



Avery Lake

FISH SURVEY AND MANAGEMENT INFORMATION Boyd Wright - Fish Biologist (Meeker)

General Information: Avery Lake (aka Big Beaver Reservoir) is a 245 surface acre reservoir on Oak Ridge State Wildlife Area with a maximum depth of 76 feet. It offers angling opportunity for rainbow trout, snake river cutthroat trout, splake, black crappie, and green sunfish, though the latter two species were illicitly introduced.

Location: Rio Blanco County. Go 19 miles E of Meeker on County Road 8, then follow signage for Lake Avery to left.

Recreational Management: Colorado Division of Wildlife (970-878-6090)

Fishery Management: Cold water species

Annual Survey Data: ([see page 2](#))

Amenities and General Info.

- Boat Ramp (1)
- Picnic Areas
- Camping
- Restrooms

Regulations

- Current bag and possession limit for crappie is 10 fish, but is subject to change
- Rainbow trout and Snake River cutthroat trout daily bag limit is no more than 4 fish in the aggregate; possession limit is no more than 8 fish in the aggregate
- Lake Avery is a no-wake lake

Aquatic Nuisance Species

- Clean, drain, and dry your boat before coming to Lake Avery.
- There is not an ANS check station at Avery, but boaters are asked to follow the above guidelines.

Previous Stocking

2010

50,000 5" Rainbow Trout

2009

50,000 5" Rainbow Trout

2008

50,000 5" Rainbow Trout
5,000 2" Splake

2007

50,000 5" Rainbow Trout
5,000 5" Snake River cutthroat

Additional Notes

- Black crappie were illicitly introduced sometime between the lake being sampled in 2005 and 2008, they are now an established self-sustaining population with increasing numbers.
- Green sunfish were also illicitly introduced and have been established in the lake for several decades.

Sportfishing Notes

Rainbow Trout

- Expect fast action for rainbow trout using all conventional angling methods, including spin fishing, fly fishing, and bait fishing during the spring, summer, and fall months.
- Standard trout fishing baits including woolly boogers, various dry flies, spinners, salmon eggs, power bait, and night crawlers.
- Avery is a locally popular ice fishing destination for trout during winter months.

Splake

- Splake stocking has seen very limited success, and few anglers have reported catching splake. Splake have been captured incidentally while fishing for rainbow trout.

Snake River Cutthroat Trout

- Cutthroat are caught few and far between, but tend to attain greater mass than the rainbows. They should be targeted using the same methods described for rainbow trout.

Black Crappie

- Crappie are caught using jigs along the dam and eastern shoreline.



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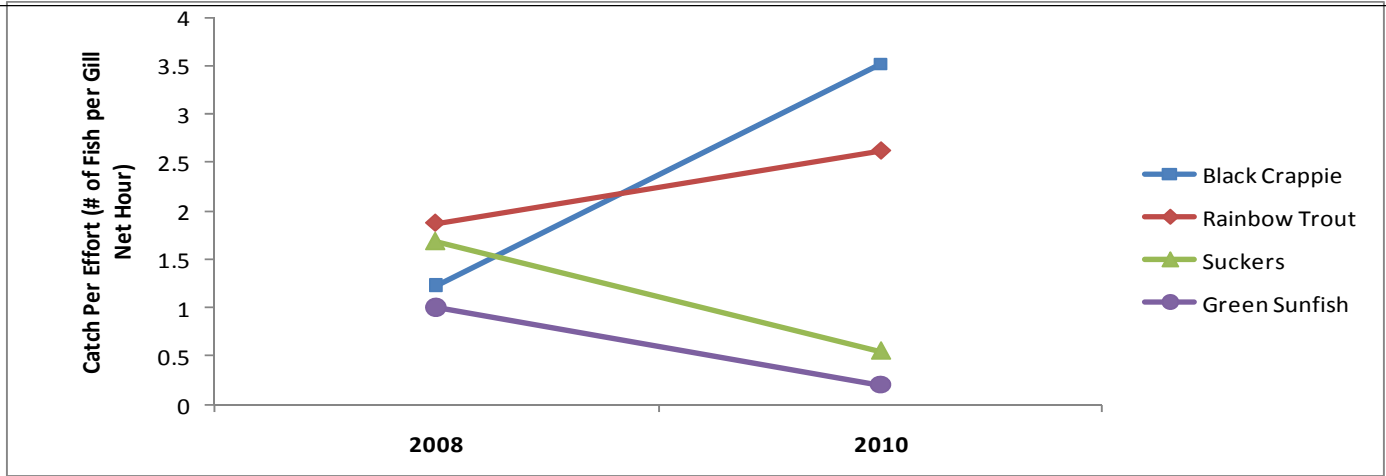


Figure 1. 2008 and 2010 relative abundance (Catch Per Effort; number of fish per gill net hour) of four species in Lake Avery. The lake is sampled using 2-150' standard gill nets and 3 standard shoreline electrofishing stations, but relative abundance is reported here for gill nets only. A standardized sampling program began in 2008. Prior to 2008, when a fishery biologist was assigned to the area, the lake was sampled sporadically. The introduction of black crappie was first documented in 2008, and since their introduction relative abundance of black crappie and rainbow trout has increased, while sucker and green sunfish numbers have decreased. This decrease could be a result of adult black crappie predation on juvenile sunfish and suckers.

Table 1. Relative abundance (Catch Per Effort; number of fish per gill net hour) and fish length summary data for all species sampled in 2008 and 2010. The table shows relative abundance of each species in each sample year, length range in inches, average length in inches, and PSD. PSD (proportional stock density) values range from 0 to 100 and are an index of size structure of a population. The greater the PSD value, the greater the proportion of "quality" length fish versus "stock length" (the minimum size of fish that may be caught angling).

Species	2008				2009			
	CPE (# fish/				CPE (# fish/			
	<u>gill net</u> <u>hour)</u>	<u>Length</u> <u>Range (in.)</u>	<u>Average</u> <u>Length (in.)</u>	<u>PSD</u>	<u>gill net</u> <u>hour)</u>	<u>Length</u> <u>Range (in.)</u>	<u>Average</u> <u>Length (in.)</u>	<u>PSD</u>
Suckers	1.7	5.1—11.2	7.1	100	0.6	4.5—11.4	7.1	100
Green Sunfish	1.0	3.5-8.4	5.7	33	0.2	3.8—7.4	7.4	71
Rainbow trout	1.9	4.2—16.1	10.3	1	2.6	6.1—16.1	10.9	1
Snake R. Cutthroat Trout	0.1	6.6—13.5	10.9	NA	0.01	16.7	16.7	100
Splake	0	NA	NA	NA	0	NA	NA	NA
Black Crappie	1.2	1.6—11.7	4.5	38	3.5	1.6—10.5	6.2	18



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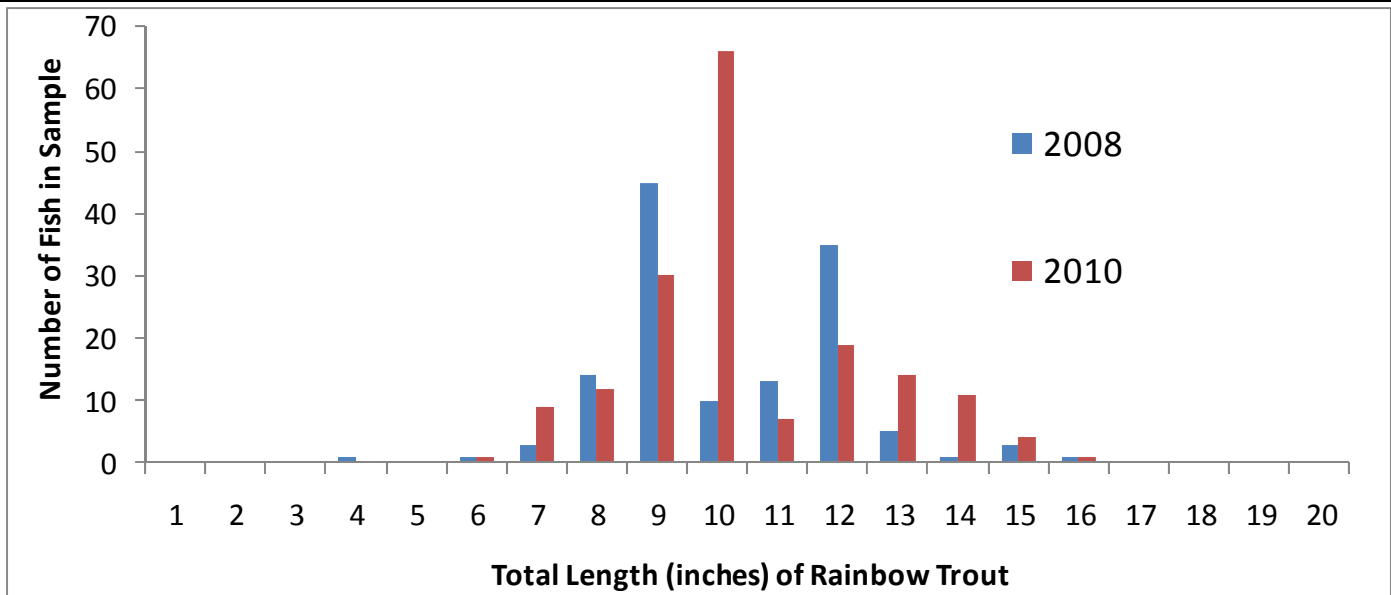


Figure 2. Rainbow trout length-frequency histogram from 2008 (blue) and 2010 (burgundy). In 2010 there was a greater proportion of rainbow trout greater than 12 inches in the population. The graph also shows that stocking of 5" (sub catchable) rainbow trout continues to be an effective means for sustaining adult trout abundance in the lake. Stocking these sub-catchable fish is preferred over stocking catchable trout, because it allows the fish to attain the majority of their growth in a natural environment. The result is a higher quality trout that features many of the characteristics exhibited by wild trout.

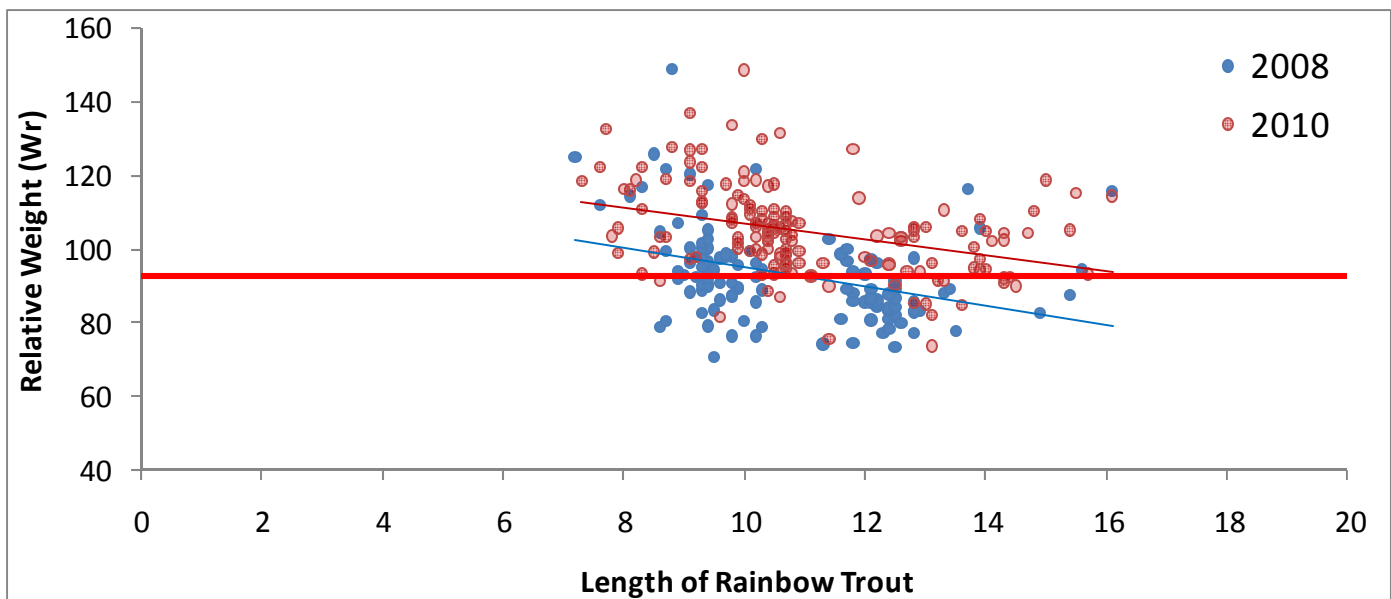


Figure 3. Rainbow trout relative weights in 2008 (blue) and 2010 (burgundy). Relative weight is a function of a fish's mass relative to its length, and can be thought of as an index of plumpness and growth potential. The solid red line represents what is considered an average relative weight for rainbow trout across their range. In general, relative weights of trout were higher in 2010 than in 2008 across all size classes and the cause for this apparent increase in plumpness is unknown. Although rainbow trout do not reach above average lengths in Avery, the lake offers opportunity to catch plump, healthy trout.



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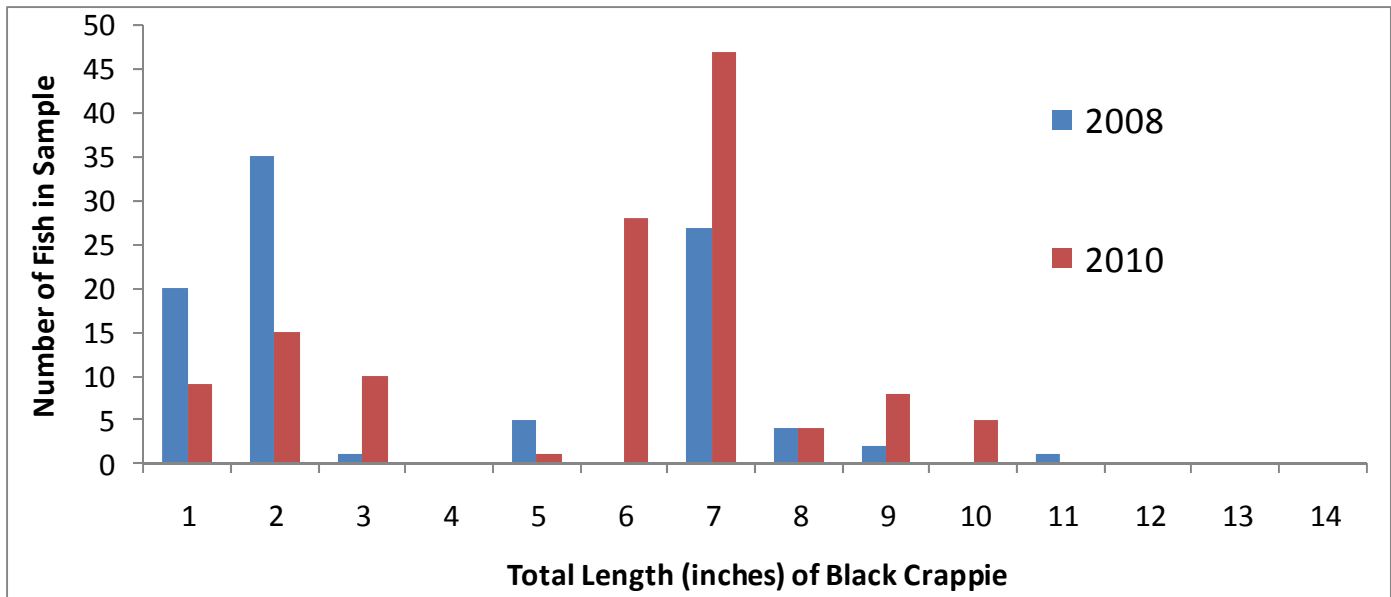


Figure 4. Black Crappie length-frequency histograms from 2008 (blue) and 2010 (burgundy). In 2010 there was a greater proportion of both quality size and stock size black crappie in the population. As the population has become established since crappie were illegally introduced in the middle part of the last decade, there is a greater number of adult fish in general in population. The graph also shows that the population is sustained by ample natural recruitment. Being relatively new, the population may be at or reaching it's prime in terms opportunity to catch "decent" size crappie. However, an optimal forage base for crappie is not present in the lake, and in the future look for the average length to begin decreasing as the population approaches carrying capacity.

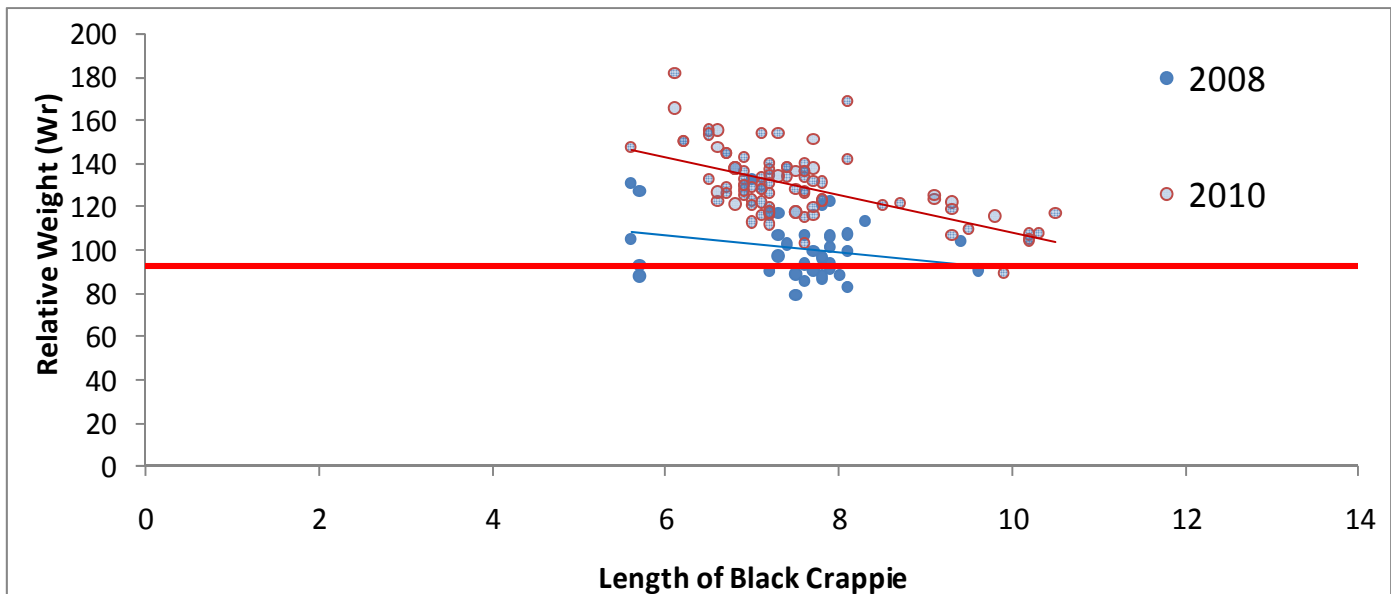


Figure 5. Black crappie relative weights in 2008 (blue) and 2010 (burgundy). Relative weight is a function of a fish's mass relative to its length, and can be thought of as an index of plumpness and growth potential. The solid red line represents what is considered an average relative weight for black crappie across their range. All crappie sampled in 2010 featured above average relative weights.



Elkhead Reservoir

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Illegal Fish Introductions

Lake Avery is yet another example of an unauthorized illegal fish introduction in Colorado. Although the presence of black crappie does not appear to be negatively impacting the fishery in Avery at this time, there are numerous examples of the deleterious ecological and economical impacts of illegal fish introductions across the state of Colorado. Further, crappie in Avery represent a fish population that is still developing and growing. Avery lacks an optimal forage base for crappie, and as the population approaches carrying capacity it is likely that we will see the quality of the crappie fishery decline. The result will likely be an over-abundant stunted population, similar to what we see with most crappie fisheries on the west slope. This could also negatively affect the success of sub-catchable rainbow trout stocking, which sustains the locally popular trout fishery in the lake. While such negative effects are not being documented at this time, the CDOW will be closely monitoring the situation at Avery in future years to further document the fishery response to the illegal introduction of crappie. CDOW fishery management exists in part to promote angler satisfaction. If anglers are unsatisfied with angling opportunities in their area, they should contact local CDOW biologists. Please do not take matters into your own hands by illegally stocking fish.



Figure 6. The catch from the same gill net location in 2008 (pictured at left) and 2010 (pictured at right). Black crappie numbers have continued to increase dramatically, since their illegal introduction to Lake Avery sometime between 2005 and 2008. Although the population appears to be healthy at this time and the rainbow trout fishery continues to thrive, it is anticipated that we have yet to see the impacts of this unauthorized fish introduction.