



North Delaney Butte Lake

FISH SURVEY AND MANAGEMENT DATA

Kyle Battige - Aquatic Biologist (Fort Collins)

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General Information: North Delaney Butte Lake (160 acres) is a coldwater impoundment on the Delaney Butte State Wildlife Area. Gold medal fishing for Brown, Cutbow, and Rainbow Trout available.
Location: Jackson County, North Park. From Walden, go 1/2 mile west on HWY 14 to CR 12; then go 5.3 miles west to CR 18. Go 4.5 miles west to CR 5 then 1/2 mile north to the SWA.
Recreational Management: Colorado Parks and Wildlife
Fishery Management: Coldwater angling
Purchase a Fishing License: <http://cpw.state.co.us/thingstodo/Pages/Fishing.aspx>

Amenities

- Boat Ramp
- Pit Restrooms
- Camping

Regulations

- Two trout bag and possession limit
- Artificial flies and lures only. Scented flies or lures must be 1.5" or longer
- Brown Trout 14-20 inches long must be returned to the water immediately
- Rainbow and cutthroat trout 18-22 inches long must be returned to the water immediately
- Fishing is prohibited from the dam and within 100 feet of the dam from Sept. 15-Nov. 15
- Fishing is prohibited in the inlet upstream of the standing water line
- Wakeless boating only
- Ice fishing allowed

Previous Stocking

2019

Brown Trout
Cutthroat/Rainbow Hybrid

2018

Brown Trout
Cutthroat/Rainbow Hybrid

2017

Brown Trout
Cutthroat/Rainbow Hybrid

2016

Brown Trout
Cutthroat/Rainbow Hybrid

2015

Brown Trout
Cutthroat/Rainbow Hybrid

Sportfishing Notes

Spring

- Fish midge patterns to rising fish at ice out
- Crawdad and minnow imitations are good early

Summer

- Damselfly hatches start in the early summer
- Target fish early and late in the day
- Fish will tend to be in deeper water midday
- Callibaetis hatches occur mid to late summer

Fall

- Egg patterns become effective, especially for Rainbows
- Target Browns cruising shorelines

Winter

- Use small jigs and flies
- Fish different depths until you find the depth fish are in



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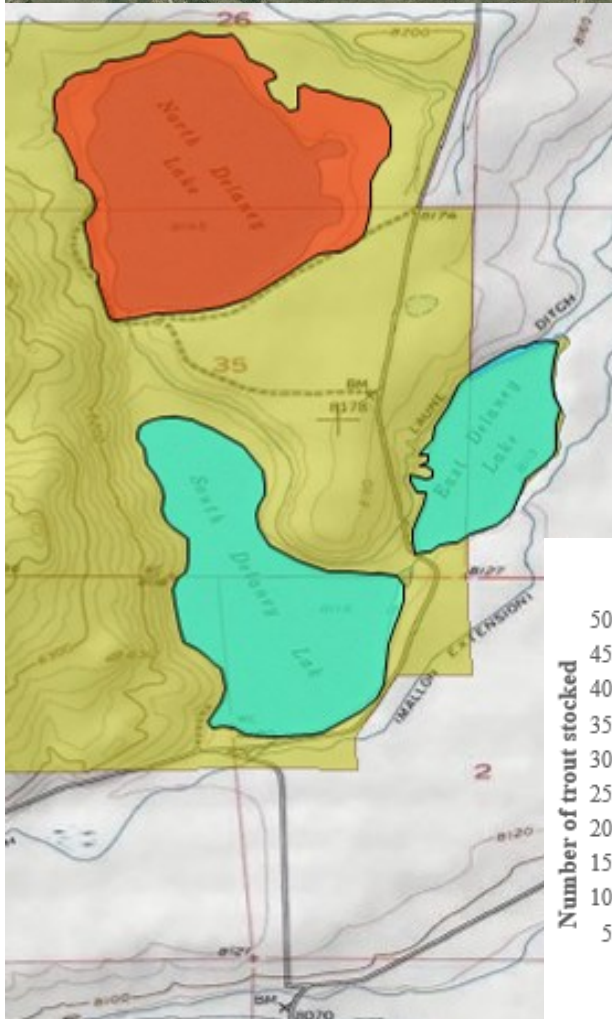
Management Notes



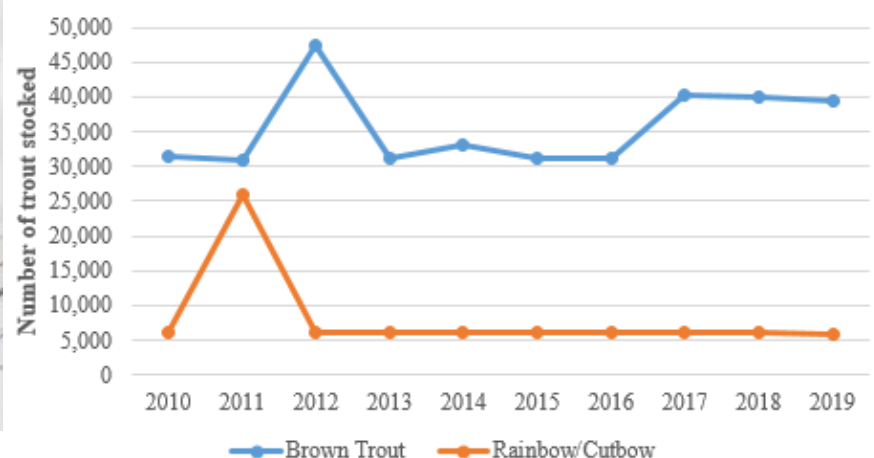
North Delaney is one of three gold medal lakes in Colorado (Spinney Reservoir and Steamboat Lake are the others). The lake is managed as a Brown Trout brood lake and is one of two egg sources (Antero Reservoir being the other) that provide eggs for the rest of Colorado. Each year CPW takes around 1,000,000 eggs from Brown Trout in North Delaney to raise in hatcheries for stocking waters around the state.

Fishing regulations are in place here to protect Brown Trout in their prime spawning size and age. With the high productivity in the lake, this also provides a great opportunity to catch trophy sized fish, that range up to 25 inches and over 8 pounds.

North Delaney is a highly productive body of water and trout grow very quickly here. They prey on a variety of forage including crayfish, minnows, damselflies, mayflies, and chironomids. Brown Trout comprise the majority of stocked fish, but Cutbows or Rainbows, depending on the year, are stocked annually as well. As you can see in the stocking figure below, an additional 20,000 Cutbows were stocked into North Delaney in 2011 because of a pH issue preventing them from being stocked in their intended destination. Neither Browns or Rainbows are able to naturally reproduce in the lake due to a lack of suitable spawning habitat.



North Delaney: Trout Stocking





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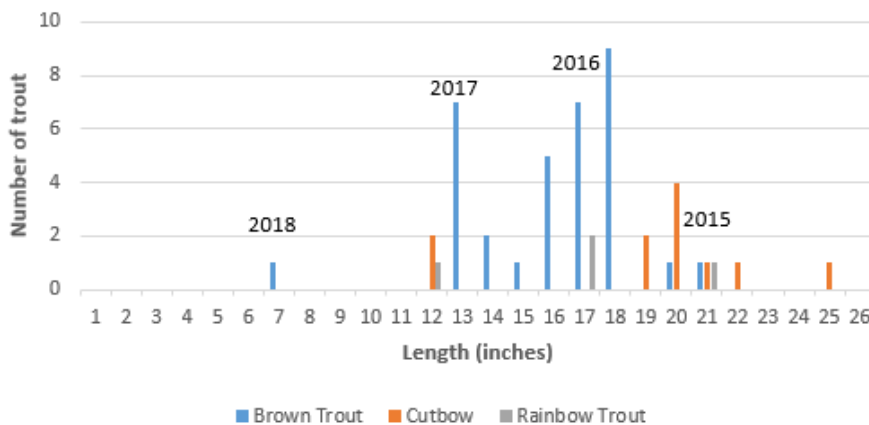
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Management Notes

Colorado Parks and Wildlife conducts an annual nighttime electrofishing survey at North Delaney to monitor the fishery by assessing trends and overall health of the fish population. Four electrofishing stations are sampled and we shock for 10 minutes within each station. This sampling effort generally takes place in early June. In 2019, sampling showed the species composition was 70% Brown Trout and 30% Rainbow/Cutbow. Species composition has shifted over the last few years with more a higher percentage of Brown Trout in the lake, which is desired since it is a Brown Trout brood lake.

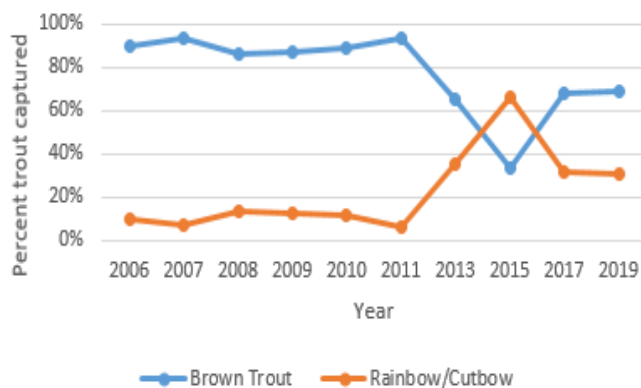
2019 North Delaney: Length Frequency



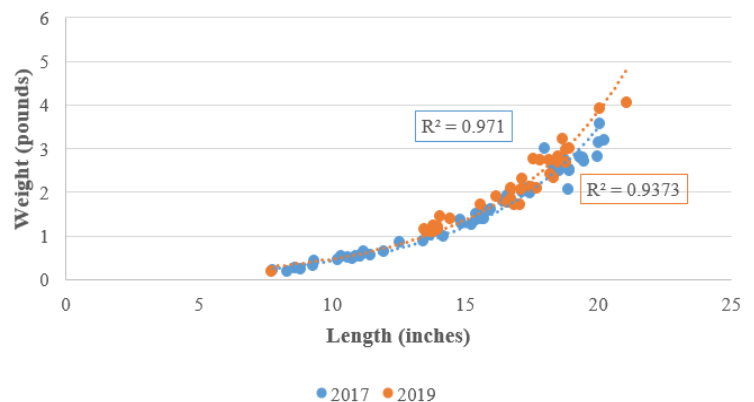
Length frequency data from 2019 shows a healthy distribution of Brown Trout present in North Delaney, with at least four stocking cohorts represented. The figure to the left is a length frequency histogram showing the size distribution of trout captured during CPW sampling. Brown Trout ranged from 7-21 inches, the years next to associated peaks represent the year the corresponding Brown Trout

would have been stocked into the lake allowing you to see growth over time. With the high productivity of North Delaney we see Brown Trout growing about 3-5 inches/year and Cutbows growing up to 7 inches/year. With such fast growth rates few fish live past their fifth year, but there are a handful of much larger individuals out there that are not represented in our data here. As you can see from the length frequency data there are quite a few 20"+ Cutbows in North Delaney right now. Colorado Parks and Wildlife increased Brown Trout stocking to bolster numbers of fish available during the October spawning operation. We will continue to monitor the population and condition indices to ensure stocking rates are suitable.

North Delaney Species Composition



North Delaney: Brown Trout Length to Weight





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Management Recommendations and Sampling Pictures

- CPW will continue annual sampling to monitor population trends and health of the fishery.
- CPW is increasing Brown Trout stocking for the next several years to try and further bolster Brown Trout numbers in the lake and improve egg take in the fall.
- Cutbow stocking will continue with ~6,000 individuals annually. Anglers should expect Rainbow and Cutbow fishing to decline slightly over the next couple years.





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Brown Trout Spawn



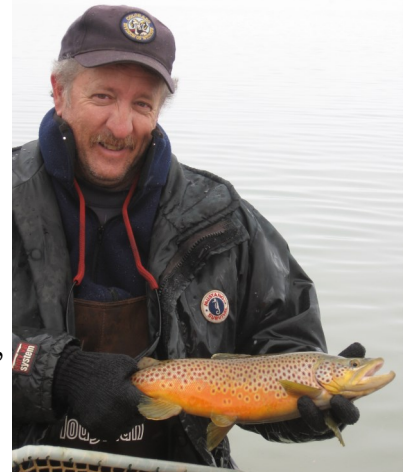
Every October, CPW sets up a wall tent on the South shore of North Delaney to spawn Brown Trout. The tent is our headquarters for the operation and keeps us out of the wind, rain, snow and sunlight while we take eggs.

The fish are collected from the lake using trap nets. As fish cruise the shore they encounter the lead portion of the net which funnel them into the opening. Here they pass through a series of hoops that

allow the fish to go in, but not out. We will set at least a dozen nets around the lake, focusing on the inlet and dam. This is the reasoning for fall fishing restrictions around the dam and inlet areas.



In the morning, we collect the fish from the nets by boat and bring them back to holding cages near the tent. Here they are sorted by gender, males and females in separate cages. Fish not ready to spawn, or already past spawning, are released back to the lake. Then, the ripe fish are brought up to the tent and anesthetized for a few minutes to calm them down, lower their stress level, and make it easier to strip the eggs from the females.



Inside the tent, the females are gently squeezed and the eggs are collected into a dry pan. The males are squeezed and their milt is added to the eggs. Then, water is added to the pan, activating the sperm in the milt. The sperm are only active for a short period of time so the pans are stirred with a feather for ninety seconds to max-

imize the chances of an egg becoming fertilized. When this time is up, the eggs are rinsed repeatedly and cleaned to reduce the possibility of fungal infection. Finally, they are placed into coolers and shipped to the hatcheries.



Check out the video summary of the operation at the link here: <https://www.youtube.com/watch?v=e3E8hyUcBus&t=29s>