

Fighting for the Future of Trout

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Montana's majestic fisheries have long inspired anglers worldwide to step into their celebrated waters, in search of their own immersive experiences. However, rapidly increasing boats at the launch and waders in the water have intensified angling pressure on already fragile fish battling changing weather patterns and invasive species. Tasked with stewarding these resources, Montana Fish, Wildlife & Parks (FWP) works diligently to balance the demands on Montana's water bodies, while ensuring that they remain healthy and viable aquatic ecosystems. This has become increasingly complex with new threats exposing the fragility of these habitats and inhabitants.

Study Session

Monitoring and analysis projects are conducted year-round across the state. Angler feedback and population surveys guide the department in prioritizing studies and efforts. For example, brown-trout populations are decreasing statewide with no definitive cause. FWP has partnered with the U.S. Geological Survey to research the decline of these otherwise-hearty trout. Data on habitat quality and maintenance, angling pressure, flow rates, and water temperatures were examined for trends. Early results point to the instream flow rates as the primary driver of the decline. This spurred the department into a second phase to investigate more prescriptive and predictive approaches to remedy the problem. Eileen Ryce, FWP Fisheries Chief, is hopeful that this next step will be helpful: "We are looking for clues, if we had a certain amount of flow, or temperature, or a timeframe that would be able to give the best conditions that will be best for the fish. We hope to have this finished in a couple of years."

There are other stressors that collectively contribute to fewer trout in the river. The Beaverhead, Big Hole, Madison, and Ruby rivers are all being studied to see what Ryce calls a "suite of things" hindering the survival of trout. Increased angling pressure affects the trout caught, but does that rise to a fishery-level concern? Local biologists are putting in field time discussing catch rates and handling times with anglers, as well as practices to help keep more fish alive after release. Some states have adopted requirements to wear gloves or a prohibition of sunscreen on the hands. Along with Fish and Wildlife Services, FWP began piloting programs in August that show promise and can be scaled up.

Alien Invasion

The Aquatic Invasive Species monitoring is the frontline prevention for threats from outside the state. Its watercraft-inspection program has grown every year and is aided by the Angler AIS Prevention Pass revenue. The \$2 (\$7.50 for nonresidents) AISPP is required when purchasing a fishing license and funds inspection sites, education, and fieldwork directly related to keeping Montana waters free of these devastating species. The FWP AIS Sampling website maps current waters and sites being tested and any findings of note. Through the 2023 season over 90,000 watercraft were inspected and nearly 20,000 of those were from states deemed "high risk" with known AIS infestations. This dragnet prevented 45 boats found to be mussel-fouled from launching. Using high pressure, high temperature water, hulls and exteriors are sprayed down and interior compartments are flushed. Everything is allowed to dry before being released. All boats that enter the state are required to be cleaned and inspected prior to launch to prevent the unintentional spread of AIS. Among the most dangerous are zebra and quagga mussels and to date none have been found in Montana's waters.

Colder the Better

Habitat is of paramount concern for viable fisheries. If provided the right environment, trout can overcome many perils. Warming waters have allowed new species to increase their range. Rainbow trout move further upstream and hybridize with westslope cutthroat. These diluted gene pools are often cleared with rotenone and restocked with pure strains to restore the fishery. Bull trout have a similar dilemma, as they cross-breed with encroaching brook trout. They face competition with lake trout and northern pike, also piscivore fish, for their prey base.

But by far, what impedes their recovery is a need for clear, connected, cold, and complex habitat. Restoring their numbers will require similarly involved solutions focused on the last two. Pat Saffel, MTFWP Region 2 Fisheries manager recalls piecing together the Marshall Creek Wildlife Management Area with several groups. Private landowners Plum Creek Timber Company and The Nature Conservancy, along with various grants and further help from the United State Forest Service Legacy Program fit together like a puzzle and became the foil for other efforts. “Immediately after removing the fish barriers and culverts we saw a remarkable increase in redds and spawning activity. Now the challenge is finding cold water, protecting it, and enhancing it.

Ingenuity Needed

The department has a large mitigation program that works across various ownerships to assist struggling fish and their waters. The Future Fisheries Improvement Program (FFIP) is focused on sportfish restoration as well as native nongame species and partners with landowners to identify habitat recovery programs. While mandated statutorily, voluntary cooperation is coupled with matching dollars from the community and non-governmental organizations. Without the program, financial hardships would make it very difficult to rehabilitate these waterways. The results are colder and cleaner water for the landowner and downstream.

The FFIP is being used to address why the Jefferson and Boulder rivers are struggling to maintain colder water temperature during a six to eight week window in the summer. Water from tributaries are sourced for irrigation leaving warmer and less water in the main river. Ron Spoon as the management biologist for the Jefferson, Boulder, and Missouri rivers knows well solving this pickle will take creative approaches. “These systems were designed around the time of the civil war and are old and need to be rethought. It’s a replumbing and requires overcoming electricity, gravity, and water obstacles. We will need to sharpen our pencil to figure this out.” A trial solution being tested on the Boulder river eliminated three irrigation canals and the installation of pumps. At a cost of \$500,000 it kept 65 degree water in the system and pumped 80 degree water into the fields, leaving a net of 7CFS of cold water instream. Determining if its enough will take time to study and an assessment of the efficacy of this project, and feasibility of future ones like it, will be ongoing.

Wild at Heart

For nearly 50 years, Montana has practiced wild-fish management, “stocking only as necessary.” They offer a higher-quality experience both on the line and on the plate. What’s more, wild fish have proven to be more resilient to environmental changes and health concerns. If left to their own, they out reproduce stocked counterparts. Only in places where reproduction is not enough to maintain the demand for sportfishing—primarily lakes and reservoirs—are fish routinely stocked. And according to FWP, “there is no scenario presented now where we would stock fish in our rivers.”

Access Granted

Access is vital to the future of Montana’s fisheries. There will always be a need for additional access and Montana’s Fishing Access Site (FAS) program is unparalleled in the country. Anglers have long paid for this via their license fees, but use by other recreationists has skyrocketed in recent decades. A new requirement that all users of FAS, not just anglers, obtain a conservation license ensures that everyone pays their fair share; it also increases the funding for improving existing sites and establishing new ones. These sites provide great habitat for other animals and are favorite spots for birdwatchers. Families like to picnic and wade-fish at these easy-to-access areas.

Best-Laid Plans

The new Statewide Fisheries Management Plan is far more comprehensive than previous iterations. It includes added information on specific plans, species needs, and pending issues. Implementing more frequent review periods and prescriptive measures triggered by certain thresholds, this plan is more responsive to changing conditions. More than just regulations for management, the plan is a valuable resource for all anglers. At nearly 500 pages, it gives detailed information on all of Montan’s fisheries. Publicly accessible fishing access sites give a good idea of where to start fishing. Populations of species and their distribution through the system help guide anglers to more productive areas, while special management issues raise awareness for

conservation-minded fishermen to consider when in sensitive areas. It won't suggest which fly is working for your time on the water, but something things are better left discovered on your own.

Bright Future

While there are currently not any new threats on the horizon, the possibility is always present. And despite specific concerns, Montana continues to offer unmatched fishing opportunities—in no small part due to the eternal vigilance and determination on the part of FWP. Now, as always, anglers who venture here with an elk-hair caddis to entice a cutthroat to rise will find that this is indeed a special place.