



Antero Reservoir

Last Updated March 2022

FISH SURVEY AND MANAGEMENT INFORMATION

Tyler Swarr - Aquatic Biologist (Upper South Platte Basin)

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General Information: Antero Reservoir provides quality fishing for Rainbow Trout, Brown Trout, Cutthroat x Rainbow hybrid trout “cutbow”, and Snake River Cutthroat Trout. Antero is also stocked with hybrid Cutthroat Trout, Lake Trout x Brook Trout hybrid “splake”, and Brown Trout x Brook Trout hybrid “tiger trout” in limited numbers when available.

Location: Park County, North of US Hwy 24 about 11 miles west of Hartsel, CO.

Recreational Management: Colorado Parks and Wildlife, Denver Water (owner)

Fishery Management: Coldwater angling for trout species

Purchase a Fishing License: <https://www.cpwshop.com/purchaseprivilege.page>

Amenities and General Info.

- Boat Ramps (north and south)
- Entrances (north and south)
- Picnic Areas (south side)
- Camping (south side)
- Outhouses (north and south)
- Informational Kiosks
- Ice Fishing

Regulations

- Bag and possession limit for trout is two fish
- Reservoir hours are 1/2 hour before sunrise to 1/2 after sunset
- Ice fishing shelters must be portable
- The north shore is a day use area only. No overnight camping.
- Swimming, wading, paddle boarding, scuba diving, wind surfing, water skiing, and all other water sports are not allowed

Previous Stocking

2021

Rainbow Trout
Brown Trout
Cutthroat x Rainbow “cutbow”
Snake River Cutthroat Trout
Lake x Brook Trout “splake”
Brown x Brook “tiger trout”
Muskellunge x N. Pike “tiger muskie”

2020

Rainbow Trout
Brown Trout
Cutthroat x Rainbow “cutbow”
Snake River Cutthroat Trout
Lake x Brook Trout “splake”
Muskellunge x N. Pike “tiger muskie”

2019

Rainbow Trout
Brown Trout
Cutthroat x Rainbow “cutbow”
Snake River Cutthroat Trout
Lake x Brook Trout “splake”
Brook Trout
Hybrid Cutthroat Trout
Brown x Brook “tiger trout”
Muskellunge x N. Pike “tiger muskie”

2018

Rainbow Trout
Brown Trout
Cutthroat x Rainbow “cutbow”
Snake River Cutthroat Trout
Lake x Brook Trout “splake”
Hybrid Cutthroat Trout
Muskellunge x N. Pike “tiger muskie”

Boat Inspections:

- Trailered boats may launch May 1st—October 31st, pending ice conditions.
- Trailered boats will only be permitted to launch after going through an inspection for Aquatic Nuisance Species. The south boat ramp will be open 6am – 8pm seven days a week. The north boat ramp will be open 6am – 8pm Thursday—Sunday, May 26th – Sept 4th

Sportfishing Notes

Summer

- Fishing is best during periods of cooler water temperatures (spring, fall, early morning).
- Target weed edges with spinners, spoons, tube jigs, scuds, and callibaetis patterns.

Winter

- Best ice fishing is from first ice through January while water quality remains good.
- Target weed edges with tube jigs, spoons, and mini jigs tipped with meal or wax worms. Scud patterns also work well.



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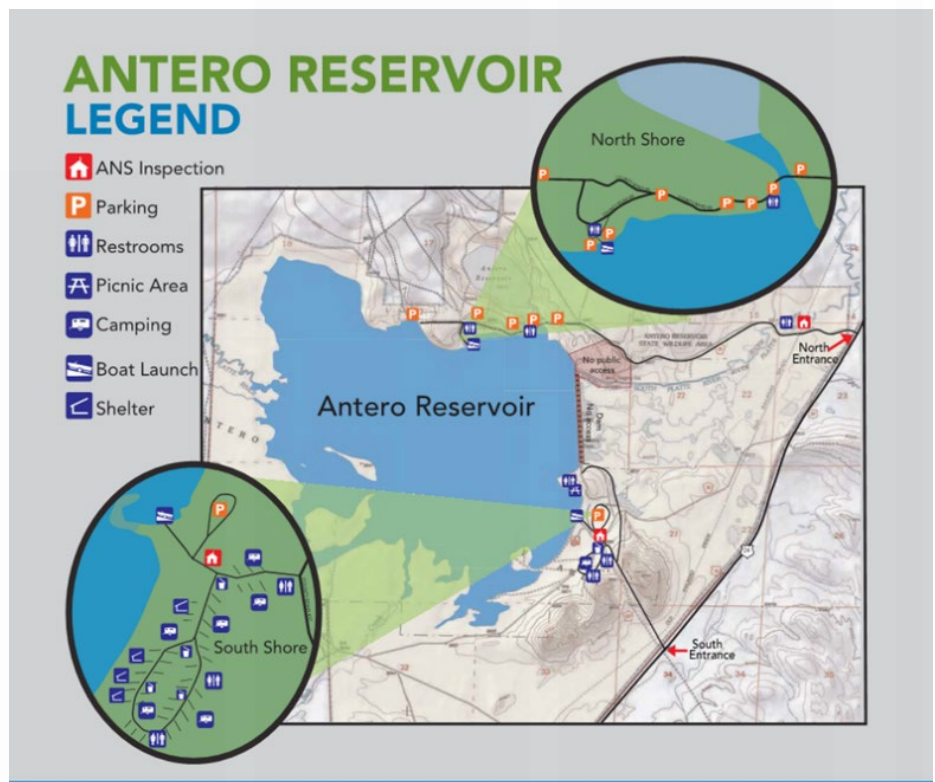
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About The Reservoir

Antero reservoir is owned and operated by Denver Water but the fishery is managed by Colorado Parks and Wildlife. The original reservoir was built in 1909 using an earth-fill dam over an old lake bed called Green Lake. Green Lake occupies the northwest corner of Antero. Since 1908, Antero has been enlarged a few times to its current size. Antero currently has a capacity of 19,881 acre-feet of water with a surface acreage of approximately 2,300 acres when full. The reservoir historically was used as an agricultural water supply during the mid 1900's but its management has changed to a "drought reservoir", which acts as a reserve water supply for the city of Denver during times of drought.

Antero is quite shallow compared to the other reservoirs located in South Park, with a maximum depth of only about 20 feet. This shallow depth allows light penetration all the way to the bottom of the reservoir, encouraging the growth of rooted aquatic plants, which provide excellent habitat for fish and the macroinvertebrates that the fish feed on. Because of its shallow depth, Antero is warmer than the other South Park reservoirs, causing it to be highly productive, with trout growing about an inch per month. However, because of Antero's shallow depth, it also has a tendency to partially winter kill during late winter. The winter kill is caused by depletion in oxygen due to decomposing aquatic vegetation. The plants tend to die when snow covers the reservoir for extended periods and they do not get enough sunlight to survive. The reservoir is also

periodically drained for maintenance on the dam. The temporary loss of the fishery is met with a "new reservoir syndrome" once re-filled. After re-filling, productivity is higher than usual due to the terrestrial grasses being inundated after cycling nutrients that were trapped in the sediment of the reservoir. When Antero is drained, there is also a large-scale loss of White Suckers, which directly compete with trout for forage, allowing a few years of extraordinary growth rates in trout before the White Suckers take hold again.





Antero Reservoir

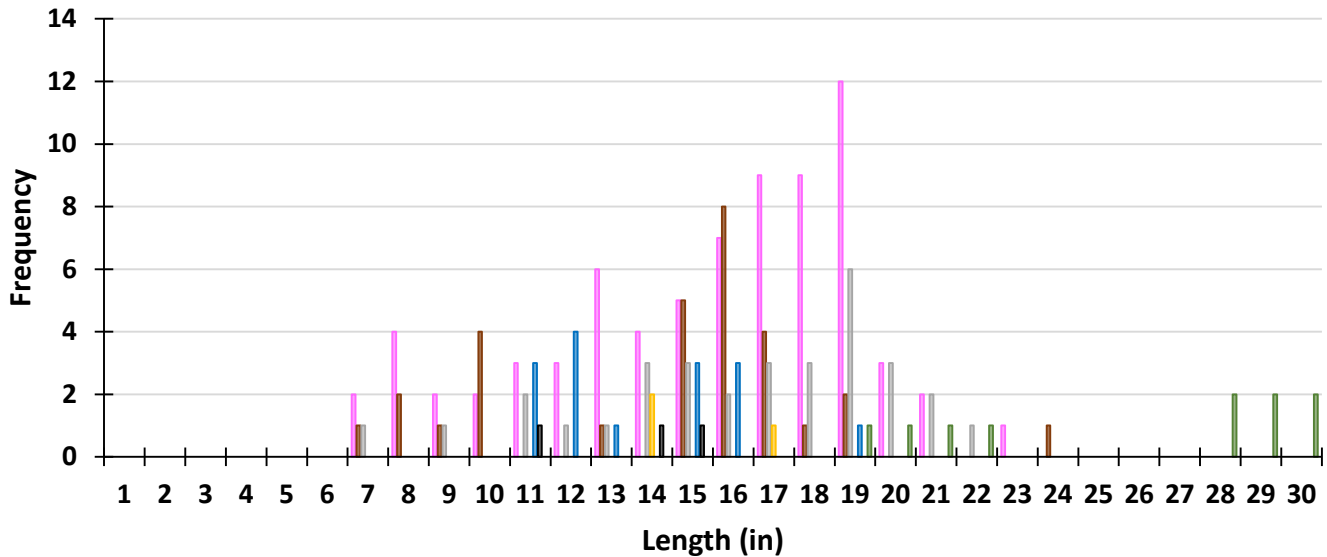
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Survey Information

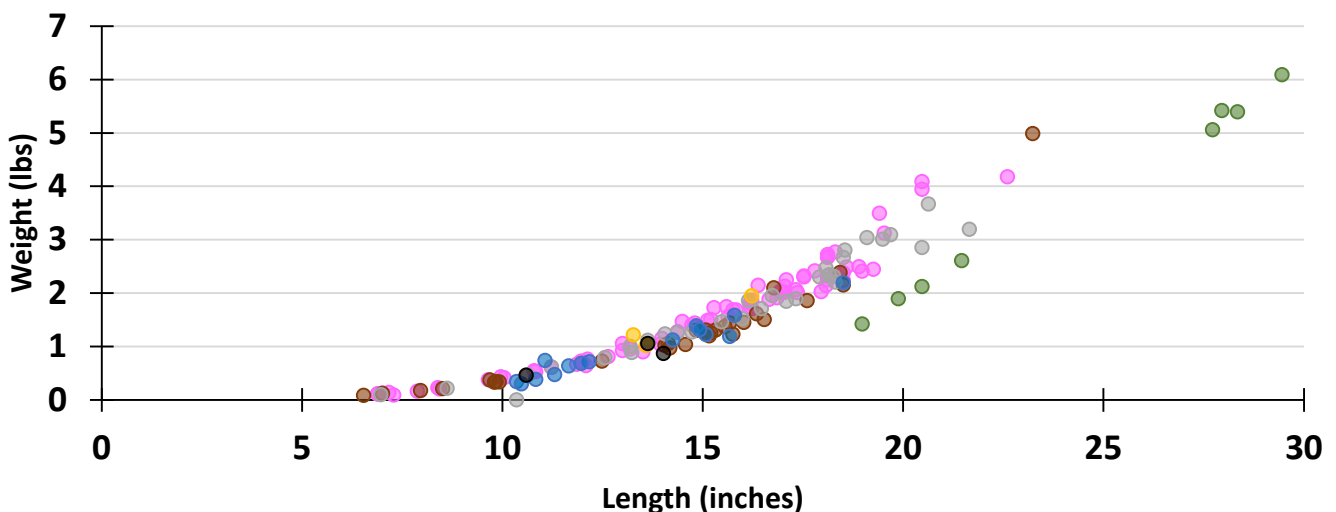
2021 Annual Survey Length Frequency Histogram



■ Rainbow
 ■ Brown
 ■ Cutbow
 ■ Snake River Cutthroat
 ■ Splake
 ■ Tiger Trout
 ■ Tiger Muskie

Length frequency of trout captured during the 2021 annual survey. Years over the histogram indicate the probable year that those fish were stocked. All trout stocked at Antero are 1" – 5" in length.

2021 Annual Survey Length Weight Relationship



● Rainbow
 ● Brown
 ● Cutbow
 ● Snake River Cutthroat
 ● Splake
 ● Tiger Trout
 ● Tiger Muskie

Length – weight relationship of trout at Antero. Ten inch trout tend to be around a ½ pound, while 20 inch trout are around 3 pounds.



Antero Reservoir

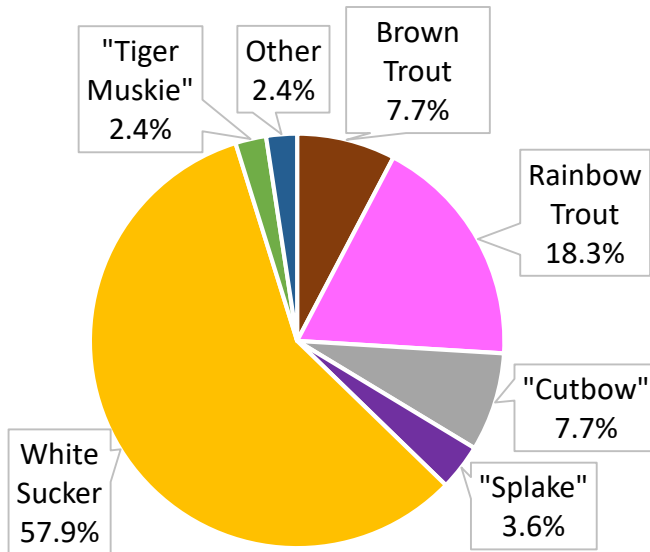
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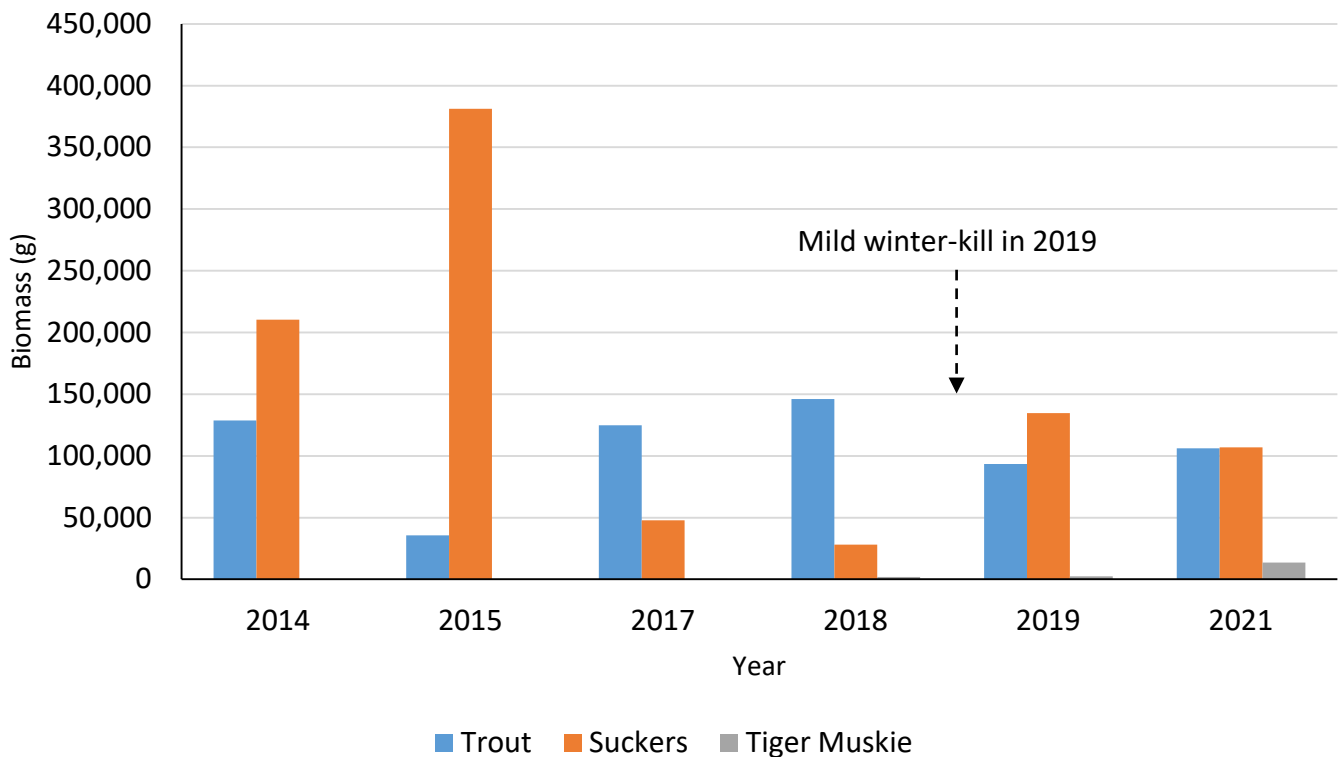
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Survey Information

2021 Annual Survey Species Composition



Biomass of Annual Samples





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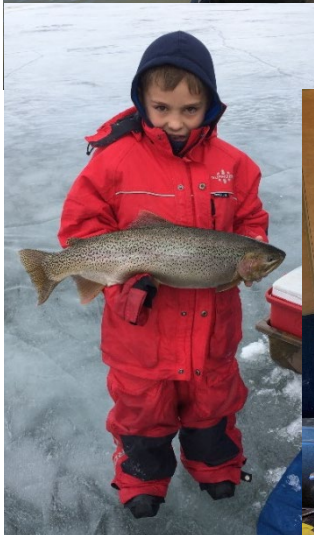
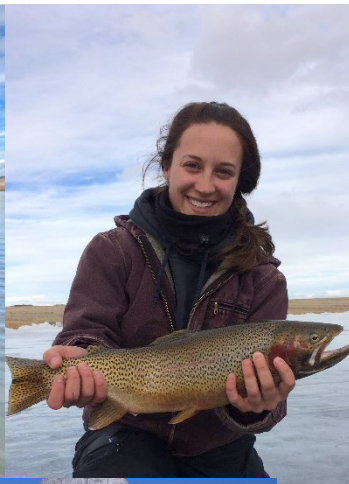
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Fish Pictures and Management Notes

Suckers are making a comeback after the reservoir was drained in 2015, their comeback is likely aided by the hard winter we had in 2018 which led to a mild winterkill of the trout. White Suckers are more tolerant of low oxygen conditions and had higher survival through the winterkill giving them a leg up on the trout. As we move farther from the draining/re-filling of Antero in 2015 anglers should expect to start seeing more trout filling into the 20+” range as trout stocked from 2016 – 2019 start to grow into larger size classes.





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Antero's Wild Brown Trout Spawning Operation

Antero reservoir is one of two water bodies that Colorado Parks and Wildlife uses as brood sources to produce the Brown Trout we stock across the state, the other being North Delaney Butte Lake in North Park near Walden, CO. The two spawning operations both begin in early October and last for one or two weeks until enough eggs are collected to meet stocking requests.

The wild spawning process starts with Aquatic Biologists catching the male and female Brown Trout using a specialized net called a trap net. These nets act as “fish lobster traps” which have a series of chambers in them that funnel the fish to the end of the trap where they cannot figure out how to get back out again. Trap nets target fish swimming close to shore, which is where the spawning fish are roaming as they search for a place to spawn. We take the fish from the trap nets and bring them back to our spawning trailer where we sort the males from the females.

Once the fish are sorted, we take females into our spawning trailer where their eggs are gently squeezed into dry bowls. Then, males are brought into the trailer and their milt (fish sperm) is added to the eggs. It is very important that the bowls remain dry until the spawning process is complete, because once the milt contacts water it becomes active for only a short period. Water is then added to the bowl and the eggs, milt, and water are stirred for 90 seconds using a goose feather. The milt remains active for only 90 seconds so we stir for this length of



time to ensure each egg is fertilized. After the 90 seconds has passed we remove any debris from the bowl and add the eggs to a cooler where they absorb water and become much less fragile. After the eggs are water hardened they are safe to transport and are then brought to one of our state fish hatcheries. At the end of each day the spawned fish are then returned to the lake.

Once the eggs arrive at the hatchery they are counted, disinfected, and placed in specialized jars that gently tumble the eggs until they are ready to hatch. Incubation takes about two months before the fish are ready to hatch. Upon hatching it takes about a month for newly hatched fish, called a fry, to absorb their yolk sacs, at which point they are started on small trout feed. Hatchery technicians painstakingly remove the egg shells, bad eggs, and uneaten feed every day until they grow large enough to eat pelleted feed. At this point caring for the fish is much less labor intensive and they are grown until they are large enough to be stocked.

See the spawning process here: <https://www.youtube.com/watch?v=e3E8hyUcBus>

Visit one of your state fish hatcheries: <https://cpw.state.co.us/learn/Pages/Hatcheries.aspx>



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What about those tiger muskie?

Due to the explosive numbers of White Suckers seen at Antero in previous years Colorado Parks and Wildlife is attempting to control their numbers using sterile tiger muskie. Tiger muskie are apex predators and are being used in an experimental way to determine if it is possible for them to reduce the numbers of White Suckers in Antero reservoir. Colorado Parks and Wildlife began stocking tiger muskie in 2016 after seeing the incredible numbers of White Suckers in the reservoir after it was drained in 2015. Tiger muskie are the hybrid of the Muskellunge and Northern Pike, and do not typically occur in nature in the native range of Muskellunge and Northern Pike, and will not occur in Colorado without being stocked. Tiger muskie cannot reproduce, as they are sterile like a mule. Because they are sterile, it makes them a potential management tool to control undesirable species in coldwater reservoirs such as the White Sucker. Colorado Parks and Wildlife only stocks 500 - 700 seven inch long tiger muskie in Antero annually as an experimental control method for White Suckers, and are currently having no observable impact on the trout fishery.

Tiger muskie are the preferred alternative for White Sucker control over Northern Pike because Northern Pike are not sterile and have a tendency to overpopulate in Colorado's coldwater reservoirs. In many cases, Northern Pike can cause a crash in Colorado's coldwater reservoirs by overpopulating and eating much of the available forage when left to their own devices.

