MISSOURI RIVER FISHERIES TECHNICAL ADVISORY COMMITTEE (MoTAC)

MINUTES OF ANNUAL MEETING FOR 2023 CALENDAR YEAR

Meeting in person in Great Falls and virtual by Zoom 22 November 2022 AND End of Year Budget Report

Attendees

Grant Grisak (Chair, NWE – Great Falls); Trevor Watson (FWP-Helena); Alli Russell (USFS-Helena); Jim Boyd (USFWS – Red Lodge); Jon Hanson (NWE – Missoula); Mary Gail Sullivan (NWE – Butte); Andy Welch (NWE – Helena); Jordan Tollefson (NWE-Helena); Jason Rhoten (FWP-Great Falls); Jason Mullen (FWP-Great Falls); Adam Strainer (FWP – Helena); Alex Poole (FWP-Great Falls); Luke Holmquist (FWP-Lewistown); Tori Ogolin (FWP-Lewistown); Tucker Walter (FWP-Lewistown); Mike Schilz (FWP – Lewistown); Cody Nagel (FWP-Havre); Chris Guy (MSU-Bozeman); Hannah Stapleton (MSU-Bozeman); Gary Bertellotti (FWP-Great Falls); Dan Madel (FWP-Great Falls); Adam Geik (FWP-Great Falls); Joe Hagengruber (private attendee); Keenan Storar (DEQ-Helena).

MoTAC Business Items

Grant covered section IV C of the Agency MOU that describes TAC Operations. By virtue of having a representative from NWE and FWP and FWS or FS or BLM, a quorum was present for making TAC decisions this day.

Environmental Webpage. The group was reminded of the NWE Environmental Webpage that warehouses all of the documents normally given out at the annual meetings in TAC booklets. The webpage has information relating the current 5-year plan, Agency MOU, 10- year agreement between NWE and FWP, project reports, meeting minutes, proposals, annual meeting information, etc. All of the information for the 2023 meeting will posted on the site except for the budget sheet which is frequently changing throughout the year. The budget sheet is sent out to all TAC members by email and is available at any time upon request.

Update on River Flow Restoration Document. NWE provided an update on the River Flow Restoration document NWE plans to submit to FERC that deals with changes at Morony, Holter, Hauser and Madison. Changes at Morony include upgrading all nine spill gates from radial to vertical slide. All nine will be automated instead of only 4-7. Gates 4-5 will remain as flow restoration. New heating system eliminates the need to crack 4 and 5 during the winter for cold weather reliability. These updates are proposed for Morony. Changes at Holter include having changed all gates to automated vertical slide gates. September 2021 test showed the new system could restore flows, following a full plant trip, quicker if the 7 minute warning siren could be shortened to about 1 min 40 sec. This would reduce biological risks and ensure restoration occurred w/in 30 minutes. Public safety concerns could be addressed with slightly different signage and adding two more signs. Project was delayed slightly because several gates could not be stroked to calibrate the PCS due to prolonged low flows and because of supply chain issues with gate sensors. That was completed in June 2022. Changes at Hauser simply involve making the current language consistent with upgrades that occurred many years ago. The original plan stated several modifications and upgrades needed to be completed in the future. Those have been completed, but the language in the plan was never updated. Changes at Madison deal mainly with the generator upgrades and how NWE will evaluate flow changes from the powerhouse for river flow restoration. Changes include using a proportion of the 8 spill gates to restore flows, help correct some issue with the measuring device being 1.5 miles downstream of the powerhouse, and issues with restoring relatively low flows compared to other plants. Grant stated NWE is finalizing an internal draft and will get that out to agencies for review within a few weeks. NWE is planning to file those changes with FERC in early 2023.

Sicklefin chub and Sturgeon chub Species Status Assessment Update. Jim Boyd provided a brief overview of the 2017 ESA listing proposal for these species. After comparing the 2000 SSA, the FWS is evaluating a lot more information gathered from the stakeholders group. FWS expects the review to be completed in early 2023.

Status of Project Completion Reports. NWE referenced the recent list of project completion reports. Several of the reports listed were submitted shortly before the meeting. The list shows numerous missing reports for this period. Applicants were reminded to work on keeping reports up to date to reduce the risk of backlog. Every 5 years those completion reports need to be filed with FERC. Next filing is for 2024-2028 5-year plan and reports.

Review of Selected 2022 Projects

2022-0 Cultural Resources Management. NWE reported projects 6, 15 and 16 were evaluated for CRM compliance and the evaluations were completed and came in under budget.

2022-2. Fisheries Monitoring. Adam Strainer reported the Missouri River tailwater surveys for Hauser and Holter are conducted every other year. In 2022 the Holter survey showed 2,857 rainbow trout per mile, 413 brown trout per mile and hatchery rainbows made up 4.6% of the population, which is very low compared to the past 14 years. The Hauser Dam tail water creel survey counted 130 boats in April, which is high. In Hauser Reservoir, walleye catch was just under 8 per net per net (45 PSD), rainbow trout numbers are at 2.4 per net, and yellow perch were very high at 10.5 per net and is the third highest on record. High perch numbers in Hauser represent a suitable forage base for walleye which highly unusual. Kokanee plants continue to show very good growth. The fish planted in 2022 showed up in gill net surveys and the 2020 plants are now about 17 inches long. Holter walleye net catch was slightly over 4 fish per net and PSD is slightly above 20. Walleye size ranged slightly higher than last year with 15-23 inch fish common. Yellow perch numbers were similar to last year at 30 per net, which is the 4th highest on record. Perch size is about 7-9 inches long and another year class of 3 inch fish is coming up behind the dominant year class. Holter rainbow trout net number was 5.5 fish per net. There were several reports of 10-12 pound fish caught in the Missouri below Holter that are believed to be 2017-2018 year classes that were low density stock years that may have produced these larger fish. In 2022, 5/6 of the fish management PSD goals were met for Hauser and Holter. This was the 6th consecutive year pike were sampled in nets in the spring and ^{4th} consecutive year pike were sampled in the fall. In 2022 over 428,000 eggs were collected. Fin clipping of Arlee strain rainbows was conducted at the Lewistown hatchery. The new state record longnose sucker was caught in Holter Reservoir in 2021 and it weighed 18.02. The new state record longnose sucker was caught in Holter which retired the previous record from 2021 that weighed 4.27 lbs.

Jason Mullen reported rainbow trout numbers in the Craig section was the third highest on record at 5,995 per mile. Long term average is 3,553 per mile. Brown trout numbers were 1,591 per mile which is the highest on record and nearly 3x the long term average of 585. In the Cascade section rainbow trout were estimated at 1,224 per mile which is lower than the long term average of 1,647 and brown trout were 557 per mile which is higher than the long term average of 377. Bright moon during the estimates contributed to reduced catch rate efficiency. Mean daily below Holter Dam was 8,200 cfs which is about 1,000 cfs less than the long term average of 9,100 cfs. The peak annual flow was about 8,200 cfs. Water temperature was again elevated this year but higher base flows in August allowed for not instituting angling restrictions. Seven juvenile pike were sampled during seine surveys in 2022 which is only the third year this species has been sampled since 2008. Jason provided an update on the Hardy Creek restoration weed management project.

Luke Holmquist reported on Missouri River fisheries monitoring from Morony Dam to the headwaters of Fort Peck Reservoir. Flows were considered low in 2022. Mean annual flow at Forth Benton was 5,040 cfs and peak was about 12,000 cfs. Electrofishing sampled 9,477 fish from 29 species. SHRH was the most abundant species (38%). Smallmouth bass had the highest relative representation on record at 9% of the total catch. Walleye numbers were the highest on record and sauger and channel catfish were higher than last year. Spines were taken from 168 walleye for ageing and 225 were tagged. 33 blue suckers were sampled and growth changes were determined from 4 recaptures. Seining sampled 23 species. Catch rates were 58.1 fish/seine. Poor shoreline conditions from low water contributed to seining difficulty. Trawling sampled 955 fish from 18 species, which is lower than the past 3 years. Channel catfish YOY was the most abundant fish sampled. Eight hatchery origin (HO) pallid sturgeon were sampled by trawl. Sturgeon chub and sicklefin chub catch was 162 and 28, respectively, which is considerably lower than last year. Trammel net catch rates was highest in the FRB and Rock Creek sections, but more fish are beginning to be caught in upstream sections. Shovelnose sturgeon catch returned to consistent number (4/net) and pallid numbers remain consistent. There were 38 SNS recaptures which helped evaluate growth rate. Set lining (90) captured 457 pallid sturgeon from 15 HOPS year classes and 1 wild fish. Pallid sturgeon larval drift test was conducted in June that released 730,000 larvae. A cold weather/water snap occurred

on the day of the release that likely reduced swimming behavior and catchability with larval nets. Two suspect larvae were sampled. It is possible the larvae remained sedentary until water temp increased, then resumed swimming behavior. Future monitoring will help evaluate survival. Mike Schilz reported there were eight PIT stations monitored on the Marias (6) and Teton (2) rivers in 2022. There were 1,847 new tags implanted bringing the total to 6,203. Pallid sturgeon was the species implanted most in 2022 with 427 tags. There were 637 individual SNS detected in the Marias with the majority of detections occurring at the RM2 station. The highest station that recorded a SNS was at RM60. Other notable species included eight blue suckers and two pallid sturgeon. Only two tagged fish (catfish, sauger) were detected in the Teton River at the RM0.2 station. In the Judith River 174 individual fish were detected; the furthest upstream was 50.1 miles up from the mouth. PIT tagged softshell turtles were also detected in the Judith.

- **2022-3. Habitat Project Consultant.** Allen McNeal worked primarily on the Grady irrigation project on Little Prickly Pear Creek project this year. About half of this budget was used.
- **2022-5. Teton Water Leases.** NWE reported the leases were implemented in 2022 for a period beginning in July. For a short period flows dropped below the priority date for these two, which suspended the leases. In August, flows increase enough to reinstate the leases. Andy Brummond from FWP usually gets a yearly report completed in December with an invoice for payment.
- **2022-6.** LPP Ck-Grady Ranch Diversion & Restoration. Adam Strainer reported the project was completed on time and according to scope. The diversion location correction for the water right is expected to be completed soon.
- **2022-7. Westslope Cutthroat Trout Field Assistance**. Alex Poole reported on monitoring of several westslope cutthroat trout restoration projects funded by the TAC in past years. In 2022 several populations were identified as genetically pure but one tested positive for the parasite that causes whirling disease. Discussions are underway to determine the conservation potential of a genetically pure, but infected population. Two sites identified as potential candidate habitats showed very cold (6C, 9C) water temps in August and likely won't be suitable habitat. The Carpenter Creek barrier project is moving forward but was discontinued due to cold weather. The contractor hopes to resume in spring of 2023. Cottonwood Creek in the Highwoods showed interesting abundance distribution in tributaries from past years.
- **2022-8. Middle Missouri River Telemetry.** Tori Ogolin reported manual tracking for radioed fish was down in 2022 to 2182 river miles sampled (25% reduction), over 234 hours (31% reduction), resulting in 1,160 relocations (20% reduction). In 2022, 22 new radios were implanted in 21 pallid sturgeon and one smallmouth buffalo.
- **2022-14. Holter Rainbow Trout Marking.** Adam reported this project was accomplished according to scope. The marked Arlee rainbows were stocked into Hauser and Holter reservoirs to differentiate them from Eagle Lake rainbows.
- 2022-15. Carpenter Creek Fish Barrier. See report for project 2022-7.
- **2022-16. Sheep Creek Bridges.** Grant reported the project was completed on September 20. The project involved repairing 8 NF bridges, installing one new bridge on the NF and replacing on bridge on the SF. Uncertainty on the budget was a concern. NWE assisted by providing oversight by securing materials and helping to haul some materials to the site to keep costs down. Assistance from DNRC and Trout Unlimited (MRF) helped. Three landowners provided in-kind assistance for labor, equipment and purchase of some materials. The project came in under budget by about \$2,000.
- **2022-17. Missouri River Trout Stock Assessment.** Hannah Stapleton (MSU) gave an overview of the number of samples collected from the two sampling sections below Holter Dam. The process for evaluating age by otoliths was explained. Evaluating the agreement between scales and otoliths up to the resolution threshold (age 4) so historic scale age data can be used to expand the analysis.
- **2022-18. Missouri River Open Lands Appraisal.** George Liknes provided an email report indicating there are several conversations ongoing between the County and DNRC to help settle the conservation easement. MROLP asked if the 2022 funds could be moved to the RESERVE account in 2023 while this process continues. If an agreement can't be made between the County and DNRC, the project would be withdrawn.

Review of Projects Carried Over from Previous Years

2021-5. Beaver Creek Restoration phase 2. Alli Russel stated construction started in September by mobilizing materials on site and constructing the new channel. Minor modifications were made to route the channel alignment around mature cottonwood trees. Construction is expected to be completed by second week of December. NWE stated there was a budget overrun for diesel fuel and some for design and survey updates to secure other funding. The project was bid in October 2020 when OR diesel was \$2.20. The project was tabled in 2021 because of funding processes and severe fire restrictions, at no fault to the contractor. NWE stated the WildTAC approved funding \$27,000 for diesel but asked if MoTAC could cover additional design and oversight costs. Given the uncertainty of MoTAC funds, we won't know about the ability for MoTAC to contribute until late 2022. NWE showed where 6 of the 2022 projects came in under budget by about \$22,000 so NWE was planning to use some of that to offset the increased costs for diesel and oversight.

2021-13. SNS data analysis and publication. Grant gave a brief overview by stating a second draft was completed by Brian a month ago. NWE reviewed and provided comments. Given the status of the draft, the project was close enough to completion to make the final payment and recommended to the applicant o submit a final invoice in late 2022. Luke also stated the project was in good standing.

Review of 2022 Expenses and Reserve Account

In 2022 the TAC approved 19 projects totaling \$672,597, which is \$10 under budget. The estimated Reserve Account at the start of 2022 was \$230,898, which included \$176,403 for project 2021-5 and \$5,918 for project 2021-13 and an estimated \$48,577 in uncommitted funds.

During 2022, 18/19 projects were completed and 6 were under budget. NWE reported a portion of those balances will likely be used to cover over expenditures in design modifications and review for permitting and for construction in 2022. WildTAC was able to cover \$27,600 in increased diesel fuel costs. The WildTAC asked if MoTAC could cover a portion of the increased expenses on Beaver Creek Phase 2 construction. NWE stated at the time of the TAC meeting the project was still under construction and invoices were still coming in. The project was expected to be complete during the first week of December. The additional charges to MoTAC would be about \$18,000-\$20,000 and the under expenditures this year should be sufficient to cover that. Project 2022-9 was partially spent to place a deposit on an outboard motor. Given the extremely low availability of this item, after one was discovered in Coos Bay, Oregon, a reserve fee of \$1,000 was paid to secure it. At the time of the meeting the Reserve balance was uncertain as was the anticipated roll over into 2023 because of the Beaver Creek project. NWE will know the status by late December and include the status in the annual meeting minutes. In addition, given supply chain issues, NWE purchased materials totaling \$16,500 to secure them for project 2023-10 using 2022 TAC funds. Those 2022 funds will be reimbursed in early 2023.

At the end of the year the total additional amount used to complete Beaver Creek Phase 2 construction was \$20,120.34. That amount came from under expenditures on projects 0, 1, 3, 4, 13 and 16.

At the end of 2022 the unspent balance was \$46,052 (\$29,542 unspent plus \$16,500 reimburse). Projects 2022-5, 2022-9 and 2022-18 were not completed in 2022, so their balance of \$27,500 will be moved to 2023 Reserve Account as commitments. There was \$8,674.88 in uncommitted 2022 Reserve funds. The end-of-year 2022 budget is provided below;

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TOTAL \$672.597 \$672.597 \$643.04	
TOTAL	45 \$46,052
Budget for CY2022 \$672,607 \$672,607	
Difference \$10 \$10	
RESERVE ACCOUNT (capped at \$250K beginning	in 2017)
Projects Approved in Prior Year(s) But Not Fully Completed Yet:	
Project # Project Description Project Cost mount Spen	
021-5 Beaver Ck Restoration - Phase 2 \$220,000 \$220,000 \$0	
021-13 Shovelnose Sturgeon Data Analysis & Pub \$17,754 \$17,754 \$0	
one remose stangeon bata marysis at all \$\pi_1/151 \pi_1/1751 \pi_1/1751 \pi_1/1751	
Total \$237,754 \$222,223 \$0	
onfirmed Reserve Acct balance start of 2022 \$230,898	
Reserve Account Commitments \$222,223	
Uncommited Reserve end of 2022 \$8,675	

Review and Comments on Selected 2023 Proposals

There were 17 projects proposed for 2023, totaling \$641,093. The budget for 2023 was \$686,059 which means the applications were under budget by \$44,966. In most cases, there was little discussion following the brief presentations by project sponsors. There were questions or comments on a few of the proposals as follows:

- **2023-0.** Cultural Resources Management. NWE indicated two of the 2022 proposed projects (#10, #12) included ground breaking activity. A review of these proposals by the NWE consulting archaeologist determined the cost of a file search, site inventory and report would be \$4,325 for proposal 2023-10 and was uncertain of the costs of CRM review with #12. A file search and review of past CRM will determine if additional review is required for this. If so, the budget would be adjusted to complete that task.
- **2023-5.** Water Leases Teton River. NWE reminded the TAC this project was approved in 2021 for 10 years and will appear in the que on an annual basis. This decision is chronicled in the 2021 minutes. 2022 is the second year water will be leased as instream flow for the Teton River. On years the water is not leased, the approved funds will forward to the Reserve Account and be used for the next year water is leased.
- **2023-6.** Equipment Yamaha 250 Outboard Jet. NWE stated this application was submitted to address performance issues with the current outboard and the known supply chain issues will likely require a substantial amount of time to replace this outboard. NWE found two outboards in Florida and NWE applied for a manufacturer's special status recognition in an attempt to secure this equipment. The application looks promising.
- **2023-12. Prickly Pear Creek Fish Screen.** Andy asked about the 25% contingency in the budget and reminded the members that the TAC moved away from including contingency in individual projects. Comments were made about the uncertainty of labor and materials discussed with other projects further supported the need for some contingency. NWE addresses this uncertainty by dealing with a few known contractors, and the estimates given at the time of application are generally honored at the time of construction. Grant stated there have a been a few instances when budgets were adjusted due to unforeseen circumstances, but the contingency is generally not included in application. FWP stated Future Fisheries also does not include contingency. FWP stated this application was very important in being able to secure Future Fisheries funding. Grant stated, if approved by the TAC, he will work with the likely contractor (Tetra Tech) to negotiate down, or away, this 25% contingency.
- **2023-13.** Blue Sucker Age and Genetics. NWE approached FWP with concerns about low/no evidence of reproduction with this species in the last few decades. This proposal was the result of those discussions and a desire to learn more about blue sucker reproduction, genetics and population status.
- **2023-15.** Hardy Creek Restoration Weed Control. Jason reported this application was to continue managing weeds at the site of the stream restoration/construction and this application was for 2 years (2023-2024).
- **2023-17.** Equipment Paddlefish Study. NWE reported on recent conversations with FWP biologists Cody Nagel and Steve Dalbey about increasing need for paddlefish C&R mortality investigations. The project is in the developmental stages. Although no application was submitted this year, Cody provided an update on the nature of the study and there will likely be future requests to the TAC for funding assistance. The reference in the budget list was added as a placeholder and FWP was encouraged to come back to the TAC in 2023 if equipment was needed to get the project started.

Summary of 2023 Funding Decisions and End of Year Budget Report

The budget for 2023 was \$686,059 which means the applications were under budget by \$44,966. After a short discussion, the TAC voted whether to approve this budget; FS=Yes, FWS=Yes, FWP=Yes, NWE=Yes. The 2023 budget was approved as described above.

The estimated Reserve Account balance at the beginning of 2023 was \$54,727 which included \$10,000 for project 2022-5, \$7,500 for project 2022-9, \$10,000 for project 2022-18 and \$27,227 in uncommitted funds. The 2023 budget is summarized below:

MOTAC I	Projects & Budget for CY2023				
Project #	Project description	Proposed budget for 2023	Approved Budget for 2023	Spent in 2023	
2023-0	Cultural Resources Management	\$4,325	\$4,325		
2023-1	Contingency/Emergency Fund	\$10,000	\$10,000		
2023-2	Fisheries Monitoring - FWP	\$262,122	\$262,122		
2023-3	Habitat Projects Consultant	\$15,000	\$15,000		
2023-4	Field Operations - NWE	\$10,000	\$10,000		
2023-5	Teton Water Leases (see 2019-18, 2/10 yrs)*	\$10,000	\$10,000		
2023-6	Equipment - Yamaha 250 outboard jet	\$33,063	\$33,063		
2023-7	WCT Technician	\$22,487	\$22,487		
2023-8	Middle Missouri Radio Telemetry	\$52,399	\$52,399		
2023-9	Equipment - 105 outboard jet	\$8,750	\$8,750		
2023-10	SF Sheep Ck Bridge	\$54,852	\$54,852		
2023-11	Middle Missouri Creel Survey	\$71,025	\$71,025		
2023-12	Prickly Pear Creek Fish Screen	\$47,000	\$47,000		
2023-13	Blue Sucker Age & Genetics	\$25,000	\$25,000		
2023-14	Equipment - Trammel Nets	\$4,050	\$4,050		
2023-15	Hardy Ck Restoration Weed Control	\$2,300	\$2,300		
2023-16	Equipment - Backpack Electrofisher	\$8,720	\$8,720		
2023-17	Equipment - Paddlefish Study	\$0	\$0		
	TOTAL	\$641,093	\$641,093	\$0	
	Budget for CY2023	\$686,059	\$686,059		
	Difference	\$44,966	\$44,966		
	Expected Uncommitted Reserve start of 2023		\$27,227		
	Total available uncommitted funds 2023 start		\$72,193		
	***RESERVE ACCOUNT**	\$250K begi	nning in 2		
Projects A _l	proved in Prior Year(s) But Not Fully Complete	d Yet:		Dalamas	
Project #	Project Description	Project Cost	Amount Spent	Balance Remaining	
2022-5	Teton Water Leases (2019-18, 2021 minutes)	\$10,000	\$0	\$10,000	
2022-9	Equipment - 105 jet outboard \$8,5		\$1,000	\$7,500	
2022-18	Missouri River Open Lands Appraisal	\$10,000	\$0	\$10,000	
	Total	\$28,500	\$1,000	\$27,500	
	Reserve Acct balance start of 2023	\$54,727			
	Reserve Account Commitments	\$27,500			
	Estimated Uncommitted Reserve	Ψ=:,000			

Funds start of 2023

\$27,227

MoTAC account calculations from 2015 through the beginning of 2023.

	RESERVE Cap	200,000	200,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
		2015	2016	2017	2018	2019	2020	2021	2022	2023
NWE Order#										
10007921-001	Reserve Start Bal	\$186,589.88	\$200,000.00	\$250,000.00	\$250,000.00	\$160,763.18	\$143,208.38	\$36,129.00	\$230,898.00	\$54,727.00
	Reserve Commitments	\$122,342.00	\$175,684.00	\$144,340.00	\$231,692.00	\$161,965.00	\$128,323.00	\$35,200.00	\$182,321.00	\$27,500.00
	Reserve Uncommitted	\$64,247.88	\$24,316.00	\$105,660.00	\$18,308.00	-\$1,201.82	\$14,885.00	\$929.00	\$48,577.00	\$27,227.00
	Reserve Expenses	\$34,763.00	\$26,048.43	\$46,142.30	\$183,373.82	\$52,107.50	\$96,925.10	\$32,804.00	\$222,223.33	
	Reserve End Bal	\$151,826.88	\$173,951.57	\$203,857.70	\$66,626.18	\$108,655.68	\$46,283.28	\$3,325.00	\$8,675.00	
10009601-751	Start MoTAC Balance	\$579,647.00	\$594,343.00	\$609,201.00	\$621,385.00	\$633,812.70	\$646,489.00	\$659,419.00	\$672,597.00	\$686,059.00
	MoTAC Expenses	\$507,603.00	\$486,560.00	\$532,258.00	\$527,248.00	\$599,260.00	\$457,959.00	\$431,848.00	\$643,055.00	
	End MoTAC Balance	\$72,044.00	\$107,783.00	\$76,943.00	\$94,137.00	\$34,552.70	-\$11,470.00	\$227,571.00	\$29,552.00	
	Reserve Begin Next Year	\$223,870.88	\$281,734.57	\$280,800.70	\$160,763.18	\$143,208.38	\$36,129.00	\$230,898.00	\$54,727.00	
	Refund Back to Company	\$23,870.88	\$31,734.57	\$30,800.70						