



FUTURE FISH A gentle press on the belly of a walleye releases milt or eggs that will be used to help sustain Montana's walleye fisheries. Afterward, these fish are safely returned back into Fort Peck.



ALL HANDS ON PECK

Collecting 60 million walleye eggs from pitching boats in freezing weather and whitecaps takes grit, dozens of volunteers, and a surprising number of turkey feathers.

BY ANDREW MCKEAN. PHOTOS BY SEAN R. HEAVEY

IF YOU CATCH A WALLEYE IN MONTANA, there's an excellent chance it started life as an egg squeezed out of the belly of its mother by a burly FWP worker perched on a four-legged stool in a temporary spawning barge nosed up to the wind-whipped shoreline of Fort Peck Reservoir.

April's annual Fort Peck "spawn," as it has come to be known, supplies walleye fry and fingerlings back to the reservoir. It is also the source of every walleye stocked statewide. This "assisted reproduction" is especially important in years when conditions hamper natural reproduction.

"There's limited natural spawning habitat in Fort Peck to begin with, and low reservoir elevations leave rock and gravel substrates high and dry," says Heath Headley, Fort Peck Reservoir fisheries manager for Montana Fish, Wildlife & Parks. "And in some years with high reservoir elevations and spring runoff, we'll see walleye and all

variety of other fish species trying to navigate some pretty skinny water to spawn," he says, flocking to tributaries like Big Dry Creek on the lake's southeast arm. "I mean, you can see their fins sticking out of the water. I look at our spawning operation as essentially giving walleye a hand."

Actually, hundreds of hands. The annual Fort Peck walleye spawn, which marked its 25th year in 2025, is the fisheries equivalent of a bucket brigade. Dozens of volunteers work shoulder to elbow with FWP staff to capture wild walleye, extract their eggs, mix them with milt (fish sperm), and transport them to hatcheries where they're incubated, reared, and eventually planted back into Fort Peck and more than a dozen other Montana waters as juvenile fish.

Fort Peck owes its reputation as a trophy walleye fishery to this cold, gritty, demanding, and often surprisingly euphoric work. Unlike egg-collection efforts in the sterile

and controlled environment of fish hatcheries, the Fort Peck spawn starts in the windy wild of the Big Dry Arm, just after ice leaves the sprawling reservoir. While hatcheries often use captive broodstock for egg production, Fort Peck's source is wild fish.

The abundance and size of wild walleyes are influenced by dozens of variables. Fluctuating reservoir levels determine the type and amount of vegetation that hides juvenile walleye from predators. Shoreline conditions influence the number and type of prey fish that grow the predatory walleye to the size anglers want to catch.

When it all comes together, years of consistent growth allow a mature female walleye to pack on as many as 200,000 eggs, each the size and consistency of a tapioca pearl.

HELPING HANDS

Because of the massive scale and compressed timeline of the spawn (last year's operation



SPAWNING SHELTERS On Fort Peck's Big Dry Arm south of Glasgow, FWP docks custom pontoon boats that function as floating fish spawning huts.



PROLIFIC BUCKET BRIGADE For 25 years, legions of volunteers have stood shoulder to shoulder with FWP staff to collect walleye from nets before their eggs and sperm are harvested and the fish are returned back into the reservoir. This work is the source of every walleye stocked statewide.

collected nearly 60 million individual walleye eggs from around 400 females in 15 days), FWP relies on dozens of volunteers. Some are avid anglers who view the spawn as an opportunity to give back to the resource they enjoy. Others cherish the camaraderie created by hard and unusual work. And for others, like Doug Voigt from Red Lodge, it's a welcome getaway during a slack season.

"It's sort of an in-between time for a Montana outdoorsman," says Voigt, a perennial volunteer who joins the spawn crew at the Nelson Creek Fishing Access Site on Fort Peck's Big Dry Arm. "I camp out here and fish in the evenings, when I can. I've seen some great weather when the spawn was done in five days, and I've seen it so cold that the reservoir froze back over. It's something different every year."

One constant, aside from a custom Fort Peck walleye spawn baseball cap every volunteer receives, is Bill Viste, a 21-year veter-

an of FWP's Fort Peck crew who coordinates volunteers, making sure each day and shift is covered.

"It's quite a balance," says Viste. "You want dependable people, because our staff really relies on these volunteers. But every year somebody cancels at the last minute and we're scrambling to fill in. I maintain a list of backups who I can call in an emergency."

Viste stresses to volunteers to pack a hearty lunch because the work won't be easy or comfortable. The spawn takes place on the remote, tumbleweed-strewn shoreline at least 40 miles from the nearest retail establishment. April can bring sunburns or sideways snow, sometimes in the same day. It's wet, muddy, and often physical work for volunteers, who help FWP fisheries staff on boats check trap nets set up overnight to catch spawning walleye cruising the shoreline.

INSIDE THE SPAWN

Each morning of the spawn starts with collecting these wild fish from the pre-set nets. Walleye are just one species in the mix. Northern pike, channel catfish, river carp-suckers, burbot, white suckers, shorthead

redhorse, goldeye, cisco, black crappie, yellow perch, common carp, and small-mouth buffalo also thrash and writhe in the nets. Volunteers help FWP staff weigh, measure, and document the impressive diversity.

"You get to handle fish that most people can't imagine seeing," says Hal Pavelis, a Billings contractor who's been volunteering for about 10 years. "Today we pulled up a 29-inch, 11-pound, 9-ounce walleye. That's a world-class fish."

While other species are released back into Fort Peck, the walleye are placed in holding tanks on the boats, then delivered to FWP's twin spawning barges. These custom-made pontoon boats with canvas sides (like a wall tent) are tied up along the shoreline in a wind-protected cove a short boat ride from the trap nets.

The operation is a mash-up of sophisticated aquaculture and farmyard improvisation—part chemistry lab, part milking barn. Wade Geraets, manager of FWP's Fort Peck Hatchery, whose crew does most of the actual egg and sperm gathering, calls it "assisted reproduction." Hatchery staff in rubber overalls gently press on the bellies of

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MIX MASTER TURKEY FEATHER Retired FWP hatchery bureau chief Jay Pravecsek uses wild turkey feathers to mix a slurry of walleye eggs and milt, mimicking the gentle wave action of the reservoir.



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the male and female fish to release their milt and eggs into stainless-steel kitchen bowls before safely returning fish back into the reservoir.

The egg slurry is then ushered to the fertilization table, where Tupperware-type containers hold walleye sperm treated with a glucose formulation to extend shelf life. Hatchery employees use a science-classroom microscope to confirm that the milt is viable, then delicately stir it in with the eggs using perhaps the least high-tech yet most ingenious tool in the process—a wild-turkey wing feather, which helps mimic the gentle wave action of the reservoir.

Stopwatches measure precise durations. Clipboards record the quarts and gallons produced. Geraets tracks progress toward the annual goal of gathering 60 million fertilized eggs.

Diatomaceous earth (a naturally occurring silica powder) is added to the slurry to prevent the fertilized walleye eggs from clumping. The eggs are then gently rinsed and water-hardened in screen-and-lath cradles in galvanized stock tanks. Industrial-grade water filters sift out fine sediment and unwanted organisms.

Once eggs leave the barge, pure oxygen is piped into the holding bags as they make the

hour-long drive to the Fort Peck Hatchery, where they’re incubated for several weeks.

Disinfection intensifies once eggs reach the hatchery, Geraets explains.

“All wild eggs that are brought in are immediately disinfected with an iodine solution before coming into the main hatchery area to remove pathogens,” he says.

Ultraviolet light and another filter further clean the Missouri River water that oxygenates the fertilized eggs in the hatchery. In the field, adult walleye that contribute eggs and sperm are randomly biopsied to confirm that they’re healthy and not introducing a novel fish pathogen into the hatchery ecosystem.



RECIPE FOR REPRODUCTION Fine-tuning their formula across more than two decades of spring spawning events, FWP staff have honed a meticulous, multi-step method to fertilize walleye eggs using a blend of handmade and store-bought equipment, ranging from items you’d find in most kitchens or garages to instruments purpose-built for a fish lab. The Fort Peck Hatchery manager calls the process “assisted reproduction.”



COMPRESS FRACTURE Fort Peck hatchery manager Wade Geraets locks down the lid on the triploid pressure chamber used to produce sterile walleye.

Pressure makes...triploids?

In a corner of a Fort Peck walleye spawn barge, a stainless steel canister the size of an artillery shell waits for service. It’s a pressure chamber, and an example of the applied science of the Fort Peck walleye spawn.

Fertilized walleye eggs are placed in the chamber, the lid of which screws down like a submarine hatch, then subjected to intense pressure for several minutes. This renders the fish produced from these eggs, called triploid walleye, to be entirely sterile. They serve an important management goal in select waterbodies. In Montana, all triploid walleye are bound for Yellowtail Reservoir, often called Bighorn Lake.

FWP supplements the walleye population in Yellowtail to ensure good fishing for anglers, but the agency also has an obligation to protect the large population of native sauger in the Yellowtail Reservoir/Bighorn River system, which Montana shares with Wyoming. Walleye can outcompete sauger because they spawn at the same time and in the same places.

Indeed, many waterbodies shared by both species are home to “saugeye”—hybrids of native sauger and non-native walleye.

By planting sterile triploid walleye, fisheries managers supplement Bighorn Lake’s popular walleye population without harming the native saugers. This year the Fort Peck spawn contributed about 5.5 million of these specialized fish eggs.



OFF TO THE RACES Volunteers and FWP staff transport precious cargo—fertilized walleye eggs—from lakeside spawning tents to the hatchery nearby.



NEST EGGS Matt Baxter, hatchery fish culture specialist, places fertilized walleye eggs into incubation cylinders at the Fort Peck Hatchery.



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CULTURE CLUB

The weeks-long effort is orchestrated by FWP’s hatchery staff and the Fort Peck fisheries crew—department employees who typically focus on different things.

“It’s such a large operation that covers so many facets of biology and fish culture, that you can’t have one without the other,” says Headley of the combined campaign.

In the weeks after Geraets’s hatchery staff incubates eggs and transfers the tiny walleye larvae to rearing ponds to grow larger, crews plant millions of fry and later 1.5-inch walleye fingerlings in the warming waters of Fort Peck Reservoir and other Montana lakes and

reservoirs. Last year, of the 59 million eggs collected in April, Fort Peck received 21 million mosquito-size fry and 1.8 million pinkie-sized fingerling walleye. Tongue River, Fresno, and Nelson reservoirs, and 13 other waters received fry or fingerling walleye reared in both FWP’s Fort Peck and Miles City hatcheries. Certain fisheries are stocked every year, others biennially.

Walleye fry tend to be stocked in waterbodies that warm gradually in early spring, helping support abundant zooplankton that fry feast on to grow larger. Fingerlings, meanwhile, are put where fickle water temperatures limit zooplankton production

or where swarms of predatory fish would quickly gobble up the slower fry.

It all starts with dedicated volunteers, which both Headley and Geraets will attest are vital to the success of the Fort Peck walleye spawn.

“Apart from the work they perform, volunteers bring a ton of energy, which is often needed when we run this operation seven days a week for typically three weeks, and sometimes longer depending on the conditions,” says Headley. “It gives me a little needed boost when I see someone get excited about all the fish we handle, elevating it from a job to something more.” 🐾



For a video of staff and volunteers working the annual walleye spawn, visit qr1.be/XLPLMM

TEAM WALLEYE The Fort Peck spawn brings together FWP fisheries and hatchery staff, all committed to maintaining Montana’s legendary walleye fishing. The FWP crew is backed by dozens of volunteers who donate hours and days to help with the egg-take operation. “You get to handle fish that most people can’t imagine seeing,” says one Billings resident who has volunteered for the past 10 years.

