

## LAKE MANAGEMENT PLANS

Updated July, 2010 – C. Jackson

### Water(s): **Desert Lake Chain**

**Location:** Desert Wildlife Area, Secs. 25, 31, and 36, T18N, R26E; approximately 18-22 miles south of Ephrata and 12 miles southwest of Moses Lake, Grant County, WA

<b>Waters:</b>	<b>Size (acres):</b>	<b>Max Depth (ft):</b>	<b>Volume (acre feet):</b>
Dune	8	15	70
Harris	39	20	353
Sedge	9	15	85
Tern	8	15	70

**OUTLET:** None. Natural and man-made dikes separate waters in the proposed treatment area from the adjacent Lakes and Winchester Wasteway.

**INLET:** None. Water Source: Seep from the adjacent Desert Lakes and Winchester Wasteway.

### **Management History:**

This chain of four lakes lie just west of Winchester Wasteway. All are extremely rich in nutrients and have been managed for trout fishing since their formation in the 1960's from rising groundwater tables.

Management of these waters has been on a year around season and an allowable catch limit of five fish. These walk-in fisheries require anglers to trek a fourth to a full two miles. These restrictions are required to eliminate instantaneous harvest and to spread angler use over the entire year. This management scheme has been very favorably received by anglers as a quality experience in a setting of rolling, shifting sand dunes and a unique abundance and variety of wildlife and flowering plants. No opening day creel surveys are possible, and angler interviews have been sporadic over the years. However, recreational use data for the Desert Wildlife Management Area has been collected steadily since the late 1970's.

Stocking levels for the Desert Lake Chain have hovered around 26,000 rainbows since 1978. Stocks were originally Spokane Hatchery rainbow, but were switched to the later spawning Eagle Lakes rainbow in 1984 to reduce crowding problems in the Columbia Basin Trout Hatchery. More recently (1994) Tokul Creek Hatchery stocks (also late spawners) have been the choice, not only for these waters, but for many year around lakes. A gage of their survival and growth relative to Spokane stock is moot until removal competing species is accomplished.

In early years these waters yielded 5 - 6 trout per trip and frequent incidence of fish over 2 lbs. As their popularity grew catches settled down to about 3 fish/man in the 1970's, with a continued catch of large fish 14" - 20". Surveys conducted during 1977 estimated that the majority (42%)

of the activity in the Desert Wildlife Management Area was due to fishing. The Area received a total of 4,892 angling trips and yielded a catch of 12,130 trout. The average catch was 2.5 per trip and averaged about 0.6 fish per hour. Sunfish were illegally planted in the mid-1970's and by the 1980's fishing dropped to average of one fish per angler during the prime early spring fishery.

Rehabilitation records indicate that Harris has been treated with rotenone twice. The remaining waters have never been rehabilitated.

In conjunction with the State's increasing population, all types of use on the Desert Wildlife Area have increased dramatically during the last decade. Total angling alone is estimated to average about 15,000 trips per season when these lakes have good fisheries. Yet angling activity as a percentage of the whole has decreased from around 40 percent during the late 1970's to about 30 percent currently of the total use. Once productive enough to be popular with fly fishers and others looking for a quality angling experience, the proposed waters rarely attract those anglers anymore. Gill netting surveys conducted during 1995 and 2007 revealed that small sunfish, bluegill, and bass represented most of the fish life in these lakes. These species entered some waters from Winchester Wasteway before those lakes were isolated. Illegal introductions account for the remaining waters. A few trout were extant in only three of these lakes. Catch rates were about one fish or less per trip.

#### **Current Management Objectives:**

Continue management of these waters for trout. Manage as low key walk-in quality trout waters. Manage these waters for year-round seasons and selective gear regulations (i.e., single barbless hooks and no bait). Stock rainbow, brown, and/or tiger trout fingerlings each spring. Provide yearling trout of about 14 inches, and catch constitution of 15 - 20 percent age 2+ fish.

Spot check angler use randomly during the year and assess yearly for presence of non-trout species. Continue rehabilitation with rotenone as soon as possible after detection of unwanted fish species.

Stocking rates; spring planted rainbow fry:

Tern	2,000
Sedge	2,000
Dune	2,000
Harris	10,000

Management Strategy:

- Plant rainbow fingerlings in spring.
- Check yearling growth; should be about 14 inches, adjust stocking rate as necessary.
- Expect 80% loss of yearling fish by end of year due to harvest and hooking mortality and natural attrition.
- Maintain about 15-20 percent of the catch at age 2+ years old, 16-20+ inch fish.
- Spot check angling activity randomly as time allows.

- Monitor all fish species periodically by electrofishing or netting.
- Control spiny-ray species with rotenone when trout survival is inadequate to produce an acceptable fishery.
- Use of tiger and brown trout as possible temporary controls on sunfish and for diversity.