

Onion River, Sheboygan County
WBIC # 51200
Trout Creel Survey – 2003
by
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ABSTRACT

A creel survey was conducted on the upper Onion River, Mill Creek and Ben Nutt Creek during the 2003 fishing season to document the existing fishery prior to the implementation of more restrictive regulations on trout. The objective of the regulation change was to protect more adult trout and boost natural reproduction so that a natural population can sustain the sport fishery. The survey entailed a 20 hour per week effort including five shifts. Total angler effort was estimated at 2329.1 hours with opening weekend accounting for 27.8% of the total season pressure. May fishing effort accounted for 56.4% of the total hours. Anglers caught an estimated 2243 trout of which 63.6% were rainbow trout. The remainder were brown trout. Two brook trout were reportedly caught and released by one angler. Anglers reported harvesting 45.3% of their catch or 1014 fish. Anglers reportedly kept 52.1% of the rainbow trout and 33.2% of the brown trout. The average length of fish in the creel was 10.1" for rainbow trout and 10.9" for brown trout. The largest trout observed in the creel was 13.0". The creel survey should be repeated in 2009 to measure the effect of the more restrictive regulations. Population estimates should be conducted every other year until that time to evaluate changes in the trout population.

INTRODUCTION

A great deal of effort and funding has been expended in the Upper Onion River Watershed to restore the trout fishery there. The restoration has included the purchase of important lands, the removal of numerous small dams on spring sources, the stocking of wild strain brown trout, the construction of instream habitat and the writing of a long-term plan to address the needs of the watershed. Yet, trout populations have not expanded to the degree expected at this point. Therefore, a more restrictive set of angling rules for the river and its tributaries was proposed and approved. The new regulations include increasing the minimum size limit on trout to 15", reducing the daily bag limit to one fish and restricting the angling methods to artificial lures only. The new rules will be in effect starting in spring 2004 for the Onion River upstream of CTH "E", Mill Creek and Ben Nutt Creek.

The purpose of this creel survey was to document the amount of angling pressure, angler catch and angler harvest on the Onion River prior to the change in regulations so those changes can be evaluated following 5 years of the rules being in effect. The objective of the rule change was to protect more adult trout to boost natural reproduction in the watershed to the point where stocking of hatchery trout is no longer needed to sustain a healthy sport fishery.

METHODS

We conducted a random stratified creel survey of the trout section of the Onion River, Mill Creek and Ben Nutt Creek during the 2003 fishing season. The creel clerk generally conducted the survey during five shifts each week including both weekend days, holidays and three week-days. The shifts were 4 hours long for a total of 20 hours per week. The times were chosen at random. The entire day on each of the opening weekend days was sampled since it was expected that those days were to receive the highest fishing pressure of the entire season. The clerk made car counts at the beginning and end of each shift and made two counts at predetermined times during the shift for a total of four counts per shift. The clerk conducted angler interviews between car counts, focusing on completed trips when possible.

Angling pressure was very light from June through September and relatively few angler interviews were possible for that period. Therefore, I calculated a total mean for the number of anglers/car and

catch/harvest rates for that June through September period to be used in the calculations for effort and catch/harvest. Anglers were presumed to be fishing for any trout rather than focusing on one specific species.

RESULTS AND DISCUSSION

Angler Effort

Anglers expended a total of 2329.1 hours of effort toward trout in the Onion River system during the 2003 fishing season (Table 1). Opening weekend anglers accounted for 27.8% (648.4 hrs) of the season pressure and the month of May accounted for 56.4% (1314.5 hrs) of the pressure. Pressure declined in June to 434.7 hours (18.3%) and declined dramatically during the remainder of the season. A minor increase in effort during August may have been due to a small mid-season stocking of rainbow trout by Trout Unlimited. The fish were stocked as part of a demonstration event. The season average fishing trip lasted 1 hour and 40 minutes.

Table 1. Angling effort, trout catch and trout harvest for the 2003 season on the Onion River, Mill Creek and Ben Nutt Creek, Sheboygan County.

Period	Angling Effort – hrs.	Total Rainbow Catch	Total Rainbow Harvest	Total Brown Catch	Total Brown Harvest	Total Trout Catch	Total Trout Harvest
Opening Weekend	648.6	850	499	110	39	960	538
May Days	427.4	286	111	141	51	427	162
May Weekends	238.5	160	62	79	29	239	91
May total	1314.5	1296	672	330	119	1626	791
June Days	303.0	39	21	145	45	184	66
June Weekends	131.7	17	9	63	20	80	29
June Total	434.7	56	30	208	65	264	95
July Days	67.1	9	5	32	10	41	15
July Weekends	78.6	10	6	38	12	48	18
July Total	145.7	19	11	70	22	89	33
Aug. Days	186.0	24	13	89	28	113	41
Aug. Weekends	49.2	6	3	23	7	32	10
Aug. Total	235.2	30	16	112	35	142	51
Sept. Days	108.0	14	8	52	16	66	24
Sept. Weekends	91.0	12	6	44	14	56	20
Sept. Total	199.0	26	14	96	30	122	44
Season Total	2329.1	1427	743	816	271	2243	1014

Angler Catch and Harvest

Anglers caught an estimated 2243 trout including 1427 rainbow trout (63.6%) and 816 brown trout during the 2003 season in the Onion River Watershed (Table 1). The estimated total harvest of trout was 1014 fish which was 45.3% of their catch. The harvest was comprised of 743 rainbow trout and 271 brown trout. The percent harvested was different between rainbow trout (52.1%) and brown trout (33.2%). Most of the rainbow trout stocked before and during the season were legal size fish whereas, a fair number of the brown trout were likely under the 9" size limit. Rainbow trout catch and harvest was especially high in May and declined dramatically after that month. The drop off in brown trout catch was less pronounced.

The average length of the rainbow trout harvested during 2003 was 10.1" long. The average length of the brown trout was 10.9" long. As expected, most of the fish were in the 9.5" – 10.5" length groups (Figure 1). The largest trout observed in the creel was a 13.0" brown trout.

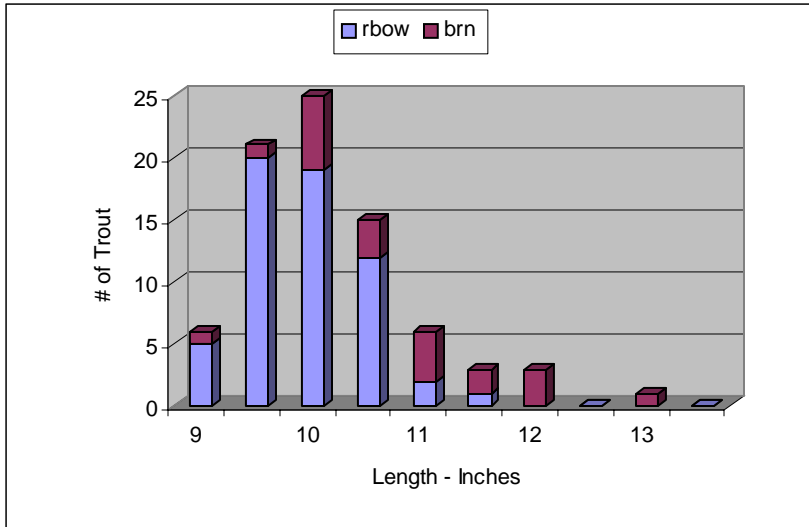


Figure 1. Length frequency distribution of trout observed in the creel in the Upper Onion River Watershed during the 2003 angling season.

MANAGEMENT RECOMMENDATIONS

The creel survey should be repeated in 2009 to measure the impact of the regulation change on the sport fishery of the Upper Onion River Watershed. The delay to 2009 would allow five full seasons to pass before the survey was repeated. Trout population estimates at two stations on either side of CTH "E" should be conducted every other year to monitor changes in the trout population.

NOTED AND APPROVED

E. Randy Schumacher, Fisheries Supervisor

Date