Exxon Valdez Oil Spill
Restoration Project Annual Report

Tatitlek Coho Salmon Release

Restoration Project 96127
Annual Report

This annual report has been prepared for peer review as part of the *Exxon Valdez* Oil Spill Trustee Council restoration program for the purpose of assessing project progress. Peer review comments have not been addressed in this annual report.

James Winchester

Prince William Sound Economic Development Council, Inc.
Post Office Box 2353
Valdez, Alaska 99686

for:

Alaska Department of Fish and Game
Habitat & Restoration Division
333 Raspberry Road
Anchorage, Alaska 99518-1599

April 1997

Exxon Valdez Oil Spill
Restoration Project Annual Report

Tatitlek Coho Salmon Release

Restoration Project 96127
Annual Report

This annual report has been prepared for peer review as part of the *Exxon Valdez* Oil Spill Trustee Council restoration program for the purpose of assessing project progress. Peer review comments have not been addressed in this annual report.

James Winchester

Prince William Sound Economic Development Council, Inc.
Post Office Box 2353
Valdez, Alaska 99686

for:

Alaska Department of Fish and Game
Habitat & Restoration Division
333 Raspberry Road
Anchorage, Alaska 99518-1599

April 1997

Tatitlek Coho Salmon Release

Restoration Project 96127
Annual Report

Study History: The project effort was initiated in 1995. The project effort has continued under Restoration Project 96127, the subject of this annual report. Fiscal year 1996 is the second of five seasons for this project, which will be closed out with a final report prepared in fiscal year 1999.

Abstract: As a result of this ongoing project, it continues to move forward to create a run of coho salmon for subsistence use in Boulder Bay, near Tatitlek, Alaska. The Solomon Gulch Hatchery continues to be responsible for the taking of eggs (enough to produce 50,000 smolt) and smolt production (standard fish culture practices are utilized to incubate the eggs and rear the resultant fry). The village of Tatitlek is then responsible for imprinting and releasing the smolt into the wild. Approximately 2,000 to 3,000 adult coho salmon return to Boulder Bay for subsistence harvesting. The residents of Tatitlek are beginning to notice increasing numbers of returning salmon which will insure subsistence recovery.

Key Words: Coho salmon, egg taking, smolt production, subsistence recovery.

Project Data: Project data files are currently kept at the Prince William Sound Economic Development Council, Inc., 128 Pioneer Drive, Second Floor, Post Office Box 2353, Valdez, Alaska 99686.

Citation:

Winchester, J. 1997. Tatitlek coho salmon release, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 96127), Alaska Department of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The release of coho salmon in Boulder Bay, near the village of Tatitlek, was proposed to replace lost and injured resources that were disrupted by the *Exxon Valdez* oil spill.

The Valdez Fisheries Development Association operates the Solomon Gulch Hatchery in Valdez, Alaska, which continue to oversee the rearing of the coho salmon smolt.

INTRODUCTION

Subsistence fisheries available to residents of Tatitlek village were severely disrupted by the *Exxon Valdez* oil spill. This project is intended to enhance subsistence resources near Tatitlek by creating a 2,000 to 3,000 coho salmon return to Boulder Bay which is immediately adjacent to Tatitlek village. This resource is intended to partially replace for the near term other subsistence resources, such as harbor seal, that were injured by the spill.

This coho salmon return will be created through an annual release of 50,000 coho salmon smolt in Boulder Bay. The smolt are produced at the Solomon Gulch Salmon Hatchery under an agreement between its operator, the Valdez Fisheries Development Association and the Tatitlek IRA Council. The coho salmon eggs needed to produce the smolt come from a wild coho run that has been approved by ADF&G for the egg take. The eggs are taken to the Solomon Gulch Hatchery for incubation and rearing to the smolt stage. The sea ready smolt are then transported by boat to Boulder Bay and are imprinted to the Bay by placing them in net pens for about a two week period before being released into the wild.

This project was approved by the EVOS Trustee Council in FY 95. Funds were appropriated to underwrite the environmental assessment, which has been produced. Funds received in FY 96 and beyond are being used to produce the coho salmon returns to Boulder Bay.

OBJECTIVES

The key objectives of this project are to continue the agreement with the Valdez Fisheries Development Association to produce 50,000 coho salmon smolt for release in Boulder Bay; imprint smolt to Boulder Bay by holding and feeding them in net pens in the Bay for two weeks prior to release into the wild; and harvest for subsistence 2,000 to 3,000 coho salmon annually upon their return to the imprint site.

METHODS

The purpose of this project is to create a run of coho salmon in Boulder Bay near Tatitlek for subsistence use. The project is undertaken annually and is classified as "put and take" since it is unlikely that the coho returns produced by this project would establish a wild run. There are four basic steps to the project; egg take, incubation and rearing to the smolt stage, imprinting and release of smolt, and the subsistence harvest.

The Solomon Gulch Hatchery is responsible for the egg take and smolt production, Tatitlek village is responsible for imprinting and releasing the smolt into the wild. The subsistence fishery is open to all, but mostly consists of Tatitlek village residents.

The eggs are taken from a coho run approved by ADF&G for use in this project. Enough eggs are taken to produce 50,000 smolt. They are taken to the Solomon Gulch Hatchery where standard fish culture practices are utilized to incubate the eggs and rear the resultant fry to the smolt stage. The smolt are then transported by boat to Boulder Bay where they are placed in net pens and held (and fed) for a two week period during which time they imprint to Boulder Bay.

The smolt are then released into the wild and proceed to their ocean rearing grounds, returning back to Boulder Bay approximately 12 months later as adults. Around 2,000 to 3,000 adult coho salmon return to Boulder Bay from the smolt release. As many of these fish as possible (usually 75% to 85%) are harvested in a subsistence fishery that has been set up specifically for this purpose. The unharvested fish die without spawning.

RESULTS

As a result of this ongoing project, it continues to move forward to create a run of coho salmon for subsistence use in Boulder Bay, near Tatitlek, Alaska. The Solomon Gulch Hatchery continues to be responsible for the taking of eggs (enough to produce 50,000 smolt) and smolt production (standard fish culture practices are utilized to incubate the eggs and rear the resultant fry). The village of Tatitlek is then responsible for imprinting and releasing the smolt into the wild. Approximately 2,000 to 3,000 adult coho salmon return to Boulder Bay for subsistence harvesting. The residents of Tatitlek are beginning to notice increasing numbers of returning salmon which will insure subsistence recovery. Please refer to Table 1 for detailed salmon release statistics for return years 1994 through 1996.

DISCUSSION

During the first two years, the project has remained on schedule with egg take happening in August of each year for smolt rearing in a two-year cycle. The smolt are reared and transported to Boulder Bay and placed in net pens in May of each. After an approximate

two week salt water rearing, they are released into Boulder Bay. The adult coho salmon return to Boulder Bay for subsistence harvesting and egg take in August of each year.

CONCLUSIONS

The necessary milestones have been completed in a timely fashion. The logistics of the project continue to present minimal difficulties over the duration of this project.

The success of this project is beginning to be noticed by the residents of Tatitlek as the number of returning salmon are beginning to increase. The residents are confident that this will insure the subsistence recovery of the coho salmon.

LITERATURE CITED

None.

Table 1. Tatitlek Coho Salmon Release Statistics

Return Year	Estimated Number of Coho Caught	Number of Eggs Taken	Number of Juvenile Coho Received	Number of Coho Released
1994 (by 91)		24,184	20,000	20,000
1995 (by 92)	750*	25,478	13,784	13,700
1996 (by 93)	500**	20,907	20,000	20,000

*There were no Coho in the area prior to this project. This number represents years 1994 and 1995. The residents of Tatitlek took only the fish they needed, but could have taken more.

**The number of fish was down a little, but the residents of Tatitlek were still able to catch what they needed for subsistence.