

*Exxon Valdez* Oil Spill  
Restoration Project Annual Report

Community Involvement/Traditional Ecological Knowledge  
Part 1: Resource Abnormalities Study

Restoration Project 96052-1  
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.

Rita A. Miraglia

Alaska Department of Fish and Game  
Division of Subsistence  
333 Raspberry Road  
Anchorage, Alaska 99518

May 1997

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**Study History:** The Subsistence Restoration Project: Food Safety Testing (Restoration Projects 93017 and 94279) was an outgrowth of work begun by the Oil Spill Health Task Force in 1989 as part of the response to the *Exxon Valdez* oil spill. A final report was issued on the 1993 work by Shemet and Miraglia under the title Subsistence Restoration Project (93017), and a final report covering both years' work was issued in 1995 by Miraglia under the title Subsistence Restoration Project: Food Safety Testing. The project effort continued in 1995 with a new emphasis, which was reported by Miraglia in an annual report titled Resource Abnormalities Study (95052). In 1996, the project became part of the Community Involvement/Traditional Ecological Knowledge Project. This report covers the 1996 continuation of the Resource Abnormalities Study.

**Abstract:** The project goal was to restore confidence of subsistence users in their abilities to determine the safety of subsistence resources. In 1993-94, project emphasis was on testing samples of subsistence resources for the presence of hydrocarbons. By 1995, it was evident that we had learned all we could from hydrocarbon testing. The 1995 project was designed to continue efforts to communicate information on subsistence food safety to communities. Additionally, we established systems for getting samples of abnormal resources from subsistence users to biologists and pathologists for study, and for reporting the scientific findings to subsistence users. Samples were taken from animals harvested by local hunters or fishers for subsistence use. Training sessions were held in 19 communities in the spill impact area. Sixty-one local volunteers were trained to preserve, package and ship the different sample types. A videotape version of the training session was supplied to each community as a refresher course and to train additional community residents. Sampling kits and instructions were placed in communities, and accounts were set up with air carriers to transport samples to Anchorage. A resource abnormality hotline was established, and posters were placed in communities listing local volunteers and the hotline number.

**Key Words:** Abnormalities, Alaska Peninsula, community participation, *Exxon Valdez* oil spill, Kenai Peninsula, Kodiak Archipelago, Prince William Sound, subsistence resources.

**Project Data:** No data sets were developed for this project. All information pertaining to samples obtained as part of the Resource Abnormality Study is included in the report.

**Citation:**

Miraglia, R.A. 1997. Community involvement/traditional ecological knowledge, part 1: Resource abnormalities study, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 96052-1), Alaska Department of Fish and Game, Division of Subsistence, Anchorage, Alaska.

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## EXECUTIVE SUMMARY

In FFY 1995, the Resource Abnormality Study was begun to continue efforts to communicate information on subsistence food safety to the communities in the oil spill area (for additional detail on the injury to subsistence and earlier efforts to mitigate the injury see the final report on Restoration Project Number 95279, Resource Abnormality Study (Shemet & Miraglia, 1997)). In addition, we put in place a system for getting samples of abnormal resources from subsistence users to biologists and pathologists for study and reporting the findings of the scientists to subsistence users, with all samples taken from animals harvested by local hunters, fishers or gatherers for subsistence use.

In FFY 1995, a total of 61 volunteers were trained to preserve, package, and ship the different types of samples. Training sessions were held in the communities of Chenega Bay, Tatitlek, Cordova, Valdez, Nanwalek, Port Graham, Seldovia, Seward, Larsen Bay, Karluk, Old Harbor, Akhiok, Ouzinkie, Kodiak City, Chignik Lake, Chignik Bay, Chignik Lagoon, Perryville, and Ivanof Bay. A videotape version of the training session was left in each community to serve as a refresher course for the volunteers, and allow for the training of additional community residents. Sampling kits and instructions were placed in each community, and accounts were set up with air carriers to transport samples to Anchorage.

A resource abnormality hotline (1-800-267-2552) was established, and posters were placed in each participating community listing the names of the local volunteers and the hotline number.

Although this project was only funded for one year, the Trustee Council provided funding to the Division of Subsistence to support the continuation of the hotline, the transport of samples and the replacement of sampling kit components as part of the Community Involvement and Use of Traditional Knowledge project (restoration project number 96052).

This project answers the need to continue to monitor the risks to human health from the oil spill, and in part, the need to involve residents of the spill area as partners in restoration activities. Additionally, the project gives biologists and pathologists the opportunity to see examples of abnormalities that they might not otherwise encounter given their limited time in the field.

In FFY 1995, three samples were brought to the project, one of which was suitable for examination. The abnormality was found to be unrelated to oil contamination, and not a cause for concern to human health.

In FFY 1996, six calls were made to the Resource Abnormality Hotline. These calls resulted in three samples being sent in for examination. In two of these three cases, the abnormalities were found to be unrelated to oil contamination, and not a cause for concern to human health. In the third case, the specimen was delayed in getting to ADF&G and by the time it arrived, decomposition was advanced to the point where tests or cellular level examination was not possible.

The program might be more effective if the hotline were in operation 24 hours, rather than simply being an added line to ADF&G staff during regular office hours.

Division research staff continue to remind community officials and other residents of the availability of this service in community meetings and household visits, in the course of their work on other projects.

It should be remembered that even if the opportunity to have samples of abnormalities examined turns out to be little used, knowing that the service is available provides subsistence users with assurance that their concerns are taken seriously.

## INTRODUCTION

Subsistence uses of fish and other wildlife constitute a vital natural resource service that was injured by the *Exxon Valdez* oil spill. Data collected by the Alaska Department of Fish and Game's Division of Subsistence demonstrated this injury (Fall, 1991). For additional detail on this injury and earlier attempts to mitigate the injury, see the final report on Restoration Project Number 95279, Resource Abnormality Study (Shemet & Miraglia, 1997).

State and federal laws define subsistence as the "customary and traditional" uses of wild resources for food, clothing, fuel, transportation, construction, art, crafts, sharing, and customary trade. Harvesting, sharing, and using fish and wildlife are integral to the customs and traditions of a variety of cultural groups. Subsistence uses are also important for Alaska's economy. Many Alaskan communities, including those in the EVOS area, depend upon mixed, subsistence-cash economies, where subsistence production is a major economic sector. The household economies of many families are dependent upon food and raw materials from subsistence activities. State and federal statutes recognize the importance of customary and traditional subsistence uses of wild resources. Subsistence uses are given preference over commercial fishing and recreational fishing and hunting in state and federal law. State and federal laws differ in who qualifies for subsistence uses. Currently, all state residents qualify for subsistence fishing and hunting under state law. Under federal law, rural residents qualify for subsistence fishing and hunting on federal lands in Alaska (Wolfe and Bosworth 1994).

Within the oil spill area, subsistence harvests are relatively high in diversity. Major resources include seals, sea lions, moose, deer, goats, waterfowl, salmon and other finfish, invertebrates, and plants and berries. Virtually everyone participates in the harvesting and processing of wild resources, especially in the smaller communities. Subsistence harvests make up a large portion of the diet of many families.

### *Genesis of the Resource Abnormalities Study*

After evaluating the work of the Oil Spill Health Task Force and the results of the joint ADF&G and MMS study (see Shemet & Miraglia, 1977, for additional detail on these earlier studies), it was evident that there was little more we could learn about subsistence food safety from additional hydrocarbon testing. Concern in the communities had shifted from hydrocarbon contamination levels to the effects of the oil, and abnormalities observed in resource species. For this reason, the FFY 1995 project was designed to continue efforts to communicate information on subsistence food safety to the communities. In addition, we put in place a system for getting samples of abnormal resources from subsistence users to biologists and pathologists for study and reporting the findings of the scientists to subsistence users. All samples are taken from animals harvested by local hunters or fishers for subsistence use.

This project answers the need to continue to monitor the risks to human health from the oil spill, and in part, the need to involve residents of the spill area as full partners in restoration activities. Additionally, the project gives biologists and pathologists the opportunity to see examples of abnormalities that they might not otherwise encounter given their limited time in the field.

In FFY 1995, a total of 61 volunteers were trained to preserve, package and ship the different types of samples. Training sessions were held in the communities of Chenega Bay,



Tatitlek, Cordova, Valdez, Nanwalek, Port Graham, Seldovia, Seward, Larsen Bay, Karluk, Old Harbor, Akhiok, Ouzinkie, Kodiak City, Chignik Lake, Chignik, Chignik Lagoon, Perryville and Ivanof Bay. A videotape version of the training session was left in each community to serve as a refresher course for the volunteers, and allow for the training of additional community residents. Sampling kits and instructions were placed in each community, and accounts were set up with air carriers to transport samples to Anchorage.

A resource abnormality hotline (1-800-267-2552) was established, and posters were placed in each participating community listing the names of the local volunteers and the hotline number.

As of this writing, there have been eleven calls to the hotline, and four samples have been examined and reported on. In April 1996, we issued a flyer reminding subsistence users in the oil spill impact area that this service is available to them.

Although this project was only funded for one year, the Trustee Council provided funding to the Division of Subsistence to support the continuation of the hotline, the transport of samples and the replacement of sampling kit components as part of the Community Involvement and Use of Traditional Knowledge project (96052).

## OBJECTIVES

The goal of the project is to restore the subsistence uses of fish and wildlife damaged by the *Exxon Valdez* Oil Spill. It is expected that by responding to the specific oil spill related concerns of subsistence users, and reporting accurate health information back to the affected communities in clear, understandable language and in one-on-one discussions, subsistence users' confidence in the resource can be restored. Past efforts in this direction have been partially successful.

## METHODS

Our intention was to respond to concerns expressed by subsistence users in the *Exxon Valdez* oil spill impact area by putting a system in place whereby subsistence users can send samples of abnormal resources that they encounter to biologists and pathologists for examination. We attempted to identify scientists willing to examine different types of specimens. Community residents were trained to properly preserve, package and ship the different types of samples. Sampling kits and instructions were placed in each community, with an account set up with an air carrier to transport samples from the communities to Anchorage. The training of subsistence users and the assembling of kits were contracted out on a competitive basis. Reporting the information from the scientists to the subsistence users is done by the Division of Subsistence.

We continued our efforts to communicate health advice and information on subsistence restoration projects to residents of the impacted communities through the production of the Subsistence Restoration Project Report. The Report was supplemented by community visits. These involved both informal visits to households and formal community meetings. The purpose of this effort is to further the dialogue between researchers and the communities regarding study proposals and findings.

The project included Prince William Sound, the Kenai Peninsula, the Alaska Peninsula, and Kodiak Island. The communities of Chenega Bay, Tatitlek, Nanwalek, Port Graham, Seward, Larsen Bay, Karluk, Old Harbor, Akhiok, Ouzinkie, Chignik Bay, Chignik Lake, Chignik Lagoon, Perryville and Ivanof Bay were involved. Port Lions was invited to participate in the project, along

with the other communities listed above, but declined the opportunity without explanation. Port Lions was the only community that declined to participate.

## RESULTS

Only the cases that resulted in samples being sent in, examined, and reported on are discussed here. For additional detail on these cases, as well as the other calls received by the hotline, see the Resource Abnormalities Project Log (Appendix A).

In February 1996, Don Kompkoff of Chenega Bay sent in a section of seal skin with an abnormality, from a harbor seal harvested near his community. The sample was forwarded to Kimberlee Beckmen, a licensed veterinarian and research associate at the University of Alaska, Fairbanks, who specializes in marine mammal pathology. Beckmen prepared slides of the abnormality, and diagnosed it as an old healed-over abscess. The original abscess was probably caused by a wound that became infected. The slides were forwarded to Kathy Burek, a veterinary pathologist in Eagle River, who confirmed Beckmen's diagnosis.

On August 5, 1996, Mitch Lind, of Chignik Lake reported that he had found a red salmon stuck against the side of the weir. It appeared bloated and seemed to have some sort of infection. Miraglia asked Lind to send the fish in fresh, then sent an e-mail message to ADF&G Fish Pathologist, Jill Follett, asking if she could look at it. Follett called back and said she would be glad to examine the fish. Unfortunately, Lind put a Federal Express label on the package. Since the account numbers we gave him were for PenAir and Alaska Airlines, Federal Express held the package in King Salmon for two days, unrefrigerated.

By the time the package arrived at ADF&G on August 8<sup>th</sup>, the cooler had been travelling three days and the ice had long since melted. Tamara Burton, a Microbiologist who works with Jill Follett, opened the cooler and examined the fish. The fish had become warm and had begun to decay. There was some sort of wound on the side of the fish, which Burton said was most likely there when the fish was still alive. However, the tissue had rotted to the point where it was no longer possible to tell whether the wound was bacterial or mechanical in origin. There was definite bloating in the region of the organ cavity. Burton said the bloating was not the result of normal decomposition. The organ cavity was filled with a large amount of bloody fluid. This could have resulted from an infection or the early stages of a tumor. There was no abnormal solid mass present in the body cavity, but if there had been a soft tumor present in the living fish, it could have dissolved. Again, with the state the fish was in (the internal organs were grey rather than a healthy pink), it was too late to do any sort of tests or cellular level examination. Burton agreed to write a report on her findings. A copy of Burton's report was sent to Lind with an explanatory cover letter (see Appendix C).

On September 25, 1996, Karen Goodberlet of Valdez left a message on the hotline, saying a fisherman had brought an abnormal shrimp that he wanted examined in to the Valdez Native Association. Miraglia called Goodberlet back for more information. Goodberlet said the fisherman had been seeing small black spots on all the shrimp he was catching. This one shrimp had a single larger black spot of roughly one quarter inch in diameter. Miraglia asked Goodberlet to locate one of the local volunteers and have the shrimp packaged and sent to ADF&G via Goldstreak. The shrimp had already been frozen and was sitting in the freezer at Valdez Native Association when Goodberlet made her initial call.

Alaska Airlines Goldstreak called the hotline at 8:30 AM on September 27<sup>th</sup>, to let us know the package with the shrimp had arrived. Unfortunately, the package had actually been sitting at Goldstreak in Anchorage since 1 PM the previous day. Whoever packed the shrimp in Valdez has failed to put a "Keep Frozen" sticker on the package. So the package was kept at room temperature overnight. Luckily, the shrimp was packed well enough that it was still frozen when the package was opened. The shrimp was examined by both Tamara Burton and Jill Follett. They determined that the black spot was scar tissue that had formed following a break in the carapace. Miraglia asked Follett and Burton to write a one page report on their findings. Goodberlet called again later in the day and Miraglia told her about the findings and told her she would get a written report as well (see Appendix C). The shrimp was caught near Glacier Island, and Goodberlet confirmed that it was alive when caught.

### *Follow Up*

In April 1996, the Division sent out flyers reminding subsistence users in the oil spill impact area about the Resource Abnormalities Study, and that this service is still available to them (Appendix B). In addition, Division research staff continued to remind community residents of the availability of this service in both household visits and community meetings, in the course of their work on other projects.

In October 1996, we sent a letter to each volunteer, asking that they inventory their community's sampling kit (Appendix D). Only two of the volunteers returned completed inventories.

## CONCLUSIONS

In general, this project has been well received by subsistence users in the oil spill communities. With the exception of Port Lions, every community invited to participate in the project chose to do so. In each community at least two, and in some communities as many as six, local people volunteered to be trained and to provide their services to their community free of charge. There have been problems with samples coming in either improperly preserved and/or improperly packaged and labeled. The pathologists have suggested that this problem can be solved by having them speak directly with the person taking the sample. We will be giving this a try.

The first couple of samples sent in illustrated problems with the sample transport arrangements made by Dames and Moore. We made adjustments to correct this. However, not all of the Federal Express labels placed in the sampling kits by Dames and Moore have been discarded as we requested.

The number of samples submitted has been lower than expected, and about half of the calls received by the hotline have not resulted in samples being sent in for examination. In some cases, this was because no examination was necessary. However, in four cases our delay in response to calls was probably part of the problem. The response was slow partly because the "hotline" is really just an additional line to a staff telephone at ADF&G. Therefore, there can only be an immediate response during regular office hours (Monday through Friday, 8 AM to 4:30 PM). If a call comes in on a weekend or in the evening, it is not responded to until the start of the next working day. In one case, delivery of a voice mail message was somehow delayed by

the phone system by three days. We checked with the company that installed the phone system, they said they did not see how this could happen (although other ADF &G staff have reported that this problem occurs intermittently). The problems with the phone system, and the fact that there is not always an immediate response to calls, may have caused frustration on the part of some volunteers. One way to improve the program might be to have a bona-fide hotline with 24-hour response. However, such a system would be much more expensive to operate.

The Division continues efforts to promote the program, issuing a flyer in April 1996, to remind subsistence users in the oil spill impact area that the project was still in place, and the resource abnormalities hotline still in operation. In October 1996, each volunteer was sent a letter asking that they inventory the sampling kits so the kits could be restocked. Only two completed inventories were returned. In addition, Division researchers continue to remind community residents that the project is continuing, through household visits and community meetings in the course of their work on other projects.

It should be remembered, that even if the opportunity to have samples of abnormalities examined turns out to be little used, knowing that the service is available provides subsistence users with assurance that their concerns are taken seriously.

The Resource Abnormalities Study is a service being provided to the communities in response to their requests to have abnormal resources examined. The sampling kits, training sessions, shipping, researcher examinations, interpretations, and health advice are all being provided to the communities that chose to participate, free of charge. The volunteers provide their services to their community, also free of charge.

## ACKNOWLEDGEMENTS

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We also want to thank the researchers who have provided their expertise to the project: Jill Follett, Tamara Burton, and Jana Geesin of ADF&G, and Kimberlee Beckmen, Kathy Burek, and Kate Wynne of UAF.

In addition, we gratefully acknowledge the assistance of other members of the Division of Subsistence staff: James A. Fall, Ana Lewis, Craig Mishler, Lisa Scarbrough, Bill Simeone, Ron Stanek, and Vicki Vanek.

## LITERATURE CITED

Shemet, K., and R.A. Miraglia, 1997. Resource Abnormalities Study, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 95279), Division of Subsistence, Alaska Department of Fish and Game, Anchorage, Alaska.

APPENDIX A

Resource Abnormalities Project Log

## RESOURCE ABNORMALITIES PROJECT LOG

### Case #1

8-22-95, 1 PM Victor Ashenfelter, 224-3118 Seward

Problem: Dead Puffin found in marine storage area

Action: Karen Shemet spoke with Dan Rosenberg (also left a message for Rick Sinnott), who said it is probably useless to have the carcass sent in, since the bird has been dead for at least two weeks, and its composition has gone too far to allow for any meaningful necropsy or testing. Shemet called Ashenfelter back and told him to discard the carcass.

### Case #2

8-28-95, 309PM Justyna Katelnikoff Ouzinkie

Problem: Brown slimy strings of algae in the area, more algae than usual

Action: Both Shemet and Miraglia were in the field when the call came in. We did not respond until Miraglia returned to the office on 9-6-95. By that time, a sample of the algae had been sent in. Katelnikoff said she used the self-addressed label and sent the cooler via FedEx. However, it went to the ADF&G office in Kodiak City instead of coming to the Anchorage office. Vicki Vanek (a Fish and Wildlife Technician who works for the Division of Subsistence in Kodiak) opened the cooler and examined the sample. She said it just looked like algae to her. Miraglia called Katelnikoff back and told her we would not be analyzing the algae because the algae itself was not abnormal. Miraglia also suggested possible reasons there is more algae than usual (such as currents, winds, or changes in water temperature). Katelnikoff seemed satisfied with this answer. She added that this year there are too many pink salmon, so many that the canneries will not take any more. The local residents blame this on the Exxon Valdez oil spill, saying this is a legacy of overescapement due to fishery closures in the spill year. Katelnikoff also mentioned that she has been told about live clams in the area that appear to be pretty rotten. She has agreed to send one in, if she can find one. We need to figure out the problems with FedEx<sup>1</sup>. I directed Vanek to send the cooler back to Ouzinkie, discard the sample and send the accompanying paperwork to us.

### Case #3

9-14-95, 2 PM Juanita K. Kelly, 486-4449 Kodiak City

Problem: Bass with tumors in the gill cavity

Action: Vicki Vanek called to say a person she knew brought an abnormal fish into the ADF&G office in Kodiak City, and gave it to Jim Blackburn. Vanek told Blackburn to bring the fish to the Kodiak Tribal Council to have one of the volunteers there send it in to the Abnormalities Study. Vanek suggested putting the tumors in formalin and freezing the rest of the fish. Shemet called Jill Follett (ADF&G fish pathologist in Anchorage) who said she had seen things like this before and would be happy to examine it. She said the tumors should be preserved in formalin, and a photo should be taken of the fish. At 4 PM, Juanita K. Kelly, one of the volunteers trained in Kodiak City called to

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<sup>1</sup> The problem with FedEx is that they do not have service to many of the communities in the study. Shemet set up accounts with local air carriers (which the contractor, Dames and Moore was supposed to do, but never did), and we instructed the local volunteers to discard the FedEx labels. This problem has continued to haunt us, because some of the FedEx labels were not discarded.



**Case #3 (Cont'd)**

say she had the fish cleaned up and in the refrigerator. Shemet told her to take a photo of the fish and write a description of the tumors, including where they are, the type of fish and what they look like, if they are firm or mushy, bumpy or smooth, grey or white, etc. how many, and then prepare it in formalin and send it here on Monday, after it fixes in the formalin for at least three days.

9-18-95

Received a message from Kelly that the weather in Kodiak is bad, so the sample will not get out today, she will try to send it tomorrow.

9-25-95

Miraglia got a message (that was evidently recorded on the hotline on Wednesday 9-20-95) that Kelly had questions about shipping. Shemet called her and told her to send the sample via FedEx today. She agreed.

9-27-95

Sample cooler with formalized sample arrived here (Anchorage). Packed well with disposable camera (containing exposed shots of fish) and form enclosed. Unpacked it in pathology lab and gave it directly to Jill Follett and Tammy Burton for examination. They hypothesized, based on the last fish they examined with gill tumors, that this could be another case of X-cells.

10-24-95

Received report back from the lab on the gill tumors (report number 96-0032). The growth was a xenoma, not oil related.

11-1-95

Sent lab report on to Juanita Kelly along with a cover letter.

**Case #4**

2-96 Don Kompkoff, 573-5132 Chenega Bay

Problem: Don Kompkoff sent in a section of seal skin with an abnormality, from a harbor seal harvested near Chenega Bay.

Action: The sample was forwarded to Kimberlee Beckmen at the marine mammal pathology laboratory in Fairbanks. Beckman prepared slides of the abnormality, and diagnosed it as an old healed-over abscess. The original abscess was probably caused by a wound that became infected. The slides were forwarded to Kathy Burek, a veterinary pathologist in Eagle River, who confirmed Beckmen's diagnosis.

**Case #5**

6-25-96 Liz Kosbruk, 853-2202 Perryville

Problem: Greenling with abnormalities in the guts

Action: Received a message from Liz Kosbruk in Perryville reporting a greenling with abnormalities in the guts. The voice mail envelope says the message was left Friday morning, but this does not seem possible. Miraglia has been checking for messages everyday. Miraglia tried to call

**Case #5 (Cont'd.)**

the number left on the message, but got no answer. Miraglia met with Lisa Scarbrough to discuss other options for contacting Kosbruk, and ultimately reached her at her home. Kosbruk said she had a pogie (greenling) with hard roe in it. She said the roe looked like plastic and was very dark, almost the color of tar. The roe was the texture of wax. She said it was the only fish she had ever seen with this kind deformity. All the spawns had split open. Other than that, the fish looked O.K.. Since we took so long to get back to her, she had discarded the fish. I told Kosbruk if another such fish turned up, she should preserve a sample in formalin and call us. I sent an e-mail message to Jill Follett about the reported abnormality, asking if she could hazard a guess about what might have caused it.

7-1-96

Got an e-mail message back from Jill Follett which read, "Sorry, fresh out of guesses today. Either fresh or in formalin would be the way to submit this if you get another one."

**Case #6**

6-25-96 Loretta Stellwag, 325-2311 Tatitlek

Problem: Received a fax from Loretta Stellwag in Tatitlek about an abnormal porpoise brought in by a hunter. The hunter, Norman Vlasoff reports that it has "oiled looking stains and lesion type of sores and possibly worms underneath".

Action: Miraglia called Stellwag and determined that the only abnormalities study volunteer in the village at this time is Steve Totemoff Jr.. Stellwag said she would contact him.

Spoke to Kate Wynne, she said the animal sounds like a dolphin or possibly a Dall's porpoise. She said they normally have a lot of weird scars and parasites, but only in the skin or blubber, they do not normally get into the meat. Even very healthy porpoises have parasites. They may have liver flukes. Wynne said she would not eat the liver if she saw this, but these liver flukes do not cross over to humans. She advised that we take the teeth (the whole lower jaw), and the stomach and freeze these parts in the seal biosampling freezer. She said we should take a sample of the skin with lesions, and send that to Kim Beckman. The other samples will be picked up with the seal samples in the fall.

Miraglia spoke to Totemoff, he said the skin lesions had disappeared. We agreed there was no point in taking skin samples if the skin looked normal. Totemoff was asked to go ahead and take the lower jaw an stomach and freeze these for Wynne (Wynne said she would fax diagrams to help Totemoff identify the sex of the animal and some of the parasites he might find. If he does find anything odd looking once he cuts it open, he will preserve it in formalin and send it up on Jim Air. He was asked to shoot a whole roll of photos of the animal before he cuts it and to send the disposable camera up on Jim Air. Totemoff said he is certain the animal is not a porpoise and agreed with Wynne that it might be a dolphin.

6-26-96

Miraglia landed in Tatitlek on her way to Chenequa Bay via Jim Air, got off the plane and took a look at the dolphin/porpoise lying on the beach. I could see that the mandible was gone and the body cavity had been opened, so Totemoff probably did take the samples requested by Wynne. There was a hole in the side of the animals head, which looked like it was the result of scavengers (a bird was pecking on it at the time). There were some superficial abrasions on the skin, but nothing that looked like a sore or a lesion. Miraglia took a photo of the animal.

### **Case #6 (Cont'd.)**

Based on Totemoff's photos the animal was identified as a pacific white-sided dolphin.

### **Case #7**

8-5-96 Mitch Lind, 845-2213 Chignik Lake

Problem: Mitch Lind found a red salmon stuck against the side of the weir, it appears bloated and seems to have some sort of infection.

Action: Miraglia asked Lind to send the fish in fresh, then sent an e-mail message to Jill Follett asking if she could look at it. Follett called back and said she would be glad to examine the fish.

8-6-96

Came in to a message left by Mitch Lind at 7:30 last night. He said the salmon should arrive here sometime today

8-7-96

Lisa Scarbrough worked on trying to track the cooler down, since it still has not arrived. She was not having any luck. Mitch Lind called in again and Miraglia got more information on how the package was sent. Unfortunately, Lind put a FedEx label on it. Since the account numbers we gave him were for PenAir and Alaska Airlines, FedEx was simply holding the package in King Salmon. We spoke with John with FedEx this afternoon and he said he would take it up to Alaska Airlines.

8-8-96

The fish finally arrived this morning, we brought it over to the fish pathology lab. Tamara Burton, a Microbiologist who works with Jill Follett opened the cooler and examined the fish. The cooler had been travelling three days and the ice had long since melted. The fish had become warm and had begun to decay. There was some sort of wound on the side of the fish, which Burton said was most likely there when the fish was still alive. However, the tissue had rotted to the point where it was no longer possible to tell whether it was bacterial or mechanical in origin. There was definite bloating in the region of the organ cavity. Burton said the bloating was not the result of normal decomposition. The organ cavity was filled with a large amount of bloody fluid. This could have resulted from an infection or the early stages of a tumor. There was no abnormal solid mass present in the body cavity, but if there had been a soft tumor present in the living fish, it could have dissolved. Again, with the state the fish was in (the internal organs were grey rather than a healthy pink), it was too late to do any sort of tests or cellular level examination. Burton agreed to write a report on her findings. A copy of Burton's report was sent to Lind with an explanatory cover letter.

### **Case #8**

9-3-96 Mitch Lind, 845-2213 Chignik Lake

Problem: Mitch Lind left a message on the hotline Sunday (9-1-96) saying he had found an abnormal salmon.

Action: Miraglia tried to reach Lind, but was only able to leave a message. He called back this afternoon and said the fish's eyes were popping out, but he thought it was too late to send it in. Miraglia agreed, and told him next time, he should not wait for us to get back to him. Evidently,

there were no planes flying Sunday or Monday because it was a holiday weekend. Miraglia told him in that case, he should preserve the portion of the fish with the abnormality in formalin.

**Case #9**

9-25-96 Karen Goodberlet Valdez

Problem: A fisherman brought in an abnormal shrimp that he wanted examined.

Action: Miraglia called Goodberlet back, she said the fisherman had been seeing small black spots on all the shrimp he was catching. This one shrimp had a single larger black spot of roughly one quarter inch in diameter. I asked her to locate one of the local volunteers and have the shrimp packaged and sent to us via Goldstreak. The shrimp had already been frozen and was sitting in the freezer at Valdez Native Association when she called.

9-27-96, 8:30 AM

Got a call from Alaska Airlines Goldstreak to let us know the package had arrived. Unfortunately, the package had actually been sitting there since 1 PM the previous day. Luckily the shrimp was packed well enough that it was still frozen when the package was opened. The shrimp was examined by both Tamara Burton and Jill Follett. They determined that the black spot was scar tissue that had formed following a break in the carapace. I asked them to write a one page report for me on their findings. Goodberlet called again later in the day and Miraglia told her about the findings and told her she would get a written report as well. The shrimp was caught near Glacier Island, and Goodberlet confirmed that it was alive when caught.

**Case #10**

9-4-96 Mack Kvasnikoff, 281-2249 Nanwalek

Problem: Was sent a fax by Keri Hile in the EVOS office forwarding a message from Nanwalek that Mack Kvasnikoff had a pink salmon that was "very unusual inside".

Action: Miraglia called Kvasnikoff's house and spoke with someone else in the home. Miraglia told him who the volunteers in the community were and how to send in the sample. Nothing was sent in and we never heard anymore about this fish.

**Case #11**

10-8-96 Mitch Lind, 845-2213 Chignik Lake

Problem: Mitch Lind found another fish with a bloated belly.

Action: It was too late to send it in that day, and the next day there was no plane. He wants to know whether he should freeze the next one. He also had another fish he brought home that had a hollow-looking body cavity. When he cut it open, it look grey and there were white splotches along the walls of the body cavity and no blood. Miraglia told Lind she would talk to the pathologists about the best preservation method and call him back. Another male he cut the head open and there was watery reddish liquid that came shooting out of the body cavity. The insides did not look normal, they looked funny, bloodshot. Miraglia called Lind back with the advice from the pathologists that he preserve any abnormality in formalin and freeze the rest of the fish.

**APPENDIX B**

Subsistence Restoration Project, April 1996 Report



# Subsistence Restoration Project

April 1996 Report

## The Subsistence Resource Abnormality Study in Oil Spill Impact Area Communities Continues

In 1995, the Division of Subsistence, Alaska Department of Fish and Game, set up a system in which subsistence harvesters can send in samples of abnormal resources to be examined by biologists or pathologists. The scientists' findings are then reported back to the communities, along with an explanation of the results. The project was begun in response to requests from subsistence users in the oil spill impact area, who asked where they could send samples of abnormal animals they harvested, to find out what could have caused the abnormalities. This work is part of the Resource Abnormalities Study (Restoration Project number 95279), a project funded by the Exxon Valdez Oil Spill Trustee Council.

A total of 61 volunteers were trained to take and preserve samples, fill out sampling forms, and package and ship the different types of samples. Training sessions were held in the communities of Chenega Bay, Tatitlek, Cordova, Valdez, Nanwalek, Port Graham, Seldovia, Seward, Larsen Bay, Karluk, Old Harbor, Akhiok, Ouzinkie, Kodiak City, Chignik Lake, Chignik Bay, Chignik Lagoon, Perryville, and Ivanof Bay (the names of the volunteers are listed on the other side of this page).

A videotape version of the training session was left in each community to serve as a refresher course for the volunteers, and allow for the training of additional community residents. Sampling kits and instructions were placed in each community, and accounts were set up with air carriers to transport samples to Anchorage.



Seward volunteers Victor Ashenfelter and Michael Hibbetts being trained in sampling techniques by Mike Fitzgerald

A resource abnormality hotline (1-800-267-2552) was established, and posters were placed in each participating community listing the names of the local volunteers and the hotline number.

Although this project was only funded for one year, the Trustee Council has provided funding to the Division of Subsistence to support the continuation of the hotline, the transport of samples and the replacement of sampling kit components as part of the Community Involvement and Use of Traditional Knowledge project (96052).

The Division of Subsistence serves as a clearing house to make sure the samples get to the appropriate scientists for examination, and also works with scientists to interpret the results of the examinations, and ensure that the information gets back to the community.

Now that spring is here and people are gearing up for subsistence activities, we wanted to remind everyone that this service is available.

**If you harvest any animal that appears abnormal to you and you would like to have it examined, contact one of the project volunteers in your community, or call the hotline.**

We will do our best to get answers back to you as soon as possible.

**Resource Abnormality Hotline  
1-800-267-2552**

## Resource Abnormalities Project Volunteers

Akhiok	Mitch Simeonoff Judy Simeonoff Jennie Rastopsoff Edward Phillips Sr.	Nanwalek	Linda Evans Dale Brewster Kathy Brewster Ephim H. Moonin
Chenega Bay	Larry Evanoff Mike Eleshansky Elizabeth Kakala Cheryl Eleshansky Joyce Kompkoff	Old Harbor	Tilly Christiansen Michael Alexanderoff Jennifer Castoc Cynthia Berns
Chignik Bay	Kim Kuster Teri Carey Roy Carey	Ouzinkie	Robert W. Katelnikoff Justyna Katelnikoff Sharon Boskofsky Wanda Morrison Rosemary Squartsoff
Chignik Lagoon	Ronda Gregorio Delissa Jones Jerod Jones	Perryville	Jerry Yagie Elizabeth Kosbruk
Chignik Lake	Patti Lind Don O. Lind Mitchell Lind Sr. Ronny Lind	Port Graham	Ephim Anahonak Thomas H. Sawden Melvin Malchoff
Cordova	Faye Pahl Steve Donaldson Diane Platt	Seldovia	Lillian Elvsaaas Hoyt Ogle
Ivanof Bay	Alfred Kalmakoff Glen Kalmakoff Senafont Shugak	Seward	Victor Ashenfelter Michael Hibbetts
Karluk	Dale Reft Nick Charliaga	Tatitlek	Gary Kompkoff Steve Totemoff Herman Geffe June Totemoff
Kodiak City	Mary Cichoski Juanita K. Kelly	Valdez	Helmer J. Olson Becki Kompkoff Gloria Hiratsuka

### The Exxon Valdez Oil Spill and Subsistence Food Safety

Since 1990, the Oil Spill Health Task Force has advised that all the fish, deer, ducks, seals and sea lions tested as part of the subsistence program were found to be safe to eat, but people should not use shellfish from beaches where oil is still present. Between 1989 and 1991, about 1,000 samples of fish and shellfish, 28 samples of deer, 19 samples of ducks, and 144 samples of marine mammals were tested. With the exception of shellfish and the blubber of heavily oiled seals, levels of hydrocarbons in the edible flesh were very low, many non-detectable. This is because fish, birds, marine mammals, and land mammals are all able to rid themselves of limited amounts of contamination in their bile. While this process may cause added stress and potential harm to the organism, it prevents the hydrocarbons from building up and contaminating the meat. However, shellfish are different, because they do not have the ability to get rid of hydrocarbons quickly. They accumulate these toxins and retain them for a long period of time.

The Alaska Department of Fish and Game, Division of Subsistence has received funds from the Exxon Valdez Oil Spill Trustee Council for subsistence restoration projects. Requests for more information on the projects or comments and inquiries about information in this newsletter should be directed to the Division of Subsistence, Alaska Department of Fish and Game, ATTN: Rita Miraglia, 333 Raspberry Road, Anchorage, Alaska 99518. Phone (907) 267-2358.

The Alaska Department of Fish and Game conducts all activities free from discrimination on the basis of sex, color, race, religion, national origin, age, marital status, pregnancy, parenthood, or disability. Information on alternative formats is available for this and other department publications by contacting the ADA coordinator at (907) 165-4120 (TDD) 800-478-3648, or (fax) (907) 586-6595. Any person who believes s/he has been discriminated against should write to: ADF&G, P.O. Box 25526, Juneau, AK 99508-5526 or O.E.O., U.S. Department of the Interior, Washington, D.C. 20240.

APPENDIX C

Pathologist Reports and Related Correspondence



# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

### DIVISION OF SUBSISTENCE

TONY KNOWLES, GOVERNOR

333 RASPBERRY ROAD  
ANCHORAGE, ALASKA 99518-1599  
PHONE: (907) 267-2353  
FAX: (907) 349-4712

October 9, 1996

Mitch Lind  
P.O. Box 20  
Chignik Lake, AK 99548

Dear Mitch:

Attached is the pathologists report on the red salmon you sent in for examination in August. As you know, due to a mix-up the fish spent three days in the airport at King Salmon. By the time it got to us it had been warm for some time. Because the fish had begun to decompose, the pathologists were not able to determine what had caused it to become so bloated.

As I mentioned to you in our phone conversation today, if you find another fish like this, call me, so I can talk to the pathologists ahead of time about how to proceed. It is still preferable to send the fish in fresh, but only if it can get here quickly and remain cold. If you find the fish in the evening or on a weekend when we are not available you should follow these steps:

- 1) take a photo of the fish.
- 2) watch the training video to refresh your memory on how to handle formalin
- 3) open the belly of the fish and look for anything abnormal
- 4) if you do find an abnormality inside the fish, such as the white spots you mentioned, take a photograph of the abnormality
- 5) cut out that portion of the fish with the abnormality and preserve it in formalin
- 6) freeze the rest of the fish thoroughly
- 7) pack the preserved sample separately from the rest of the fish, without ice (formalin should not be frozen)
- 8) pack the frozen fish in a cooler with ice, and a label saying "KEEP FROZEN"
- 9) send both packages to: Alaska Department of Fish and Game, Division of Subsistence, 333 Raspberry Rd., Anchorage, AK 99518, Attn.: Rita Miraglia, via Penn Air to King Salmon, then via Alaska Airlines Goldstreak from King Salmon to Anchorage (the Penn Air account number is 3919, the Goldstreak account number is 27449830068)
- 10) call the hotline and leave a message letting me know when the packages were sent and when to expect them

Thank you for keeping us informed about what you are seeing. Hopefully we can get one of these samples in good enough shape to give you some definite answers.

Sincerely,



Rita A. Miraglia  
Oil Spill Coordinator  
Subsistence Resource Specialist

cc: Jim Fall  
Lisa Scarbrough  
Martha Vlasoff  
Jill Follett/Tammy Burton

ALASKA DEPARTMENT OF FISH AND GAME  
FISH PATHOLOGY SECTION, CFM&D DIVISION  
333 RASPBERRY ROAD, ANCHORAGE, AK 99518-1599

REPORT OF LABORATORY EXAMINATION

LOT (YEAR, STOCK, SPECIES): Chignik Lake sockeye salmon, Oncorhynchus nerka  
FACILITY: ADFG Anchorage - Subsistence (Resource Abnormality Study)  
CONTACT PERSON/ADDRESS: Rita Miraglia , 333 Raspberry Road, Anchorage AK 99518-1599  
SAMPLE DATE: 08/05/96      DATE SAMPLE RECEIVED: 08/08/96  
SPECIMEN TYPE: whole fish      LIFE STAGE: adult      STATE: decomposed  
NUMBER IN SAMPLE: 1      WILD: yes  
HISTORY/SIGNS: Fish sample was submitted by a community volunteer for the Resource Abnormality project. Fish was seen at the Chignik weir and was having trouble swimming. The fish was reported to be bloated.  
REASON FOR SUBMISSION: Diagnostic  
FINAL REPORT DATE: 08/09/96

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**COMMENTS/RECOMMENDATIONS:** This adult sockeye salmon was severely bloated, grossly distending the body wall of the fish. A large amount of bloody liquid was liberated from the visceral cavity when the body wall was opened. No other gross abnormalities were seen internally. Unfortunately, further processing of the fish was impossible due to gross decomposition. The fish was sent fresh, on ice but did not arrive at the laboratory for three days.

FISH HEALTH INVESTIGATOR(s): <sup>TB</sup>Burton

COPIES TO: FY97, Misc., Burkett, Meyers

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

### DIVISION OF SUBSISTENCE

TONY KNOWLES, GOVERNOR

333 RASPBERRY ROAD  
ANCHORAGE, ALASKA 99518-1599  
PHONE: (907) 267-2353  
FAX: (907) 349-4712

October 9, 1996

Karen Goodberlet, EVOS Local Facilitator  
Valdez Native Association  
P.O. Box 1108  
Valdez, AK 99686

Dear Ms Goodberlet:

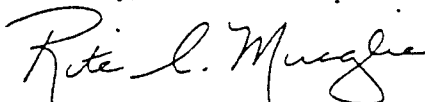
Attached is the pathologists report on the examination of the shrimp you sent in. The pathologists determined that the black spot was a protective scab that formed over the flesh of the shrimp in a place where the shell had been broken away. This scab probably kept the injured area from becoming infected. Such a scab, while not very appetizing, would not make the shrimp any less safe to eat.

Thank you for sending the shrimp in. However, there were a couple of problems with the way it was shipped. The shrimp arrived in Anchorage the same day you sent it, but Alaska Airlines Goldstreak did not call me to let me know it was here until the next day. In future, it would be best if you called me to let me know when to expect the package to arrive. Also, the sample was not packed in a cooler, and it was not labeled "keep frozen". It sat in a heated room all night. Fortunately, it was well enough insulated with bubble wrap, that it stayed frozen.

It is preferable to send samples fresh, cold but unfrozen. Freezing a sample makes some kinds of testing impossible. Of course a sample can only be sent fresh when it can get here quickly, within a couple of hours. In cases where this is not possible, the abnormal portion should be preserved in formalin (see the training video for a refresher on how to do this), and the rest of the animal frozen. The two samples should then be packed separately (formalin should not be frozen) and sent to Anchorage. The frozen sample should be labeled "keep frozen", so the carrier will know to put it in a freezer if it is delayed enroute. A frozen sample should always be shipped in a cooler (we will send the cooler back to you). If possible, call me when you first get the sample so I can consult with the pathologists and advise you of the best way to process and ship the sample.

Thanks again for your help. Feel free to call me at 1-800-267-2552 if you have any questions, or if you need new supplies for the sampling kit.

Sincerely,



Rita A. Miraglia  
Oil Spill Coordinator  
Subsistence Resource Specialist

cc: Jim Fall  
Martha Vlasoff  
Bill Simeone  
Jill Follett/Tammy Burton

ALASKA DEPARTMENT OF FISH AND GAME  
FISH PATHOLOGY SECTION, CFM&D DIVISION  
333 RASPBERRY ROAD, ANCHORAGE, AK 99518-1599

REPORT OF LABORATORY EXAMINATION

LOT (YEAR, STOCK, SPECIES): Glacier Island (Prince William Sound) spot shrimp, Pandalus platyceros

FACILITY: ADFG-Anchorage

CONTACT PERSON/ADDRESS: Rita Miraglia, Subsistence, 333 Raspberry Road, Anchorage AK 99518-1599

SAMPLE DATE: 09/25/96

DATE SAMPLE RECEIVED: 09/27/96

SPECIMEN TYPE: whole shrimp

LIFE STAGE: adult

STATE: frozen

NUMBER IN SAMPLE: 1

WILD: Yes

HISTORY/SIGNS: Shrimp was caught by a fisherman and reported to have a large black spot on the side. Several other shrimp were also seen with smaller black spots in various places on the carapace. The shrimp was alive and appeared healthy to the fisherman.

REASON FOR SUBMISSION: Diagnostic - Resource Abnormality project

FINAL REPORT DATE: 10/03/96

CLINICAL FINDINGS:

NECROPSY: A portion of the exoskeleton covering the second abdominal segment was ripped away. The edge of the injured area was covered with a black, fibrous material. No bacteria or other abnormalities were seen.

COMMENTS/RECOMMENDATIONS: The black material is most likely a melanized scab associated with normal crustacean response to injury. The melanization may play a role in defense against the invasion of foreign organisms at the wound site.

FISH HEALTH INVESTIGATOR(s): <sup>FW</sup> Follett, <sup>MB</sup> Burton

COPIES TO: FY97, Misc., Burkett, Meyers

APPENDIX D

Letter to Volunteers Regarding Inventory of Sampling Kits

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

### DIVISION OF SUBSISTENCE

TONY KNOWLES, GOVERNOR

333 RASPBERRY ROAD  
ANCHORAGE, ALASKA 99518-1599  
PHONE: (907) 267-2353  
FAX: (907) 349-4712

October 28, 1996

Dear Resource Abnormality Study Volunteer:

Thank you for your work on the Resource Abnormality Study. We wanted to contact all of the volunteers to let you know that the study continues. Although the Trustee Council is no longer funding it as a separate project, support for the Resource Abnormality Study continues as part of the Community Involvement Project. The Resource Abnormality Hotline (1-800-267-2552) is still active. We continue to accept samples of abnormal resources for examination by biologists and pathologists, and to report back their findings to the communities.

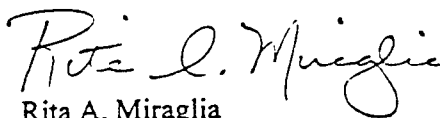
I would like to ask that the volunteers in each community get together and inspect your community's sampling kit. I have attached a form listing the items that should be in each kit. If you are missing any of the items, please circle the item(s) on the form, fill in your name and the name of your community, and return the list to me in the enclosed stamped, self addressed envelope.

This might be a good time for the volunteers in your community to get together and watch the training video again, as a refresher course. If some of the volunteers in your community have dropped out of the project, the video can be used to train new volunteers. Please let me know if anyone has dropped out, and who the replacements are.

There have been problems with some of the samples that have come in so far. In some cases they have not been properly packaged or labeled. There have been delays in shipping caused by improper labeling of packages. Some samples have been frozen before the hotline was called. Please remember, frozen samples are less useful than samples sent in fresh. Freezing a sample makes some kinds of examination impossible. It is important to call the hotline as soon as you can, preferably before processing the samples in any way. This allows us to talk to the pathologist and determine the best way to preserve, package and send the sample. It is also important to remember to take photographs of the animal before the sample is taken. There is a disposable camera in each kit for this purpose. The whole camera can then be sent in to us.

Thanks again for all your hard work. If you have any questions, or suggestions for how we can make this a better project, please feel free to call me, either on the hotline or at 907-267-2358. I can also be reached via e-mail at [RitaM@fishgame.state.ak.us](mailto:RitaM@fishgame.state.ak.us).

Sincerely,



Rita A. Miraglia  
Oil Spill Coordinator  
Subsistence Resource Specialist

cc: Jim Fall  
SRS staff  
Martha Vlasoff

RESOURCE ABNORMALITY SAMPLING KIT  
INVENTORY AND REPLACEMENT ORDER FORM

COMMUNITY: \_\_\_\_\_

VOLUNTEER(S): \_\_\_\_\_

1. large plastic storage chest
2. instruction video
3. procedures manual
4. 2 small coolers
5. disposable surgical gloves
6. chemical resistant rubber gloves
7. safety glasses
8. 1 liter 10% buffered formalin
9. shipping containers for formalin-preserved samples
10. small, medium and large glass sample jars
11. small, medium and large Ziploc bags
12. small and large WhirlPak bags
13. large garbage bags, light weight
14. large garbage bags, heavy duty
15. ice packs
16. disposable camera
17. stainless steel scissors, knife and scalpel
18. aluminum foil
19. bubble wrap, bubble bags, and parafilm sealer
20. bleach
21. portable spring scale and measuring tape
22. black electricians tape
23. strapping tape and clear tape
24. waterproof notebooks
25. data forms
26. washing pan
27. mechanical pencils and waterproof markers
28. HAZMATPAC box for shipping formalin
29. paper towels
30. scrub brushes

F

*Exxon Valdez* Oil Spill  
Restoration Project Annual Report

Community Involvement/Traditional Ecological Knowledge  
Part 2

Restoration Project 96052-2  
Annual Report

Patty Brown-Schwalenberg, Executive Director  
Martha Vlasoff, Community Involvement Coordinator

Chugach Regional Resources Commission  
4201 Tudor Centre Drive, Suite 300  
Anchorage, Alaska 99508

May 1997



Community Involvement/Traditional Ecological Knowledge  
Part 2

Restoration Project 96052-2  
Annual Report

**Study History:** The Community Involvement/Traditional Ecological Knowledge project was designed to increase the participation of local community members in the restoration process as well as providing a mechanism to share their traditional knowledge about the resources injured as a result of the *Exxon Valdez* Oil Spill. This project began in 1995 and is currently in its 3rd year of operation (FFY97). This report covers the FFY96 continuation of the Community Involvement/Traditional Ecological Knowledge Project.

**Abstract:** The goal of this project is to facilitate communication between the *Exxon Valdez* Oil Spill Trustee Council, researchers working on oil spill restoration projects, and residents of communities impacted by the spill. This project initiated a program to encourage, and facilitate such communication. The goal is to make optimal use of the complementary nature of scientific data and traditional knowledge.

**Key Words:** Community Involvement, Community Involvement Facilitators, Spill Area Wide Community Involvement Coordinator, Traditional Ecological Knowledge, TEK Specialists, TEK, traditional knowledge, subsistence, Prince William Sound, Kodiak, Alaska Peninsula, Chugach Regional Resources Commission (CRRC).

**Citation:** P. K. Brown-Schwalenberg and Vlasoff, Martha. 1997. Community Involvement/Traditional Ecological Knowledge, Part 2, Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 96052-2), Chugach Regional Resources Commission, Anchorage, Alaska.

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2. Quarterly Narrative Report - 2nd Quarter (January - March, 1996)
3. Quarterly Narrative Report - 3rd Quarter (April - June, 1996)
4. Quarterly Narrative Report - 4th Quarter (July - September, 1996)

## EXECUTIVE SUMMARY

In FFY95, the Community Involvement Project was begun to facilitate communication between the Exxon Valdez Oil Spill Trustee Council, researchers working on spill related projects, and local community members who were affected by the oil spill. Initially, this project was managed and administered by the Alaska Department of Fish & Game, Subsistence Division. Three Community Facilitators were hired in Tatitlek, Port Graham, and Chenega Bay.

In FFY96, the ADF&G remained the lead agency, but signed a cooperative agreement with the Chugach Regional Resources Commission (a native non-profit fish and wildlife commission serving the villages in the Chugach Region of Alaska) to serve as the entity responsible for achieving the project objectives. Also, the communities felt that more communities should be included in the project. As a result, the number of communities to be included in the project was increased to nine. The project was also expanded to include a component on traditional ecological knowledge to integrate western science and local traditional knowledge to further the restoration efforts. CRRC then hired a Community Involvement Coordinator and subcontracted with the nine village councils of Tatitlek, Eyak (Cordova), Valdez, Chenega Bay, Nanwalek, Port Graham, Qutekcak (Seward), Kodiak (for the Kodiak Island region), and Chignik Lake (for the Alaska Peninsula region) to provide community facilitators for each of their communities.

It should be noted that whenever the phrase "Community Involvement Project" is used in this report, specifically regarding activities conducted by the Community Involvement Project, this includes all those entities and individuals who have been integral to this project. Parties responsible for the success of this project include all of the Community Facilitators, the Spill Area Wide Community Involvement Coordinator, the Chugach Regional Resources Commission, National Park Service, and the Alaska Department of Fish & Game, Subsistence Division.

## INTRODUCTION

The Exxon Valdez oil spill caused severe disruption of the lives of many people living in the spill impact area. The spill also caused residents of the area to be concerned about the safety of their wild food sources, and the integrity of the surrounding natural environment. While scientific studies aimed at restoring the resources and services damaged by the oil spill occurred throughout the spill area, most of the researchers worked for agencies or institutions based in Anchorage, Fairbanks or outside Alaska. Residents complained of a lack of involvement by spill area communities in the restoration efforts, and incomplete communication to spill area inhabitants of study proposals and results. At the same time, restoration researchers recognized that local residents have traditional knowledge that could help them answer questions they have not been able to answer through conventional scientific means. People living in the spill area have detailed knowledge about the condition of resources, which can significantly add to data collected as part of scientific studies, and even enhance the success of restoration efforts. Local people expressed a desire to be involved in all aspects of restoration projects, and a willingness to work with researchers. This project was intended to increase the involvement of spill area communities in the restoration efforts of the Trustee Council, and to improve the communication of findings and results of restoration efforts to spill area inhabitants.

Prior to 1995, there was no formal program in place to effectively facilitate communication between the Trustee Council, researchers working on oil spill restoration projects, and residents of communities impacted by the spill. This project initiated a program to encourage, and facilitate such communication. The goal was to make optimal use of the complementary nature of scientific data and traditional knowledge.

### BACKGROUND:

The initial idea for the community involvement project was voiced by Martha Vlasoff at a restoration workshop held in Anchorage by the Trustee Council on April 13-15, 1994. Vlasoff felt it was important to bring traditional knowledge into decision being made with regard to oil spill restoration. As a result of this discussion, a Community Involvement Working Group was formed by the Trustee Council staff. This Group held their first meeting on May 4, 1994, at the Trustee Council office in Anchorage. Participants included:

Molly McCammon, EVOS Trustee Council  
L.J. Evans, EVOS Trustee Council  
Judy Bittner, State Historic Pres. Office

Rita Miraglia, ADF&G  
Ted Birkedal, NPS  
Linda Yarborough, Forest Service

Participant List (Continued):

Karen Hosler, Independent Consultant who has participated in similar efforts in Canada	Elenore McMullen, Chief, Port Graham*
Gary Kompkoff, Chief of Tatitlek*	Fran Norman, Tribal Admin., Port Graham*
Pam Carter (VISTA volunteer in Tatitlek)*	Martha Vlasoff
Bud Antonelis, NMFS, Seattle*	Nancy Bird, Cordova (citizen involved in restoration issues)*
Kate Wynne, Kodiak (marine mammal bio.)	Bruce Wright, NOAA*
Bob Spies, California, (Chief Scientist to the Trustee Council)*	

\*Indicates those who participated via teleconference

At this meeting, it was agreed that staff of the Division of Subsistence, ADF&G, and the State Historic Preservation Office, would work together to develop a project proposal. A brief project proposal was written which called for the entire project to be contracted out under a competitive bid process, with the contractor in turn hiring local people to serve as community facilitators. As proposed, the first year of the project would be a pilot effort, only involving three communities. This brief project description was submitted to the Trustee Council under the FFY95 restoration work plan.

This project was later redesigned for FFY96 by the EVOS Trustee Council staff to include funding for the Resource Abnormalities Study (95279). The activities of these projects were to be undertaken by the Community Involvement Coordinator, who would be funded within the Division of Subsistence. This project was approved by the Trustees on October 25, 1995.

After FFY95, the first year of the project, the communities felt this project would be better served under a regional organization and that more communities should be included in the project. As a result, the Chugach Regional Resources Commission (CRRC) was approached to serve as this entity and the number of communities to be included in the project was increased to nine. The project was also expanded to include a component on traditional ecological knowledge to integrate western science and local traditional knowledge to further the restoration efforts. A Cooperative Agreement was then developed and signed between CRRC and the ADF&G. CRRC was assigned the responsibility of hiring a Community Involvement Coordinator and subcontracting with the nine village councils of Tatitlek, Eyak (Cordova), Valdez, Chenega Bay, Nanwalek, Port Graham, Qutekcak (Seward), Kodiak (for the Kodiak Island region), and Chignik Lake (for the Alaska Peninsula region) to provide communities facilitators. Work on the project objectives began in November of 1995, immediately following the signing of the cooperative agreement.

## OBJECTIVES

The objective of the project is to increase the involvement of spill area communities in the restoration efforts of the Trustee Council, to improve the communication of findings and results of restoration efforts to spill area inhabitants, and to improve the communication of traditional ecological knowledge (TEK) from local residents to scientists, which can significantly enhance the value of Trustee Council restoration efforts.

## METHODS

This project was coordinated by the Chugach Regional Resources Commission through a cooperative agreement with the Alaska Department of Fish & Game. CRRC contracted with a Spill Area Wide Community Involvement Coordinator to serve as the liaison between the communities affected by the oil spill and the existing network of scientists, agency personnel, restoration office personnel, and the Trustee Council. Through direct communications with a network of nine local Community Facilitators, the Community Involvement Coordinator actively involved local residents in the restoration program, particularly ongoing scientific studies. The second component, Traditional Ecological Knowledge (TEK) consisted of a pilot effort to integrate western science and traditional knowledge to further the Trustee Council's restoration program. The objective to be achieved utilized the following methods:

- 1) A contract was let by ADF&G Subsistence Division to CRRC for overall coordination of the facilitators and spill area wide coordinator. The contractor arranged for the hiring and coordination of local facilitators in the communities of Chenega Bay, Tatitlek, Port Graham, Nanwalek, Cordova, Seward, Valdez, and regional coordinators of the Kodiak Island and Alaska Peninsula regions.

- 2) The Spill Area Wide Community Involvement Coordinator identified those projects funded by the Trustee Council for which a community outreach component was appropriate, and worked with the principal investigators of those projects to design and implement community outreach components. This goal of community outreach was to continue the informal partnership begun under 95052, between the people of the oil spill affected areas and scientific researchers. This outreach included communication of TEK and local interests, as well as research proposals and study results. The TEK portion of the project was integral to its success in that the project objectives could only be achieved through a cooperative working relationship between the participating agencies wherein guidelines/protocols were developed, people trained, and databases shared.

3) The effectiveness of the project will be evaluated on an annual basis, by the Trustee Council staff working in cooperation with the Spill Area Wide Coordinator, the communities in the oil spill region, and the Subsistence Division of the ADF&G.

## RESULTS

### CONTRACT FOR PROJECT COORDINATION:

A Cooperative Agreement was developed and signed between the Alaska Department of Fish & Game and the Chugach Regional Resources Commission for overall coordination of the project. CRRC, in turn, contracted with Martha Vlasoff to serve as the Spill Area Wide Community Involvement Coordinator. CRRC also subcontracted with the following entities to hire a community facilitator in each of their communities/regions:

Tatitlek IRA Council	Chenega Bay IRA Council
Native Village of Eyak Tribal Council	Nanwalek IRA Council
Port Graham Village Council	Qutekcak Native Tribe (Seward)
Valdez Native Tribe (Valdez)	Kodiak Tribal Council (Kodiak region)
Chignik Lake IRA Council (Alaska Peninsula region)	

These subcontracts allowed the local tribal governments to hire their respective Community Facilitator, provide guidance and supervision, and ensure their reports were submitted in a timely manner.

### IDENTIFICATION OF PROJECTS REQUIRING COMMUNITY INVOLVEMENT:

One of the initial responsibilities of the Spill Area Wide Community Involvement Coordinator was to identify those projects that would require a community outreach component. This was accomplished with the help of the Community Facilitators and Village Councils. Community outreach components were designed and implemented in the following projects:

Clam Restoration Project	Pink Salmon Enhancement Project
Youth Area Watch Project	Tatitlek Coho Salmon Release
Community Based Harbor Seal Management	Inter-Tidal Habitats of Octopus
Documentary on Harbor Seals	Chenega Chinook Release Program
Archaeological Repositories Project	Elders/Youth Conference
Redesigned Forestry Workshop	Sockeye Salmon Stocking at Solf Lake
Eastern PWS Wildstock Salmon Habitat	Chenega Bay Salmon Restoration



In addition, the Community Involvement project also assisted the communities in successfully obtaining funds from the Department of Community and Regional Affairs Criminal Settlement Subsistence program for the following projects:

Tatitlek Mariculture Processing Facility	Tatitlek Subsistence Freezer
Tatitlek Mariculture Operations Project	Chenega Bay Mariculture Project
Chenega Bay Subsistence Harvest Support	Perryville Subsistence Ed./Trng. Center
Chignik Lagoon Subsistence Ed./Trng. Center	Port Graham Coho Salmon Restoration
Prince William Sound Regional Spirit Camp	Nanwalek Sockeye Enhancement Project
Chignik River Weir Project	Kametolook River Salmon Enhancement
Kodiak Island Spirit Camp	Chignik Lake Subsistence Ed./Trng. Center
Ivanoff Bay Subsistence Processing Facility	Perryville Subsistence Processing Facility

Another activity related to this objective was to assist the communities in identifying projects and developing proposals for the 4/15/96 EVOS Trustee Council deadline for FY97 projects. In addition to those projects listed above, the following new projects were submitted for funding by the communities affected by the oil spill with the assistance of the Community Involvement Project, or were projects submitted in cooperation with the communities:

Delight and Desire Lakes Restoration Project	Archaeological Index Site Monitoring
Site Specific Archaeological Restoration	Archaeological Site Stewardship
Survey of Octopuses in Inter tidal Habitats	Chenega Bay Salmon Habitat Enhancement
Community-Based Harbor Seal Research	Port Graham Landowners Resource Ethic and Stewardship Subsistence
Shoreline Inventory, and Protection Enhancement of Shorelines	Assessment, Prot./Enh. of Salmon Streams
Assessment, Prot./Enh. of Wetlands	Subsistence Enh. on Port Graham Uplands
Port Graham Floating Skiff Dock	Educational Harvest Trips - Port Graham
Status of Subsistence Marine Mammals in Lower Cook Inlet	Access Road to Donor Bay as Replacement for Chignik Lagoon
Sea Otter Population Monitoring	Reduction/Cleanup of Marine Pollution-PGM
Eyak-Cordova Beach Cleanup	Archaeological Repository in Chenega Bay
Traditional Ecological Knowledge	

#### TRADITIONAL ECOLOGICAL KNOWLEDGE:

The TEK portion of the project was a small, but important component. The main theme of the Restoration Workshop held in January, 1996, was the importance of TEK. This highlighting of TEK served to bring this issue to the forefront of research and we were thus able to garner support from many of the participating scientists who expressed an interest in either integrating this component into an existing project or to utilize TEK in a new research project. It became quite clear by the spring of 1996, that this component would have to be expanded upon and submitted as a separate project in the FY97 closing.

DEVELOPMENT OF TEK PROTOCOLS AND GUIDELINES:

April, 1996 meeting held to develop TEK protocols and guidelines. Select Principal Investigators (PI's) were invited to give presentations to the community facilitators regarding their research. Henry Huntington facilitate the workshop and a draft set of protocols came out of the meeting as a result. This draft was sent to all the village councils in the oil spill affected region for their comment. After their comments were received, this second draft was sent to the PI's and Trustee Council staff for their comments. Comments were received and a teleconference was held to discuss the proposed changes. More changes were made as a result of this teleconference and a final version was then sent out to all interested parties, and this is the version that was finally approved by the Trustee Council.

More important, however, was the reluctance by the tribal governments to adopt these protocols. The tribes continue to express their dissatisfaction over the section regarding ownership of data and compensation for those individuals providing information to the PI's. Unfortunately federal and state regulations state that when public funds are utilized for a project, the information gathered as a result of that project is public information. Due to the perception of past improprieties of the state government in the past over what the tribes felt was confidential information, they are very distrustful of the federal and state government as far as how this information will be used and how much of it will be disclosed to the public. CRRC is continuing to work with the village governments on this issue, hoping to address it to their satisfaction.

DEVELOPMENT OF A DATABASE FOR TEK:

This objective of the project was not addressed due to the fact that once it was investigated, it turned out to be much bigger and broader than anticipated. Therefore, it was decided that time would be better spent identifying the organizations that had databases on specific species of animals and to further investigate the actual feasibility developing a TEK database.

TRAINING FOR EVOS RESEARCHERS ON TEK:

The Subsistence Division of the Alaska Department of Fish & Game has been working on putting together a manual for this purpose. According to ADF&G, EVOS staff decided that this task should be deferred until the TEK specialists could be hired and consulted on its contents. This task is now being undertaken by ADF&G, Division of Subsistence staff as part of 97052B. The concept has now been expanded to a training and reference manual for both

EVOS researchers and community residents interested in working with Traditional Ecological Knowledge for the EVOS restoration process. A preliminary draft has been circulated under the title "Traditional Ecological Knowledge Handbook: A Training Manual and Reference Guide on Method and Theory in Research on Traditional Ecological Knowledge from Research Design through Collection of Information and Analysis to Report," and is currently under revision. The author expects to have a second draft ready for review by the TEK Advisory Group by the end of July, 1997, and the final version printed and ready for distribution by the end of August, 1997.

INFORMATION REGARDING COMMUNITY ISSUES/QUESTIONS/CONCERNS:

A total of four meetings were held with the Spill Area Wide Community Involvement Coordinator and the Community Facilitators to discuss issues of concern to their respective communities, brainstorm on new projects the communities wanted to submit for funding, and develop strategies on how communities could be more involved in the restoration process. The Involvement Coordinator also provided a twice monthly update to the Community Facilitators detailing the most recent activities of the Trustee Council and staff, and research projects. Communities have also agreed to compile a resource inventory, which will list those individuals willing to work on or cooperate with the research projects, boat owners, hotels, restaurants, stores, etc.

OTHER:

CRRC identified and is in the process of perfecting a method to get funding directly to the communities. The Lead Trustee Agency will be the Department of Interior-Bureau of Indian Affairs. Funds will be transferred to the BIA Juneau Area Office, added on to CRRC P.L. 93-638 contract, and then passed through to the respective tribal government office. The guinea pig for the first experimental transfer of funds will be the Youth Elders project for the Eyak tribe. This is a \$15,000 planning grant for FY97. All parties are familiar with the process, so we are anxious to see how it turns out.

## CONCLUSION

This project has become an institution in the villages and is an integral part of those EVOS Trustee Council funded projects with a community involvement component. This project has also provided a vital link to the communities in the restoration process, giving them a feeling of ownership in the projects conducted in their traditional use areas. This project has also served as a vehicle by which community members can express their opinions regarding any aspect of the

Trustee Council's work. On many occasions, comments from the communities have been negative and oftentimes have identified problems or issues of concern that the Trustee Council has no control over. It is important to note, however, the value of listening to these concerns. The long term effects of the oil spill are not only seen in the damage to the natural resources, they are also seen, somewhat, in the comments by the facilitators and other community members. Ongoing problems associated with the decrease of the natural resources affects every aspect of community life and the frustration of this loss by the local community members is evident by some of their comments regarding the land sales, inability of the Trustee Council to fund many of the community projects that address the human element of the oil spill, and the level of funding going to researchers outside of the oil spill area with little or no benefit being seen at the community level, to name a few. The local grassroots people are going to be living in the oil spill affected area long after the money goes away and long after the researchers have packed up their bags and gone home. It is up to the communities to become involved now, to develop their capabilities to manage the resources in accordance with their traditional philosophies, and to ensure these resources continue to exist in a pristine condition for generations to come. That is why this project is important and that is why there has been such an increase in interest by the communities to become more integrally involved in the restoration process.

### ACKNOWLEDGMENTS

The authors acknowledge the contribution of the local community residents who dedicated their time and energy to make this project a reality: Elenore McMullen, Chief, and Fran Norman, Tribal Admin., Port Graham Village Council; Gary Kompkoff, Chief of Tatitlek; Patrick Norman, President, Port Graham Corporation; Arnold Mesheimer, CRRC Chairman; Ken Blatchford, President, and Arne Hatch, Vice President, Qutekcak Native Tribe; Helmer Olson and John Boone, Valdez Native Tribe; Bob Henrichs, President, Native Village of Eyak Tribal Council; Mike Eleshansky, Chenega Bay; Don Kompkoff, President, Chenega Bay IRA Council; Nancy Yeaton, Nanwalek; Hank Eaton, Kodiak; Mollie Burton, Qutekcak Native Tribe; Walter Meganack, Jr., Port Graham; Benna Hughey, President, Valdez Native Tribe; Carl Calugen, Valdez; Virginia Aleck, Chignik Lake; and Margaret Roberts, President, Kodiak Tribal Council.

We also thank the state and federal agency personnel who provided their expertise to the project: Jim Fall and Rita Miraglia, ADF&G Subsistence Division; Don Callaway and Ted Birkedal, National Park Service; Linda Yarborough, Forest Service; Judy Bittner, State Historic Preservation Office; Pam Carter, Tatitlek VISTA volunteer; Kate Wynne; and Bruce Wright, NOAA.

# **COMMUNITY INVOLVEMENT PROJECT (96052)**

## **Quarterly Narrative Report**

**October - December, 1995**

Activities conducted by the Chugach Regional Resources Commission in regards to the Community Involvement Project (96052) during the months of October, November, and December of 1995 are listed below to inform you as to the current status of the project in each of the communities and in the region as a whole.

Ms. Martha Vlasoff has been hired as the Spill Area Wide Coordinator under the Community Involvement/Traditional Ecological Knowledge Project funded by the EVOS Trustee Council. She is currently working with seven communities and two regional organizations to get Community Facilitators hired. She is housed at the Restoration Office in order to serve as the communications link between the Restoration Office and the communities affected by the oil spill. We hope to have all Facilitators hired by January so that they will be available to attend the EVOS Trustee Council Workshop scheduled for January 16-18, 1996. Contracts with each of the village councils hiring a Community Facilitator were sent out in early November. The Community Facilitators will be selected by the village councils and supervised by them as well. They will also be responsible for setting their hours and rate of pay. In addition to the seven community facilitators in the Chugach Region, One will be hired for the Kodiak area and one to represent the Alaska Peninsula Region. Each community will be paid \$12,000 to hire the Facilitator and pay for other costs related to the project.

The deferred projects proposed to the *Exxon Valdez* Oil Spill (EVOS) Trustee Council were acted upon in December. Approved for funding was a second year of funding for the Clam Restoration Project. Although funding was cut, objectives of the project will still be met, but on a limited basis. The expansion of the project to additional communities was scaled back somewhat, but activities for the communities included in the FY95 project were not curtailed. The approval of this project was based on a site review held at the Qutekcak Tribal Shellfish Hatchery, Seward, in late October. Presentations were given by the CRRC Executive Director, Jeff Hetrick, Mariculture Specialist; and Carmen Young, Hatchery Manager. The site review included a tour of the hatchery facility and technical assistance was provided to Carmen by individuals working in the shellfish industry from North Carolina.

The Port Graham Village Council Coho Salmon Enhancement Project is currently underway. As reported in the last period, this project was funded through the Department of Community and Regional Affairs (DCRA) and is being administered by the Village Council, with CRRC providing all payroll and payroll tax related services.

The construction of the Mariculture Technical Center will hopefully be underway by the spring of 1996. This is the facility the Qutekcak Native Tribe will be utilizing for the shellfish hatchery. After many meetings in Anchorage, Juneau, and Washington, D.C., the Alaska Dept. of Fish & Game has finally agreed to let the project out for bid next month, and plans are that we will be in the facility by the fall. The construction of this facility will allow the hatchery to expand their research and production into other species such as rock scallops and possibly mussels. We are currently negotiating a cooperative agreement with the Kenai Peninsula Borough Economic Development District and the Alaska Dept. of Fish & Game for the operation of the hatchery portion of this facility. Draft documents are enclosed for your review.

A meeting was held in December with Carol Kvasnikoff, Fisheries Project Director in Nanwalek; Paul McCollum, Fisheries Biologist on contract; Dave Daisy; and the CRRC Executive Director to discuss the year

to date accomplishments of the Sockeye project. Plans were also made for the upcoming year to assist Carol in laying out activities and objectives to be met, as well as the discussion of a staffing plan. Ms. Kvasnikoff's annual report is enclosed.

The processing facility in Tatitlek is moving forward. The foundation and floor were finished in late November. The building has been moved from Whittier to Tatitlek and erection of the building will take about a month. Due to the shortage of labor in the village, we have expanded our search for workers to the surrounding communities. I believe we have located two individuals from neighboring villages to work on the project beginning this month to alleviate the need to bring in non-Native workers from Anchorage. The power line was installed as well as a water line and telephone cable. Utilities will be ready for use as soon as the building is erected.

The Chugach Heritage Foundation is beginning work on EVOS Project 96154. This project is to develop a comprehensive community plan for restoring archeological resources in Prince William Sound and Lower Cook Inlet, including strategies for storing and displaying artifacts at appropriate facilities within the spill area.

Work is currently underway to seek funds for the construction of a new hatchery in Port Graham. A meeting was held with CRRC, Gale Phillips, and the Port Graham Village Council to discuss the possibility of placing Port Graham's name on the Loan Fund list. If that is accomplished we will then have the ability to borrow funds from the State for the construction of the hatchery, if needed. Meanwhile, we continue to search for other federal sources of funds for this project.

Finally, the Chugach Regional Resources Commission has moved its offices to the floor above Chugachmiut. This was primarily due to the fact that Chugachmiut is quickly running out of office space in their efforts to hire additional staff to accommodate increased activities. We are now in Suite 300, with our telephone and telefax numbers remaining the same as before. In order to afford the additional space we have had to lease, we

have sublet a portion of the office space to the Alaska Inter-Tribal Council. The CRRC Board approved the sublease with the thinking that AI-TC could provide additional technical assistance to the member communities in the Chugach Region and would facilitate a closer working relationship between our Natural Resource Management Program and theirs.

Thank you for the opportunity to present this information to you. As always, if you have any questions or would like additional information on any of the initiatives I've mentioned above, please give me a call.

Respectfully submitted,

Patty Brown-Schwalenberg  
Executive Director



# **COMMUNITY INVOLVEMENT PROJECT (96052)**

## **Quarterly Narrative Report**

**January - March, 1996**

Activities conducted by the Chugach Regional Resources Commission in regards to the Community Involvement Project (96052) during the months of January, February and March of 1996 are listed below to inform you as to the current status of the project in each of the communities and in the region as a whole.

Ms. Martha Vlasoff continues to move forward as the Spill Area Wide Community Facilitator under the Community Involvement/Traditional Ecological Knowledge Project. All but one Community Facilitator has been hired in each of the communities, and contracts have been signed between CRRC and the village councils involved. Those facilitators were then able to attend the January EVOS Trustee Council Workshop and related meetings. Plans are underway to hold a working session with the community facilitators and village council representatives to draft the protocols and guidelines to be used by the researchers when conducting research activities which affect the subsistence resources in the traditional use areas of the communities. These plans came as a result of a number of requests to Martha by scientists interested in the benefits of TEK in the restoration projects.

Martha continues to submit bi-weekly reports to the communities regarding the latest activities of the Trustee Council and staff. Assistance was also provided to all the participating communities in the development of ideas and proposals to the Trustee Council for FY97 funding. This proves to be a challenging process as many of the projects the villages are interested in pursuing are not allowable under EVOS Trustee Council funding guidelines. The CRRC Executive Director is continuously searching for alternative funding sources of these types of projects.

The Pink Salmon project funded by the EVOS Trustee Council has undergone the final contract negotiations between the Port Graham Village Council, the Kenai Peninsula Borough Economic Development District, and the Alaska Department of Fish & Game. Work started on the project during the month of March. The Coho Salmon project, which was funded with the criminal settlement monies, has begun. This project proposal was written by CRRC, but the entire project is being conducted and administered by the Port Graham Village Council and hatchery staff. Technical assistance continues to be provided by CRRC in both the biological and administrative aspects of the project.

The Executive Director traveled to Cordova in January to discuss new projects to submit to the EVOS Trustee Council for their FY97 work plan, as well as to discuss the EVOS Workshop which was held in mid January.

The Clam Restoration project was approved for FY96 funding, although the Council is still considering it a pilot project. Activities for additional communities were decreased due to lack of funding, but year two activities for the original villages and the Qutekcak Shellfish Hatchery will occur as scheduled. Specifically, beach site selection and surveys will be conducted in Chenega Bay and Ouzinkie, planting will occur in Port Graham in Nanwalek, and predator control methods will be employed in Tatitlek for Littleneck Clams and in Eyak for Razor Clams.

The construction of the Mariculture Technical Center is scheduled to begin in late March of 1996. The project has been let out for bid and we are currently in the 30 day waiting period to see who will get the construction contract. If all goes well, the Qutekcak Tribal Shellfish Hatchery will be in this new facility by late October, which will allow the hatchery to expand their research and production into other species such as rock scallops and possibly mussels. Negotiations are currently underway for the operations contract between the State of Alaska, Kenai Peninsula Borough Economic Development District and CRRC in behalf of the Qutekcak Native Tribe.

The construction of the processing facility is continuing in Tatitlek. The roof is on the building and minor work is being done inside. The

project will be put on hold after this work is done until May, when the weather warms up, to finish the facility. When the building is finished and fully equipped, CRRC and the Tatitlek Village Council will hold an open house for Tatitlek and Chugach area residents.

The revised Detailed Project Description for the Clam Restoration Project was sent to all the participating village councils. A meeting was held with the Alaska Business Development Center regarding the smoked and dried fish operation in Valdez. The purpose of this meeting was to request technical assistance in developing a business plan and operational plan for this venture. They felt this project was a promising one and are anxious to get started on the project.

A report was provided to the Chenega Bay IRA Council at their meeting in February to discuss the clam, community involvement, and mariculture projects they are involved in. Also discussed was the traditional natural resource management program initiative. A resolution was passed supporting this project and requesting assistance from the Alaska Inter-Tribal Council to participate in their challenge grant program. CRRC will assist in facilitating this participation as well as provide training and assistance to the Natural Resource Specialist they hire to conduct the activities under this program.

Work continues on the identification of funds for the construction of a new hatchery in Port Graham. The meeting held in December with CRRC, Gale Phillips, and the Port Graham Village Council was successful in that the legislature agreed to place Port Graham's name on the Loan Fund list. We now have the ability to borrow funds from the State for the construction of the hatchery, if needed. We are continuing to search for other federal and private sources of funds for this project.

Technical assistance was provided to the Alaska Native Harbor Seal Commission in both the administrative and biological areas of the project. CRRC assisted in preparing Monica for her board meeting which was held in February, and is continuing to provide technical assistance in the fund raising area, including the new submission of the ANA grant.

Much of the work done by the CRRC Executive Director in March and early April was dedicated to preparing EVOS proposals for FY97. All continuing projects were submitted for consideration, as well as some new ideas submitted by the communities. We are looking forward to getting more of the local community driven projects funded this year, but it may take a more concerted effort by the villages to support these projects at the Trustee Council level. CRRC will continue to assist in this regard.

Thank you for the opportunity to present this information to you. As always, if you have any questions or would like additional information on any of the initiatives I've mentioned above, please give me a call.

Respectfully submitted,

Patty Brown-Schwalenberg  
Executive Director

# **COMMUNITY INVOLVEMENT PROJECT (96052)**

## **Quarterly Narrative Report**

**April - June, 1996**

Activities conducted by the Chugach Regional Resources Commission in regards to the Community Involvement Project (96052) during the months of April, May and June of 1996 are listed below to inform you as to the current status of the project in each of the communities and in the region as a whole.

The first part of this quarter was spent writing and submitting project proposals to the Exxon Valdez Oil Spill Trustee Council for FY97 funding. The villages submitted approximately 15 project proposals. The remainder of the quarter was spent soliciting support for these projects and meeting with the Trustee Council Executive Director to amend specific project descriptions.

One of the projects that was developed by the Trustee Council Executive Director is 97352 - Traditional Ecological Knowledge. This project was a component to the Community Involvement Project last year, but it was felt that it should be a separate project, anticipating increased activity as a result of the Restoration Workshop held in January. After writing a letter and having meetings with the Executive Director, she has agreed that CRRC will be the administrator of this project, and that the project activities will be conducted under the direction of the CRRC Board of Directors. We are hoping to advertise for a TEK Specialist prior to the start of the next fiscal year so that this person can start work on October 1, 1996. Many meetings were held this quarter regarding the scope of work for this project, and more work still needs to be done before it is finalized.

The Community Involvement project funding for FY97 was increased to accommodate an additional Community Facilitator (Seldovia), and more travel for the facilitators. We attempted to get some computers funded through this project, but was deleted from the budget due to the Trustee Council's shortage of funds.

The Clam project was written to include additional beach surveys and planting in Chenega Bay and Ouzinkie. No feedback has been received as of yet regarding the status of this project.

Informational meetings were conducted in the Kodiak Island villages in late March to listen to local concerns, possible project proposals, and to discuss the ongoing restoration programs. Previous meetings have been held in Kodiak, but these were the first meetings in the villages since 1993. The group traveling included Molly McCammon, Martha Vlasoff, Hank Eaton, Community Involvement Facilitator for Kodiak Island, Brenda Schwantes, Public Advisory Group member from Kodiak, Dan Moore, ADFYG Fisheries Specialist, and Alex Swiderski, Alaska Dept. of Law, who visited Akhiok and Karluk only. A detailed outline of this meeting can be found in Martha's Community Involvement Report dated April 25, 1996.

The construction of the Mariculture Technical Center has begun, although it looks like the crew is a bit behind schedule. I don't anticipate moving into the facility until the first of next year. We are currently undergoing negotiations with the Alaska Dept. of Fish & Game for the operation of the hatchery in behalf of the Qutekcak Native Tribe. This too, has been a slow and lengthy process, but we continue to move forward.

The construction of the processing facility is continuing in Tatitlek. The electrical and mechanical work is being done at this time. We are in the process of looking for a carpenter to do the finish work. We are tentatively over budget on this project, so the search for additional funding sources has been occurring this quarter.

The Pink Salmon project funded by the EVOS Trustee Council has signed a contract between the Port Graham Village Council, the Kenai Peninsula Borough Economic Development District, and the Alaska Department of Fish & Game. Pauline Allen, Contract Administrator, traveled to Port Graham to assist Fran Norman in setting up the administrative structure to manage this grant. The Coho Salmon project, which was funded with the criminal settlement monies, continues to do well. The Coho module has been constructed and is in the final stages of completion. Technical assistance continues to be provided by CRRC in both the biological and administrative aspects of the project.

The Executive Director traveled to Port Graham in May for the Hatchery Board Meeting. Travel in May also included attendance at the Native American Fish & Wildlife Society annual national conference, which was held in Minnesota. Pauline Allen, Contract Administrator, Don Kompkoff of Chenega Bay and Ron Totemoff of Tatitlek were also able to attend. Two other village residents were scheduled to attend, but unfortunately had to cancel out at the last minute. I am hoping to bring the Natural Resource Specialists to the next national conference, which is scheduled for the spring of 1997 in the Great Plains Region. This conference is very valuable in that it provides a forum by which we can see what other tribes are doing in the natural resource management arena, as well as exchange ideas and gain new insight on tribal management issues.

Technical assistance was provided during this quarter to the Alaska Native Harbor Seal Commission on an ANA grant and ADF&G billing under the biosampling project, to Native fishermen of the Eyak Tribe in the formation of a Native fishermen's association, the Qutekcak Native Tribe on their ANA grant, and Chugachmiut (Rose Ellis, Paul Jackson, Allison Nyholm, and Emily Read) regarding natural resource related employment opportunities and grant funding sources for specific projects.

A cost recovery permit was issued by the state to the Port Graham Village Council, and sockeye salmon will be sold for the first time this year. We are hoping to do the same with the pink salmon next year.

Thank you for the opportunity to present this information to you. As always, if you have any questions or would like additional information on any of the initiatives I've mentioned above, please give me a call.

Respectfully submitted,

Patty Brown-Schwalenberg  
Executive Director



# **COMMUNITY INVOLVEMENT PROJECT (96052)**

## **Quarterly Narrative Report**

**July - September, 1996**

Activities conducted by the Chugach Regional Resources Commission in regards to the Community Involvement Project (96052) during the months of July, August, and September of 1996 are listed below to inform you as to the current status of the project in each of the communities and in the region as a whole.

Reports by Martha Vlasoff have been submitted to the villages on a monthly basis. This change in the frequency of these reports came as a result of an increased workload and the amount of activities surrounding the FY97 workplan. Community Facilitators have been submitting their quarterly reports to the CRRC office. A detailed report on specific projects this quarter can be obtained from Martha Vlasoff's July 30, 1996 report, a copy of which is attached.

The CRRC Executive Director spent part of this quarter investigating ways in which to provide funding directly to village councils from the EVOS Trustee Council. Up until now, we have had to go through an economic development district or the project goes out for bid and we are faced with bidding on our own projects, or a contract is negotiated between the village or CRRC and the state agency, which is also a lengthy process. I spoke with the contracting people and Area Director at the BIA in Juneau and they agreed to accept the EVOS funds if they are identified as the lead agency. They would simply add the money on to our 638 contract and we would then pass the funds through to the village. This is great news, and we are currently fine tuning the mechanism for this to happen. I must point out, though, that BIA has not been the most expedient agency to work with as far as providing funds at the beginning of the fiscal year. This, too, must be worked on and improved before final plans are made.

The EVOS Trustee Council FY97 Work Plan has been distributed, and there are a few new projects recommended for funding, which were submitted by the villages in April. We have continually been monitoring their progress and continue to support them at the Trustee Council level. The FY97 Work Plan was approved by the Trustee Council in its entirety at their meeting held in late August.

Funding for the clam project has tentatively been provided for an additional year. The Trustee Council is still considering this project a pilot project, so they have not committed funds beyond FY97. Due to the "pilot" nature of this project, they have also recommended not planting clams in any more beaches than we have already and not to conduct any more beach surveys, until we can prove that this will be a successful project. The work plan for FY97 includes planting more clams in the existing beaches in Tatitlek, Nanwalek and Port Graham, and continuing the studies on the predator control methods in Tatitlek and Eyak.

After many meetings and re-writes separating the Community Involvement Project from the Traditional Ecological Knowledge Project (TEK) at the request of Trustee Council staff, it is back to its original format. The TEK portion is back in as part of the Community Involvement project, but is being called 97052A and 97052B. Funding will provide for Martha Vlasoff's position, as well as a TEK Specialist, who will be responsible for working with the scientists in assisting them in incorporating TEK into the western science knowledge base of the research. As mentioned in an earlier report, this position has been advertised in the region, and will hopefully start November 1, 1996. Deadline for submission of resumes is October 4, 1996, and interviews will be conducted during the week of October 14th or October 21st.

The construction of the processing facility is continuing in Tatitlek. The electrical and mechanical work is finished and the carpentry work was started. The search for additional funding sources has been ongoing this quarter, but we are hopeful in obtaining the funds necessary to finish the project by the end of the year.

The cost recovery permit issued by the state to the Port Graham Village Council was used for the first time this year for the sockeye salmon. Approximately \$30,000 was raised, which will assist in offsetting expenses at the hatchery. We are hoping to do the same with the pink salmon next year. We have contracted with Dr. John Sproul to assist us in obtaining markets for the salmon, possibly directly to Japan. He traveled to Port Graham for their hatchery board meeting in late August and informed them that the sockeye salmon he took to Seattle high end markets was very well received and believes that is the best strategy to utilize rather than selling directly to the tenders. Dewey Schwalenberg of the Bering Sea Commercial Fisheries Development Fund was also at the meeting and mentioned that he traveled to Denver, Colorado to a trade show of the National Indian Gaming Association to provide samples of salmon to the tribes with gaming facilities. He is optimistic that this could be a very promising market for Port Graham and Nanwalek as the tribes from the Lower 48 would be buying salmon from the Alaska Native village councils rather than retail or wholesale markets, and they seemed very receptive to that concept.

As mentioned above, the Executive Director traveled to Port Graham in August for the Hatchery Board Meeting, and to Seward for a meeting with the shellfish hatchery staff. We are continuing to assist them in formulating some type of benefit plan for their employees. Pauline Allen, Contract Administrator, provided technical assistance to Fran Norman, at the Port Graham Village Council on the DCRA and ÉVOS funded projects.

Technical assistance was provided during this quarter to the Alaska Native Harbor Seal Commission on ADF&G billing for the EVOS biosampling project, to Qutekcak Native Tribe on budget planning for the shellfish hatchery, Eyak Tribal Council on their new ANA grant, and to Port Graham and Nanwalek in the marketing arena. Technical assistance was also provided to the Chugachmiut's Environmental Protection Consortium program in developing the natural resource section of their declaration of intent.

Thank you for the opportunity to present this information to you.  
As always, if you have any questions or would like additional information  
on any of the initiatives I've mentioned above, please give me a call.

Respectfully submitted,

Patty Brown-Schwalenberg  
Executive Director