

LAKE MANAGEMENT PLANS

Updated June, 2009 - J.W. Korth, L.E. Cooke, and J. Tabor

Water(s): Desert Lakes and Ponds (TD-02 wetland enhancement area)

Location: Desert Wildlife Area, Secs. 27, 36, T18N, R26E; Secs_31, T18N, R27E; and Sec. 6, T17N, R27E; approximately 18-22 miles south of Ephrata and 12 miles southwest of Moses Lake, Grant County, WA

Waters:	Size (acres):	Max Depth (ft):	Volume (acre feet):
Wildlife Ponds (16 ponds total)	21 total 1-3 acres each	6 feet	62
Aztec	3	15	25
Desert	42	15	195
N. Desert	3	15	25
Dune	8	15	70
Harris	39	20	353
Lizard	3	15	25
Meadowlark	3	15	25
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.

Wildlife –

Management History: The waters proposed for treatment are several ponds (4 ponds) adjacent to the Desert Lakes (Desert, Harris, Dune, Sedge, and Tern). The enhanced project waters are herein referred to as the Desert Lake Ponds (TD-02) and are located within the Desert Wildlife Area. Surface waters in the treatment area are isolated from the adjacent lakes (Desert, Harris, Dune, Sedge, and Tern) and Winchester Wasteway by dikes. The purpose of the dikes is to allow management of individual waters for enhanced spring waterfowl production, summer brood rearing and molting habitat, and fall waterfowl hunting opportunities. The Desert Lakes are larger bodies of water that are managed for enhanced fishing opportunities. Management activities within the Desert Lake Ponds (TD-02) to date consist of excavation of wetland cells, creation of fish barriers by dikes, protection of dikes by armoring with chain link, and reseeding of disturbed areas with appropriate grass mixes. The use of rotenone in approximately 25 % of the project area will remove undesirable fish species that compete with waterfowl and other wildlife for aquatic foods.

All water proposed for treatment is within the Desert Lake Ponds (TD-02). Enhanced wetlands within the project waters will provide nesting and feeding habitat for a multitude of species. During the fall, quality waterfowl hunting opportunities will be provided to those that make the long trek into the area. Quality fishing opportunities will be maintained in the surrounding Desert Lakes.

In addition to the use by waterfowl during the hunting season, the Desert Lakes is used heavily during other periods of the year and by a wide variety of wildlife species.

Another one of the more significant wildlife uses of the Desert Lakes is by breeding and molting ducks. In other parts of the Desert (e.g., The North Potholes Reserve), breeding and molting duck use increased dramatically after rotenone treatment to remove carp in 1981. Numbers of duck broods and molting adults peaked at very high levels (at least 200-300 broods and 500-1000 molting ducks) in 1985-86, but declined annually to pre-treatment (very low) numbers by summer of 2003. Large numbers of carp were observed in waters of NPR by the mid-1990s.

The focus of wildlife management in the Desert Lakes is to provide enhanced habitat for breeding and molting ducks, enhanced fishing opportunities in surrounding lake, and promote wildlife observation that does not result in negative impact to wildlife use.

T&E Flora and Fauna: Professionals from many resource fields have visited this site countless times during the last 40 years. Use of the area by several wildlife species of concern has been documented. These species include:

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| 1) Black Tern | (Federal Species of Concern) |
| 2) Bald Eagle | (State and Federal threatened) |
| 3) Sagebrush Lizard | (State candidate) |
| 4) Sage Thrasher | (State candidate) |
| 5) American White Pelican | (State Endangered) |
| 6) White-tailed Jackrabbit | (State candidate) |

Current wildlife-related management actions in the Desert Lakes include:

- 1) Minimizing human disturbance during the breeding period for birds and ducks (e.g., no public motorized vehicle access).
- 2) Minimizing human disturbance during the duck molting period in July and August (e.g., no public motorized vehicle access).
- 3) Maintaining high quality winter habitat for ducks and geese during the waterfowl-hunting season (e.g., enforcement presence).

- 4) Maximizing in-water food resources (i.e., invertebrates and submerged aquatic plants) for ducks (e.g., coordinating with Fish Management program for carp removal).
- 5) Promotion of wildlife viewing in a manner that minimizes human disturbance of wildlife.
- 6) Continue management actions to protect dikes and levees from beaver activity (e.g., armoring of dikes).

Fisheries –

Management History:

This series of nine 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 1960s 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 1970s.

Stocking levels for the Desert lakes 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 gauge 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/angler in the 1970s, 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-1970s and by the 1980s fishing dropped to average of one fish per angler during the prime early spring fishery.

Rehabilitation records indicate Desert has been rehabbed three times, and 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 1970s 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. The exception was Desert Lake, which had a good population of largemouth bass ranging in size from 2-4 lbs each. Desert Lake may be excluded from treatment if further surveys confirm a well-balanced population of warmwater fish.

Current Management Objectives:

Continue management of most of these waters for trout. Provide low key, walk-in fishery. Propose regulation change to selective gear rules (no bait, single barbless hook, reduced limits). Manage as quality waters. Stock rainbow, brown, and tiger trout fingerlings each spring. Provide yearling trout of about 14 inches, and catch constitution of 15 - 20 percent age 2+ fish. Investigate possibility of keeping Desert Lake as a quality bass fishery through regulations.

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:

Aztec	300	Lizard	500
Desert	8,000	Meadowlark	500
N. Desert	300	Sedge	2,000
Dune	2,000	Tern	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.