Progress Report - October 29, 1987

Fish Management Plan - Siuslaw River

- Management plan adopted by the Commission 1979

- Trout objectives are being met. Objective #9 has been modified. Electrophoretic analysis done in 1987 revealed some hybridization. In addition, the Commission took action to support BLM's proposal to provide passage at Lake Creek Falls.

1979 adopted

FISH MANAGEMENT PLAN

SIUSLAW RIVER

OREGON DEPARTMENT OF FISH AND WILDLIFE

Fish Division
August 1979

SIUSLAW RIVER
FISH MANAGEMENT PLAN

INTRODUCTION

The Siuslaw River is a large system entering the Pacific Ocean near Florence (Fig. 1). The system contains about 950 miles of stream and produces resident and anadromous cutthroat trout, winter steelhead, and coho and fall chinook salmon. Small numbers of spring chinook are found in the system and shad and striped bass are also present.

Good numbers of wild fish of all species are produced in the Siuslaw and ODFW annually releases sea-run cutthroat and winter steelhead. Extensive fisheries have developed on this combination of wild and hatchery fish. There are no special angling regulations in effect at present other than an angling deadline on Lake Creek.

Three private salmon hatcheries have received permits to release fish into the Siuslaw. Although these facilities have not yet obtained significant returns of adults, the potential exists for large numbers of hatchery adults to return to the system.

In July 1979, the Oregon Fish and Wildlife Commission accepted the Department's recommendation to manage the Siuslaw River system, except for Triangle Lake and its tributaries, for wild and hatchery trout, steelhead, and salmon. Hatchery fish will be released in areas and at sizes and times to maximize their contribution to the sport fisheries in the system and to minimize their impact on the extensive wild fish populations present. Trout populations in Triangle Lake and its tributaries will be managed for wild fish.

HABITAT

A cutthroat study conducted by the ODFW Research Section from 1965 to 1970 did not specifically address habitat. However, it showed that juvenile cutthroat spend up to 4 years in streams before migrating to the ocean, and they spend only a few months in the ocean before reentering fresh water on their spawning migration. These findings emphasized the importance of freshwater habitat to cutthroat.

The main stem of the Siuslaw River is 110 miles long, including 22 miles of estuary, with water temperatures exceeding 75 F during late summer. The Siuslaw has two major tributary systems. The North Fork contains 118 miles of stream and Lake Creek below the falls has 188 miles. Tributaries are especially valuable in the Siuslaw since they contain spawning gravel, rearing areas, and cooler water. Rearing pools have been created in some tributaries by using gabions and blasting pools in bedrock with dynamite.

Only one major barrier exists in the system since Siuslaw Falls was laddered. A combination of falls on Lake Creek, below Triangle Lake, create a drop of about 100 feet and is a total barrier to upstream fish movement. Stream gradient in the system ranges from flat to steep.

STEELHEAD

Populations

As with cutthroat, steelhead are present in most streams of the Basin. The North Fork and Lake Creek are prime producers of wild steelhead; but few inhabit the upper Siuslaw watershed, especially above RM 60. Stream gradients and summer flows there are low, and more conducive to production of wild cutthroat and coho.

The Siuslaw system supports a winter steelhead run of about 10,000-15,000 fish per year. Steelhead utilize about 680 (72%) of the system's 950 miles. Spawning escapement in the system is estimated at 6,000-10,000 adults per year and is considered adequate. Primary spawning areas are in the North Fork, Lake Creek system, and main stem tributaries such as Sweet, Wildcat, Wolf, and Whitaker creeks.

A total of 120,000 hatchery smolts of the Alsea strain are released annually into the system. Allocations are 10,000 to the lower North Fork, 40,000 to lower Lake Creek, and 70,000 to the main stem between RM 22 (tidewater) and RM 42. This distribution pattern provides favorable returns to the angler.

In recent years when surplus adult steelhead have been available from Alsea Hatchery, these have been released to spawn above Triangle Lake and in Sweet Creek. This substantially supplements wild production; however, the parents are all hatchery stock from another river system.

Fishery

Because of its proximity to the Willamette Valley, excellent fishing, and size of the watershed, the Siuslaw River supports a major steelhead fishery. Waters open to winter angling include the main stem Siuslaw (110 miles), the North Fork (25 miles), Lake Creek up to Greenleaf Creek (14 miles), Indian Creek (17 miles), Deadwood Creek (15 miles), and Sweet Creek (8 miles). Miles of open waters total 189, including 22 miles of estuary. General season and bag limits of Zone 1 apply, and there are no special regulations or closures except for a winter angling deadline on Lake Creek at the mouth of Greenleaf Creek.

About 20,000 angler days are spent annually for steelhead in the system from late November through the end of March. Effort is nearly equally divided between boat and bank anglers. Peak effort and catches generally occur in December and January, in the areas where smolts are stocked. Catches range from 3,000 to 7,000 steelhead per year with an average of 5,100. As on other coastal winter steelhead streams, weather and flows play a major role in determining angler effort and catch levels. Annual creel samples since 1970 have shown that during December and January the catch includes up to 70% hatchery fish. These samples have also shown the catch rate has declined from about 9 hours per fish in 1970 to about 16 hours per fish now, as a result of increasing effort.

The present rate of return to the creel from hatchery stocking ranges from 2 to 4% of the release. About 90% of the catch is made in stocked areas.

SALMON

Populations

The Siuslaw River contains many miles of good salmon producing habitat despite extensive losses in past decades while the watershed was being developed for timber production, agriculture, and other needs. Fall chinook use about 420 miles in the system; and the annual spawning population was estimated at 4,500 fish in the mid-1970's. About one-half of the returning run appears to use Lake Creek and tributaries up to the falls below Triangle Lake and the remainder scatter throughout the North Fork and main stem including its medium sized tributaries like Wolf and Esmond creeks. Coho use about 864 miles of stream in the system. The annual escapement was estimated at 25,000 fish in the early 1970's.

Index surveys for spawning salmon are maintained on Lake Creek for chinook and Panther Creek for coho. These generally show fall chinook escapements are stable, while coho have declined in recent years.

Historically, the Siuslaw system supported a modest run of spring chinook. A few apparently still use the system as they have occasionally been seen or taken from the stream by anglers, in the striped bass and shad fisheries, or by ODFW sampling gear.

The Siuslaw system, in its lowermost tributaries, at one time supported runs of chum salmon. However, based on commercial fish landing records, the run was small. There are presently few, if any, native chums in the system.

Three private salmon hatcheries have been authorized to release fish on tributaries or in the Siuslaw estuary. Two have permits only for chum salmon; Siuslaw Fisheries has a facility on Sweet Creek and Ceratodus Fisheries has a hatchery on Divide Creek. Both have a tentative upper release limit of 5.0 million juvenile chum salmon annually. Domsea Farms, Inc., has an authorized release site on the lower Siuslaw estuary for 12 million chinook, 12 million coho, and 25 million chum salmon. These operators have all released some fish, but to date none are close to their tentative permit limits. Most of the fish released to date originated outside the system, mainly from sources in Washington state. The ODFW Stocking Policy allows importation of coho and chum, but requires the use of native stocks of chinook. In 1979, Domsea Farms released about 100,000 juvenile native fall chinook resulting from eggs collected in the Siuslaw system the previous fall. This included a release of 25,000 smolts in the area where the eggs were taken. An application for a fourth private hatchery to release chum salmon in the system is being considered by the Department.

Releases of salmon into the Siuslaw from state operated hatcheries, for the past 15 years, have been confined to adults surplus to egg-taking needs from Fall Creek Hatchery (Alsea system). These were put into the Lake Creek system above the falls. Adult coho have also occasionally been stocked into Sweet Creek above the falls.

Fishery

Fall chinook and coho support fair fisheries in the Siuslaw estuary and river. Estimates from recent salmon and steelhead license returns show an

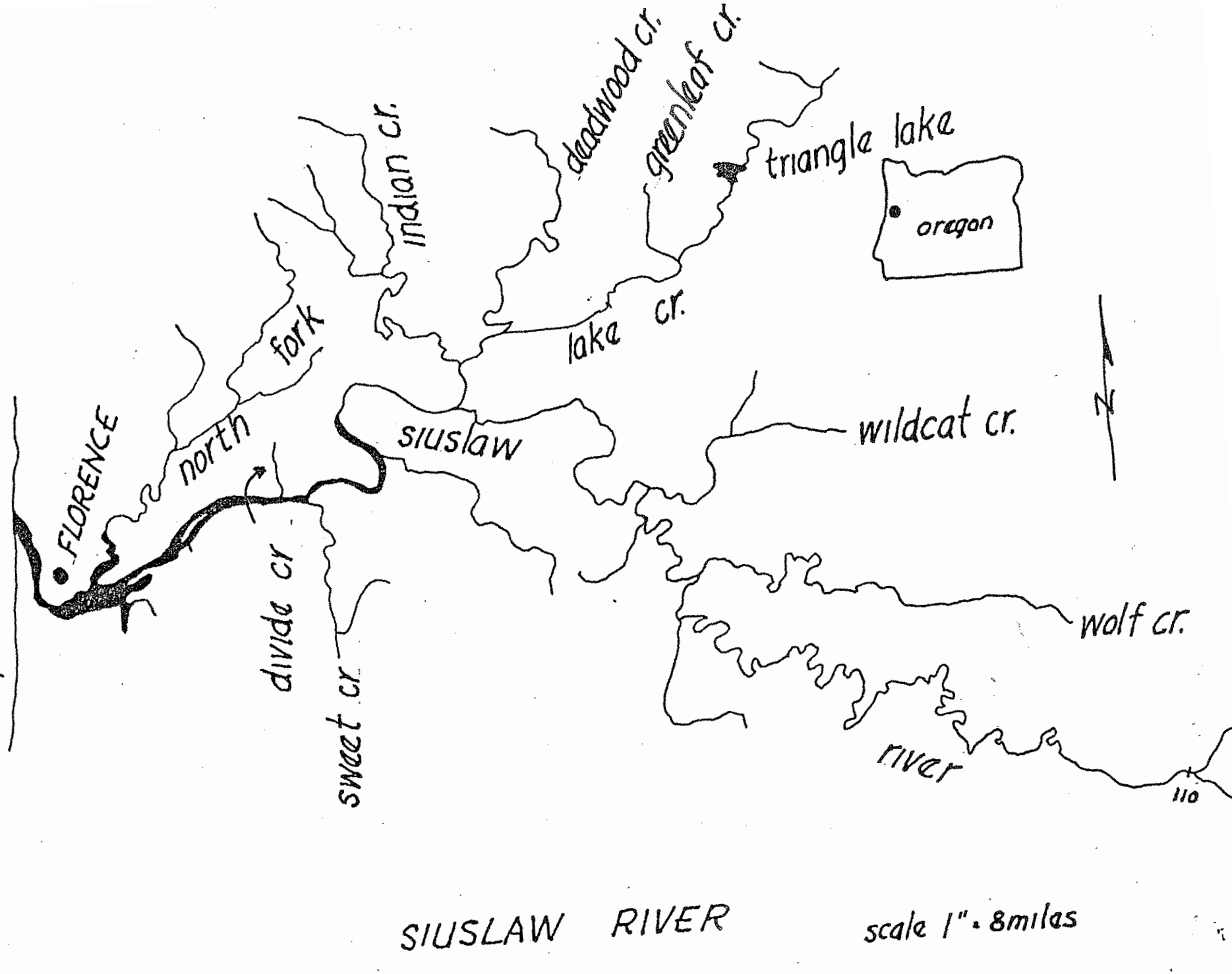

Fig. 1. Siuslaw River

TROUT

Populations

Cutthroat are found in all basin streams having perennial flows. The research study from 1965 to 1970 showed that wild fish composed up to 61% of the fall catch. The wild sea-run cutthroat population was estimated to range from 23,000 to 31,000 fish. Moderate numbers of cutthroat were captured in the main stem from RM 22 to 109 in sampling from 1963 through 1969. Warm water temperatures in this area are more conducive to rough fish populations; suckers, squawfish, and redside shiners are abundant.

Three sample sites located on Greenleaf Creek (Lake Creek tributary) were inventoried by Bureau of Land Management personnel from 1974 to 1977. The stream is considered one of the best producers of wild salmonids in the Siuslaw watershed. Steelhead, cutthroat, and coho were numerous and population estimates were made.

A sizable population of wild nonmigratory cutthroat exists in Triangle Lake and its tributaries. This population supports a light to moderate fishery without stocking of hatchery trout.

Hatchery yearling cutthroat smolts are annually stocked downstream of RM 42 on the main stem Siuslaw, RM 6 on Lake Creek, and RM 15 on the North Fork. The number released has varied annually, but will average about 45,000 in the future. Fish size and time of release has also varied due to problems with hatchery production and release.

Fishery

The Siuslaw River has the largest boat fishery for sea-run cutthroat in Oregon. Anglers mainly fish the narrow, deep portion of the estuary between RM 7 and 23. The fall fishery has been monitored periodically since 1949 and was intensively studied from 1965 to 1970. During the intensive study, an average of 50,000 angler hours were spent annually in the fall fishery. Combining the fall and spring fisheries (1967-1970), an annual average of 57,000 angler hours was spent to catch 12,400 cutthroat. Based on previous catch data, and assuming we can achieve better control of hatchery production, we believe returns of hatchery sea-runs can be increased and a landing rate of 2.0 to 2.5 cutthroat per boat can be achieved.

Adult sea-run cutthroat have been caught in the Siuslaw in late June at the earliest. The fishery peaks in August and September and small numbers continue to enter in early October. High water temperatures in the river force cutthroat to hold in the estuary longer and later than in most other coastal systems, making them highly vulnerable to the boat fishery. Salmon normally dominate angling interest in the estuary by October.

The spring stream fishery is of low to moderate intensity and acts upon both wild and hatchery cutthroat smolts. Most angling occurs near stocked sites early in the season. Hatchery fish normally comprise over 70% of the catch in stocked stream areas.

annual catch of 200-700 adult fall chinook and 1,200 to 1,500 adult coho per year. There are no estimates of the number of jack salmon taken because they are not recorded on catch records. Additionally, several thousand fish of both species originating in the Siuslaw River are probably taken in ocean fisheries along the Pacific coast in common with other similar stocks.

Recent restrictions to the ocean salmon fisheries by the Pacific Fishery Management Council and the Department have been necessary to provide more chinook back to the Columbia River to satisfy treaty Indian needs and to increase coast-wide escapements of coho for natural production. Although not yet measured, these restrictions should have a positive effect on the numbers of both species returning to the Siuslaw system.

Future operations at the Domsea Farms facility have the potential to return increased numbers of fall chinook and coho to the Siuslaw estuary and river. These fish may contribute to sport fisheries in these areas. Returns from full levels of chum salmon production at the private hatcheries could conceivably lead to development of a fishery on these fish as well.

OBJECTIVES

1. Maintain natural fish production capabilities of the system by applying existing laws and regulations to protect and improve stream habitat. The Siuslaw is a large river system with extensive natural fish populations. Maintenance of habitat is essential to perpetuating these populations.

2. Maintain adequate spawning escapements to perpetuate natural production of all species.

3. Achieve a landing rate of 2.0 to 2.5 sea-run cutthroat per boat trip with 40% of the catch provided by hatchery fish.

4. Maintain the opportunity for anglers to take up to 10,000 winter steelhead per year assuming at least 60% will be hatchery stock.

5. Maintain a return to the creel of at least 3% of the steelhead smolts released annually and an annual landing rate at less than 20 hours per fish.

6. Maintain a wild steelhead contribution of at least 20% to the winter fishery while continuing the current stocking rate for hatchery steelhead (120,000 smolts annually).

7. Determine the impact of private hatchery operations on wild salmon stocks and fisheries in the Siuslaw River.

8. Determine the need for stocking hatchery fish in the system to optimize the natural production of salmon.

9. Maintain the genetic integrity of the Triangle Lake Basin cutthroat population by limiting the stocking of trout to steelhead.

10. Assist private salmon hatcheries in reaching anticipated levels of production contingent on evaluating the impacts of their fish on wild stocks of all species.