Beatons Lake

Gogebic County, T.45N., R. 41W., Sec. 1
Cisco Branch of the South Branch of the West Branch Ontonagon River watershed

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Environment

Beatons is a 330-acre lake and is located about 12 miles northwest of the town of Watersmeet. The lake has a maximum depth of 90 feet with sparse aquatic vegetation. There is an almost continuous gravel shoal area around the lake. The lake has no inlet, and one outlet that forms the headwaters of Two Mile Creek, which flows into the Cisco Branch of the Ontonagon River. There is one US Forest Service boat launch located on the north end of the lake.

History

Beatons Lake has been managed as a coldwater trout fishery since 1928. Landlocked salmon (species unknown) were stocked in 1928, 1933, and 1937. Lake Trout and Rainbow Trout were stocked regularly between 1937 through present. Fishing reports in 1969 classified the lake as "excellent for trout". Yellow Perch and Smallmouth Bass were always present in the lake and at times the abundance of Yellow Perch was likely high enough to affect Rainbow trout survival through competition for zooplankton (Rainbow Trout less than 12 inches in size depend on good levels of zooplankton for their diet). Splake were stocked as early as 1963. Subsequent surveys for Splake found that they contributed only mediocre catch numbers to the overall sport fishery. Splake stocking was continued at the request of the lake association, and since the time of 1999, equal numbers of Splake and Rainbow Trout have been planted. Carryover of stocked Splake appeared to be minimal during those years. Lake Medora (Keweenaw County Lake) Lake Whitefish were stocked into Beatons Lake during the late 1960's to try to establish this Coregonid into additional Upper Peninsula waters. The Lake Medora Lake Whitefish were considered unique because they displayed extensive top-water feeding habits during mid-summer periods, which made these fish attractive to fly fishing anglers.

To reduce abundances of Yellow Perch, Walleye were stocked into Beatons Lake between 1994 - 2003. Walleye are known to forage on centrarchids (Bluegill), and to prevent a diminishment of the Bluegill fishery in Beatons Lake, Walleye stocking was terminated in 2004 and Splake stocking was used as the control predator for the perch.

There have been numerous fisheries surveys on this lake between the period of 1937 - 2016. A short synopsis of the surveys conducted from 1937 - 2002 is as follows (fish acronyms; Smallmouth =SMB Bass, Yellow Perch =YEP , Rock Bass =RKB , Common White Sucker = CWS, Rainbow trout = RBT, Lake Trout = LAT, Brook Trout = BKT, Splake = SPL, Brown Trout = BNT, Walleye = WAE);

1937 - Survey finds SMB, YEP, RKB, and CWS to be Common. RBT, LAT, BKT, and landlocked salmon also reported to be present.

1947 - Survey finds strong YEP (6-10") population. One individual each of BKT, LAT, SMB, and RKB captured. 22 suckers also collected.

1954 - Survey finds strong YEP (6-9") population. 5 LAT (14-17"), 4 RBT (8-21"), 2 SMB (8-20") and 122 suckers also collected.

1959 - Survey finds little change in fish community since last survey. 10 RBT (11-16") and no LAT captured.

1965 - Survey finds that small YEP, RKB, and CWS comprise most of the biomass. Only 1 Splake (14"), 3 RBT (10-12") and 1 BNT (27") found.

1966 - Survey finds 13 Splake (10-20"), 1 LAT (28"), 55 SMB (6-16"), and lots of YEP, RKB, and suckers. Estimated 7 lb of rough fish to 1 lb of gamefish.

1969 - Survey finds 40 RBT (avg = 11.7"), 31 Splake (avg = 8.7"), and 2 LAT (9.6"). One YEP and 23 suckers also captured. Trout comprise 63% of the biomass in the catch.

1971 - Survey (June) finds 12 Splake (avg = 10"), 6 RBT (avg = 12"), and 2 Lake Medora Lake Whitefish (12-14"). Suckers comprise about 90% of the biomass in the catch.

1973 - Survey (Dec) finds 131 RBT (10-12"), 15 Splake (avg = 9.2"), and 3 LAT (12-14"). Suckers comprise 30% of total biomass.

1974 - Survey (June) finds 85 Splake (avg = 10.9"), 47 RBT (avg = 12.1"), 20 LAT (avg = 11.7") and 1 Lake Medora Lake Whitefish (15"). Perch and suckers comprise 61% of total biomass.

1979 - Survey (Oct) finds 11 LAT (avg = 21.5"), 9 Splake (avg = 17"), 5 RBT (avg= 16"), and 23 Lake Medora Lake Whitefish. 10 Rainbow Smelt captured (natural reproduction). Suckers and perch comprise 25% of biomass.

1982 - Survey (Sept) finds 118 Splake (7-27"), 18 RBT (8-12"), 12 LAT (5-30"), and 3 Lake Medora Lake Whitefish (16-20"). Growth of Splake is poor. White Suckers and perch abundant.

1986 - Survey (Oct) finds 60 RBT (8-13"), 14 Splake (7-29"), and 8 LAT (11-25"). Growth of Splake and LAT is poor. No Lake Medora Lake Whitefish found. Two Rainbow Smelt collected. Suckers comprise 80% of total biomass.

1989 - Manual removal of 1,505 lb of White Suckers (4.7 lb/acre) and 320 lb of YEP (1 lb/acre) 57 RBT (5-14"), 46 Splake (6-16"), and 1 Lake Medora Lake Whitefish (20") also found.

1993 - Survey (June) finds 7 LAT (12-34"), 5 Splake (6-10"), and no RBT. 5 Lake Medora Lake Whitefish (17-21") and 12 Rainbow Smelt also collected. Large zooplankton found to be abundant.

1996 - Fall electrofishing survey finds 26 yearling WAE (1995 plant) and 1 YOY WAE (1996 plant). 28 RBT (10-13") and 1 Splake (13") also were captured.

1998 - Fall electrofishing survey finds only 2 age-0 Walleye, 5 age III, and 7 age IV WAE. 90 SMB (2-6") also found.

1999 - Survey (May) finds 13 RBT (7-16"), 26 Splake (6-8"), and 35 WAE (7-20"). RKB and suckers comprise most of the catch.

2000 - Manual removal of 481 lbs of White Suckers (1.5 lb/acre) and 104 lbs of RKB (0.3/acre)

Spring survey/removal finds 19 RBT (most 15-16"), 9 Splake (7-10"), and 7 WAE (12-19"). SMB still abundant and small. RKB and suckers comprise 89% of total biomass. Fall electrofishing survey finds only 2 WAE (18-20"), and no evidence of natural reproduction.

2001 - Manual removal of 788 lbs of Suckers (2.4 lb./acre). Spring survey finds 37 RBT (14-23"), 1 Splake (21"), and 33 WAE (15-21"). Over 50% of RBT 20" or larger. Suckers comprise 77% of total biomass.

2002 - Great Lake Indian Fish and Wildlife Commission staff fall electrofishing survey finds no WAE or trout.

A 2004 spring survey was conducted on Beatons Lake with the following comments about the fishery; "Rainbow trout have been stocked annually in Beatons Lake since 1981. During the 2004 survey, 81 Rainbow Trout were collected. Eighty-nine percent of these fish were of legal size (12 inches), and 53 fish larger than 20 inches were captured. Some of the large (20 inch or larger) Rainbow trout were survivors from the Kamloops strain plant in 1999, but the majority of these trophy-sized trout were from the Eagle Lake strain plants in 2000 and 2001. Growth of Rainbow Trout in Beatons Lake appears to be well above the state average (mean growth index = +4.8)." Sport angler success for Rainbow Trout was very good in the 1990's and early 2000's.

A 2008 netting survey showed a completely different picture of the fishery as compared with 2004, with only one Rainbow Trout captured in the nets. The 2008 spring survey might have missed the presence of the Rainbow Trout due to the timing of the survey and highly fluctuating water temperatures. Comments from lake property owners remark that Rainbow Trout occupied a larger role in the fish community than what the netting efforts revealed.

The first occurrence of Northern Pike in the lake was in the winter of 2016, when two Northern Pike were reported by a lake resident, with the comment that two small (12 inch) Pike were caught through the ice during a winter fishing trip. Northern Pike were not documented in any of the previous survey collections.

Current Status

The fishery of Beatons Lake has changed significantly since its earlier reputation as a quality trout fishery. Looking at the 2018 netting catch summary; the fish community has changed vastly since the 2004 netting survey thereby changing the lake's status as a quality trout fishery. Rainbow Smelt (7,200 adults) were stocked in Beatons Lake in 1975, but these fish were only caught in incidental numbers (possibly due to survey timing or gear type) in following surveys (10-1979, 2-1986, 12-1993), and

there were no reports of smelt being caught by anglers. The one Rainbow Smelt captured in 2008 has now evolved into tens of thousands of Rainbow Smelt in the 2018 survey, to the point that the fyke nets were hard to pull from the water. Yellow Perch (N=109) were represented in a size structure of 3-8 inches, with the average size being 4.7 inches. Only one Rainbow Trout was netted in the 2018 survey, and no Splake were captured. White Suckers were not in over-abundance in comparison with the rest of the fishery. Of a significant discovery, Northern Pike are now present with nine fish between 17 - 39 inches captured in the nets. Anglers also comment that sport catches of trout have waned over the past 20 years, and they are disappointed with increasing catches of Northern Pike in their creel.

A limnological profile survey was conducted on Beatons Lake on August 25, 2016. Data collected during this effort documented a 4-foot optimal range of water quality available for trout in the 23-27 depth water column during summer stress periods.

Analysis and Discussion

The presence of Northern Pike and Rainbow Smelt is a challenging find in the Beatons Lake fishery. These two species of fish are a problem with trout management, as the Rainbow Smelt graze on the same zooplankton supply that the Rainbow Trout are dependent on and the Northern Pike will prey on the trout fishery. Trout are stocked during the month of May, of which is the same time when Northern Pike are in the shallow shoal waters seeking their spawning habitats. The stocking of 6-9 inch soft-fin trout in nearshore waters occupied by Pike will result in unacceptable levels of predation on the hatchery fish. Northern Pike numbers may continue to increase over time, whereby they will diminish the success and annual carry over of any stocked trout.

The contamination of many other Gogebic and Iron county trout lakes with Northern Pike and Rainbow Smelt has recently been documented with increasing occurrences. Other nearby coldwater trout lakes (Imp, Hannah-Webb, Little Duck) are experiencing infestations of trout-competing fishes, which hinders the success of those trout fisheries.

Management Direction

Fingerling and yearling allocations of all species of trout for Beatons Lake will be discontinued for the 6-year management window of 2019 - 2025. As an experiment, stocking allocations of adult Lake Trout may allow for some continued existence of a trout fishery for this lake. Adult Lake Trout are supplied by Federal hatcheries when surpluses are available, however they are not typically available on an annual basis. The current annual stocking request for adult Lake Trout is 600 fish, which for Beatons Lake equates to 1.9 per acre. Stocking adult Lake Trout may provide an occasional fish for sport take, but this does not compare to Beatons Lake heyday of 1969. A follow-up fisheries survey should be scheduled towards the end of this 6-year management window to see what level the Northern Pike and Rainbow Smelt presence is found within the Beaton fishery.

Beatons Lake management options:

Option 1: Continue to stock yearling trout (Splake, Rainbow),

The current trout stocking program is not producing a sport fishery, and with the presence of Rainbow Smelt and the possible expansion of Northern Pike numbers, trout stocking would be hampered by these two competitor fish species. These two species of fish are a problem with trout management, as the Rainbow Smelt graze on the same zooplankton supply that the Rainbow trout are dependent on, and the Northern Pike will prey on the trout fishery. Trout are stocked during the month of May, of which is the same time of when Northern Pike are in the shallow shoal waters seeking their spawning habitats. The stocking of 6-9 inch soft-fin trout in nearshore waters occupied by pike will result in unacceptable levels of predation on the hatchery fish.

Option 2: Stock Walleye,
The abundance of Rainbow Smelt in the Beatons Lake fishery will likely hamper the success of Walleye stocking and/or Walleye natural recruitment. The 1994 - 2003 stocking of Walleye did not produce a viable Walleye fishery, therefore a returned attempt to create a Walleye fishery through additional stocking, with the current abundance of Rainbow Smelt, would also have minimal results. It is widely recognized by fisheries managers that Rainbow Smelt in a fishery will deter the attainment of a Walleye fishery. Abstract summaries of two peer reviewed studies of Wisconsin lakes are represented as follows;

"In part suggests that in some cases predation or competitive interactions between juvenile piscivores and adult Rainbow Smelt can limit recruitment success of piscivores. In particular, larval Walleye experience high levels of mortality after Rainbow Smelt establishment. A foraging-based bioenergetic model was created to determine if the zooplankton community that results from Rainbow Smelt establishment creates an "energetic bottleneck" for larval Walleye (Mercado-Silva et al. 1998)."

"We assessed predictability of negative interactions between native fishes and exotic Rainbow Smelt (Osmerus mordax) through field experiments and long-term data analysis for two lakes in Wisconsin. Predictions were made based on thermal preferences, diet characteristics, and published accounts of interactions between smelt and Yellow Perch (Perca flavescens) and smelt and Cisco (Coregonus artedii). Our results indicate predation is the most likely cause for the extirpation of Cisco from Sparkling Lake in 1990. In Crystal Lake, native Yellow Perch experienced significant overlap in distribution and diet with Smelt. The condition of adult Perch was negatively correlated with Smelt abundance indicating competition was occurring. Smelt feed on a wide size range of prey items making this species a threat to native fishes, especially when spatial overlap is high. Information on spatial and temporal overlap and diet enable useful predictions about the effect of smelt invasions on native fishes (Hrabik et al. 1998).

Option 3: Stock adult Lake Trout,
Beatons Lake has the coldwater temperature characteristics that allow for habitation of trout. This lake has had successful trout management for the past 90 years. With the coldwater limnologic aspects of this lake, continued management with a desire to see a trout component remain as part of the fishery might be accomplished by stocking adult Lake Trout. As an experiment, allocations of adult Lake Trout may allow for some continued existence of a trout fishery for this lake. The current stocking request for adult Lake Trout is 600 fish, which for Beatons Lake equates to 1.9 trout per acre. Stocking apportionments will normally be 200-300 adult fish when available, however the fish stocking request of 600 fish will allow for a provision for a more abundant allocation when smaller adult trout (such as the 12-18 inch size) are available. Stocking adult Lake Trout may provide an

occasional fish for sport take but this does not compare to Beatons Lake fishery of the past. Adult Lake Trout are supplied by Federal hatcheries when surpluses are available, however they are not typically available on an annual basis. These fish from the Federal hatcheries are in limited supply, therefore when they are announced for stocking there are typically a few hundred fish available and not thousands as one might desire for Beatons Lake.

Option 3: This is the preferred and selected management action to stock adult Lake Trout when fish are available.

References

Mercado-Silva, N., G. Sass, B. Roth, S. Gilber, and J. Vander Zanden, 1998. Impact of Rainbow Smelt (Osmerus mordax) invasion on Walleye (Sander vitreus) recruitment in Wisconsin lakes. Canadian Journal of Fisheries and Aquatic Sciences, 1998, 55(6): 1364-1371. 64. 1543-1550. 10.1139/F07-112.

TR Hrabik, JJ Magnuson, and AS McLain, Predicting the effects of Rainbow Smelt on native fishes in small lakes: evidence from long-term research on two lakes: Canadian Journal of Fisheries and Aquatic Sciences [Can. J. Fish. Aquat. Sci.], vol. 55, no. 6, pp. 1364-1371, June 1998.

BEATONS LAKE MANAGEMENT SUMMARY

Gogebic County, 323 acres

1928 – Landlocked salmon planted

1933 – Landlocked salmon planted

1937 – **Survey** finds SMB, YEP, RKB, and CWS to be common. RBT, LAT, BKT, and landlocked salmon also reported to be present.
Fishing reports: Average, few trout taken, SMB and RKB most often taken
Lake mapped

1939 – 1,500 (5/acre) SMB and 8,000 **BLG** (25/acre) planted

1940 – 25,000 LAT (77/acre) and 5,000 BLG (15/acre) planted

1941 – 38,000 LAT (117/acre) and 10,000 BLG (31/acre) planted

1942 – 40,000 LAT (124/acre) and 20,000 spring fingerling **RBT** (62/acre) planted

1943 – 6,000 fall fingerling RBT (19/acre) and 775 legal-sized RBT (2/acre) planted

1944 – 3,000 legal RBT (9/acre) planted

1945 – Lake opened for fall RBT fishing

1947 – **Survey** finds **strong YEP (6-10") population**. One individual each of BKT, LAT, SMB, and RKB captured. 22 suckers also collected.
Fishing reports: 30 RBT (16-26") taken by trolling in Nov. 1946. Fair RBT and BKT fishing early in 1947. Fair SMB and good panfish (YEP and RKB) fishing later in season.

1948 – **Fishing report:** 14 RBT and 2 LAT taken in 22 angler hours

1951 – 2,200 sublegal LAT (7/acre) and 10,000 fingerling RBT (31/acre) planted

1952 – 10,000 fingerling RBT (31/acre) planted

1953 – 10,000 fingerling RBT (31/acre) planted

1954 – **Survey** finds strong YEP (6-9") population. 5 LAT (14-17"), 4 RBT (8-21"), 2 SMB (8-20") and 122 suckers also collected.
Fishing reports: Fair RBT fishing, but it was better when legal-sized fish were stocked. SMB fishing good.
10,000 fingerling RBT (31/acre) planted

1955 – 10,000 fingerling RBT (31/acre) planted

1957 – 2,000 legal RBT (6/acre) planted

1958 – 4,000 legal RBT (12/acre) planted
Access site developed on USFS land and turned over to USFS for maintenance

1959 – **Survey** finds little change in fish community since last survey. 10 RBT (11-16") and no LAT captured.
2,000 legal RBT (6/acre) planted

1960 – 2,000 legal RBT (6/acre) planted

1961 – 2,000 legal RBT (6/acre) planted

1963 – 2,000 legal RBT (6/acre) and 10,000 fingerling **splake** (31/acre) planted

1964 – 1,500 legal RBT (5/acre) and 13,000 fall fingerling splake (40/acre) planted

1965 – **Survey** finds that small YEP, RKB, and CWS comprise most of the biomass. Only 1 splake (14"), 3 RBT (10-12") and 1 BNT (27") found.
5,000 fingerling splake (15/acre) planted

1966 – **Survey** finds 13 splake (10-20"), 1 LAT (28"), 55 SMB (6-16"), and lots of YEP, RKB, and suckers.
Estimated 7 lb of rough fish to 1 lb of gamefish.
Meeting with riparian owners to discuss chemical treatment

1967 – **Fish barrier constructed on outlet**
Lake treated with 0.75 ppm rotenone

1968 – 130,000 fall fingerling RBT (402/acre), 100,000 fall fingerling splake (310/acre), and 30,000 fall fingerling LAT (93/acre) planted following detoxification

1969 – **Survey** finds 40 RBT (avg = 11.7"), 31 splake (avg = 8.7"), and 2 LAT (9.6"). One YEP and 23 suckers also captured. Trout comprise 63% of the biomass in the catch. *Cambarus* = main item in diet.
Fishing report: Excellent for trout
59 adult **Lake Medora whitefish** planted
Splake, RBT, and LAT planted (numbers and sizes unknown)

1970 - Splake, RBT, and LAT planted (numbers and sizes unknown)

1971 – **Survey** (June) finds 12 splake (avg = 10"), 6 RBT (avg = 12"), and 2 Lake Medora whitefish (12-14").
Suckers comprise about **90%** of the biomass in the catch.
Fishing reports: Poor at this time, but generally good.
Splake and LAT planted (numbers and sizes unknown)

1972 – RBT planted (sizes and numbers unknown)

1973 – 15,000 yearling RBT (46/acre) planted
Splake also planted (numbers and sizes unknown)
Survey (Dec) finds 131 RBT (10-12"), 15 splake (avg = 9.2"), and 3 LAT (12-14"). Suckers comprise 30% of total biomass.

1974 – **Survey** (June) finds 85 splake (avg = 10.9"), 47 RBT (avg = 12.1"), 20 LAT (avg = 11.7") and 1 **Lake Medora whitefish** (15"). Perch and suckers comprise 61% of total biomass.
Fishing reports: Fair, but fish are small.
5,509 adult LAT (17/acre) planted

1975 – **7,200 adult smelt** (22/acre), 11,150 fall fingerling splake (35/acre), and 295 adult LAT (1/acre) planted

1976 – 844 adult LAT (3/acre) and 8,250 fall fingerling splake (26/acre) planted

1977 – 243 adult LAT (1/acre) and 5,775 fall fingerling splake (18/acre) planted

1978 – 8,450 yearling RBT (26/acre) planted

1979 – **Survey** (Oct) finds 11 LAT (avg = 21.5"), 9 splake (avg = 17"), 5 RBT (avg= 16"), and 23 **Lake Medora whitefish**. 10 smelt captured (natural reproduction). Suckers and perch comprise 25% of biomass.
Fishing reports: Poor
8,250 yearling LAT (26/acre)

1980 – 10,000 yearling LAT (31/acre) planted

1981 – 20,000 yearling LAT (62/acre), 10,000 yearling RBT (31/acre), and 8,100 yearling splake (25/acre) planted

1982 – **Survey** (Sept) finds 118 splake (7-27"), 18 RBT (8-12"), 12 LAT (5-30"), and 3 **Lake Medora whitefish** (16-20"). Growth of splake = poor. White suckers and **perch abundant**.
10,000 yearling splake (31/acre), 17,000 yearling RBT (53/acre), and 8,000 yearling LAT (25/acre) planted

1983 – 8,010 yearling splake (25/acre), 20,000 yearling RBT (62/acre), 10,000 yearling LAT (31/acre), and 20,000 fall fingerling LAT (62/acre) planted

1984 – 12,600 yearling RBT (39/acre) and 600 adult LAT (2/acre) planted

1985 – 20,000 yearling RBT (62/acre), 8,050 yearling splake (25/acre), 30,000 fall fingerling splake (93/acre), and 1,100 adult **LAT** (3/acre) planted

1986 – **Survey** (Oct) finds 60 RBT (8-13"), 14 splake (7-29"), and 8 LAT (11-25"). Growth of splake and LAT = poor. No Lake Medora whitefish found. Two smelt collected. Suckers comprise 80% of total biomass.
19,000 yearling RBT (59/acre) and 10,000 yearling splake (31/acre) planted

1987 – **Manual removal** of 2,570 lb of white suckers (8.0 lb/acre)
Temporary repairs made to the rough fish barrier at the outlet
20,000 yearling RBT (62/acre) and 20,000 yearling splake (31/acre) planted

1988 – **Manual removal** of 2,435 lb of white suckers (7.5 lb/acre)
New fish barrier installed at outlet???
812 splake (7-18"), 44 RBT (6-15"), 1 LAT (16"), and 1 Lake Medora whitefish (17") also found
20,000 yearling RBT (62/acre) and 20,510 yearling splake (63/acre) planted

1989 – **Manual removal** of 1,505 lb of white suckers (4.7 lb/acre) and **320 lb of YEP** (1 lb/acre)
57 RBT (5-14"), 46 splake (6-16"), and 1 **Lake Medora whitefish** (20") also found. Eagle Lake strain fish appear to have better survival, but poorer growth, than Shasta strain RBT.
Fishing reports: Good. Most boats had several fish averaging 12-14".
20,000 yearling RBT (62/acre) planted

1990 – 20,000 yearling RBT (62/acre) planted

1991 – 15,062 yearling Arlee RBT (47/acre) and 10,600 yearling Wytheville RBT (33/acre) planted

1992 – 20,000 yearling Eagle Lake RBT (62/acre) and 8,000 yearling splake (25/acre) planted

1993 – **Manual removal** of 1000 lb of suckers (3.1 lb/acre), 35.9 lb of RKB (0.1 lb/acre), and **43.9 lb of YEP** (0.1 lb/acre)
Survey (June) finds 7 LAT (12-34"), 5 splake (6-10"), and no RBT. 5 **Lake Medora whitefish** (17-21") and 12 smelt also collected. Large zooplankton found to be abundant.
Fishing reports: Poor since 1991
16,125 yearling Eagle Lake RBT (50/acre), 11,600 Shasta RBT (36/acre), and 6,950 yearling splake (22/acre) planted

1994 – **Manual removal** of 1050 lb of suckers (3.3 lb/acre)
Two year classes of RBT and splake also captured (15-18" for carryover fish). YEP = 20-50 fish per net
5,000 yearling Shasta RBT (15/acre), 1.6 million **WAE** fry (4,954/acre), and 28,117 spring fingerling WAE (87/acre)

1995 – 5,000 yearling Arlee RBT (15/acre), 28,757 spring fingerling WAE (89/acre), and 5,429 fall fingerling WAE (17/acre) planted

1996 – Fall electrofishing **survey** finds 26 yearling WAE (1995 plant) and 1 YOY WAE (1996 plant). 28 RBT (10-13") and 1 splake (13") also were captured. Good growth for RBT. **Lots of YEP observed.**
2.8 million WAE fry (8,668/acre) and 5,000 yearling Shasta RBT (15/acre) planted

1997 – 5,000 yearling Shasta RBT (15/acre) and 15,107 spring fingerling WAE (47/acre)

1998 – Fall electrofishing **survey** finds only 2 YOYs, 5 age III, and 7 age IV WAE. 90 SMB (2-6") also found.
Fishing reports: Decent fishing for RBT
4,500 yearling Shasta RBT (14/acre) and 16,294 spring fingerling WAE (50/acre) planted

1999 – **Manual removal** of 325 lb of suckers (1.0 lb/acre)
Survey (May) finds 13 RBT (7-16"), 26 splake (6-8"), and 35 WAE (7-20"). **RKB and suckers comprise most of the catch.**
Fishing reports: Good fishing for splake in late summer and early fall
5,000 yearling splake (15/acre), 5,000 yearling **Kamloops** RBT (15/acre), and 30,029 spring fingerling WAE (93/acre) planted

2000 – **Manual removal** of 481 lb of white suckers (1.5 lb/acre) and 104 lb of RKB (0.3/acre)
Spring **survey**/removal finds 19 RBT (most 15-16"), 9 splake (7-10"), and 7 WAE (12-19"). SMB still abundant and small. RKB and suckers comprise **89%** of total biomass.
Fall electrofishing **survey** finds only 2 WAE (18-20") → **no evidence of natural reproduction**
5,000 yearling splake (15/acre) and 5,000 yearling **Eagle Lake** RBT (15/acre) planted

2001 – **Manual removal** of 788 lb of suckers (2.4 lb/acre)
Spring **survey** finds 37 RBT (14-23"), 1 splake (21"), and 33 WAE (15-21"). **Over 50% of RBT 20" or larger.** Suckers comprise **77%** of total biomass.
5,000 yearling splake (15/acre), 5,000 yearling Eagle Lake RBT (15/acre), and 26,890 spring fingerling WAE (83/acre) planted

2002 – GLIFWC fall electrofishing survey finds no WAE or trout
5,000 yearling splake (15/acre), 5,000 yearling Eagle Lake RBT (15/acre), and 16,673 spring fingerling

WAE (52/acre) planted

2003 – 5,000 yearling splake (15/acre), 5,000 yearling Eagle Lake RBT (15/acre), and 13,908 spring fingerling WAE (43/acre) planted

2004 – Spring **survey** finds 81 RBT (5-24”), 12 splake (most 6-9”), and 57 WAE (16-24”). About **65% of RBT were 20” or larger**. Large RBT = Kamloops and Eagle Lake fish. Suckers comprise **71%** of total biomass. Panfish abundance = low.
Mean growth indices: RBT = **+4.8** and WAE = **-1.6**
5,000 yearling splake (15/acre) and 5,000 yearling Eagle Lake RBT (15/acre) planted

2005 – 5,650 yearling Eagle Lake RBT (17/acre) planted

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