

LAKE MANAGEMENT PLANS

updated June, 2008 - J.W. Korth

Waters: Canal Chain - June, Lois, Virgin, North North Windmill, North Windmill, Windmill, Canal, Pit, and Heart lakes

Location: Seep Lakes Wildlife Area, Sec 21, 22, 27, 28, and 33, T17N, R29E; approximately 7 miles north of Othello and 6 miles southeast of the southeast corner of Potholes Reservoir, Grant County, WA

	Size:	Maximum Depth:
June	11 acres	40 feet
Lois	? acres	? feet
Virgin	20 acres	? feet
N.N.Windmill	4 acres	30 feet
N.Windmill	20 acres	50 feet
Windmill	37 acres	60 feet
Canal	92 acres	130 feet
Pit	23 acres	30 feet
Heart	26 acres	64 feet

Water Source: subsurface seepage springs

Outflow: 5-10 cfs to North Teal Lake (Sec 32, T17N, R29E)

Management History:

The June, Lois, Virgin, North North Windmill, North Windmill, Windmill, Canal, Heart, and Pit chain of lakes lie southeast of O'Sullivan Dam and Potholes Reservoir. These waters have been popular trout fisheries since the 1960s when opening day-type seasons were in effect. Heart Lake is normally isolated, but at times Canal Lake overflows into Heart Lake and species mixing occurs. The three upper lakes, June, North North Windmill, and North Windmill, are protected from upstream migration by an impassable falls below North Windmill Lake. Two additional waters above North North Windmill Lake, Lois and Virgin lakes, are also isolated by an impassable falls at Virgin Lake's outlet.

Contamination by spiny-ray species is the largest obstacle to managing these waters as trout fisheries. Undesirable species usually appear with illegal assistance from anglers. Six rehabilitations have been done on Windmill and Canal lakes, the largest waters in this system. The smaller surrounding lakes have been treated fewer times. Virgin and Lois lakes are far enough removed from the system to dissuade illegal stocking and have never needed rehabilitation. The earlier rehabilitations targeted illegally introduced crappie, although perch, sunfish, bullhead catfish, and even carp were also eradicated at one time or another. Crappie persisted, or were continually and illegally introduced, through four rehabilitations, including two with toxophene. They were no longer present after the 1987 rehabilitation. Pumpkinseed sunfish have been persistent since the early 1980s, and the last three rehabilitations have failed to

eradicate this species. Perch were also illegally introduced into Heart Lake during the late 1980s. Lake rehabilitation has provided at least 4-6 years of good trout fishing after each treatment.

Since the late 1980s, a relatively new management issue for this water has been the increasing number of piscivorous birds frequenting the area. Cormorants and mergansers have become spring breeders and summertime residents. While no uncontested proof of damage to the fishery exists, these species are primarily fish eaters. It is suspected that many of the unpredictable and unexplainable failures of the fisheries, which occur periodically in most of the smaller lakes in the area, could be attributable to predation from these avian species.

Stocking levels for June, Lois, Virgin, North North Windmill, North Windmill, Windmill, Canal, Pit, and Heart lakes have hovered around 80,000 rainbow trout. In early years these waters were very productive and yielded 4-10 trout per trip. In 1969, rainbow fry stocked at less than one inch long (210/lb) in April grew to 7.5-9.5 inches by July.

T&E Flora and Fauna: Professionals from many resource fields 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.

June, Lois, Virgin, North North Windmill, North Windmill, Windmill, Canal, Pit, and Heart lakes are currently open to angling year-round reducing the opening day crowds in favor of prolonged and steady angling pressure. The catch limit is five fish, and bait is allowed. Boating access is available at Windmill, Canal, and Heart lakes, while anglers must walk into the remaining smaller lakes. Expanding populations of sunfish, perch, and possibly other illegally introduced species are competing with trout fry and depressing trout survival. Anglers rarely pursue sunfish, and the perch fishery is a relatively small affair. The present fishery is a shadow of the former rainbow fisheries, which can occur there in the absence of competing fish species.

Current Management Objectives:

Year around, low-key, production type fishery. Five fish limit, no size or gear restrictions. Provide 3 yearling rainbow trout per angler trip for 1-5,000 anglers per season.

1. Fishery Objectives:

<u>Species</u>	<u>Type</u>	<u>Category</u>	<u>Number of Fish</u>		<u>Avg.Size</u>	<u>Exploit.</u>
			<u>/hour</u>	<u>/Angler</u>		<u>Rate</u>
Rainbow	Prod	Year Around	2	3	12 inches	90% 1-yr-olds

2. Angler use objective (# angler days): Season - 1,000-5,000

3. Stocking Objectives:

<u>Lake</u>	<u>Species</u>	<u>Number of Fish Stocked</u>			<u>Planting Month</u>
		<u>Total</u>	<u>/Acre</u>	<u>/pound</u>	
June	Rainbow	2,000	180	<80	April-May
Lois	Rainbow	2,000	?	<80	April-May
Virgin	Rainbow	5,000	250	<80	April-May
NN Windmill	Rainbow	1,000	250	<80	April-May
N Windmill	Rainbow	10,000	500	<80	April-May
Windmill	Rainbow	15,000	400	<80	April-May
Canal	Rainbow	35,000	380	<80	April-May
Pit	Rainbow	5,000	220	<80	April-May
Heart	Rainbow	6,000	230	<80	April-May

E. Management Strategy:

- Plant rainbow fry in spring.
- Check yearling growth; should be about 12 inches, adjust stocking rate as necessary.
- Harvest 90% of yearling fish by end of season.
- Monitor all fish species periodically by electrofishing or netting.
- Substitute fall fingerlings for at least a portion of the spring fry when competing species begin to impact trout fry survival.
- Control spiny-ray species with rotenone when trout survival is inadequate to produce an acceptable fishery.