

92(FR-9)  
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FINAL REPORT  
on the  
COOPERATIVE AGREEMENT  
between  
FISH AND WILDLIFE SERVICE  
UNITED STATES DEPARTMENT OF INTERIOR  
and the  
NORTHERN CALIFORNIA INDIAN DEVELOPMENT COUNCIL  
  
YUROK ACCELERATED STOCKING PROGRAM  
KLAMATH RIVER LATE RUN FALL CHINOOK  
  
FY 1992

## INTRODUCTION

Late run fall chinook salmon, endemic to the lower 40 miles of the Klamath River and its tributaries, are severely depressed due to both manmade and natural habitat degradation.

Six separate small scale integrated facilities have been developed which are operated to restore natural spawning late run fall chinook in select streams tributary to the Klamath River and the Yurok Reservation.

The strategy of the overall program is to gillnet capture adult late run brood stock from the main stem Klamath, spawn and incubate the eggs at two central facilities ( one downriver, one upriver) and rear the resultant fry to 90 per lb. or yearling size at various streamside facilities for release into those streams.

Individual components of the integrated program have been in operation for varying lengths of time and funded and administered through various agencies. In FY 92 the total program was administered by Northern California Indian Development Council Inc. with funding provided by the Klamath River Basin Restoration Program, USFWS, FOA Yreka.

YUROK ACCELERATED STOCKING PROGRAM  
DOWN RIVER PROGRAM 1992

## INTRODUCTION

Late run fall chinook salmon, endemic to the lower 40 miles of the Klamath River and its tributaries, are severely depressed due to both manmade and natural habitat degradation. There are three small scale hatcheries Spruce Creek, High Prairie and Cappell Creek. There are also two extended rearing sites Hunter which is supplied by Spruce and Pecwan which is supplied by Cappell. They are all located within the boundaries of the Yurok Reservation and are ran by Yurok Indians.

The strategy of the overall program is to gillnet capture the broodstock from the mainstem and utilize the adults returning to the sites where fish have been planted in years past by this program. To spawn and incubate the eggs at the three small scale hatcheries. High Prairie hatchery is a release @ 90 per lb site. Spruce and Cappell are both moved to extended rearing sites for yearlings.

The programs have been in operation for varying lengths of time and funded and administered through varies agencies. In FY 90 the total program was consolidated and in FY 90,91 and 92 was administered by Northern Calif. Indian Dev. Council (NCIDC) with funding for the total program being provided by the Klamath River Basin Restoration Program, USFWS, FAO Yreka.

## DESCRIPTION OF THE STUDY AREA

### Down River Projects:

#### Spruce Creek Incubation and Early Rearing Site

Spruce Creek is a secondary small short run stream which is tributary to Hunter Creek. Hunter Creek which is at app. river mile one on the north bank of the Klamath estuary, is fed by Spruce at app. stream mile one. Spruce Creek is our first main site to fill with green eggs from the capture project. The fry from Spruce Creek are transferred at 90 per lb. to Hunter Creek for extended rearing till yearlings in Oct.

#### High Prairie Incubation and Early Rearing Site

High prairie Creek is tributary to the Klamath estuary at app River mile 1.1 on the norht bank. It flows thru the Yurok Experimental Forest within the boundaries of which the facility is located.

The facility consists of a hatchbox and 8' by 24' fiberglass rearing tank. In years past we have supplied fish or eyed eggs to

this facility. 1992 we brought fry from Spruce to the High Prairie facility.

#### Hunter Creek Extended Rearing Site

Hunter Creek is the largest tributary to the Klamath estuary with an app. 24 square mile drainage. It enters the estuary at app. river mile 1.3 on the north bank.

The Hunter Creek in stream cage rearing operation is located immediately downstream of the Requa Road bridge at app. stream mile 1.0.

Salmon fry, which are transferred from the Spruce incubation facility, are reared to yearling size in large mesh cages placed directly in the stream flow from app mid June to late Oct.

#### Upriver Projects:

##### Cappell Creek Incubation and Early rearing Site

Cappell Creek is tributary to the Klamath River at river mile 32 on the northeast bank. In years past the down river capture program supplied Cappell with broodstock or green eggs to incubate. The operators of Cappell chose to capture there own broodstock in the FY92 season.

##### Pecwan Creek Extending Rearing Site

Pecwan Creek is tributary to the Klamath at river mile 25.3 entering on the northeast bank.

Pecwan Creek has been the site of artificially reared yearling salmon since 1980. Most of those fish were reared in a large rearing tank. In 1987 the program was modified to use instream cages. All fish prior to FY 90 were Iron Gate Hatchery stock. In FY 90,91 and 92 fingerlings were recieved from Cappell which were from natural late run gill net captured brood.

#### METHODS AND MATERAILS

##### Program Logistics

There were a total of 53,689 fall chinook green eggs received from the FY 92 down river capture season. They all went to the Spruce Creek site and were incubated.

In Feb.92 13,600 fry were transferred to High Prairie site. In Mar. 92 another 2,955 fry were transferred to High Prairie, this made a total of 16,555 fry to be reared and released at 90 per lb into High Prairie Creek. The remaining fry were reared at the Spruce Creek site till moving to Hunter Creek for extended rearing till late Oct. 92.

There were a total of 19,350 green eggs received from the upriver capture program. These eggs were taken to the Cappell Creek site for incubation. In June 92, a portion of these fry were taken to Pecwan Creek and reared till late Oct. 92.

## RESULTS AND DISCUSSION

### Down River Projects

#### HIGH PRARIE

6/6 - 6/10. We tagged a total 12,680 fish .

6/16. Coded wire tag retention counts were taken. Of 518 fish sampled 96 percent retained tags.

6/16. By weight 13,333 fish were released into the Salt/ High Prarie Creek system.

#### HUNTER CREEK

Oct. 26. Coded wire tag retention counts were taken. Of 500 fish sampled 93 percent retained tags.

Oct. 27. The mouth of the river closed off resulting in Hunter Creek backup and high water. Potential for fish to escape out the top of floating cages was avoided by placing seine nets over cage tops. Seine nets were lent to the projects by USFWS Arcata.

Oct. 29. By weight 18,219 fish were released.

### UPRIVER PROGRAMS

#### CAPPELL CREEK

Oct. 30. Fish Release - 9,540 fish by weight released into Cappell. Tag retention 98 percent. Weight at time of release were 20.59 grams each. 20 morts at release.

#### PECWAN CREEK

Oct. 31. Fish Release - 6,130 fish by weight released into Pecwan. Tag retention 98 percent. Wiegth at time of release 22.78 grams each. No Morts at release.

### Additional Notes:

On June 2, 1992 the water was at a very critial low flow at High Prarie Creek facility. App 4000 fish were moved out of High Prarie to Hunter Creek instream cages(extended rearing site) hoping to lessen the load on High Prarie. When the fish got to Hunter Creek they were to small for the mesh on the cages. Only one bucket full was put in the cages to see how they would do and they swam thru the mesh. The rest of the fish in the moving tank were then taken to Spruce creek

for safe keeping and continuation of feeding to grow enough for Hunter Creek. They were mixed with the fish that were already at spruce as there was no other place or way to hold them. These fish and the fish that were originally in Spruce Creek ended up being held till July 23, 92. At that time they were graded out by size and the bigger ones were weighed and taken to Hunter Creek to the extended rearing site. The smaller ones (app 300 to 500 fish) were held in Spruce till they got big enough to move. The fish were graded by putting a small cage (made of the same wire mesh as the large instream cages) in the tank where the fish were being held and dipping fish into the wire mesh cage. All the fish that could not go thru the mesh were then weighed and hauled to Hunter Creek in a fiberglass fish moving tank. The fish that continued to go thru the mesh were then held in the tank till they got bigger.

As this Report is brought to an end special thanks goes out to Doug Alcorn, for his involvement and oversight in the tagging operations, releases and tag retention counts of these projects. Thanks Doug!

CODED WIRE TAG REPORT  
YUROK ACCELERATED STOCKING PROGRAM  
YUROK RESERVATION

1. Tag Code: Data Number 29/56, Agency Number: 5
2. Species: Chinook Salmon
3. Run: Lower Klamath River Late Fall / Natural
4. Brood Year: 1992
5. Release site: Pecwan Creek
6. Release Dates: 10/31/92
7. Rearing Type: Hatchery / Instream Cage
8. Number Tagged: 6,013
9. Number Adispose Only: 0
10. Number Unmarkerd: 0
11. Counting Method: GCD Tagging Machine
12. Tag Loss Days: app 75
13. Weight of Fish: 22.78 grams each
14. Stock: Klamath Mainstem Gillnet Captured
15. Location of Rearing Facility: Cappell Creek Rearing Facility and Pecwan Creek Instream Cages.

Additional Notes: The tag retention on this lot of fish was 98 percent. Doug Alcorn was present when this count was done.

CODED WIRE TAG REPORT  
YUROK ACCELERATED STOCKING PROGRAM  
YUROK RESERVATION

1. Tag Code: Data Number 29/56, Agency Number: 5
2. Species: Chinook Salmon
3. Run: Lower Klamath River Late Fall / Natural
4. Brood Year: 1992
5. Release site: Cappell Creek
6. Release Dates: 10/30/92
7. Rearing Type: Hatchery
8. Number Tagged: 10,445
9. Number Adispose Only: 0
10. Number Unmarkerd: 0
11. Counting Method: QCD Tagging Machine.
12. Tag Loss Days: app 75
13. Weight of Fish: 22.78 grams each
14. Stock: Klamath Mainstem Gillnet Captured
15. Location of Rearing Facility: Cappell Creek Rearing Facility.

Additional Notes: The tag retention on this lot of fish was 98 percent. Doug Alcorn was present when this count was done.

CODED WIRE TAG REPORT  
YUROK ACCELERATED STOCKING PROGRAM  
YUROK RESERVATION

1. Tag Code: Data number 29-55, agency number 5
2. Species: Chinook Salmon
3. Run: Lower Klamath River: Late Fall / Natural
4. Brood Year: 1992
5. Release Site: High Prairie / Salt Creek
6. Release Dates: 06/16/92
7. Rearing Type: Hatchery / 90/lb release
8. Number Tagged: 12,680
9. Number Adipose Only: 0
10. Number Unmarked: 0
11. Counting Method: GCD Tagging Machine
12. Tag Loss Days: 10 days
13. Weight of Fish: app 67 fish per pound
14. Stock: Klamath Mainstem Gillnet Captured Late Run
15. Location of Rearing Facility: Yurok Experimental Forest and Forest Service behind Yurok Tribal Office, Klamath Ca

CODED WIRE TAG REPORT  
YUROK ACCELERATED STOCKING PROGRAM  
YUROK RESERVATION

1. Tag Code: Data Number: 29/57 Agency Number: 5
2. Species: Chinook Salmon
3. Run: Lower Klamath: Late Fall / Natural
4. Brood Year: 1992
5. Release Site: Hunter Creek, Confluence with Klamath
6. Release Dates: 10/29/92
7. Rearing Type: Hatchery / In Stream Cage
8. Number Tagged: 15,647(With Data#29/57) 3,916(With Data#29/55)
9. Number Adipose Only: 0
10. Number Unmarked: 0
11. Counting Method: GCD Tagging Machine
12. Tag Loss Days: app 120 days
13. Weight of Fish: average 21 fish per pound
14. Stock: Klamath Mainstem Gillnet Captured, Late Run
15. Location of Rearing Facility: Spruce Creek Rearing Facility, And Hunter Creek Cages, Yurok Reservation.

Additional Notes: There were 3,916 fish tagged with data number 29/55, agency number 5 and were released at Hunter Creek release site on 10/29/92. This total is included in above information.