

Silver Creek

Luce County, T46N, R11W, S25
Tahquamenon River Watershed, Last Surveyed 2009

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Environment

Silver Creek is a small designated trout tributary to the Tahquamenon River, situated about ten miles northwest of Newberry in Luce County. The creek originates at the Silver Creek Pond, an eleven acre brook trout pond, and flows south 6.2 mi to the Tahquamenon River (Figure 1). The creek flows about 2.5 mi through rolling sandy hills, via a narrow 70-80 ft valley with relatively steep sides. Riparian vegetation consists of floodplain shrub, steep banks with mature trees, and areas of tag alder lined banks. Upland vegetation consists of dense maple, pine, and hemlock, interspersed with black spruce and balsam wetlands. Below the 2.5 mi reach, beginning roughly at the Silver Creek Road crossing, the terrain flattens into a coniferous wetland that extends three miles further to the Tahquamenon River. Two roads cross the creek, Silver Creek Road located about 2.5 mi downstream and Camp 6 Road located about one mile downstream from Silver Creek Road. The lower reaches are inaccessible due to flowing through a very flat wetland that borders much of the Tahquamenon River.

Total stream gradient averages 16.6 ft/mi, but the lower three stream miles flow across a relatively flat terrain. For that reason, actual gradient in the accessible, fishable reaches averages 25-30 ft/mi. The bottom substrate is about 90% sand and 10% silt. The stream averages fifteen ft width, and depths vary from 1-4 ft. An abundance of woody structure is scattered throughout the length. Little gravel spawning habitat is evident except at the headwaters immediately below the Silver Creek Pond.

History

The Silver Creek Pond is eleven-acre pond that was impounded by several headwater beaver ponds during the early 1960s. At about the same time, two small tributaries were impounded to produce Buckys Pond at seven acres and Brockies Pond at six acres. All three impoundments were managed for brook trout. Buckys Pond was removed in 2008 due to poor trout survival and the presence of an unusual parasite. The two remaining impoundments in this small watershed, Silver Creek Pond and Brockies Pond, are both stocked annually with brook trout. Both support good angling fisheries. The stream itself, however, has not been stocked since 1964. Sufficient natural reproduction was documented at that time to allow cessation of the stocking program. The creek supports a modest brook trout population and a modest angling fishery. The question remains, however, whether the brook trout are naturally reproduced or else escapees from the two impoundments upstream. Since level control structures for both ponds produce heads of about 11-12 ft, the probability appears minimal for downstream trout migration.

Silver Creek, especially at the Silver Creek Road crossing, was used as a stream protection and enhancement training ground by the Newberry (Tahquamenon Area) High School conservation class for several years during the 1970-1980s. The students constructed several types of stream bank

protection and shelter enhancement structures. Much of the work, however, has since fallen into disrepair.

The DNR conducted a stream electrofishing survey in September, 1969 at four sites. Adult brook trout were captured at all sites, along with sculpins and occasional blacknose dace. The brook trout appeared to be in good condition. A July, 1998 electrofishing survey took place at two sites, downstream from the Silver Creek Pond and upstream from the Silver Creek Road bridge. The site below the dam produced 21 brook trout with 47% legal at 7+ in, 123 sculpins, and two sticklebacks. The site above the bridge produced 16 brook trout with none legal at 7+ in, and 32 sculpins. The downstream site was quite barren with sand substrate and little woody structure. Trout from both sites combined were growing slightly faster than state average.

Current Status

A stream electrofishing survey was conducted in September 2009. Only one site was surveyed, beginning at the Silver Creek Road bridge and extending 750 ft upstream (Figure 2). The two species captured were brook trout and mottled sculpin (Table 1). Brook trout comprised 90% of the catch biomass, with 57% legal at 7+ in. Brook trout were again growing slightly faster than state average (Table 2).

Analysis and Discussion

Silver Creek is a small body of water, with only about three miles of angling access. The past stream bank protection structures did not last long. Perhaps their short duration was related to the abundance of sand and fine gravel in the surficial soils, which are easily eroded during spring snow melt flood events. Similar results were documented in the Carp River, Mackinac County when plank structures were first used to protect stream banks. Within only a few years, the sand banks behind the structures had eroded far enough to position those structures in mid-stream. Any consideration of future stream enhancement or protection structures must address the duration concept and resulting cost/benefit ratio. In addition, there is little access down steep banks to allow heavy equipment work anywhere but at the two road crossings. For those reasons, there are no projects being contemplated at this time.

Management Direction

Surveys continue to document a modest brook trout fishery, the result of natural reproduction possibly supplemented by out-migration from the two stocked impoundments in the system. Spawning habitat is rare, which implies the potential to increase the population by stocking. Growth rates, however, are so close to state average that any significant increase in numbers will result in increased competition for available food, possibly resulting in slower growth rates and reduced survival. For those reasons, active management will for the present be limited to enforcement of the statewide trout Type 1 stream angling regulations.

References

Historical files are kept at the Newberry Operations Service Center, 5100 S. M-123, Newberry, MI 49868

Figure 1. Road map of Silver Creek, Luce County area.

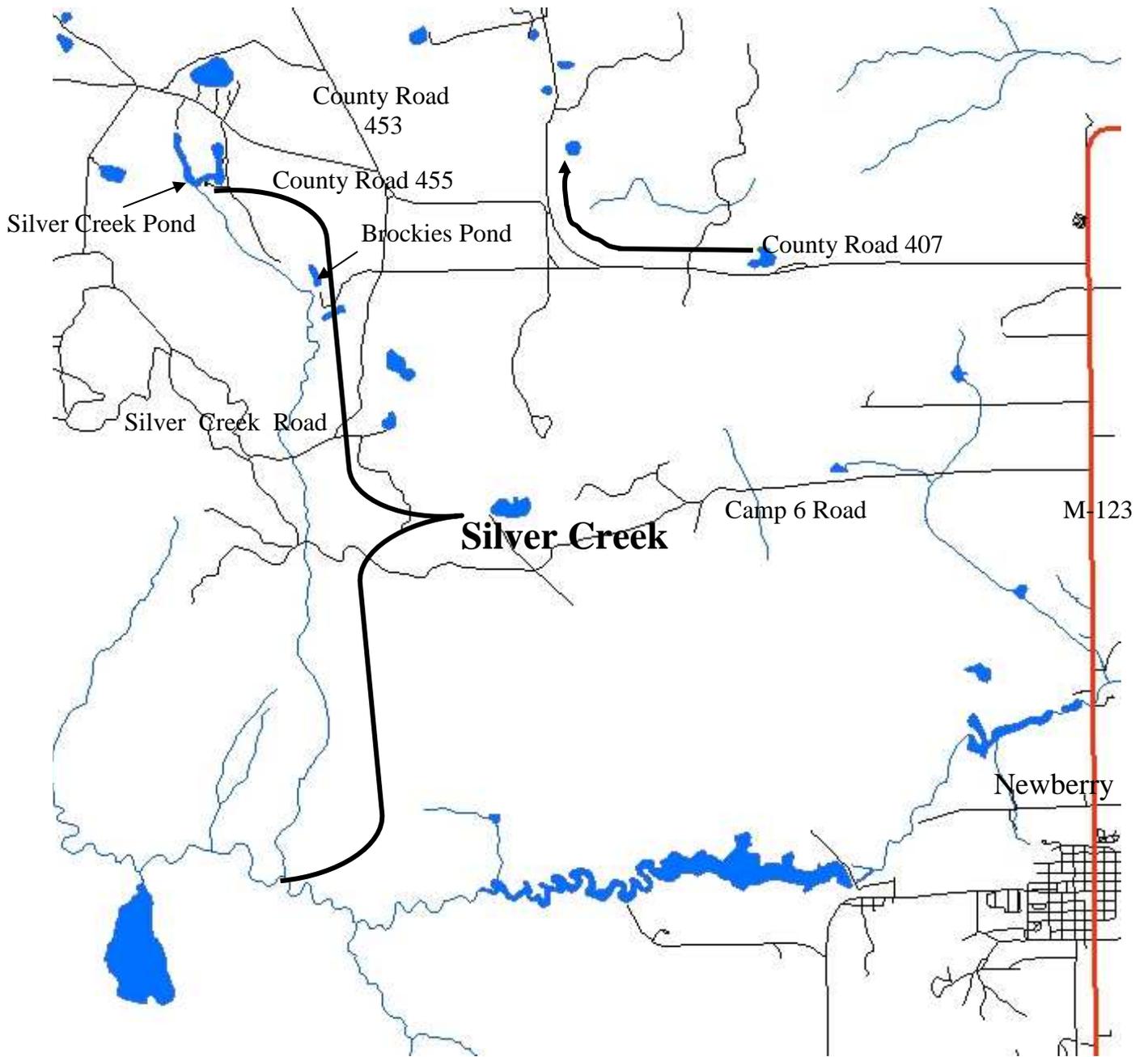


Figure 2. Aerial photograph of Silver Creek, Luce County, showing starting point for September 9, 2009 stream shocking survey, beginning at Silver Creek Road bridge, and extending upstream 750 ft.



Table 1. Number, weight, and length indices of fish collected from Silver Creek by stream electrofishing, September 9, 2009.

Species	Number	Percent by number	Weight (lbs.)	Percent by weight	Length range (in.)*	Average length	Percent legal size**
Brook trout	44	36.7	5.2	89.9	2 – 10	6.3	57
Mottled sculpin	76	63.3	0.6	10.1	1 – 3	2.4	---***
Total		100.0		100.0			

* Note some fish were measured to 0.1 inch, others to inch group: eg., "5"=5.0 to 5.9 inches; "12"=12.0 to 12.9 inches; etc.

** Percent legal size or acceptable size for angling harvest.

*** “---“ signifies a species for which there is no minimum legal/acceptable harvest size.

Table 2. Weighted mean length and age composition for brook trout sampled from Silver Creek by stream electrofishing, September 9, 2009.

Species/Age	Number aged	Length range (in.)	State average len. (in.)	Weighted mean len. (in.)	Weighted age freq. (%)	Mean growth index*
Brook trout						+0.4
Age 0	1	4.2	2.9	4.2	4	
Age I	5	6.3 – 7.6	5.7	7.1	23	
Age II	16	6.8 – 8.5	8.5	7.8	73	

* Mean growth index is the average deviation from the state average length at age.