LAKE MANAGEMENT PLAN

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Water(s): West Medical Lake (Spokane Co.)

Location: West Medical Lake is located 2 miles west of the City of Medical Lake, Washington.

	Size:	Max. Depth:	Volume:
West Medical Lake	223 acres	35 ft	5042 acre feet

Water Source: Groundwater seeps, with limited overland flow.

Outflow: Yes, intermittent outflow to Clear Lake through a series of wetlands

Management History:

West Medical Lake has a long history in Spokane and surrounding communities as the most productive opening day trout lake in the area. Commonly there are thousands of anglers that enjoy opening day at this lake (Figures 1 and 2). The opener for this lake is very popular for families because it is generally considered to be easy fishing with high catch rates. The lake can be characterized as highly productive and capable of supporting dense populations, while still producing exceptionally fast growing, robust trout.

Figure 1. Opening day crowd, April 2016.

Figure 2. Parking lot on opening day, April 2014.

West Medical Lake has been treated with Toxaphene or rotenone 6 times since it was chosen to be trout only management water. It was treated with Toxaphene in 1957 and 1963; the remaining four treatments were done with rotenone. The original two treatments targeted Common Carp and Tench. Following the 1957 treatment Carp were not completely eliminated and the lake was again treated with Toxaphene in 1963. The second treatment eliminated the Common Carp from the lake. The four following treatments (1971, 1993, 2000, and 2009) targeted Tench, Goldfish, Pumpkinseed Sunfish and Largemouth Bass. Goldfish were the major limiter in the 1993 and 2000 rehabilitations. The lake will be treated in 2018 to also control an overabundant Goldfish population that is limiting trout recruitment through interspecific competition.

Prior to 1957, this lake had severely depressed water quality and a limited game fish population. Don Earnest the Washington Department of Game Fish Biologist that conducted the initial Toxaphene treatment in 1957 wrote in his treatment notes, "*West Medical Lake has all the appearances of an exceptional lake. For many years it has received sewage from Eastern State Hospital and Lakeland Village. The hospital now has a new disposal plant, both primary and secondary treatment, and Lakeland has a primary plant. Thus the sewage problem is largely eliminated and it is hoped, the extensive winter kill problem should be corrected. If so, this lake may be outstanding. However, to this point it has never produced game fish and its suitability is unknown as yet*."

Earnest encapsulates in his notes the common fish managements issue with West Medical Lake. Water quality has always been the limiter to fish production. Historically, two aeration systems were operated on this lake to prevent winter kill and summer kill issues. Since the inception of sewage treatment plants in the late 1950's, water quality in the lake has slowly improved. The use of two aerators was suspended in 1990. Currently, only one aeration system is operated on the lake. Based on water quality information one aerator adequately mixes the lake to maintain enough utilizable habitat for trout.

It appears that water quality conditions have improved markedly since 1957, but further investigation is required before suspending aeration on this lake. By default (lack of funding) the aeration system was not operated in winter 2008-09. The outcome from this cessation of operation was observed in trout harvest for the 2009 season.

*T&E Flora and Fauna***:** Professionals from many resource agencies have visited this site countless times during the last 40 years. No known report exists of any threatened or endangered species habitually found in or near these lakes. Occasional visits from both bald and golden eagles occur, although no nests of these two species are known in the area. Protected species of waterfowl and other birds frequently are found here at times, as well.

Current Management Objectives:

West Medical Lake is a lowland lakes opener, Fourth Saturday in April to September 30, production fishery. Five fish limit, no gear restrictions. This lake should provide 3 to 5 fish/angler/trip on the opener and 2 to 3 fish/angler/trip the remainder of the season. The

carryover harvest rate should be 10 to 15 percent. Fishery should generate a minimum of 35,000 angler-trips per season.

1. **Fishery Objectives:**

Species	Type	Category	Fish/Angler
Rainbow Trout	Production	Opening Day	3 to 5
Rainbow Trout	Production	Remainder of season	2 to 3
Brown Trout	Production	Throughout the season	0.5-1

2. Angler use objective (# angler days): Season – 35,000 angler days

3. Stocking Objectives:

	Fish Stocked			
	Species	**Total**	**Fish/lb.**	**Planting Month**
Year 1	Rainbow	10-20k	2.5-4	March-April
	Rainbow	60-80k	100	May-June
	Brown	5-7k	5	March-April
	Brown	300	0.5	October
Year 2	Rainbow	100-120k	100	May-June
	Brown	5-7k	5	March-April
	Brown	300	0.5	October
Year 3	Rainbow	165k	100	May-June
	Brown	5-7k	5	March-April
	Brown	300	0.5	October
Year 4	Rainbow	165k	100	May-June
	Brown	5-7k	5	March-April
	Brown	300	0.5	October
Year 5	Rainbow	165k	100	May-June
	Brown	5-7k	5	March-April
	Brown	300	0.5	October

Management Strategy:

A. Plant Rainbow Trout spring fry and catchable size Rainbow Trout and Brown Trout during spring 2019, and Brown Trout brood in fall 2019. Other than Brown Trout catchables and brood, the fishery will be driven primarily by Rainbow Trout fry plants until fry recruitment reduces substantially from competition with undesirable fish species, or avian predation.
B. Check yearling growth; should be ~11 inches on May 1st of each spring, adjust stocking density as necessary to achieve prescribed trout growth.
C. Monitor annually with creel, gill netting and periodically with electrofishing.
D. Continue to operate aeration system during fall and winter to address overwinter water quality issues.
E. Attempt to control undesirable species introductions first with outreach and Brown Trout stocking, and then with rotenone if/when trout survival is inadequate to produce an acceptable fishery.