PROGRESS REPORT - November 1987

Fish Management Plan - Wallowa Lake
- Management plan adopted by the Commission 1980

- Both objectives are being met. During the past two years, some kokanee have matured in excess of 16 inches in length.

L2-20/j

1980 adopted

FISH MANAGEMENT PLAN

WALLOWA LAKE

Oregon Department of Fish and Wildlife
Fish Division
November 1980

TROUT MANAGEMENT PLAN

WALLOWA LAKE

INTRODUCTION

Wallowa Lake is a 1,600-acre glacial lake, 4,400 ft in elevation, located 2 mi south of Joseph (Fig. 1). It has a maximum depth of 283 ft and is 4 mi long and 1 mi wide (Fig. 2). The Wallowa River flows into and out of the lake.

Road access to the lake is via a paved highway. Cabins and resorts are present and a large state park exists on the south end of the lake. The lake receives heavy recreation use (swimming, fishing, boating) during the summer.

The Wallowa River was a prime spawning area for Columbia River sockeye salmon about the turn of the century. By 1915, however, sightings of adult sockeye in the Wallowa River system were rare due to construction of Wallowa Lake Dam, exploitation of the species, and fish losses through unscreened irrigation diversions.

In September 1980, the Oregon Fish and Wildlife Commission accepted the Department's recommendation to continue to manage Wallowa Lake for wild and hatchery fish.

HABITAT

The lake contains little shoal area and consequently produces only a limited amount of benthic food organisms. No quantitative zooplankton sampling has been done.

Water quality is adequate for trout, but the lake is not rich in productivity. Winter conditions are harsh.

The lake level fluctuates some annually. A concrete dam was constructed in 1916 to allow storage of an additional 42,000 acre ft of water over the natural level.

Kokanee spawning channels were constructed immediately above the lake in 1955 and 1959 and total slightly more than ¼ mi. Opossum shrimp were stocked in 1965, 1966, and 1967 to bolster the food chain; but to date no evidence of success (larger fish) has been noted.

FISH POPULATIONS

Fish liberation records are incomplete prior to 1938, but the first known release was lake trout in 1917.

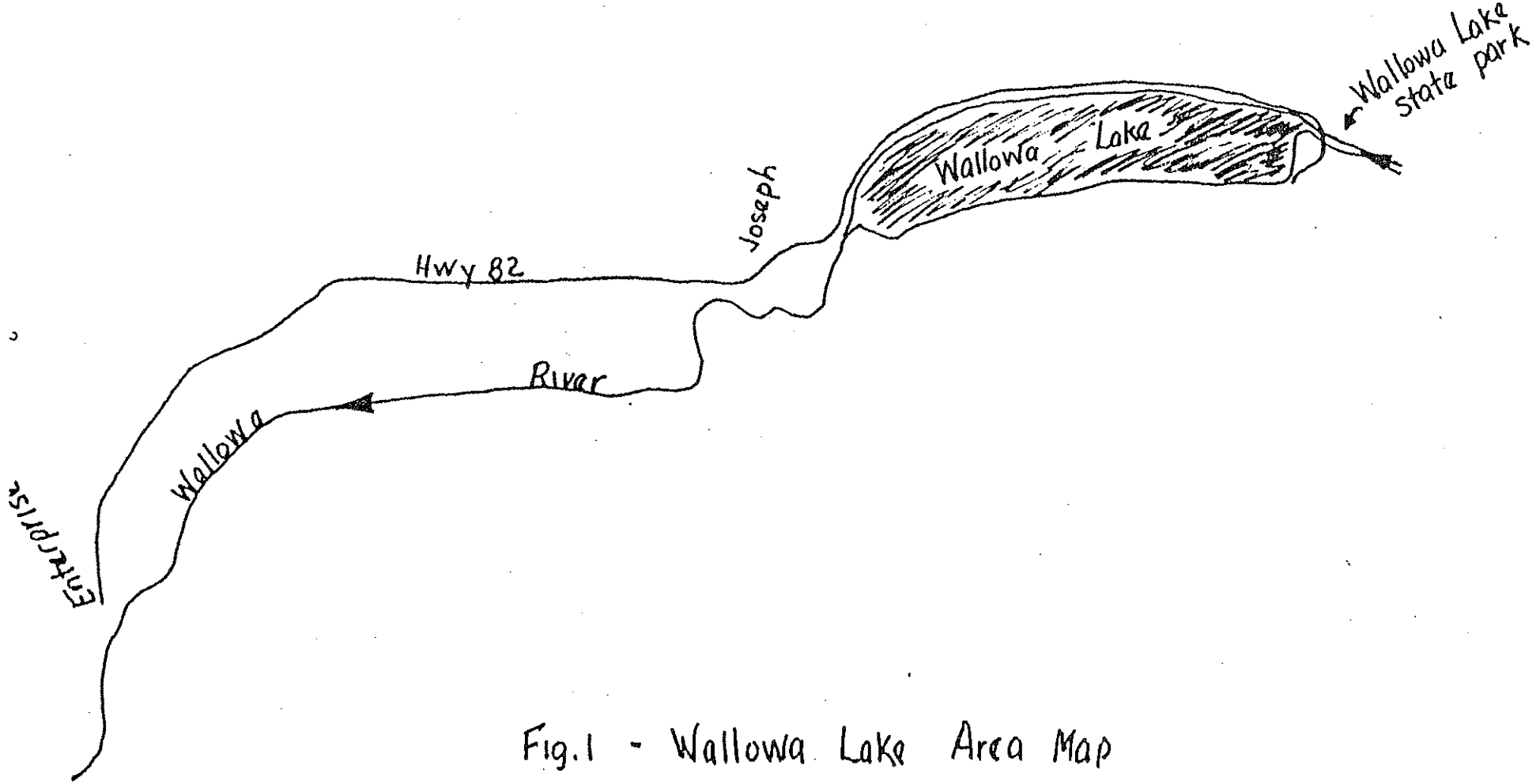
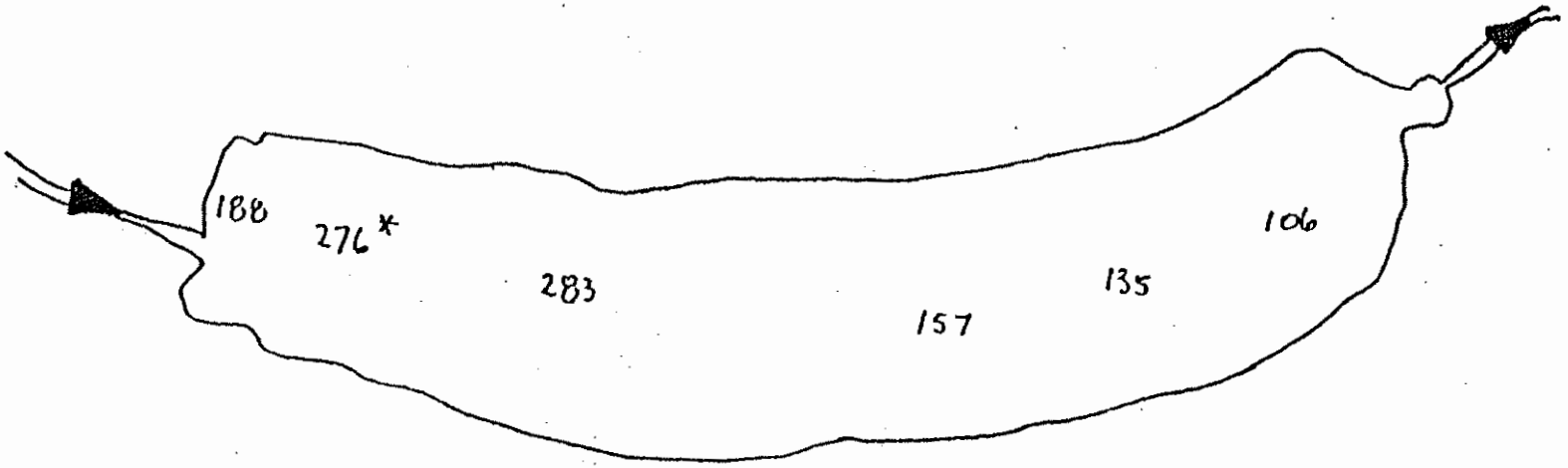


Fig. 1 - Wallowa Lake Area Map

scale - 0.75 inch = 1 mile



Scale 1.5" = 1 mile
* depth in feet

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Fig. 2 - Wallowa Lake

Since 1938, a variety of trout releases (both species and sizes) has occurred:

brook trout	-	1938 through 1942 (fingerling)
cutthroat	-	1938, 1941, 1942, 1948, 1958 (fingerling)
lake trout	-	1956 through 1961 (fingerling and yearlings)
rainbow	-	1940 through 1950 (fingerling)
rainbow	-	1946 to date (yearlings)
kokanee	-	began in 1939 and terminated after 1970 (fingerling)
Dolly Varden	-	1968, 1975 through 1978 (fingerling and yearlings)

In recent years approximately 35,000 yearling rainbow trout have been released annually. Fingerling stocking was not productive. Sufficient numbers of kokanee are naturally produced without stocking. Dolly Varden were stocked in an attempt to provide some large fish in the lake but we were not satisfied with the results.

Inventory nets, last set in 1976, took rainbow, kokanee, whitefish, Dolly Varden, bridgelip sucker, and coarsescale sucker.

FISHERY

The present fishery relies on a naturally reproducing kokanee population and annual releases of yearling rainbow trout. Few Dolly Varden are present. Kokanee are primarily caught in the early season by boat anglers. Yearling trout contribute throughout the season, especially to the bank fishery.

Statistical creel programs began in 1954 and have been continued. At present only a few randomly drawn days are needed to monitor the kokanee catch. The 1978 estimates show 49,000 angler hours spent to catch 23,000 rainbow, 12,000 kokanee, 600 Dolly Varden, and 60 whitefish. The kokanee catch was well below the 1976 record of 33,000 primarily due to poor weather conditions in the spring of 1978.

All-year angling began in 1980, but not much interest was generated prior to April or after October because of cold weather.

DISCUSSION

A variety of management programs and techniques have been tried at Wallowa Lake since runs of Columbia River sockeye salmon were eliminated in the early 1900's. Most results have been marginal or unsatisfactory except for the present utilization of kokanee and hatchery rainbow trout. Kokanee spawn naturally and provide a substantial fishery to boat anglers in the early season. A return of 20,000 plus has been realized from the annual release of approximately 35,000 yearling rainbow trout. The rainbow fishery is pursued throughout the season, especially by bank anglers.

OBJECTIVES

1. Produce an 8.5 inch mature kokanee. Kokanee size can be increased by curtailing spawning. This is accomplished by blocking the artificial channels. We can also encourage additional kokanee catch, especially in the fall, to reduce the spawning population. A modified early-season creel sampling program will be continued.

2. Maintain a 60+% return from the annual releases of yearling hatchery trout. We have been realizing this return and are satisfied with it. Monitoring is done with the kokanee creel sampling program.