

PROGRESS REPORT - November 1987

Fish Management Plan - Paulina Lake

- Management plan adopted by the Commission 1980
- Objectives are being met.
- One additional Objective has been added -- provide an occasional trophy-size brown trout. Brown trout were re-introduced in 1981.

L2-20/j

*Revised
1980 adopted*

FISH MANAGEMENT PLAN

PAULINA LAKE

Oregon Department of Fish and Wildlife
Fish Division
November 1980

TROUT MANAGEMENT PLAN

PAULINA LAKE

INTRODUCTION

Paulina Lake is a relatively large (1,300 acre), deep (250 ft) lake of volcanic origin within Newberry Crater, located 40 mi southeast of Bend (Fig. 1 and 2). It is managed to provide trout fishing and angler use is heavy.

Road access is via a paved highway and land ownership is US Forest Service. A resort is operated at the lake. The surface outlet, Paulina Creek, runs through a screen and over a low dam.

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

HABITAT

The lake is rich, gaining nutrients from several hot mineral springs. Less than 25% of the total acreage is shallower than 25 ft. Limited shoal area curtails rainbow trout food supplies, but zooplankton is abundant and utilized by kokanee.

FISH POPULATIONS

Rainbow trout were first introduced in 1912, but ODFW stocking records date back only to 1930. Brown trout stocking terminated in 1939, legal size trout in 1955, and brook trout in 1955. Fingerling rainbow releases were made throughout the entire period and fingerling kokanee stocking began in 1973; both continue. Trout losses have periodically been high from the parasitic tapeworm Proteocephalus.

Two species of chub (blue and tui) are present and one or both were probably introduced in the early 1920's by anglers using them for bait.

FISHERY

Through the years, fisheries have operated on rainbow, brook, and brown trout and on kokanee. At present most of the catch is rainbow; but, as they become aware of their availability and size, an increasing number of anglers pursue kokanee. Most anglers fish from boats.

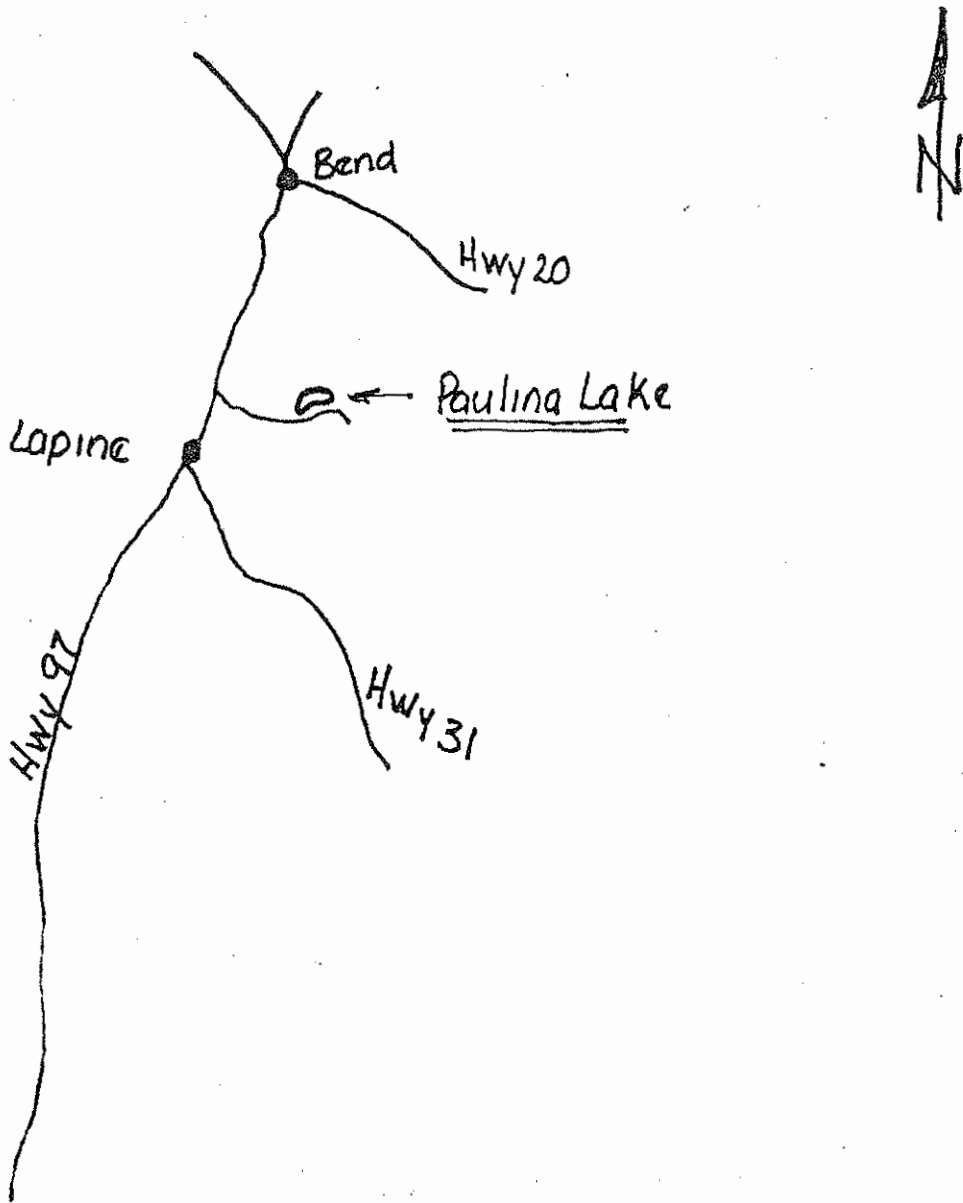


Fig 1. Area map

scale - 1 inch = 21 miles



Fig. 2 - Paulina Lake contour



The heaviest angling period is immediately after the season opens and into early July. The bulk of the rainbow are taken in shallow water near shore, while kokanee are caught in deeper water.

The catch was first estimated in 1939 when 1,600 anglers caught 21,000 trout. A statistical sampling program in 1967 showed 24,000 anglers with a catch of 49,000 trout. Angler use and catch is now well above that figure. Mid-summer and fall catches are resulting in minimum numbers of trout being carried through the winter for the following year's fishery. The largest fish known to have come from the lake are a 39 inch, 35.5 lb brown trout; a 35 inch, 21 lb rainbow; and a 22.5 inch, 3.5 lb kokanee.

DISCUSSION

Natural spawning will not maintain a trout population. Various sizes of different species of trout were stocked until fingerling rainbow proved to be the most successful. Due to the limited shoal area and abundant zooplankton production, kokanee were experimentally introduced in 1973. The species appears successful; and, since it does not compete with rainbow and matures at a good size, it should continue to become increasingly important in the fishery.

Some measures have been applied to control the chub population in practically every year for the past 30 yr. Chubs compete with trout for food and living space, spawn on submerged vegetation, are long-lived, have tremendous reproductive capabilities, and are of little value to the angler or as trout food. We are not decreasing their number and need help in devising effective controls.

OBJECTIVES

1. Approximately 70% of the rainbow caught from opening weekend through July 4 should exceed 10 inches long. Most are from the fingerling stocked the preceding spring. We have been meeting this objective with our present stocking program.
2. Maintain a landing rate of 0.75 trout/h during the same time period. We believe this is a good catch rate and one that can be maintained.

MEMORANDUM

DATE: 1-28-87

TO: Jim Griggs

FROM: Ted Fies

SUBJECT: Paulina Lake Mgt. Plan - Brown Trout.

In my notes from the production meeting was an item to check wording relative to brown trout in the Paulina mgt plan. They are mentioned under fish populations, & fishery. We need to make a change to reflect the following:

Reintroduced Br in 1981. Plant a small number of fingerling annually.

- Objectives
- (1) provide an occasional trophy-size trout (In 1986 fish to 10 lbs were taken).
 - (2) Utilize the large chub population which is difficult to control by other means.
 - (3) Keep stocking rates low to prevent a large number of predatory trout which could impact Rb & K.

I'm not sure of the steps required to modify a plan, & give me a shout if you need other information or I can help in any way. Thanks Jim.