A., J. Strait, E. Geisthardt, B. Birdsall, and R. Jakubowski. 2024. Lake Pend Oreille Predator Management Program. 2023 Annual Project Update. Avista document identification number 2024-0236.

[10] Woodruff, M. and B. Birdsall. 2024. Lower Clark Fork River Population Monitoring. 2023 Annual Project Update. Avista document identification number 2024-0097.

[11] Avista. 2024. Gas Supersaturation Subcommittee Meeting Notes from August 23, 2024. Avista document identification number 2024-0198.

[12] Kusnierz, P. C. 2024. Effects of Cabinet Gorge Dam Spillway Modification on Total Dissolved Gas and Gas Bubble Trauma in the Lower Clark Fork River. Project Completion Report. Avista document identification number 2024-0181.

[13] Kusnierz, P. C. 2024. Reducing Total Dissolved Gas and Gas Bubble Trauma in a Regulated River. Fishes 9:427. Avista document identification number 2024-0225.

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 2024 Annual Implementation Plan Project Plans

- Project Operations and Coordination
  - ***Completed per 2024 AIP*** [1, 2, 3, 4, 5, 6, 7, 8]

6.11.3 Other 2024 Activities

- No other activities to report.

6.11.4 Projects with Significant Variances

- No significant variances to report.

6.11.5 Key 2024 References

[1] Oldenburg, E. 2024. Appendix T Project Operations Package. 2024 Annual Work Summary. Avista document identification number 2024-0316.

[2] U.S. Geological Survey. 2024. National Water Information System. 12391950 Clark Fork River below Cabinet Gorge Dam ID. 2024. 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 2024).

[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. 2024. Email exchange between Paul Kusnierz and Steve Lentini regarding communication with the USACE at Albeni Falls in 2024. Avista document identification number 2024-0268.

[8] Avista. 2024. Email exchange between Paul Kusnierz and Steve Lentini regarding compliance with the General Operating Limits in 2024. Avista document identification number 2024-0258.

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 2024 Annual Implementation Plan Project Plans

- Administration of the LUMP
  - ***Variance*** [1,2,3,4,5,6,7]*; see Section 7.1.4*
- Monitoring Associated with the LUMP
  - ***Completed per 2024 AIP*** [1,2,5]
- Enforcement Associated with the LUMP
  - ***Variance*** [1,2]*; see Section 7.1.4*
- Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs
  - ***Completed per 2024 AIP*** [1,8]
- Noxon Rapids Dam Vicinity Hunting Restrictions
  - ***Variance*** [1,6]*; see Section 7.1.4*

7.1.3 Other 2024 Activities

- No other activities to report.

7.1.4 Projects with Significant Variances

Project Plan	Variances
Administration of the LUMP	The 5-year LUMP update was not completed in 2024 due to staff and schedule conflicts. The update will be completed in 2025. Recreation permit markers were ordered; however, due to staff and schedule conflicts, they were not installed. Markers will be installed in 2025.

Project Plan	Variances
Enforcement Associated with the LUMP	Monthly enforcement summaries are not feasible for IDFG staff to complete and were not completed in 2024. The timeline for these enforcement reports will be revised following discussions with IDFG ahead of 2025.
Noxon Rapids Dam Vicinity Hunting Restrictions	The enforcement agreement with MFWP was not amended to include enforcement of the Hunting Restrictions area. The Biennial Rule will be reissued in 2025 and will be updated to reflect enforcement of the weapons restriction. The Avista website has not been updated with information regarding the weapons restriction. This will be completed in 2025.

7.1.5 Key 2024 References

[1] Avista. 2024. Appendix G Land Use Management Plan. 2024 Annual Work Summary. Avista document identification number 2024-0327.

[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. 2024. Pesticide/Herbicide Application Summary for Clark Fork Project 2024. Avista document identification number 2024-0264.

[5] Avista. 2024. 2024 Recreation Permit Locations. Avista document identification number 2024-0285.

[6] Avista. 2024. Terrestrial Resources Technical Advisory Committee Meeting Packet from January 17, 2024. Avista document identification number 2024-0172.

[7] Avista. 2024. Terrestrial Resources Technical Advisory Committee Meeting Packet from August 28, 2024. Avista document identification number 2024-0281.

[8] Clean Lakes Inc. 2024. 2024 Aquatic Invasive Species (AIS) Aquatic Pesticide Application Report (APAR). Avista document identification number 2024-0313.

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 2024 Annual Implementation Plan Project Plans

Management Fund

- Administration and Resource Integration
  - ***Variance*** [1]*; see Section 7.2.4*
- Monitoring
  - ***Variance*** [1,2,3,4]*; see Section 7.2.4*
- Operation and Maintenance
  - ***Variance*** [1]*; see Section 7.2.4*
- Interpretation and Education
  - ***Completed per 2024 AIP*** [1]

Facility Fund

- Trout Creek Boat Launch Enhancements
  - ***Completed per 2024 AIP*** [1]
- Heron and Cabinet Gorge Fence Repairs
  - ***Completed per 2024 AIP*** [1]
- North Shore Expansion Due Diligence
  - ***Completed per 2024 AIP*** [1, 5, 6]
- Thompson Falls State Park Group Use Shelter
  - ***Variance*** [1]*; see Section 7.2.4*

- Supplemental Projects (Tier 2)
  - ***Completed per 2024 AIP*** [1]

7.2.3 Other 2024 Activities

- July 16, 2024 request for approval for additional funding for North Shore Expansion Due Diligence (CFSA Appendix H; approved on July 29, 2024)
  - ***Completed per Consent Mail*** [1, 5]

7.2.4 Projects with Significant Variances

Project Plan	Variances
Administration and Resource Integration	The RRMP 10-year Update was not completed in 2024 due to schedule constraints. The update will be completed in 2025.
Monitoring	Electronic site evaluations were not developed in 2024. The need for electronic site evaluation will be assessed as part of the RRMP update in 2025.
Operation and Maintenance	Dredging costs at the Flat Iron boat launch exceeded the MC-approved budget by $4,944. Costs associated with the management of MFWP sites (Thompson Falls State Park and Flat Iron boat launch) exceeded the MC-approved budget by $2,700.
Thompson Falls State Park Group Use Shelter	MFWP was not able to identify a local contractor to construct the shelter during 2024. If MFWP is able to secure a contractor, the project will be completed in 2025.

7.2.5 Key 2024 References

[1] Avista. 2024. Appendix H Implementation of the Recreation Resource Management Plan. 2024 Annual Work Summary. Avista document identification number 2024-0328.

[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. 2024. 2024 Clark Fork Recreation Site Visitation Noxon Rapids and Cabinet Gorge Hydroelectric Projects. Avista document identification number 2024-0314.

[4] Avista. 2024. 2024 Recreation Permit Locations. Avista document identification number 2024-0285.

[5] Avista. 2024. Consent Mail approval of Appendix H – Additional Funding for North Shore Expansion Due Diligence Project and Appendix K – Swan Creek Conservation Easement (July 29, 2024). Avista document identification number 2024-0231.

[6] MacKay-Sposito. 2024. North Shore Recreation Improvements Due Diligence Report. Avista document identification number 2024-0315.

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 2024 Annual Implementation Plan Project Plans

- Implementation of the Aesthetics Management Plan
  - ***Variance*** [1]*; see Section 7.3.4*

7.3.3 Other 2024 Activities

- No other activities to report.

7.3.4 Projects with Significant Variances

Project Plan	Variances
Implementation of the Aesthetics Management Plan	The Aesthetics Management Plan, 2023/2024 Addendum was not finalized in 2024. This plan will be finalized in 2025.

7.3.5 Key 2024 References

[1] Avista. 2024. Appendix I Implementation of the Aesthetics Management Plan. 2024 Annual Work Summary. Avista document identification number 2024-0329.

7.4 Development and 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 2024 Annual Implementation Plan Project Plans

- Implementation of the Wildlife, Botanical, and Wetland Management Plan
  - ***Completed per 2024 AIP*** [1,2,3]

7.4.3 Other 2024 Activities

- No other activities to report.

7.4.4 Projects with Significant Variances

- No significant variances to report.

7.4.5 Key 2024 References

[1] Avista. 2024. Appendix J Development and Implementation of the Wildlife, Botanical, and Wetland Management Plan. 2024 Annual Work Summary. Avista document identification number 2024-0330.

[2] Avista. 2024. Habitat protected through CFSA Activities 2000–2024. Avista document identification number 2024-0266.

[3] Avista. 2024. Clark Fork Settlement Agreement Management Committee Meeting Record from September 24, 2024. Avista document identification number 2024-0311.

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 2024 Annual Implementation Plan Project Plans

- Operation and Maintenance of Acquired Property and Contingency Fund
  - ***Completed per 2024 AIP*** [1]
- Habitat Acquisition and Conservation and Contingency Fund
  - ***Completed per 2024 AIP*** [1, 2, 3]
- Wood Duck Re-vegetation Maintenance
  - ***Variance*** [1]*; see Section 7.5.4*

7.5.3 Other 2024 Activities

- July 16, 2024 request for approval for Swan Creek Conservation Easement funding (CFSA Appendix K; approved on July 29, 2024)
  - ***Completed per Consent Mail*** [1, 2]
- October 15, 2024 request for approval for Peterson Conservation Easement (CFSA Appendix K; approved on October 22, 2024)
  - ***Completed per Consent Mail*** [1, 3]

7.5.4 Projects with Significant Variances

Project Plan	Variances
Wood Duck Re-vegetation Maintenance	The Wood Duck Re-vegetation Management Plan was not completed in 2024. The draft plan will be sent out for review to the Land Use Subgroup and others in 2025.

7.5.5 Key 2024 References

[1] Avista. 2024. Appendix K Wildlife Habitat Acquisition, Enhancement and Management Program. 2024 Annual Work Summary. Avista document identification number 2024-0331.

[2] Avista. 2024. Consent Mail approval of Appendix H – Additional Funding for North Shore Expansion Due Diligence Project and Appendix K – Swan Creek Conservation Easement (July 29, 2024). Avista document identification number 2024-0231.

[3] Avista. 2024. Consent Mail approval of Appendix K – Peterson Conservation Easement (October 22, 2024). Avista document identification 2024-0232.

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 2024 Annual Implementation Plan Project Plans

- Black Cottonwood Habitat Protection and Enhancement
  - ***Completed per 2024 AIP*** [1]

7.6.3 Other 2024 Activities

- No other activities to report.

7.6.4 Projects with Significant Variances

- No significant variances to report.

7.6.5 Key 2024 References

[1] Avista. 2024. Appendix L Black Cottonwood Protection and Enhancement. 2024 Annual Work Summary. Avista document identification number 2024-0332.

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 2024 Annual Implementation Plan Project Plans

- Wetlands Protection and Enhancement Program
  - ***Variance*** [1]*; see Section 7.7.4*

7.7.3 Other 2024 Activities

- No other activities to report.

7.7.4 Projects with Significant Variances

Project Plan	Variances
Wetlands Protection and Enhancement Program	The Twin Creek Recreation Area Vegetation and Wetland Management Plan was not completed in 2024. The management plan will be completed in 2025.

7.7.5 Key 2024 References

[1] Avista. 2024. Appendix M Wetland Protection and Enhancement Program. 2024 Annual Work Summary. Avista document identification number 2024-0333.

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 parcels of WWP land along the reservoirs. These have been identified as having significant wildlife habitat value. The goal is to maximize the wildlife habitat function and values of these parcels, and to protect them from land use and other activities or changes which might diminish those values.

7.8.2 2024 Annual Implementation Plan Project Plans

- South Fork Block Management Area Spotted Knapweed Treatment
  - ***Completed per 2024 AIP*** [1, 2]

- Tuscor Block Management Area Road Development
  - ***Variance*** [1]*; see Section 7.8.4*

7.8.3 Other 2024 Activities

- No other activities to report.

7.8.4 Projects with Significant Variances

Project Plan	Variances
Tuscor Block Management Area Road Development	To assist with future patrol efforts, Avista requested a site visit with the MFWP game warden and the contractor to assess the proposed road layout. Due to scheduling conflicts, this site visit did not occur in 2024. The site visit will take place in the spring of 2025 and all other associated task timelines have been adjusted accordingly.

7.8.5 Key 2024 References

[1] Avista. 2024. Appendix P Forest Habitat Protection and Enhancement. 2024 Annual Work Summary. Avista document identification number 2024-0334.

[2] Avista. 2024. Pesticide/Herbicide Application Summary for Clark Fork Project 2024. Avista document identification number 2024-0264.

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 2024 Annual Implementation Plan Project Plans

- Reservoir Island Protection
  - ***Completed per 2024 AIP*** [1]

7.9.3 Other 2024 Activities

- No other activities to report.

7.9.4 Projects with Significant Variances

- No significant variances to report.

7.9.5 Key 2024 References

[1] Avista. 2024. Appendix Q Reservoir Island Protection. 2024 Annual Work Summary. Avista document identification number 2024-0335.

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 and to develop informational materials and guidelines for the public. Resources of interest include important cultural or natural resources, and private or public property not covered by applicable easement.

7.10.2 2024 Annual Implementation Plan Project Plans

- Kirby Gulch Shoreline Stabilization
  - ***Completed per 2024 AIP*** [1]

Other 2024 Activities

- No other activities to report.

7.10.4 Projects with Significant Variances

- No significant variances to report.

7.10.5 Key 2024 References

[1] Avista. 2024. Appendix S Erosion Fund and Shoreline Stabilization Guidelines Program. 2024 Annual Work Summary. Avista document identification number 2024-0336.

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 2024 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 2024 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 2024 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 2024 was approved by the MC, including the USFWS. In 2024, 94 individual adult Bull Trout (≥300 mm in length) were captured downstream of Cabinet Gorge Dam. Seventy-seven of these individual fish required rapid-response genetic analysis while the other 17 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 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.

The established permanent fish tagging system (PIT) was utilized again in 2024 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 database, originally developed in 2000, was continually updated in 2024 to house information on all Bull Trout PIT tagged in the Project area. Data from 2024 PIT tagging events were recorded in the PIT database.

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 2024.

Fish Capture:
The CGFPF was operated again in 2024 to capture adult Bull Trout attempting to migrate upstream of Cabinet Gorge Dam. The CGFPF was operated from April 15 through October 18, with a few exceptions. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the U.S. Fish and Wildlife Service and other management agencies within 24 hours, as well as FERC within 30 days of the event. The first shutdown event occurred on May 5 and lasted one day, the second shutdown occurred on August 14 and lasted 6 days and the last event occurred on September 20 and lasted three days. Lower Clark Fork River flows did not exceed 52,000 cfs during the spring of 2024, so the CGFPF remained operational all season.

A number of warranty items were identified at the CGFPF and have either been addressed or will be addressed in the near future. In addition, Avista negotiated a settlement from the engineer of record to cover the cost of repairs and installation of new siphon pipe supports at the CGFPF in 2023 and 2024.

The CGFPF subgroup identified and approved funding for two minor modifications to the CGFPF in 2024. Additional funds were approved to cover unexpected costs for fabrication and installation of mounts for the camera system and funds were approved to cover the installation of an air bubble system in the Cabinet Gorge Dam Forebay to prevent ice buildup near the siphon intake structure. A contractor was hired to scope the feasibility of adding cold water to the CGFPF provided a cost estimate and conceptual design to present to stakeholders.

The hydraulic monitoring and design verification testing at the CGFPF that were envisioned during construction were completed in 2024. The first monitoring event occurred in early June during 35,000 cfs lower Clark Fork River flows and the second occurred in late August during 3,500 cfs lower Clark Fork River flows. A final report is expected in January 2025.

Ninety-four individual adult Bull Trout were captured downstream of Cabinet Gorge Dam in 2024. Forty-seven individuals were captured in the CGFPF (one of these adults genetically assigned to an Idaho tributary and was recaptured a second time in the CGFPF in 2024; four of the 47 genetically assigned to an Idaho tributary) and forty-nine were captured in the Cabinet Gorge Hatchery (CGH) ladder trap (Table 1). Two adult Bull Trout were captured in both the CGFPF and CGH ladder trap in 2024. One adult captured in the CGFPF that genetically assigned to a Montana tributary died of unknown causes at the Fish Handling Facility.

Table 1. Number of adult Bull Trout (≥300 mm in length) captured downstream of Cabinet Gorge Dam under the Upstream Fish Passage Program in 2024 (including recaptures between methods).

Method of Capture	Dates of Operation	Bull Trout Handling Events	Adult Bull Trout Transported
CGH Ladder Trap	July 25–October 18	49	31
CGFPF	April 15–October 18	47	42
	Total	96	73

The original plan for 2024 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 performance of the CGFPF. However, the CGFPF was shutdown for a few days in late September for maintenance and as it was close to the end of the spawning season, the CGFPF subgroup decided to start transporting Bull Trout that met the transport criteria upstream starting September 20. Data collected during 2024 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. A total of 104 Montana-origin Bull Trout were detected/captured downstream of Cabinet Gorge Dam in 2024. Seventy-four of these fish were detected on PIT antennas at the CGFPF and 33 (45%) of these fish were captured in the CGFPF. Eighty (77%) of the known 104 Montana-origin Bull Trout were captured in the CGFPF or CGH Ladder Trap.

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 2024 being the second 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 2024. The CGFPF subgroup met and decided the next step in deciding whether there is a need for fish passage at Noxon Rapids Dam is to compile information on known presence of Bull Trout below Noxon Rapids Dam. Avista personnel will work on compiling this information over the 2024-2025 winter season. Three submersible circular PIT antennas were deployed downstream of Noxon Rapids Dam from May 21 to November 1 to learn more about fish presence below Noxon Rapids Dam. Two Brown Trout (one originally tagged electrofishing in the Bull River and the other previously tagged at the Thompson Falls fish ladder trap), two Rainbow Trout (previously tagged at the Thompson Falls fish ladder trap), three Walleye (previously tagged during reservoir monitoring in Noxon Reservoir in 2019, 2020, and 2022), and four Westslope Cutthroat Trout (all upstream transports in 2024) were detected.

Fish Transport:
Seventy-three adult Bull Trout were transported to Montana based on either genetic assignment, previous capture history or criteria that includes the upstream transport of adult Bull Trout genetically assigning to Lightning Creek tributaries once the mouth of Lightning Creek is dry (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 2024 (not including within year recaptures). Table does not include the Bull Trout mortality that assigned to a Montana tributary.

Release Region	Adult Bull Trout
Lower Clark Fork River (Region 1)	20
Cabinet Gorge Reservoir (Region 2)	20
Noxon Reservoir (Region 3)	47
Thompson Falls Reservoir (Region 4)	6
Total	93

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 2023, which allowed for the upstream transport of Bull Trout in 2024. In 2024, 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 2025 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 2024 was reviewed and approved by the WRTAC 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 subgroup 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 2024 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 446 capture events of 446 individual juvenile (i.e., <300 mm) Bull Trout during 2024. A total of 379, 120–300 mm, Bull Trout were captured in Montana tributaries and transported to Idaho during 2024 (Table 3). An additional 62 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 five juvenile Bull Trout mortalities observed in 2024. The mortalities were caused by Brown Trout predation, cannibalism (two fish), injury likely sustained from a bird strike, and one fish went missing. 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 21 capture events of 21 individual adult Bull Trout in tributary traps during 2024. Twenty of these individuals were transported back to the lower Clark Fork River downstream of Cabinet Gorge Dam and one was a mortality. The cause of death for the lone mortality is unknown but believed to have been related to injuries sustained prior to being trapped.

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 2024.

Tributary	Method	Bull Trout Transported
Graves Creek	Permanent Weir	249
East Fork Bull River	Weir/Stream Electrofishing	99
Vermilion River	Stream Electrofishing	31
	Total	379

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 2024 was reviewed and approved by the WRTAC 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 subgroup 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 lower 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 2024 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 2024, 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 2024; 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 spill from high flow conditions, all eight gates were opened to one foot on May 16 meeting the FERC requirement for annual spillway gate operation tests. Full height gate tests did not occur in 2024; however, full height gate tests are required once every five years and the most recent tests occurred in 2023 for gates 1–8. At Cabinet Gorge Dam, gates 1–8 were opened to a height of one foot on June 12, meeting FERC annual gate operation testing requirements. Full height gate tests did not occur in 2024; 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 2024, 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 approximately one mile downstream of Cabinet Gorge Dam on March 12 and in the Cabinet Gorge Dam forebay on March 11. Both stations operated continuously during spill conditions and remained deployed until October 23.

Downstream of Noxon Rapids Dam, from May 16 to June 10 (the time period during which spill occurred at Noxon Rapids Dam), TDG in the Cabinet Gorge Dam Forebay had a mean of 102.9% saturation with a minimum of 100.3% and a maximum of 105.8%. Downstream of Cabinet Gorge Dam, from June 7 to June 19 (when most of the spill occurred at Cabinet Gorge Dam), TDG at the Downstream Cabinet Gorge station, had a mean of 104.4% saturation with a minimum of 102.0% and a maximum of 111.8%. TDG downstream of Cabinet Gorge Dam exceeded 110% saturation on 1 day (June 11).

No TDG-reducing modifications were made to Cabinet Gorge Dam in 2024. 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 2024 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, 2024.

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, 2023 through September 14, 2024.

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 2024 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 2024 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 2024, 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 2024, anglers turned in 1,992 Lake Trout (Table 4), which was less than the 2,677 turned in during 2023.

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 2024, seven 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 2024, the LPO Lake Trout Netting Program was implemented for the nineteenth year and removed 6,120 Lake Trout (Table 4). Since 2006, a combination of angling and netting has removed almost 280,000 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 2024 by collection method.

Collection Method	Lake Trout Harvested
Angling	1,992
Netting	6,120
Total	8,112

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 2024. 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 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 1,891 Walleye were removed in 2024 (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 2024, anglers turned in 3,239 Walleye (Table 5), similar to the number turned in during 2023.

Table 5. Walleye harvested and removed from LPO, Idaho in 2024 by collection method.

Collection Method	Walleye Harvested
Angling	3,239
Netting	1,891
Total	5,130

Box Canyon Reservoir Northern Pike Suppression:
Northern Pike 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 Northern Pike on Bull Trout increases the probability that entrained fish are collected and transported upstream of Albeni Falls Dam.

After being detected in 2004, the Northern Pike 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 Northern Pike within Box Canyon Reservoir. This suppression has been successful in significantly reducing the Northern Pike in Box Canyon Reservoir and efforts since 2015 have been focused on maintaining this greatly reduced Northern Pike population. The objective of Northern Pike suppression is to maintain the abundance of NP in Box Canyon Reservoir at or below the target of <1.73 Northern Pike /net night in the southern half of Box Canyon Reservoir and <0.5 Northern Pike /net night in the north as monitored in the annual Spring Pike Index Netting (SPIN) survey. Based on the 2024 SPIN results of a mean CPUE of 0.23 Northern Pike/net night in the core area that includes the southern half of the reservoir and all sloughs (target < 1.7), and no Northern Pike captured north of Riverbend (target < 0.5), the greatly reduced relative abundance of Northern Pike in the reservoir has been maintained 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 2024. 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 2024 began with the September 3 commencement of fish trapping in the lower East Fork Bull River under the Tributary Trapping and Downstream Juvenile Bull Trout Transport Program. In 2024, a total of 276 non-native salmonids were captured in all traps, with 236 Brown Trout (plus 23 mortalities), and 17 Brook Trout being transported and released in the lower Bull River. Excavation of Brown Trout redds to subsample eggs for genetic analysis occurred on November 18 and 20, 2024. Low streamflow and, for the most part, weir integrity at the traps helped to impede upstream access to spawning Brown Trout. Five redds were observed upstream of the weir trap that was disabled for eleven days between October 14 to November 26, which was the end of the trapping season. Eggs were collected from these redds, and genetic results are expected in the spring of 2025.

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).

The NSRP Five-Year Plan was to be updated again in 2023-2024 with input and approval from all stakeholders including the USFWS. During the initial meetings for 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). Internal review of the draft plan took longer than anticipated; therefore, the plan update was not completed in 2024. It is anticipated that the five-year plan will be completed in 2025. Additionally, all non-native fish management project plans are reviewed and approved by the WRTAC and the MC, including a representative from the USFWS. The USFWS also has a representative on the Aquatic Implementation Team, which is a subgroup 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 2024 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 2024, 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 WRTAC and MC. The Aquatic Implementation Team is a subgroup 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 2024 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 2024 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, and reintroducing large woody debris into Rattle Creek to enhance Bull Trout spawning and rearing conditions.

In Montana, efforts undertaken in 2024 included the continuation of riparian reforestation efforts along the Bull River and adjacent areas of the lower East Fork Bull River, and continuation of an extensive pre-construction survey to inform upcoming channel reconstruction projects in the Vermilion River, from which data was used to inform a design for the next reach of restoration that was finalized. 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. A design for the relocation of a trailhead, associated parking area and the removal of a vault toilet was initiated in 2024. This project is anticipated to be implemented in 2025 and will help protect a critical Bull Trout spawning area in the East Fork Bull River.

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 2024 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 2024 Idaho annual redd count table was provided, by email, to the USFWS from IDFG on October 24, 2024. Bull Trout redd numbers were greater than observed in 2023, but still below the 10-year and 20-year mean values. The 2024 Montana annual redd count report is being finalized and will be submitted to the USFWS in early 2025.

Thirty-two electrofishing surveys were conducted on tributaries to LPO and the Clark Fork River in 2024. Bull Trout juveniles were sampled in Grouse, Rattle, Granite, Gold, Caribou, Trestle, and Strong creeks. Bull Trout x Brook Trout hybrid juveniles were sampled in Grouse and Granite creeks.

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 through 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 2024, most of the work consisted of data analysis (i.e., age and length at maturity, migration timing, diet composition, and population demographics). 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 nineteenth season of a large-scale spring and fall netting operation on LPO in 2024. 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 2024. 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 2024, 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 2025 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 1,367 Bull Trout capture events during implementation of CFSA Appendix F5 LPO Lake Trout Netting in 2024, which includes 289 mortalities, and is covered under a separate Section 6 Agreement between the USFWS and IDFG. The LPO Angler Incentive programs reported four Bull Trout mortalities that were misidentified and submitted for payments as putative Lake Trout. There were 27 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 seven incidental Bull Trout mortalities. There were six Bull Trout handling events during work on the lower Clark Fork River under Appendix F5 Clark Fork River Population Monitoring with no incidental Bull Trout mortalities. These events 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 2024.

Bull Trout "take" numbers for CFSA appendices A and 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 452 Bull Trout captured under Appendix A, and none were recaptured in 2024. Appendix B project implementation resulted in the intentional take of 177 unique Bull Trout. A total of 540 unique Bull Trout were handled during CFSA Appendix C program implementation. Twenty were adult

Bull Trout transported upstream of Cabinet Gorge Dam in 2024 and later captured in the Graves Creek permanent weir trap.

Table 6. Bull Trout take and mortalities reported in 2024 along with proposed intentional take for 2025.

CFSA Program	Capture Events	Unique Bull Trout	Bull Trout Mortalities	Proposed 2025 Bull Trout Take
Appendix A	452	452	0	600
Appendix B	177	177	1	350
Appendix C	595	540	6	1,300
Total	1,224	1,169	7	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 WRTAC, 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 2024 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 6 occasions during 2024. The first report was submitted to the USFWS on May 29, 2024. This report pertained to an adult Bull Trout mortality that occurred at the Fish Handling Facility. This event was investigated and no cause of death was determined.

The second report was submitted to the USFWS on September 5, 2024 and pertained to an adult Bull Trout recovered from the East Fork Bull River upper south channel weir trap. The fish was an upstream transport to the East Fork Bull River on August 30 and appeared to have suffered several lacerations somewhere upstream of the trap and passively drifted into the trap. The third report was submitted to the USFWS on September 6, 2024 pertaining to a juvenile Bull Trout that was recovered from the East Fork Bull River weir trap as a mortality. This individual appeared to have received a lethal injury from a bird strike. The next report was submitted on September 26, 2024 and pertained to a juvenile Bull Trout that was regurgitated by an adult Brown Trout. The next report was submitted on October 1, 2024 pertaining to a juvenile Bull Trout that went missing following capture. The final report was submitted on October 31 pertaining to two age-0 Bull Trout that were cannibalized by older juvenile Bull Trout in the holding bucket during East Fork Bull River stream electrofishing.

Other Bull Trout mortalities encountered in 2024 included two post-spawn adults and a juvenile observed during a Graves Creek redd survey. In addition, a putative Bull Trout skin was observed during an East Fork Bull River redd survey. A post-spawn Bull Trout mortality was also observed during a redd survey of Gold Creek in Idaho.

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 2024 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 15 through October 18, 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 May 5 and lasted one day, the second shutdown occurred on August 14 and lasted 6 days and the last event occurred on September 20 and lasted three days.

8.1.3 Key 2024 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 2024 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 2024 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.

2024 Activities Associated with Prescription 1

Cabinet Gorge Fish Passage Facility:
The CGFPF was operated again in 2024 to capture adult Bull Trout attempting to migrate upstream of Cabinet Gorge Dam. The CGFPF was operated from April 15 through October 18, with a few exceptions. Several mechanical and structural issues resulted in three short-term shutdowns, all of which were reported to the U.S. Fish and Wildlife Service and other management agencies within 24 hours, as well as FERC within 30 days of the event. The first shutdown event occurred on May 5 and lasted one day, the second shutdown occurred on August 14 and lasted 6 days and the last event occurred on September 20 and lasted three days. Lower Clark Fork River flows did not exceed 52,000 cfs during the spring of 2024, so the CGFPF remained operational all season.

A number of warranty items were identified at the CGFPF and have either been addressed or will be addressed in the near future. Items that were addressed include installation of new position indicators for entrance gates 2 and 3; servicing the brail gear box; repair of entrance gate PIT antennas; installation of a new level transducer in the entrance pool; and repair and installation of new siphon pipe supports. Items that have not been addressed include issues with the magnetic reed switches on the ISI intake screens; continued concern with water getting in the brail crowder gear box; repair of dissipation valve position indicators; hydraulic power unit system concerns; and hydraulic lines and tee fittings sizing concerns. In addition, Avista negotiated a settlement from the engineer of record to cover the cost of repairs and installation of new siphon pipe supports at the CGFPF in 2023 and 2024.

The CGFPF subgroup identified and approved funding for two minor modifications to the CGFPF in 2024. Additional funds were approved to cover unexpected costs for fabrication and installation of mounts for the camera system and funds were approved to cover the installation of an air bubble system in the Cabinet Gorge Dam Forebay to prevent ice buildup near the siphon intake structure. The contractor hired to scope the feasibility of adding cold water to the CGFPF provided a cost estimate and conceptual design to present to stakeholders.

The hydraulic monitoring and design verification testing at the CGFPF that were envisioned during construction were completed in 2024. The first monitoring event occurred in early June during 35,000 cfs lower Clark Fork River flows and the second occurred in late August during 3,500 cfs lower Clark Fork River flows.

Ninety-four individual adult Bull Trout were captured downstream of Cabinet Gorge Dam in 2024 (Table 1). Forty-seven individuals were captured in the CGFPF (one of these adults genetically assigned to an Idaho tributary and was recaptured a second time in the CGFPF in 2024) and forty-nine were captured in the Cabinet Gorge Hatchery (CGH) ladder trap. Two adult Bull Trout were captured in both the CGFPF and CGH ladder trap in 2024. One adult captured in the CGFPF that genetically assigned to a Montana tributary died of unknown causes at the Fish Handling Facility.

Adult Bull Trout Capture, Transport and Detection:

Seventy-three adult Bull Trout were transported to Montana based on either genetic assignment, previous capture history or criteria that includes the upstream transport of adult Bull Trout genetically assigning to Lightning Creek tributaries once the mouth of Lightning Creek is dry. Twenty adult Bull Trout were transported to the East Fork Bull River (including eight fish that genetically assigned to Lightning Creek tributaries). Forty-seven Bull Trout were transported to Region 3, including one released in Swamp Creek, 10 released in the Vermilion River and 36 released in Graves Creek. Six Bull Trout were transported to Region 4 of which two were released in Fishtrap Creek and four were released in the Thompson River (two of which genetically assigned to Fishtrap Creek).

The original plan for 2024 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 performance of the CGFPF. However, the CGFPF was shutdown for a few days in late September for maintenance and as it was close to the end of the spawning season, the CGFPF subgroup decided to start transporting Bull Trout that met the transport criteria upstream starting September 20.

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. A total of 104 Montana origin Bull Trout were detected/captured downstream of Cabinet Gorge Dam in 2024. Seventy-four of these fish were detected on PIT antennas at the CGFPF and 33 (45%) of these fish were captured in the CGFPF. Eighty (77%) of the known 104 Montana-origin Bull Trout were captured in the CGFPF or CGH Ladder Trap. Results of the CGFPF M&E Plan will be compiled in the near future and used to inform operation of the CGFPF in future years.

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 tenth year Westslope Cutthroat Trout were captured downstream of Cabinet Gorge Dam and transported upstream to Cabinet Gorge Reservoir. The CGFPF was utilized to capture 31 fish for upstream transport. Fish were transported upstream from mid-April through mid-June and were released near Bull River Bay in Cabinet Gorge Reservoir. Eleven fish were detected entering the Bull River drainage during the spring spawning time period and four were detected on PIT antennas below Noxon Rapids Dam.

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 2025. Preliminary results from the first two years of analysis have shown successful reproductive of

Westslope Cutthroat Trout transported upstream of Cabinet Gorge Dam over multiple years.

Noxon Rapids Dam Permanent Fishway:
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 2024 being the second 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 2024. The CGFPF subgroup met and decided the next step in deciding whether there is a need for fish passage at Noxon Rapids Dam is to compile information on known presence of Bull Trout below Noxon Rapids Dam. Avista personnel will work on compiling this information over the 2024-2025 winter season. Three submersible circular PIT antennas were deployed downstream of Noxon Rapids Dam from May 21 to November 1 to learn more about fish presence below Noxon Rapids Dam. Two Brown Trout (one originally tagged electrofishing in the Bull River and the other previously tagged at the Thompson Falls fish ladder trap), two Rainbow Trout (previously tagged at the Thompson Falls fish ladder trap), three Walleye (previously tagged during reservoir monitoring in Noxon Reservoir in 2019, 2020, and 2022) and four Westslope Cutthroat Trout (all upstream transports in 2024) were detected.

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 2024 was conducted from March 25 through June 28 and September 3 through November 27 in Graves Creek. The East Fork Bull River was trapped from September 3 through November 26. East Fork Bull River stream electrofishing was conducted during four full days and two half days from October 16 through November 5. Vermilion River electrofishing occurred on eight days from October 23 through November 12.

There were a total of 446 capture events of 446 individual juvenile (i.e., <300 mm) Bull Trout during 2024. A total of 379, 120–300 mm, Bull Trout were captured in Montana tributaries and transported to Idaho during 2024. An additional 62 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 five juvenile Bull Trout mortalities observed in 2024. The mortalities were caused by Brown Trout predation, cannibalism (two fish), injury likely sustained from a bird strike, and one fish went missing. 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 21 capture events of 21 individual adult Bull Trout in tributary traps during 2024. Twenty of these individuals were transported back to the Clark Fork River downstream of Cabinet Gorge Dam and one was a mortality. The cause of dead for the lone mortality is unknown but believed to have been related to injuries sustained prior to being trapped.

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 2024.

Tributary	Method	Bull Trout Transported
Graves Creek	Permanent Weir	249
East Fork Bull River	Weir/Stream Electrofishing	99
Vermilion River	Stream Electrofishing	31
	Total	379

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.

2024 Activities Associated with Prescription 2

Avista continued to provide safe, timely, and efficient fish passage in 2024, 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 2024, 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 2024. 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 2024 References

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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.

Moran, S. 2024. Lower Clark Fork River, Montana – Avista Project Area – 2023 Annual Bull Trout and Brown Trout Redd Survey. 2023 Annual Project Update. Avista document identification number 2024-0136.

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

Zumwalt, T. and S. Bernall. 2024. Cabinet Gorge Fish Passage Facility Monitoring and Evaluation Plan Year 1 Update. 2023 Annual Project Update. Avista document identification number 2024-0254.

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 2024 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 2024 Activity Table

License Article Number	License Article Description	2024 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 2024, 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 2024.

8.3.3 Key 2024 References

Avista. 2024. Avista Property Use Permits, 2024. Avista document identification number 2024-0340.

Section 9: FERC Submittals and Actions

9.1 Purpose

The purpose of this section is to provide a succinct record of the 2024 submittals under the Clark Fork License No. 2058 and any items requiring FERC action through December 31, 2024. The FERC-related activities for 2024 (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 2024, FERC activities related to the Clark Fork Project included the following:

- Avista's April 12, 2024 submittal of the 2023 Clark Fork Annual Report and the 2024 Clark Fork Annual Implementation Plans.
- Avista's June 4, 2024 letter regarding the Notification of Cabinet Gorge Dam Fish Passage Facility May 5, 2024 Shutdown.
- Avista's June 25, 2024 submittal of a Biological Opinion Condition 20 Report regarding one Bull Trout mortality on May 29, 2024.
- Avista's September 12, 2024 letter regarding the Notification of Cabinet Gorge Dam Fish Passage Facility August 14, 2024 Shutdown.
- Avista's October 3, 2024 submittal of a Biological Opinion Condition 20 Report regarding three Bull Trout mortalities for September 2024.
- Avista's October 15, 2024 letter regarding the Notification of Cabinet Gorge Dam Fish Passage Facility September 20, 2024 Shutdown.
- Avista's October 29, 2024 submittal of a Biological Opinion Condition 20 Report regarding three Bull Trout mortalities on October 1, 2024.
- Avista's November 26, 2024 submittal of a Biological Opinion Condition 20 Report regarding one Bull Trout mortality on October 31, 2024.

9.3 Key 2024 References

Avista. 2024. 2023 Clark Fork Annual Report and 2024 Clark Fork Annual Implementation Plans (April 12, 2024). FERC Submittal. Avista document identification number 2024-0065.

Avista. 2024. Notification of Cabinet Gorge Fish Passage Facility May 5, 2024 Shutdown (June 4, 2024). FERC Submittal. Avista document identification number 2024-0105.

Avista. 2024. Biological Opinion Condition 20 Report Regarding Bull Trout (June 25, 2024). FERC Submittal. Avista document identification number 2024-0121.

Avista. 2024. Notification of Cabinet Gorge Dam Fish Passage Facility August 14, 2024 Shutdown (September 12, 2024). FERC Submittal. Avista document identification number 2024-0186.

Avista. 2024. Biological Opinion Condition 20 Report Regarding Bull Trout (October 3, 2024). FERC Submittal. Avista document identification number 2024-0201.

Avista. 2024. Notification of Cabinet Gorge Dam Fish Passage Facility September 20, 2024 Shutdown (October 15, 2024). FERC Submittal. Avista document identification number 2024-0209.

Avista. 2024. Biological Opinion Condition 20 Report Regarding Bull Trout (October 29, 2024). FERC Submittal. Avista document identification number 2024-0216.

Avista. 2024. Biological Opinion Condition 20 Report Regarding Bull Trout (November 26, 2024). FERC Submittal. Avista document identification number 2024-0243.

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, 2024. 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 no activities in 2024.

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

Article Number	Description	Date Amended or Clarified
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 was one activity in 2024.

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 F2	Obligation Fulfilled	09/25/2024
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 2024 calendar year (i.e., January through December). The MC-approved activity year is from April through March; therefore, the following budget spreadsheet summary includes the fourth quarter of 2023 approved activities and the first through third quarters of the 2024 approved activities.

The "2023 Carryover Funding w/INT" column in the budget spreadsheet shows funding obligations carried over from 2023 (4.82% interest). Total carryover was $14,872,448. Note that this differs from the 2023 carryover dollars that were reported in the 2023 annual budget report. In 2023, unallowable overhead costs were included in the expenditures and the interest rate percentage was incorrectly calculated. Also, appendices L and M had historical errors in the funding schedule starting in years eight and nine, respectively. The aforementioned mistakes resulted in under reporting available carryover by $564,911 in 2023 which has been corrected in this report.

The "2024 Contribution w/GDP" column, totaling $5,749,825, details Avista's annual funding obligation per Appendix U (Funding Summary Table) of the CFSA plus an additional $151,179 "GDP" (Gross Domestic Product) escalation for inflation (3.24%) under terms of Paragraph 23 of the CFSA.

The "Total Funding Obligation" column is the sum of the "2023 Carryover Funding" column and the "2024 Contribution w/GDP" column. For 2024, the "Total Funding Obligation" was $19,729,220. Note 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 "2024 Annual Implementation Plan Budget" column, totaling $7,186,760, 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 2024 AIP budgets were more or less than the actual 2024 "Total Funding Obligations".

The "Total 2024 Expenditures" column shows expenditures for each of the PM&E measures, totaling $3,558,488.

The "Unspent Dollars" column shows the amount of unspent dollars for certain annual funding obligations totaling $17,083,711. 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 contributions to date.

Under terms of Paragraph 23 of the CFSA, the Treasury constant maturity 1-year, (4.190% for 2024) is added to the unspent dollars noted as "Fund" or "Budgeted" and equates to an additional $539,407. The final column on the spreadsheet is the "2024 Carryover Funding w/INT". Total 2024 end-of-year carryover, plus interest, is $17,308,810.

Avista CFSA Annual Budget Report 2024
Year Twenty-Six of CFSA

App.	PM&E Funds	2023 Carryover Funding w/INT	Notes	Fund	2024 Contribution w/GDP	Total Funding Obligation	2024 Annual Implementation Plan Budget	Budget Additions	Total 2024 Expenditures	Expenditure Notes	Unspent Dollars	2024 Carryover Funding w/INT
A	ID Trib. Habitat, Acquisition & Fishery Enhance Prgm											
	Tributary Habitat Acquisition & Enhancement	$2,000,530	1,3	Fund	$682,463	$2,682,993	$592,212		$299,084	1	$2,383,910	$2,445,801
	Fishery Resource Monitoring, Enhancement & Mgmt	$0	3	Budgeted	$58,924	$58,924	$122,000		$95,391		-$36,467	$0
B	MT Trib. Habitat Acquisition & Rec. Fish Enhance Prgm											
	Tributary Habitat Acquisition & Enhancement	$2,804,330	1	Fund	$486,256	$3,290,586	$318,303		$115,621		$3,174,965	$3,307,996
	Recreational Fishery Enhancement	$1,674,276	1	Fund	$324,168	$1,998,444	$216,551		$76,903		$1,921,541	$2,002,054
C	Fish Passage/Native Salmonid Restoration Plan											
	Annual Operations	$1,398,019	1	Budgeted	$940,092	$2,338,111	$1,985,106		$1,065,520		$1,272,590	$1,325,912
	Facilities	-$39,259,217	1,4	Fund	$682,466	-$38,576,751	$316,067		$198,126	2	-$38,774,877	-$40,399,545
	Cabinet Minor Modifications	$897,505	1,5	Other		$897,505	$458,728		$34,323		$863,182	$863,182
D	Bull Trout Protection & Public Education Project	$241,186	1	Budgeted	$210,428	$451,614	$240,790		$131,163		$320,451	$333,878
E	Watershed Council Program	$20,000	6	Budgeted	$16,834	$36,834	$16,370		$16,086		$20,747	$20,000
F1	Clark Fork River Water Quality Monitoring Program											
	Annual Monitoring	$23,130	1,2	Budgeted	$25,253	$48,383	$44,000		$32,791		$15,592	$16,245
	5yr intensive monitoring	$10,000	1,7	Periodic		$10,000			$0		$10,000	$10,000
F2	Noxon Res Stratification & Sediment Nutrient/Metals			Estimated			$38,253		$15,276		$22,977	
F3	Aquatic Organism Tissue Analysis	$11,920	7	Periodic		$11,920	$6,920		$0		$11,920	$0
F4	Water Quality Protection & Monitoring Plan		8									
F5	Dissolved Gas Supersaturation Control, Mit. & Mon.											
	Section 3.1 Funding	$638,973	1,2	Fund	$691,385	$1,330,358	$1,306,998		$1,056,613	3	$273,745	$285,215
	Section 3.2 Funding	$1,865,224	9	Other	$932,612	$2,797,836	$247,980		$0		$2,797,836	$2,797,836
G	Land Use Management Plan (LUMP)			Estimated			$203,800		$137,978		$65,822	
H	Recreation Resource Mgmt Plan (RRMP)											
	Management Fund			Estimated			$398,800		$283,638		$115,162	
	Facilities Fund	$568,677	1	Fund	$260,273	$828,950	$457,065	1	$101,628		$727,321	$757,796
I	Aesthetics Management Plan			Estimated			$12,000		$235		$11,765	
J	Wildlife, Botanical, & Wetland Management Plan			Estimated			$5,000		$0		$5,000	
K	Wildlife Habitat Acquisition, Enhancement, & Mgmt	$1,518,740	1	Fund	$339,048	$1,857,788	$171,522	2, 3	$49,404		$1,808,384	$1,884,155
L	Black Cottonwood Habitat Protection & Enhancement	$90,362	1,15	Budgeted	$4,831	$95,193	$15,000		$0		$95,193	$99,181
M	Wetlands Protection & Enhancement Program	$682,779	1,16	Budgeted	$31,413	$714,192	$13,000		$2,094		$712,098	$741,934
P	Forest Habitat Protection & Enhancement	$226,796	10	Other		$226,796	$22,000		$468		$226,328	$226,328
Q	Reservoir Islands Protection		11									
R	Clark Fork Heritage Resource Program			Estimated			$57,000		-$23,045		$80,045	
S	Erosion Fund & Shoreline Stabilization Guidelines Prgm	$200,000	12	Fund	$63,381	$200,000	$68,500		$16,396		$183,604	$191,297
T	Project Operations Package		13	Other		-$147,205	-$147,205		-$147,205	4	$0	
	Total	$14,872,448	14		$5,749,825	$19,729,220	$7,186,760		$3,558,488		$17,083,711	$17,308,810

NOTES

1 In the 2023 Annual Report, the reported "2023 Carryover Funding w/INT" values were incorrect due to inclusion of unallowable overhead costs and a calculation error in the interest rate percentage. Both items were corrected in this report resulting in a higher 2023 carryover amount.

2 In 2023, $873.98 in Appendix F5 (section 3.1) expenses were applied to Appendix F1 in error. "2023 Carryover Funding w/INT" was adjusted to correct this mistake.

3 In 2019, the MC approved the funding obligation for App A (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 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.

4 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 permanent fish passage facility construction in the event the Facilities budget is not adequate.

5 The Cabinet Minor Modifications fund is a one-time commitment of up to $938,751 made available beginning in 2023 and not subject to GDP inflation or interest.

6 Pursuant to the CFSA, carryover funding with interest in any one year shall not exceed $20,000.

7 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.

8 Cost associated with monitoring and best management practices implementation will be borne by Avista.

9 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.

10 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 (Appendix G).

11 Pursuant to the CFSA, costs associated with Reservoir Island Protection are covered through administration of the Land Use Management Plan (Appendix G).

12 Annual contributions of $40k plus GDP inflation are contributed to this fund until reaching the $200k cap. Thus, the annual contribution with GDP was not applied.

13 A one-time $1M allocation made available in 2018 and not subject to GDP escalation and unexpended funds carryover without interest. If actual expenditures exceed $1M, the balance will be funded equally between Appendix C Facilities and Appendix F5. Three Appendix T projects were proposed and approved by the Management Committee from 2018 through 2021. The Management Committee approved additional language in the 2018 and 2019 Annual Implementation Plans stating, “If it is determined that these costs cannot be capitalized, the costs associated with this project will be transferred to Appendix A”. One project was never completed as a result of the Coldwater Bypass Alternative Assessment; thus, the $80,750 expended on this effort were transferred to Appendix A (Tributary Habitat Acquisition and Enhancement fund) at the end of 2024. As such, those dollars are not counted against the one-million-dollar Appendix T obligation. The total project costs for the Cabinet Gorge Fish Hatchery Spring Collection System Upgrade and the Clark Fork River (Derr Island) Boating Access Site Improvement exceeded the $1M agreement by $71,827. The MC recognized total project costs would likely exceed $1,000,000 and decided the remaining balance would be split evenly between appendices C (facilities fund) and F5 (Section 3.1), which is reflected in the "Total 2024 expenditures" column.

14 Appendix C Facilities balances were removed from both carryover totals, total funding obligation, and unspent dollar totals because expenditures to date have greatly exceeded the sum of the annual contributions to date.

15 An error was made in year eight of the implementation of Appendix L funding schedule defined in Appendix U of the CFSA. This has been corrected and resulted in “2023 Carryover Funding with interest” of $90,362 (was reported as $118,741 in the 2023 Annual Report) and a “2024 Contribution” of $4,679 (was reported as $8,010 in the 2023 Annual Report). This resulted in a funding obligation balance reduction of -$32,810.97.

16 An error was made in year nine of the implementation of Appendix M funding schedule defined in Appendix U of the CFSA. This has been corrected and resulted in “2023 Carryover Funding with interest” of $682,779 (was reported as $144,381 in the 2023 Annual Report) and a “2024 Contribution” of $30,426 (Was reported as $0 in the 2023 Annual Report). This resulted in a funding obligation balance increas of $533,008.75.

17 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.

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 Appendix H consent mails for $55k additional funding for the North Shore Expansion Due diligence Project (7/16/24) and $16k for Pilgrim Creek Park (11/27/23).

2 Appendix K consent mail for $15k for the Swan Creek Conservation Easement (7/16/24).

3 Appendix K consent mail for $10k for the Peterson Conservation Easement (10/15/24).

EXPENDITURE NOTES

1 The Priest River Coldwater Bypass Alternative Assessment was recognized as an O&M activty and the costs associated with this assessment ($80,750) were transferred from Appendix T pursuant to MC direction as outlined in the 2018 and 2019 AIPs.

2 The Appendix T MC-approved overspend was partially corrected by transferring a cost of $35,914 to Appenidix C facilities.

3 The Appendix T MC-approved overspend was partially corrected by transferring a cost of $35,913 to Appendix F5 (section 3.1).

4 The Appendix T MC-approved overspend was corrected by transferring costs to appendices A, C, and F5. The total amount transferred was $152,576 (an additional $5,371 came in early 2024).

12.2 Grant Summary

Appendices B and H of the CFSA included a provision intended to leverage PM&E measure funds through grants. Avista has employed a grant writer who pursues creative funding opportunities to match and enhance the financial commitments being made to implement the PM&E measures. It is important to note that any funding received 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.

In 2024, the grant writing team secured $995,054 in grants for a variety of projects. A grant request for $299,668 remained pending at the end of 2024. Since inception of the grant writing program in 1999, a total of $14,385,798 in federal, state, and private foundation grants has been acquired to assist with implementation of a wide range of on-the-ground aquatic and terrestrial projects.

Grants received in 2024 helped initiate or carry out the following projects:

Project Planning for Water Quality and Aquatic Resiliency in the Lower Clark Fork Watershed:
The LCFWG received a $299,158 grant from the U. S. Bureau of Reclamation's WaterSMART Cooperative Watershed Management Program to fund planning and development of on-the-ground projects to improve water quality and aquatic resiliency in the lower Clark Fork watershed over three years. The proposal was among those receiving a "highest rating for consideration" for a grant award. The LCFWG will coordinate this project and contract with Trout Unlimited for project development assistance. LCFWG and Trout Unlimited will work with an array of CFSA and other project partners to develop shovel-ready projects focused on water quality and aquatic resiliency in the watershed's key tributaries. The grant will augment LCFWG's ongoing work on projects funded by CFSA appendices B and E.

Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs:
A $23,145 grant was awarded to Sanders County from Montana's Aquatic Invasive Species Council for continuation of the EWM control program in the Cabinet Gorge and Noxon reservoirs. The overall program budget was $73,670, which included control of EWM through herbicides, education and outreach, and facilitation of the Sanders County Aquatic Plant Task Force and administration of the program. The grant funds were used to fund the control measures, while $29,108 in CFSA funds contributed to control measures and managing the program. Other in-kind match was provided by members of the Sanders County Aquatic Plant Task Force and the Scientific Advisory Panel.

Purchase of Chromebooks for students at Noxon Elementary School:
On occasion, the CFSA grant writer assists with "White Hat Projects" unrelated to the CFSA when that assistance does not interfere with the funding needs of the CFSA partners. A "White Hat Project" grant from the Star Peak Foundation provided $10,000 to Noxon Public Schools to purchase Chromebooks for students. The school lacked funds to replace outdated and damaged

laptops for teaching and assessment purposes. The school district was able to provide $10,000 in match funding, while the Avista Foundation provided $2,000.

Vermilion River Restoration Projects 4-6 Survey and Design:
Near year's end, the LCFWG was awarded a grant from the National Fish and Wildlife Foundation's America the Beautiful Challenge grant program for $662,751 to fund restoration and effectiveness monitoring work in the Vermilion River in Sanders County. The grant will help cover expenses for design and restoration of the Rocker Reach, and design of the 100 Ton Reach in this critical Bull Trout and Westslope Cutthroat Trout tributary to the lower Clark Fork River. The grant requires significant non-federal match, which is being sourced through state and private grants.

Grants pending at the end of the year:

Priest River Watershed Group Restoration Planning:

Priest River Watershed Group members on a field trip to access the river's watershed.

In Idaho, a proposal was submitted by Trout Unlimited to the Bureau of Reclamation WaterSMART Cooperative Watershed grants program for $299,668 to fund ongoing facilitation and planning of the Priest River Watershed Group. The Priest River Watershed Group formed two years ago and has a diverse membership, organizational structure, mission, goals, website, draft strategic plan. The group is compiling data, planning documents, and studies for a clearinghouse of planning resources. The grant would continue the group's necessary collaborative work to draft a restoration plan for the watershed. No match funding was required for this grant proposal.

Vermilion River Restoration Project—Grouse Reach:
A $10,000 grant request from LCFWG to the Sitka Ecosystems grant program would, if funded, be utilized for restoration work in the Grouse Reach of the Vermilion River. This project is a portion of six identified restoration reaches to be implemented through the partnership of LCFWG, USFS, MFWP, Avista, and U.S. Geological Survey. The grant would provide important and much-needed non-federal match funding to help make on-the-ground restoration of the Grouse Reach possible in 2025.

Managing Aquatic Invasive Plants on Noxon and Cabinet Gorge Reservoirs:
At year's end, a grant request for $40,000 was submitted to Montana's Aquatic Invasive Species Council for continuation of Sanders County's EWM control program in Cabinet Gorge and Noxon reservoirs. If received, the grant will assist with control efforts in 2025. Additional support is being sought through 2025 CFSA funding, with in-kind match to be provided by members of the Sanders County Aquatic Plant Task Force and the Scientific Advisory Panel.

2024 GRANTS SUMMARY			
GRANTS RECEIVED IN 2024			
AMOUNT	**PROJECT**	**SPONSOR**	**FUNDER**
$23,145	Managing AIS in Reservoirs, 2024	Sanders County	DNRC
$299,158	Project Planning in LCF Watershed	LCFWG	BOR WaterSMART
$10,000	Chrome Books for Noxon Schools	Noxon Schools	Star Peak Foundation
$662,751	Vermilion River Restoration	LCFWG	NFWF – AtBC Grant
$995,054	TOTAL RECEIVED 2024		
GRANTS PENDING AT YEAR'S END			
$299,668	PRWG Restoration Planning	Trout Unlimited	BOR WaterSMART
$10,000	Vermilion River Restoration	LCFWG	Sitka Ecosystem Grant
$40,000	Managing AIS in Reservoirs, 2025	Sanders County	DNRC
$349,668	TOTAL PENDING		
GRANTS NOT RECEIVED IN 2024			
$4,019	Wood Duck Enhancement	LCFWG	Y2Y
$25,000	Vermilion River Restoration	LCFWG	Campbell Foundation
$4,830	Bull River Re-vegetation Planning	LCFWG	MT Watershed CC
$10,000	Chrome Books for Noxon Schools	Noxon Schools	BNSF Foundation
$43,849	TOTAL NOT RECEIVED 2024		