



Joe Wright Reservoir

FISH SURVEY AND MANAGEMENT DATA

Kyle Battige - Aquatic Biologist (Fort Collins)

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General Information: Joe Wright Reservoir (150 acres) is a coldwater impoundment near the top of Cameron Pass along Highway 14.

Location: Larimer County, from Fort Collins take US-287/HWY 14 north 6 miles to HWY 14/Poudre Canyon HWY. Turn left and proceed up the canyon 55 miles to the reservoir.

Recreational Management: Colorado Parks and Wildlife

Fishing Opportunities: Coldwater angling

Purchase a Fishing License: <http://cpw.state.co.us/buyapply/Pages/Fishing.aspx>

Amenities

- Restrooms upstream of reservoir at Zimmerman Lake trailhead

Regulations

- Artificial flies and lures only
- Bag and possession for trout and grayling is 4 fish. Bag limit is in aggregate meaning your combined total of trout and grayling cannot exceed 4 fish.
- Bag and possession for tiger muskie is 1 fish at least 36"
- From the confluence with Joe Wright Reservoir to Hwy 14, **there is no fishing in Joe Wright Creek from Jan. 1—July 31.** Bag, possession, and means of take from the reservoir apply.
- Non-motorized boating only
- Ice fishing allowed

Previous Stocking

2021

Cutthroat Trout
Tiger Muskie
Tiger Trout (Sterile Brook/
Brown Hybrid)

2020

Cutthroat Trout

2019

Cutthroat Trout
Tiger Muskie
Tiger Trout (Sterile Brook/
Brown Hybrid)

2018

Cutthroat Trout

2017

Cutthroat Trout
Tiger Muskie

2016

Cutthroat Trout
Tiger Muskie

* In 2004 - 50 female lake trout were planted to help control stunted grayling

Sportfishing Notes

Grayling

- Fishing is usually slow from ice off until when the fish are staging to spawn
- Fish typically spawn from mid-June to mid July depending on ice conditions. **Keep in mind, the creek is closed to fishing to the Hwy. until July 31.**
- Grayling will aggressively rise to small flies fished on the surface. Be patient, they will frequently miss their first attempt.

Winter

- Use small jigs and flies to catch cutthroat and grayling through the ice, no bait allowed.
- Fish this lake early. The ice gets prohibitively thick in the later winter months.



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Management Notes



Joe Wright Reservoir is a high mountain reservoir managed as an Arctic grayling brood lake. It is owned and operated by the City of Fort Collins as a water supply reservoir and, as a result, water levels fluctuate seasonally. Grayling were originally stocked into Zimmerman Lake (lowed edge of aerial photo to left). At that time Joe Wright was managed for Eagle Lake Rainbow Trout. A spawning channel was built in the creek above the reservoir to accommodate the spawning preferences of the Eagle Lake fish to maintain a naturally reproducing population in the reservoir.

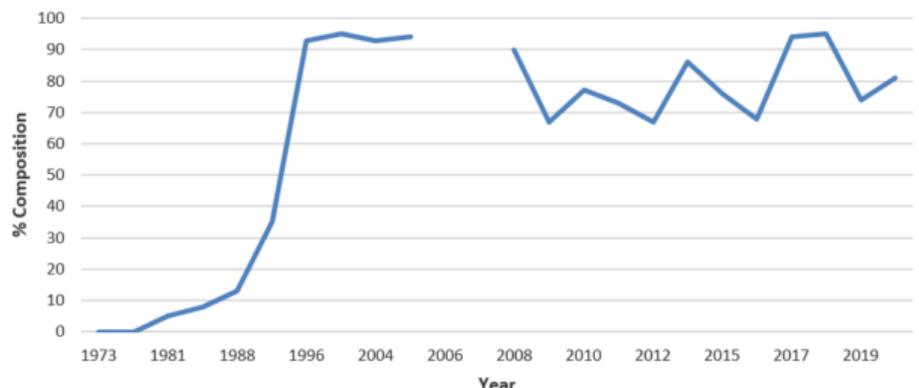


Over time, a number of grayling escaped Zimmerman, migrating downstream to Joe Wright. They found the creek and spawning channel above the reservoir to be ideal spawning habitat and their population exploded. In 1988 grayling represented 13% of the catch in Joe Wright, but only 8 years later in 1996 they accounted for 93% of the catch (Figure below). Since 2008 grayling comprise between 65-95% of fish sampled by CPW in Joe Wright Reservoir.

The Grayling were too successful and began to overpopulate the lake. To help combat this trend, sterile tiger muskie

were stocked in the lake in limited numbers to reduce grayling numbers. Tiger muskies grow slowly in the cold water, with the largest tiger muskie captured to date being 28". Sterile tiger trout were introduced in 2013 with the same intent and have performed well with the largest individual sampled being 26.7". These additions are and should continue to make changes to the population structure of Grayling in the lake over the next few years. This is translating to increased mean and max length that Grayling are achieving in Joe Wright.

Joe Wright: Grayling Percent Composition





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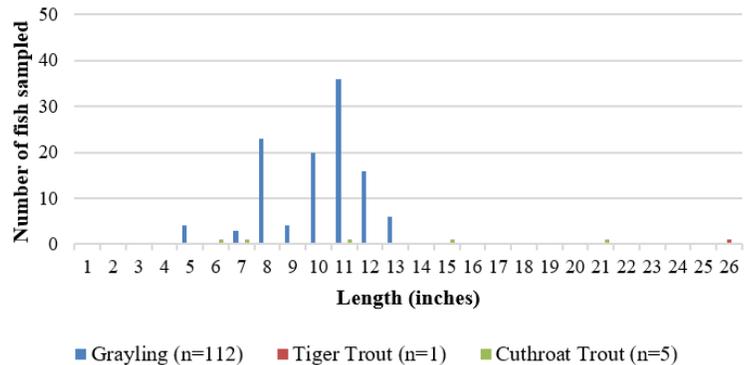
Management Notes Continued

Standardized sampling in 2021 captured four different species: grayling, longnose sucker, cutthroat trout, and tiger trout.

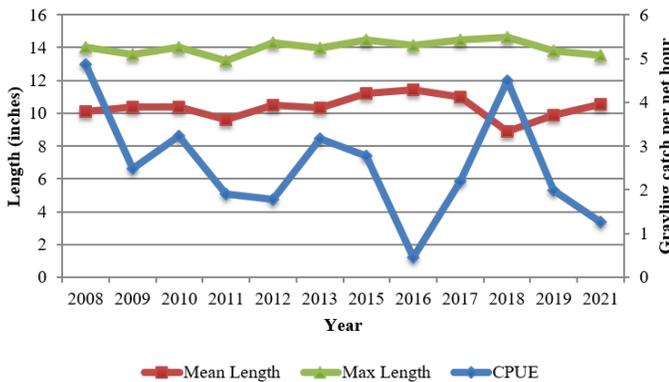
Growth rates for all species in Joe Wright is slow due to the limited growing season, but 21 inch cutthroat and 26.7 inch tiger trout were sampled in 2021.

Three distinct year classes of grayling were captured in 2021. One year old grayling were ~5 inches, with two year old grayling being 7-9 inches, and then a strong cohort of adult grayling ranging from 10-13 inches, representing a mix of ages, likely between 3-6 years old.

2021 Salmonidae Length Data



Grayling Catch Per Unit Effort vs. Length Metrics



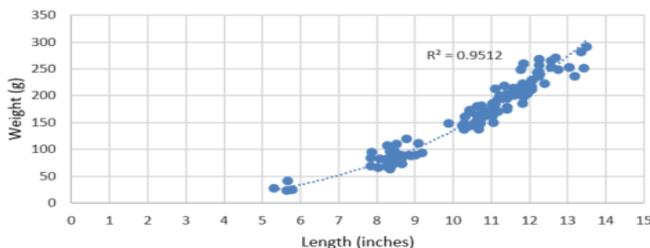
In the figure to the left, you can see grayling catch per unit effort as well as mean and max length metrics. In 2021, grayling catch per unit effort (CPUE, i.e. how many grayling were netted per hour) was down slightly, but still in the realm of typical catch rates. What is interesting in this figure is the inverse relationship between CPUE and length metrics. When CPUE is high then there are more fish in the lake and more competition for resources. As a result, you see a negative correlation with length. As density of grayling increases, competition also increases, and grayling length metrics decrease as a result. Grayling ap-

proaching 18 inches were caught in the reservoir shortly after they migrated into the reservoir, so we know that the potential for larger fish, that could challenge the state record has existed for this water.

Note the five age classes of Grayling in the picture to the right, with the top fish measuring 14.5". Don't miss the < 1" fish in the bottom left of the picture (highlighted by the red box) which was naturally spawned in Joe Wright Creek just two months earlier.



Joe Wright Reservoir: 2021 Grayling





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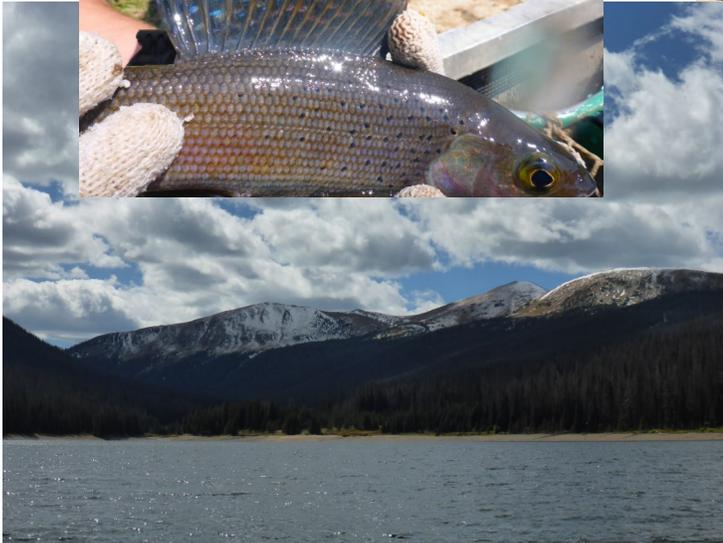
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Management Recommendations:

- Continue monitoring grayling trends: catch per unit effort, size structure, and condition to assess population dynamics. Hopefully size of adult Grayling and maximum length continue to increase.
- Evaluate stocking of additional predators in the reservoir. CPW may back off stocking additional teeth in the reservoir over the next few years depending on what trends we see in the grayling population.
- CPW will continue conducting the Grayling wild spawn operation to collect eggs to meet the statewide Grayling stocking requests.

Pictures from fishery sampling:



26.5" Tiger Trout



21" Cutthroat Trout



26.5" Tiger Muskie



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Grayling Spawn

Joe Wright Reservoir is the location from which CPW takes all grayling eggs for the entire state. The operation will take up to 250,000 eggs that go to the Glenwood Hatchery to meet our request for grayling stocking around the state. The average grayling produces around 1,100 eggs.

Grayling have a massive spawning run out of Joe Wright Reservoir. They move up the river together



shortly after ice off, when the flows and temperatures meet their criteria. This occurs over a short span of just a few days and for the most part, the fish all move up at once. Thousands of fish school up in the shallow stream, congregating together, then seeking out and defending the optimal spawning sites, typically shallow gravel bars. The males are distinctive with their large colorful dorsal fin that they use to attract females. Unlike salmon, when they are finished spawning, Grayling immediately return the lake.

CPW produced a video highlighting the spawning operation that can be seen at the link below:

<https://www.youtube.com/watch?v=LuJiflT3oDs>

