Restoration of Coghill Lake Sockeye Salmon
FY 97 Detailed Project Description

Project Number:	97259
Restoration Category:	Restoration
Proposer:	Alaska Department of Fish and Game
Lead Trustee Agency:	Alaska Department of Fish and Game (ADF&G)
Cooperating Agencies:	U.S. Department of Agriculture, Forest Service (USFS)
Duration:	October 1 to September 30, 1997-1999
Cost FY 97:	$220,200
Cost FY 98:	$100,000
Cost FY 99:	$50,000
Geographic Area:	Coghill Lake, Prince William Sound
Injured Resource/Service:	This project is intended to increase productivity for sockeye salmon in Coghill Lake to replace other fishery resources injured by the *Exxon Valdez* oilspill.

ABSTRACT

Coghill Lake has historically been the major producer of sockeye salmon in Prince William Sound and a mainstay of commercial and sport fisheries. Returns have declined from a historical average of 250,000 to less than 10,000 in recent years. High escapements of sockeye salmon in the early 1980s and low zooplankton levels suggest that over-escapement of adult sockeye salmon is a potential cause for the stock decline. The current production is very low and could jeopardize the sustainability of this sockeye stock without restoration efforts. In 1993, the Trustee Council approved funding a program to fertilize Coghill Lake to increase zooplankton levels, which in turn would benefit juvenile sockeye growth and survival. A restored sockeye salmon run would provide an important replacement resource for sport and commercial fisheries in Prince William Sound.

INTRODUCTION

The goal of this project is to restore the natural sockeye salmon production of Coghill Lake to historical levels through use of established and proven lake fertilization technology (LeBrassseur et al. 1978; Stockner and Hyatt 1984; Koenings and Burkett 1987; Kyle et al. 1995; Kyle 1994a; Kyle 1994b). Coghill Lake (61° 4' N, 147° 54' W) is an oligotrophic lake located 130 km northwest of Cordova in Prince William Sound at an elevation of 18 m. This lake has a surface area of 12.7 km^2, a mean depth of 46.3 m, and a total volume of 587 x 10^6 m^3 (Pellisier and Somerville 1984). The lake becomes turbid in late August due to glacier runoff, and is meromictic due to the presence of a permanent layer of saline water (monimolimnion). The outlet of the lake empties into the eastern side of Port Wells in Prince William Sound. This project is conducted cooperatively by the Alaska Department of Fish and Game (ADF&G) and the U.S. Forest Service (USFS).

The Coghill Lake sockeye salmon stock has historically supported an important commercial fishery in western Prince William Sound (PWS), but in recent years returns have declined considerably (Edmundson et al. 1992). In 1982, a record 1.2 million sockeye salmon returned to Coghill Lake. Escapements have been as high as 187,000 (1987), but fewer than 10,000 sockeye have escaped into the lake in recent years.

This project should continue in 1997 because the Coghill Lake sockeye stock continues to be at dangerously low levels, and will be the last year of the planned 5 years of nutrient treatment. Action must be taken to restore the stock before any further decline occurs. Since sockeye salmon rear in lakes for one to three years before emigrating to sea, sockeye smolt production is closely linked to the productivity of rearing lakes (Koenings and Burkett 1987; Koenings and Kyle 1995; Kyle et al. 1995). Limnological studies indicate that the zooplankton forage base of Coghill Lake cannot support large numbers of fry. Fertilization (for at least 5 years) is needed to increase lake productivity and boost zooplankton abundance until natural nutrient input from salmon carcasses is restored (Edmundson et al. 1992).

NEED FOR THE PROJECT

A. Statement of Problem

Coghill Lake has demonstrated a major decline in sockeye production since 1985, as indicated by the very low (<1) return per spawner (Appendix A). This sockeye stock has been used for stocking smolts in PWS from Main Bay Hatchery operated by the Prince William Sound Aquaculture Corporation PWSAC. In addition, large returns and harvests of enhanced pink and chum salmon in some years has made it difficult to meet sockeye salmon escapement goals for Coghill Lake while concurrently harvesting the return of sockeye salmon to the Main Bay Hatchery (from smolt releases).

B. Rationale

The underlying philosophy of examining the ecosystem and sockeye salmon production of Coghill Lake centers on restoration, rather than attempting to understand controlling processes. Each year Coghill Lake is sampled at least monthly for 25 different physical, chemical, and biological variables; these data are collected to understand the response of nutrient supplements and relate productivity changes to the data base we have developed for nearly 200 lakes in Alaska. The benefit of this approach is a clear understanding of the carrying capacity of this system and develop a meaningful evaluation of the benefits derived from the fertilization project.

Changes in harvest practices to reduce interceptions is certainly part of ADF&G's mandate to effectively manage sustainable fisheries; however, allocative effects and economic trade-offs require decisions from the Alaska Board of Fisheries. Management actions and plans have been altered by ADF&G with the Board of Fisheries concurrence to insure harvest rates on returning adults to Coghill Lake be reduced to meet the escapement goal (Appendix B).

To insure that restoration efforts designed to increase forage for rearing sockeyes juveniles are fully utilized, hatchery fingerlings (Coghill brood stock) were stocked into Coghill Lake in the fall of 1995. This action is an effort to restore this system with modest supplementation without putting exceptional stress on the zooplankton community. This program was conducted outside of the Trustee Council funding mechanism and may be continued in the future to provide adequate number of rearing juveniles relative to the standing stock of zooplankton. Future stocking levels will take into account natural recruitment through escapements and issues such as brood stock selection and stocking levels will follow the normal ADF&G regulatory procedures, including fish and egg transport permits and the basic and annual hatchery management plans. These activities are integrated with the lake fertilization project to insure stocking levels are in balance with escapements and available forage.

Lake fertilization coupled with escapement management and hatchery stocking are the primary restorative techniques for any sockeye lake system. The question has been raised by reviewers as to the role that decreases in lake fertility have had in the decline of Coghill Lake sockeye salmon. Lake fertility may be reduced by carcass reduction or by nutrient loss to the non-mixing saline layer. The history of the saline layer of Coghill is not yet well known; however preliminary analysis of core samples indicates the saline layer is about 200 years old (Bruce Finney, University of Alaska, personal communication). If the saline layer was formed in the 1964 earthquake we would have expected return-per-spawner rates to drop steadily after its formation; however, no such trend is apparent. If a reduction in the number of carcasses contributed to the reduced fertility of the lake, it would affect nutrient levels in the most recent years and not account for the rapid decline in return-per-spawner from brood years 1985-1988. Therefore, available data does not suggest that the main decline is associated with decreased fertility. Why then fertilize?

Coghill Lake is very similar to many oligotrophic sockeye nursery lakes, it is nutrient poor, primarily lacking in the annual loading of phosphorus and sporadically lacking nitrogen during the peak summer period (July) This is also reflected in reduced chlorophyll *a* and the low densities of zooplankton. If the primary goal of restoration is to re-establish the sockeye run to it's former production, regardless of the cause, Coghill Lake will benefit from the addition of nutrients. The trophic-level responses that we have observed so far (Willette et al. 1995; Edmundson et al. 1995; Kyle et al. 1996) support this conclusion.

What then is the primary cause of the decline? We have suggested that the very high escapements from 1980-1982 may have initiated changes in the lake plankton community which may have reduced the carrying capacity of the system (overescapement). These high escapements are thought to have reduced the standing crop of zooplankton. Other factors such as in-lake climatic changes which would effect turbidity and temperature in the lake may have compounded the problem. Reviewers have suggested that the modest rate of return-per-spawners observed following the high 1980-1982 escapements suggest that overescapement is not a likely cause. Other lakes in Alaska have experienced lags of a year in the declines in recruitment and suggest that these initial years may have been the initiation of this process (Kyle et al. 1988; Koenings and Kyle 1995). The failure of the system to respond to decreased escapements in 1983-1984 would support this contention. Major recruitment failure from high escapements in 1985-1988 are consistent with this hypothesis. These drops in return-per-spawner are consistent with the magnitude of those observed for Frazer Lake on Kodiak Island following major overescapement events (Kyle et al. 1988; Appendix C). Further, multiple lake comparisons of sockeye production per unit area does not suggest that the oligotrophic nature of Coghill Lake and its low standing stock of zooplankton could sustain escapements ranging at a level of 100,000-200,000 as experienced during 1980-1982 and 1985-1987. Because Coghill Lake is meromictic with a saline layer that acts as a nutrient sink, has a short growing season, and at least recently has had very low zooplankton densities suggests that sockeye production would be lower than in other systems. We do not doubt that other factors may have made a major contribution to the production of sockeye salmon from Coghill. For example, major changes in the length of ice cover, high summer turbidity because of warmer than normal conditions and increased run-off and glacial melt. These factors are being evaluated to assess the benefit and efficiency of the lake fertilization project.

Since Coghill has a saline layer at about 25 m which most likely acts as a nutrient sink, reviewers have raised the question of the relative efficiency of a fertilization program on lakes of this type. Turnover rates of the lake volume exclusive of the saline layer, are used in the present calculation of fertilizer loading. Spring loading will probably be reduced from other lakes because of the lack of nutrient mobilization from the sediment water interface. However, significant shoals and stream runoff will provide continued loading from carcasses as escapements improve. Redoubt Lake, a meromictic lake that has been fertilized since 1984 and is located near Sitka, Alaska, has responded to treatment despite the presence of a saline layer (Kyle et al. 1995). The best measure of success, however, is the response we have observed from Coghill Lake over the past 3 years of lake fertilization (Willette et al. 1995; Edmundson et al. 1995; Kyle et al. 1996).

This specific element of the restoration program for Coghill Lake sockeye salmon addressed by this study plan will increase productivity through the use of lake fertilization. Nutrient loading from adult salmon carcasses is expected to maintain lake productivity after the fertilization program is completed, and the run is restored. Restoration of Coghill Lake sockeye will provide alternate restoration for injured fishery resources that have not been restored within the EVOS area. The USFS is responsible for the purchase of fertilizer and application each summer (through 1997). ADF&G will conduct limnological and fisheries studies needed to monitor and refine the fertilization program. These studies will focus on the effects of fertilization on primary and secondary production and on sockeye salmon smolt production.

C. Summary of Major Hypothesis and Objectives

Several mechanisms have been hypothesized as potential causes for the decline of Coghill Lake sockeye salmon including:

1) interception fisheries
2) climatic effects on
   a) marine rearing survival
   b) freshwater rearing survival.

In addition, other restoration activities currently underway outside of the purview of the Trustee Council include:

1) changes in harvest practices
2) stocking of sockeye juveniles into Coghill Lake from the Main Bay Hatchery to insure full utilization of improved zooplankton stocks.

Coghill Lake sockeye returns in recent years has declined because of poor returns-per-spawner. Since interception of returning Coghill Lake sockeye lowers escapements (not return-per-spawner), the primary cause of the collapse of sockeye in this system is related to factors other than harvest management. Because return-per-spawner is the problem (low return brood years of 1985-1988 had above normal or exceptionally high escapements), increasing escapements through reduction of interceptions is a major concern of ADF&G managers, and is an integral part of the restoration effort of Coghill Lake sockeye salmon. Although not the cause, adequate escapements can insure recovery is expedited. The attached section (Appendix B) references the PWS management plans. These plans include harvest rate alterations by time and area to reduce the interception of Coghill Lake sockeye returns.

Climatic effects on marine survival have been speculated as a major cause of the decline of Coghill Lake sockeye salmon. The Sound Ecosystem Assessment (SEA) program has suggested major variations in pink salmon and herring returns in the PWS are most likely driven by broad-scale climatic variables. Consequently, reviewers of this project have commented that this project

should also take into account a climatic hypothesis to explain the decline of Coghill Lake sockeye salmon. Although marine survival may be a factor in the variability in return-per-spawner, there is insufficient data to consider this as a major driving variable. However, we are working with the University of Alaska on a sediment coring project for Coghill Lake that may elucidate the indirect effects of climatic changes through the interpretation of silt laminations in the coring analysis.

In contrast to the lack of information of marine survival variables, the smolt outmigration from Coghill Lake during pre-fertilization is sufficiently low to account for poor adult returns. This is true whether examined from a numeric perspective or using the smolt-per-spawner data as an index. Hence, the freshwater component of the life cycle is most likely the culprit. If a common marine survival mechanism were hypothesized, we would expect the collapse of sockeye return-per-spawner to parallel that of pink salmon returns-per-spawner, once we account for the protracted freshwater residence of sockeye salmon. This would be true, even if we totally discount the validity of the smolt data. Clearly, the 1985-1988 brood year returns-per-spawner for Coghill Lake sockeye salmon have no correlation to pink salmon brood years of 1986-1989, which if they were correlated would suggest common mechanisms. Thus, we can discount the SEA hypothesis as a major factor for the decline of Coghill Lake sockeye salmon.

Climatic effects on freshwater survival are most certainly a major factor in contributing to the high volatility in the freshwater production of sockeye salmon smolt in Coghill, including variations in the quality and quantity of the plankton food supply, as well as temperature effects on growth rates. Turbidity changes caused by glacial melt, ice cover on the lake extending into the summer because of snow pack, decreased retention times of water in the lake because of high rainfall and flooding conditions, all indirectly affect the growth and recruitment of sockeye salmon smolts. These parameters have been monitored and are being examined as covariates affecting production along with the lake fertilization studies, and will be analyzed in subsequent reports.

D. Completion Date

Treatment of Coghill Lake with nutrients will terminate after 5 years (after FY 97). There will be two years of post-treatment assessment (FY 98 - smolt and limnological investigations and FY 99 - limnological investigations).

COMMUNITY INVOLVEMENT

There has been an unknown (believed to be very small) amount of subsistence use, in the traditional sense, on the sockeye salmon of Coghill Lake (Mark Willette, ADF&G, personal communication). There has been no community involvement of subsistance users for this project.

FY 97 BUDGET

The following budget is the total for ADF&G and the USFS.

Personnel	$80.4
Travel	1.2
Contractual	112.2
Commodities	6.5
Equipment	0.0
Subtotal	200.3
Gen. Admin.	19.9
Total	$220.2

PROJECT DESIGN

A. Objectives

1. Apply fertilizer to increase the rearing capacity of Coghill Lake.

2. Evaluate the effect of fertilization on nutrient levels, algal biomass, and the zooplankton community.

3. Evaluate the effect of fertilization on the age, size, and condition of smolts.

4. Integrate results of the fertilization project with harvest management and other restoration (stocking) activities outside of the Trustee Council funding.

B. Methods

Objective 1

Lake fertilization is recommended for one sockeye life cycle (5 yr) to elevate the productivity of the lake and zooplankton forage base to ultimately increase the rearing capacity for sockeye salmon. The recent loading of phosphorus (P) into Coghill Lake is ~350 mg m^{-2} yr^{-1}, and the critical loading rate of P (Vollenweider 1976) needed for full phytoplankton productivity is ~650 mg m^{-2} yr^{-1}. An additional ~235 mg m^{-2} yr^{-1} of P (~65 tons) based on an application area of 5.5 km^2) is needed to achieve full phytoplankton productivity. A pharmaceutical-grade liquid blended fertilizer will be applied to the lake by releasing it from a low-flying aircraft. The fertilizer (20-5-0) contains 20% nitrogen and 5% phosphorus, and will be applied during early June to mid or late August. Application will consist of six to nine passes of five-minute duration over a two to three day period each week. Thus, approximately 6.5 tons of 20-5-0 fertilizer will be applied each week. In addition, due to nitrogen deficiency during the peak of summer, 10 tons of a nitrogen fertilizer (32-0-0) is necessary to ensure proper N:P ratios. The nitrogen fertilizer will be applied on a weekly basis during July.

Public reserving the cabin at Coghill will be notified of the fertilization schedule, which will be posted in the cabin. Fertilizer will be applied no closer than a mile and a half from the cabin and lagoon where most of the recreational activity takes place. The pilot will not dispense fertilizer in a portion of the application area if anyone is within that area.

The water residence time of Coghill Lake will be monitored to assist in determining phosphorus loading rates. Discharge will be measured in the Coghill River twice during low, medium, and high flow periods. Water depth and current speed will be measured at 10-m intervals along a transect drawn perpendicular to the stream length. The cross-sectional area of each segment and the current speed will be used to estimate the discharge within each segment. The discharge estimates for all the segments along the transect will be summed to estimate the total stream discharge. Water level in the lake will be measured at the same time that discharge is estimated. Regression analysis will be used to develop an empirical model relating lake level to stream discharge. An electronic pressure recorder will be installed in the lake to continuously monitor changes in lake level. The empirical model will be used to construct a time series of lake flushing rate (inverse of water residence time) throughout the fertilization period and the year.

Objective 2

The effect of lake fertilization on primary and secondary production will be assessed by comparing limnological data collected pre- and post-fertilization. Analysis of variance (ANOVA) and multiple comparisons will be used to test for pre- and post-fertilization differences of several limnological variables (e.g. filterable reactive phosphorus, ammonia, nitrate-nitrite, chlorophyll *a*, copepod biomass, and cladoceran biomass). The independent variables in the model will include sampling period and year (pre- and post-treatment effects will be compared by grouping years).

Limnological sampling will be conducted as in past years to insure valid pre- and post-fertilization comparisons. Sampling will be conducted twice each month from June through October at 3 stations that have been sampled in past years. The samples collected within each month will be used as replicates in the pre- and post-fertilization comparison. Temperature and dissolved oxygen concentrations will be measured from the surface to a depth of 40 m (above the monimolimnion) using a YSI model-57 meter. Measurements of light penetration (foot-candles) will be measured at 1 m increments from the surface to a depth equivalent to 1% of the subsurface light using a Protomatic submarine photometer. The euphotic zone depth defined as the depth at which 1% of the subsurface light (photosynthetically available radiation [400-700 nm]) penetrates (Schindler 1971), will be calculated from the relationship of light transmission through water (Wetzel and Likens 1979). Secchi disk transparency will be determined as the averaged reading (depth) taken by lowering a standard 20 cm disk until it disappears, and then raising the disk until it reappears. Most of the water samples will be collected from 1 m and 20 m using a non-metallic, opaque Van Dorn sampler. The exception is that water samples for chlorophyll *a* will be collected from 1 m and 2 m. Eight liters of water will be collected from each depth, stored (<24 hr) in pre-cleaned polyethylene carboys, and transported to the Limnology Laboratory in Soldotna for analysis.

General water-quality samples will be analyzed for the following parameters as detailed by Koenings et al. (1987). Conductivity (μmhos cm^{-1}) will be measured with a YSI model-32 conductance meter. Alkalinity levels (mg L^{-1}) will be determined by acid titration (0.02 N H_2SO_4) to pH 4.5, using a Corning model-399A specific ion meter. Calcium and magnesium (mg L^{-1}) will be determined from separate EDTA (0.01 N) titrations after Golterman (1969), turbidity (NTU) will be measured with a HF model-DRT100 turbidimeter, and color (Pt units) will be determined with a spectrophotometer. Total iron (mg L^{-1}) will be analyzed by reduction of ferric iron with hydroxylamine during hydrochloric acid digestion after Strickland and Parsons (1972).

Nutrient samples will be analyzed by methods detailed by Koenings et al. (1987). Filterable reactive phosphorus (FRP) will be analyzed by the molybdate-blue/ascorbic-acid method of Murphy and Riley (1962), as modified by Eisenreich et al. (1975). Total phosphorus will be determined using the FRP procedure, after persulfate digestion. Nitrate and nitrite ($NO_3 + NO_2$) will be determined as nitrite, following Stainton et al. (1977) after cadmium reduction of nitrate. Total Kjeldahl nitrogen (TKN) will be determined as total ammonia following sulfuric acid block digestion (Crowther et al. 1980). Total nitrogen will be calculated as the sum of TKN and $NO_3 + NO_2$. Reactive silicon will be determined using the method of ascorbic acid reduction to molybdenum-blue (Stainton et al. 1977). Estimation of the yearly phosphorus loading in Coghill Lake will be calculated after Vollenweider (1976).

Algal standing crop will be estimated by chlorophyll *a* analysis, after the fluorometric procedure of Strickland and Parsons (1972). The low-strength acid addition recommended by Riemann (1978) will be used to estimate phaeophytin. Water samples (1-2 L) will be filtered through 4.25-cm GF/F filters to which 1-2 mls of a saturated $MgCO_3$ solution is added just prior to the completion of filtration. The filters will be stored frozen in individual plexislides for later analysis. Samples of unfiltered lake water will be preserved with Lugol's acetate solution for later identification of phytoplankton species.

Vertical zooplankton tows will be taken using a 0.2-m diameter, 153-μm mesh conical net from a depth of 30 m at 5 stations (3 of the stations are the same as those used to collect water samples and the 2 other stations are located adjacent to the outer 2 limnological stations). The net will be pulled at a constant 0.5 m s^{-1}, and all organisms will be preserved in a 10% neutralized formalin solution. Cladocerans and copepods will be identified using keys developed by Brooks (1957), Pennak (1978), Wilson (1959), and Yeatman (1959). Enumeration will consist of counting animals in triplicate 1 ml subsamples taken with a Hansen-Stempel pipette in a 1 ml Sedgewick-Rafter cell. Cladoceran body length will be measured to the nearest 0.01 mm for at least 10 individuals along a transect in each 1 ml subsample (Koenings et al. 1987). Cladoceran weight will be estimated from an empirical regression between body length and dry weight. Zooplankton biomass will be estimated for each species by the product of average body weight and abundance (Koenings et al. 1987).

Objective 3

The effect of the fertilization program on outmigrant smolts will be evaluated by testing for pre- and post-fertilization differences in smolt age composition, condition, and size at age. Sockeye salmon smolts emigrating from Coghill Lake will be enumerated using incline-plane traps (Kyle 1983; Todd 1994). The traps will be operated continuously from early May to early June. The catch efficiencies of the traps will be determined by mark and recapture trials (Rawson 1984). A review of this method is provided in Appendix D which addresses past reviewer comments on the smolt enumeration method. At least 300 individuals will be marked and released at the lake outlet for each mark-recapture trial. The number marked will depend upon trap efficiency and relative error. A sample of 40 smolts will be collected each day to estimate age composition. The fish will be anesthetized with MS-222. Several scales will be taken from each fish, affixed to a glass slide, and aged in the laboratory using a microfiche projector. Each fish will be measured to the nearest millimeter and weighed to the nearest 0.01 g. Pre- and post-fertilization differences in the proportion of total smolt population for each age group will be evaluated. Sampling period and year will be independent variables in the model. ANCOVA will be used to test for pre- and post-fertilization differences in smolt condition. The independent variables in the model will be sampling period and year with ln(L) as a covariate.

Objective 4

The data generated from objectives 1-3 will be integrated with management and other restoration activities associated with the Coghill Lake sockeye salmon by the ADF&G and PWSAC. Specifically, smolt outmigrations will be used in the forecast of adult returns. These adult return forecasts will be used to develop annual harvest management plans and proposals to the Alaska Board of Fisheries where appropriate. The information developed on egg-to-fry survival and the carrying capacity of Coghill Lake will be used to examine the escapement goal for this system and to recommend appropriate revisions when necessary. Measurements of the growth rate and survival of fry and the subsequent response of the zooplankton community to fry abundance from escapements and hatchery stocking will be incorporated in recommending future stocking levels. Brood stock selection for stocking will go through normal ADF&G review and approval procedures including disease screening and genetic review. These data will be provided to the regional planning team in their consideration of the annual hatchery management plans and to ADF&G reviewers of fish and egg transport permits.

C. Contracts and Other Agency Assistance

Contracts (USFS) will be needed for the purchase and application of fertilizer. Contractual services for air charter will also be used to provide logistical support for field sampling operations.

D. Location

This project will be conducted at Coghill Lake which is located in northwestern Prince William Sound.

SCHEDULE

A. Measureable Project Tasks for FY 97

May - Jun:	Enumerate outmigrant smolts and collect samples to estimate age and size composition.
Jun - Oct:	Apply fertilizer each week (through August), conduct limnological sampling once every 3 weeks.
July - Dec:	Conduct analyses of limnological and smolt samples.
Dec - Feb:	Analyze data and prepare annual report.
Apr 1998:	Submit annual report.

B. Project Milestones and Endpoints

Project milestones include the accomplishment of all project objectives during the above mentioned schedule. In FY 97 the lake fertilization phase will end and in FY 98 and FY 99 post-treatment assessment (smolt and limnological investigations in FY 98; limnological investigations in FY 99) will be done. The project will terminate at the end of FY 99.

C. Project Reports

An annual report for 1997 detailing project results will be submitted on April 15, 1998 for review. At the end of the 5 years of lake fertilization (after 1998 smolt sampling), a completion report will be prepared for review and publication.

COORDINATION OF INTEGRATED RESEARCH EFFORT

The ADF&G operates a weir on Coghill River to enumerate adult salmon returning to Coghill Lake. Age, weight, and length (AWL) data are collected. Along with AWL data from commercial catches, data from the weir are used to forecast adult salmon returns to the lake system. The salmon run forecast for Coghill Lake is an important element in the ADF&G management program for the Coghill sockeye stock. ADF&G also will conduct a test fishery project to determine the exploitation rate on Coghill Lake sockeye salmon in the Eshamy District and Esther Subdistrict. Data from the test fishery will be used to refine the present fishery management strategy to reduce the interception of Coghill Lake sockeye salmon in an effort to increase the escapement.

PWSAC under ADF&G review and recommendation may stock sockeye fry or fingerling into Coghill Lake to accelerate the restoration of this stock and to make use of the enhanced rearing area through lake fertilization. In addition, the limnological and sockeye salmon smolt data obtained at Coghill Lake will be interpreted by the ADF&G Limnology Laboratory and used for modeling other similar sockeye nursery lakes in Alaska.

ENVIRONMENTAL COMPLIANCE

The USFS has conducted an environmental assessment to evaluate the various alternatives for rehabilitating Coghill Lake and the sockeye salmon population (USFS 1993). The assessment has concluded that the lake fertilization program is the most appropriate method for rehabilitation of the Coghill Lake ecosystem and sockeye salmon stock. The project was also publicly reviewed by the Prince William Sound/Copper River Regional Planning Team (RPT).

PERSONNEL

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Experience:

April 1977 - April 1988: Project Biologist and later Area Biologist for the Division of Fisheries Rehabilitation, Enhancement, and Development of the ADF&G in Soldotna Alaska. Conducted and evaluated various fisheries enhancement and evaluation projects in the Cook Inlet watershed including limnological investigations of sockeye salmon producing lakes, and evaluation of hatchery stocking programs. Also, during the period I served as a project limnologist for the Limnology Section which involved the collection, analysis, and interpretation of limnological data from sockeye nursery lakes for assessment of rearing capacity and for modeling purposes.

April 1988 - present: Regional Limnologist for the Limnology Section for ADF&G in Soldotna, Alaska. Supervised by Dr. Dana Schmidt. As the Regional Limnologist for the Southcentral Region comprising of the Interior, PWS, Cook Inlet, and Alaska Peninsula; the primary purpose of this position is the supervision of staff in the coordination, assignment, prioritization, analysis, and review of subordinates work and interagency contract work related to lake fertilization and stocking projects, water quality monitoring projects, and fisheries and limnological research. In addition, the position is responsible for training subordinates, reporting and review of project results for publications and meetings, and administrating state and non-state (contract) budgets.

Education:

1975 Bachelor of Science, Life Science/Natural Resources, University of Wisconsin.

Publications:

A total of 40 technical reports, 9 journal manuscripts, 25 formal presentations, and 6 magazine articles dealing with adult sockeye production, lake fertilization, lake stocking, and in-lake assessments of juvenile sockeye production.

List of personnel working on this project in FY 97:

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Appendix A. Return of sockeye salmon by brood year for the major age classes, and the return per spawner for Coghill Lake, 1962-1995.

Brood Year	Brood year Escapement	Age class return (number of fish) 1.1	1.2	1.3	2.2	2.3	Total return	Return per spawner
1962	26,866		17,815	34,021	2,195	489	54,520	2.0
1963	63,984	159	4,391	53,756	318	5,325	63,949	1.0
1964	22,200		32,538	124,343	4,154	2,095	163,130	7.3
1965	62,500	224	25,199	48,915	1,634	1,694	77,666	1.2
1966	82,500	267	9,913	54,766	303	20,909	86,158	1.0
1967	33,000		3,751	140,138	1,396	8,047	153,332	4.6
1968	11,800		22,526	108,120	3,219	3,643	137,508	11.7
1969	81,000		12,896	60,811	7,908	10,133	91,748	1.1
1970	35,200		49,280	158,164	8,803	4,619	220,866	6.3
1971	15,000	115	5,604	32,566	2,782	5,661	46,728	3.1
1972	51,000		29,452	164,079	6,691	18,346	218,568	4.3
1973	55,000		25,454	203,097	3,332	1,805	233,688	4.2
1974	22,334	455	21,031	76,250	10,499	2,590	110,825	5.0
1975	34,855		38,347	136,670	7,713	8,799	191,528	5.5
1976	9,056	90	52,434	99,913	12,717	8,377	173,531	19.2
1977	31,562	1,981	137,083	1,108,256	1,773	1,956	1,251,048	39.6
1978	42,284	656	8,799	51,329	2,139	7,381	70,303	1.7
1979	48,281	270	17,439	105,297	6,351	21,049	150,407	3.1
1980	142,253	162	37,780	344,020	51,572	40,122	473,656	3.3
1981	156,112	436	92,478	355,917	14,590	32,817	496,238	3.2
1982	180,314	155	58,604	546,985	5,829	586	612,159	3.4
1983	38,783	71	11,755	86,810	448	7,213	106,297	2.7
1984	63,622	1,347	64,775	133,744	2,112	1,108	203,086	3.2
1985	163,342	31	1,682	12,951	1,170	764	16,598	0.1
1986	74,135	34	4,372	17,266	83	5,164	26,918	0.4
1987	187,263	20	2,169	53,697	1,419	2,749	60,053	0.3
1988	72,023	21	6,913	41,717	1,246	598	50,495	0.7
1989	36,881	11	2,596	4,662	406	885	8,560	0.2
1990	8,250	49	3,519	10,219	485			
1991	9,701	106	18,678					
1992	29,642	88						
1993	9,232							
1994	7,264							
1995	30,382							

Appendix B. Management activities related to meeting escapement requirements of Coghill Lake sockeye salmon.

Fish stocks in the state are directed by statute (AS 16.05.730) to be managed consistent with sustained yield of wild fish stocks and may be managed consistent with sustained yield of enhanced fish stocks. In addition giving preference to wild stocks over enhanced stocks, this statute also allows the adoption of fishery management plans to guide the Department in managing enhanced stocks.

Sockeye salmon bound for Coghill Lake are harvested primarily in gillnet fisheries in the Eshamy and Coghill Districts in June and July. These fisheries target enhanced stocks of sockeye and chum salmon returning respectively to Main Bay and Noerenberg hatcheries. Management plans for these two hatcheries recognize that fishing may be restricted when wild stock shortfalls occur in the Coghill District (PWSAC 1995). Decisions by the department to conduct common property fisheries in these districts are based upon wild stock escapements and, the strength and origin of the stocks being harvested. Coghill stock sockeye salmon reared at Main Bay have been released on site at the hatchery, into Coghill Lake as presmolts, and as smolts near the mouth of Coghill River. Returning hatchery and wild Coghill stock sockeye salmon are subsequently harvested together in the two fishing districts. The Department recognized it lacked stock and location specific sockeye salmon catch information. Therefore, in 1992 the Department initiated a two year test fishery project in the Eshamy and Coghill Districts to better understand the migration routes used by Coghill bound sockeye salmon and, to gain some insight into the interception rate during commercial fisheries. Stock compositions were determined using scale pattern analysis. Exploitation rates were determined using both scale pattern analysis and coded wire tag recoveries.

The information gathered during these test fisheries has been used to formulate management strategies to provide for protection of Coghill sockeye salmon. Total returns to Coghill Lake have historically averaged 320,000 fish with the majority entering the river between early June and late July. Beginning in 1990 smolt production at Coghill Lake began to decline. The subsequent poor returns and escapement shortfalls at Coghill Lake have resulted in extremely restricted fisheries in the two gillnet districts. The entire Coghill District was last open to commercial fishing in 1989. Since then, the commercial gillnet fleet has been restricted to fishing in either the Esther Subdistrict, a reduced subdistrict, or in the hatchery terminal harvest area in an effort to reduce the harvest of Coghill Lake sockeye. Similar restrictive measures have been incorporated in the Eshamy District. In 1994, the Crafton Island Subdistrict remained closed the entire season to protect weak Coghill and Northwest District stocks which move through the Eshamy District. Closures of the Crafton Island Subdistrict to protect Coghill sockeye occurred in 1993 as well.

Current management strategies include opening gillnet districts concurrently when possible, including the Copper River District, to disperse effort over the greatest area possible. If escapement to the Coghill District is not being met, the Board of Fisheries in 1994 endorsed the use of a reduced Esther Subdistrict, defined as one nautical mile off the southern portion of Esther Island, to harvest enhanced stocks while affording some protection to Coghill wild stocks. In the 1995 PWS Area Commercial Fisheries Salmon Management Outlook (Wayne Donaldson, ADF&G memo to Jeff Koenings), the department outlines it's intent to employ this reduced Esther subdistrict option based on the weak forecast for Coghill Lake sockeye. However, if the escapement at Coghill Lake is still not being met the department intends to use only the Noerenberg Hatchery Terminal Harvest Area to harvest returning enhanced chum stocks. The Crafton Island Subdistrict in the Eshamy District is not anticipated to open during the Coghill sockeye stock run timing.

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Appendix C. Frazer Lake return-per-spawner summary 1975-1992.

YEAR	ESCAPEMENT	RUN	RETURN	R/S
75	64,199	67,499	299,631	4.7
76	119,321	128,091	709,424	5.9
77	139,548	140,914	425,466	3.0
78	141,981	172,317	235,043	1.7
79	126,742	154,008	59,106	0.5
80	405,535	460,248	761,264	1.9
81	377,716	487,926	29,471	0.1
82	430,423	506,655	80,172	0.2
83	158,340	196,323	1,038,092	6.6
84	53,524	67,377	503,856	9.4
85	485,835	637,871	160,412	0.3
86	126,529	178,377	2,225,638	17.6
87	40,544	58,163	384,663	9.5
88	246,704	457,707	271,566	1.1
89	360,373	1,070,871	357,175	1.0
90	226,707	979,833	1,096	0.0
91	190,358	1,268,145	0	0.0
92	185,825	418,773	0	0.0

Appendix D. Response to reviewer comments on smolt estimation methodology.

Two important assumptions in single mark-recapture estimation (both of which apply to the smolt trap method) are (*i*) all animals have an equal probability of capture in the first sample and (*ii*) the second sample is a simple random sample (Seber 1982; Krebs 1989). In general the same sampling device is used for both samples. Seber (1982) discusses effects and possible remedies for departures from these assumptions. If assumption (*i*) is invalid, the more catchable individuals will be caught in the first sample which will lead to a higher catch rate of marked individuals in the second sample. This will ultimately result in an estimator that is biased low. In fisheries, catchability usually varies with the size of the fish (e.g., Ricker 1975). Seber states that little can be done to remedy this problem unless 1) different trapping methods with different selectivity are used for the two samples or 2) subgroups of the population with constant catchability are estimated separately. Relative to smolt enumeration programs in Alaska, these alternatives need to be assessed in terms of feasibility.

The current method used in Coghill River, which was adapted from Cochran (1978) by Rawson (1984), provides an estimate of trap efficiency that is expanded to estimate sockeye smolt abundance. Inclined plane traps (Todd 1994) placed in one location are used to obtain both samples; marked smolt are re-released several hundred meters upstream. A temporally stratified sampling design is used to account for changes in trap efficiency that may be related to fluctuations in stream discharge and variation in catchability. Weekly strata are used and the stratum estimator is unbiased under the usual assumptions of mark-recapture estimation. It is common knowledge that outmigration timing is related to the age thus size of smolt (e.g., Todd and Kyle 1991) . The temporal stratification should therefore satisfy, reasonably well, Seber's remedy #2 since size-based subgroups of the population are estimated separately. Mark-release numbers for Coghill Lake are also projected to obtain a relative error within 25% at the 95% confidence level (a 20.4% relative error was achieved in 1994, for example).

Use of a different trapping method for the first sample (remedy #1) is not currently feasible, primarily because of prohibitive costs and lack of availability of a trap that is either non-selective or has a (known) different selectivity than the inclined plane trap. Installation of a smolt weir is also not possible due to the size of the river and discharge patterns. A method recently described by Schwarz and Dempson (1994), although deserving of further consideration, has practical limitations because it requires operation of two partial weirs separated by several kilometers. In other mark-recapture studies tests of equal catchability have been applied (Chapman 1952; Cormack 1966; Caughley 1977). However, these procedures all require sample collection at three or more different times, which would be difficult if not impossible to perform on a migrating smolt population. The final option is to obtain concurrent weir censuses (N) and trap abundance estimates ($\hat{N}$), in systems where feasible, and test the hypothesis of no difference using a simple one sample test (*t* or *z*, since sample sizes are large). This type of experiment was conducted at Red Lake, Kodiak Island in 1992 (Barrett et al. 1993). The no difference hypothesis was not rejected ($z = -0.672$; $p = 0.251$), indicating no evidence of bias in the abundance estimate for this

system. Results are summarized as follows (note that the 95% confidence interval contains the parameter N):

$$N = 1{,}314{,}373$$
$$\hat{N} = 1{,}210{,}554 \quad 95\%\ \text{CI}\ (907{,}945 - 1{,}513{,}163)$$

It is also worth noting that Red Lake produces much larger age-1 smolt – approximately 5-10 g – than Coghill Lake, which typically range from 1-2 g.

The smolt program at Coghill Lake has improved steadily since it was initiated in 1989. Improvements have included weekly stratification (begun in 1991) and placement of traps in a more suitable location downstream (1994). Smolt estimates have been acceptable with respect to escapement numbers and projected survival based on fall fry hydroacoustic estimates. The current program appears to be providing reasonably accurate estimates, suitable for meeting the objectives of the project.

References

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1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	PROPOSED FFY 1997 TRUSTEE AGENCIES TOTALS					
			ADEC	ADF&G	ADNR	USFS	DOI	NOAA
				$104.0		$116.2		
Personnel	$119.1	$80.4						
Travel	$1.2	$1.2						
Contractual	$112.4	$112.2						
Commodities	$7.3	$6.5						
Equipment	$0.0	$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$240.0	$200.3	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration	$25.7	$19.9						
Project Total	$265.7	$220.2	$100.0	$50.0	$0.0	$0.0	$0.0	$0.0
Full-time Equivalents (FTE)	0.0	1.6						
	Dollar amounts are shown in thousands of dollars.							
Other Resources	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

Comments:

This project will restore the natural productivity of Coghill Lake and the resident sockeye salmon population through lake fertilization. The Coghill Lake sockeye salmon stock historically supported important sport and commercial fisheries in western Prince William Sound. Sockeye salmon returns have declined from a historical average of 250,000 to less than 10,000 in recent years. The project will achieve the following objectives: (1) apply liquid fertilizer to Coghill Lake between June and August, (2) determine the response of fertilization on nutrient levels, primary production and secondary production, (3) determine the response of sockeye salmon smolts to fertilization, and (4) estimate the effect of lake fertilization on lake carrying capacity.

This project is being done by the United States Forest Service (USFS) of the Department of Agriculture and the Alaska Department of Fish and Game (ADF&G). The USFS receives Trustee funding for the purchase, shipping and application of fertilizer to Coghill Lake. The ADF&G receives funding for the assessment of trophic-level responses to nutrient treatment: including nutrient analysis, phytoplankton and zooplankton biomass determination, and the quantity and quality of smolts.

The activities described in this DPD and budget represent the 5th year of a 7- year project, including the final year of 5-years of lake enrichment. Proposed activities in 1998 include limnological and smolt monitoring and in 1999, limnological monitoring.

1997

Prepared: 29-Mar-96

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Lead Agency: AK Dept. Fish and Game

FORM 2A
MULTI-TRUSTEE
AGENCY SUMMARY

4/9/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Personnel	$107.5	$68.7						
Travel	$1.2	$1.2						
Contractual	$21.4	$16.2						
Commodities	$7.3	$6.5						
Equipment	$0.0	$0.0						
Subtotal	$137.4	$92.6						
General Administration	$17.6	$11.4						
Project Total	$155.0	$104.0	$100.0	$50.0				
Full-time Equivalents (FTE)		1.3						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: AK Dept. Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
Shields, Pat	Fishery Biologist I	14F	6.5	4.8		31.2
Sadder, Penny	F & W Technician III	11D	1.0	3.9		3.9
Edmundson, John	Fishery Biologist I	14K	1.0	4.9		4.9
Cialek, Denise	F & W Technician III	11K	1.0	4.1		4.1
Vacant	F & W Technician III	11E	2.0	3.9	1.0	8.8
Vacant	F & W Technician II	9C	2.0	3.2	0.8	7.2
Carslon, Stan	Biometrician II	19D	1.5	5.7		8.6
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		15.0	30.5	1.8	
					Personnel Total	$68.7

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
Soldotna to Anchorage for G. Kyle, D. Schmidt, and S. Carlson	0.3	3	3	0.1	1.2
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$1.2

1997

Prepared:

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: AK Dept. Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Air charter for smolt operation and limnological surveys	15.0
Analysis of phytoplankton samples (existing contract with Eco-Logic)	0.8
Report printing fees	0.2
Postage	0.2
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$16.2

Commodities Costs:	Proposed
Description	FFY 1997
Food for field personnel (2 people for 60 days) and camp gear	2.5
Hip boots, waders, and rain gear	1.0
Outboard fuel, oil, and structural material	1.0
Laboratory supplies - chemicals, poly bottles, filters, AA supplies etc.	2.0
Commodities Total	$6.5

1997

Prepared:

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: AK Dept. Fish and Game

FORM 3B
Contractual & Commodities DETAIL

3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
None			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.	**New Equipment Total**		$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: AK Dept. of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Personnel	$11.6	$11.7						
Travel	$0.0	$0.0						
Contractual	$91.0	$96.0						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$102.6	$107.7						
General Administration	$8.1	$8.5						
Project Total	$110.7	$116.2						
Full-time Equivalents (FTE)		0.3						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

999

1997

Prepared:

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: United States Forest Service

FORM 3A
TRUSTEE
AGENCY
SUMMARY

3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
	Staff Biologist	GS 11/3	1.4	3.7		5.2
	Fisheries Biologist	GS 9/1	1.3	3.0		3.9
	Fisheries Technician	GS 5/1	1.3	2.0		2.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		4.0	8.7	0.0	
					Personnel Total	$11.7

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
None					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: United States Forest Service

FORM 3B
Personnel
& Travel
DETAIL

3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract for purchase and shipping of fertilizer	43.0
Contract for application of fertilizer	53.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$96.0

Commodities Costs:	Proposed
Description	FFY 1997
None	
Commodities Total	$0.0

1997

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: United States Forest Service

FORM 3B
Contractual & Commodities DETAIL

Prepared: 3/29/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
None			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97259
Project Title: Restoration Coghill Lake Sockeye Salmon
Agency: United States Forest Service

FORM 3B
Equipment
DETAIL

Prepared: 3/29/96

Project Title: Reduction & Cleanup of Marine Pollution in Port Graham.

Project Number:	97260
Restoration Category:	General Restoration.
Proposer:	Port Graham Village Council
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$616,500
Cost FY 98	$600,000
Cost FY 99	$500,000
Geographic Area:	Port Graham Bay and Southern Kenai Peninsula
Injured Resource/Service:	Subsistence and the near shore and marine ecosystem with the associated flora and fauna.

ABSTRACT

The Port Graham Village Council will supervise the complete cleanup of the existing and potential pollution of the marine ecosystem of Port Graham. This cleanup will include out-of-use old boats and vessels, cars, trucks, construction equipment and the associated waste material. Port Graham Village residents will be the main work force. All of the material will be transported to Kenai Peninsula Borough Approved Sanitation Sites.

INTRODUCTION

There are old boats, other vessels, cars, trucks, construction equipment on PG village council and 36 private allotments and some private land within Port Graham. All of this is potential pollution to the marine ecosystem of Port Graham and will be cleaned up and removed from Port Graham to Kenai Peninsula Borough sanitation sites. This cleanup will put an end to the current pollution and prevent any future pollution from these sources. The cleanup will increase the subsistence resources available in Port Graham for its residents by improving the immediate marine ecosystem.

Port Graham residents will be used for the project management and for equipment operators and all labor. Their involvement in all phases of this project will heighten their awareness for a clean and non-polluted upland and marine ecosystem.

NEED FOR THE PROJECT

A. Statement of Problem

There is existing pollution entering the marine ecosystem of Port Graham from old boats, trucks and equipment. This material must be cleaned up and transported out of Port Graham. Assistance is needed by PGVC to complete cleanup of the present landfill with its associated pollutants.

B. Rationale/Link to Restoration

This cleanup will improve the marine ecosystem of Port Graham. It will also increase the subsistence resource for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location

Port Graham, off of Kachemak Bay on the southwest tip of the Kenai Peninsula.

COMMUNITY INVOLVEMENT

The Port Graham Village Council (PGVC) will be contracted by the Kenai Peninsula Borough's Economic Development District (EDD) to manage the project. Port Graham residents will provide the supervision, equipment, boats and operators and labor for this project.. Seminars with the residents of Port Graham will be conducted to assess possible enhancement and/or restoration projects. All local residents working on this project should develop a higher awareness of the desirability for a pollution free upland and marine ecosystems.

PROJECT DESIGN

A. Objectives

A complete cleanup of all old & unused: boats, vehicles, equipment and other sources of pollution in the upland and marine ecosystems in Pot Graham. The objective is to stop the present pollution and prevent future pollution of the marine ecosystem in Port Graham. complete cleanup of present landfill and sludge area.

B. Methods

The Port Graham Village Council (PGVC) personnel and consultants will prepare the final project plans. Local residents will inventory and survey the existing and potential pollution sources. The method, equipment needed, cleanup process, final location, method of transport will be noted, then a consolidated and concentrated cleanup would take place. Professional consultants and agency personnel will be used for the hazardous materials situation where needed.

C. Cooperating Agencies, Contracts and Other Agency Assistance

ADEC and the Kenai Peninsula Borough sanitation personnel will be utilized as needed.

SCHEDULE

A. Measurable Project Tasks for FY 97 (October 1, 1996 to December 31)

Oct-Dec Prepare Project Plans

Jan-March Consult with agency personnel, train residents.

April-June Survey pollution sources, contract for equipment. Start cleanup.

July-Sept. Transport polluted material out of Port Graham.

B. Project Milestones and Endpoints

September 1997: First phase of cleanup completed.

September 1998: 80% of cleanup is completed and removed from Port Graham.

July-Sept 1999: Cleanup is fully completed and pollution sources eliminated. Reports are written and project documented.

C. Completion Date:

Projected completion date is September 1999.

PUBLICATIONS AND REPORTS

Yearly Report

Final Report

PROFESSIONAL CONFERENCES

Port Graham Village Council personnel will attend the annual EVOS conferences.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project will be coordinated with the other PGVC projects and those of the Port Graham Corporation. Coordinated trips to conferences will be stressed.

PROPOSED PRINCIPAL INVESTIGATOR

Port Graham Village Council
Port Graham, Alaska 99663

Elenore McMullen—Village Chief
Fran Norman—Administrator
Walter Meganack, Jr.—Project Coordinator

PERSONNEL

Elenore McMullen—Village Chief
Fran Norman—Administrator
Walter Meganack, Jr.—Project Coordinator

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$0.0						
Travel		$0.0						
Contractual		$592.2						
Commodities		$0.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$592.2	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$24.3						
Project Total		$616.5	$600.0	$500.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract	592.2
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$592.2

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
Personnel		$428.7						
Travel		$4.3						
Contractual		$86.0						
Commodities		$34.5						
Equipment								
Subtotal		$553.5	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$38.7						
Project Total		$592.2	$436.6	$398.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		65.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
		Resource Consultant	1.0	16200	500	16.7
	W. Meganack, Jr	PGVC Personal	6.0	8500	2000	53.0
	John Hall/Arvid Hall	Consultants	2.0	13500	1000	28.0
	Fran Norman	PGVC Personal	8.0	6500	1000	53.0
	Eleenore McMullen	PGVC Personal	8.0	6500	1000	53.0
		PGVC Resident	8.0	6500	1000	53.0
		PGVC Resident	8.0	6500	1000	53.0
		PGVC Resident	8.0	6500	1000	53.0
		PGVC Resident	8.0	6500	1000	53.0
		Administrative Support	8.0	1600	200	13.0
						0.0
						0.0
		Subtotal	65.0	79	9.7	
					Personnel Total	$428.7

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
	RT Port Graham -Anchorage	180	4	16	50	1.5
	RT Anchorage Port Graham	180	4	8	100	1.5
	RT Port Graham-Homer	80	10	20	25	1.3
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$4.3

1997

Prepared:

Project Number:97260
Project Title: Port Graham Haz-Mat Cleanup
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Boat Charter	30.0
Helicopter Charter	16.0
Heavy Equipment Lease	20.0
Barge Charter	20.0
Contractual Total	$86.0

Commodities Costs:	Proposed
Description	FFY 1997
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Field supplies/light equipment	12.0
Haz-Mat supplies for cleanup	20.0
Commodities Total	$34.5

1997

Project Number: 97260
Project Title: Port Graham Haz-Mat Cleanup
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units

1997

Project Number:97260
Project Title: Port Graham Haz-Mat Cleanup
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Project Title: Port Graham Landowners Resource Ethic & Stewardship Subsistence Enhancement.

Project Number:	97261
Restoration Category:	General Restoration.
Proposer:	Port Graham Village Council Port Graham Corporation
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$443,600
Cost FY 98	$450,000
Cost FY 99	$350,000
Geographic Area:	Port Graham Drainage on the southwest Kenai Peninsula
Injured Resource/Service:	Subsistence

ABSTRACT

The Port Graham Village Council will serve as a leader to develop a cooperative land ethic and resource stewardship plan for the 36 parcels of private land (native allotments) and village council lands that total 5,300 acres Seldovia Native Assn. State and Port Graham Corporation lands and the land within the Port Graham village itself. This plan will be designed to protect and enhance the subsistence resources that will substitute for the subsistence resources lost and damaged due to the *Exxon Valdez* oil spill.

INTRODUCTION

Port Graham Bay is ringed by 36 parcels of private, native allotments owned by the allotees and their families. These lands total 5,000 acres. The majority of the allotees are Port Graham Corporation shareholders and Port Graham residents. The Bureau of Indian Affairs, through the Chugachmuit Resource Council is the trust agency for these allotees. Port Graham Village Council owns and/or controls the 300 acres surrounding the village of Port Graham. Port Graham Corp. owns the surface estate and Chugach Alaska Corp. owns the subsurface estate of over 80 percent of this watershed. Also, Seldovia Native Association (SNA) and Cook Inlet Region, Inc. (CIRI) owns 1,280 acres, and the State of Alaska has approximately 10,000 acres within this area.

The spruce bark beetle epidemic has spread south from upper Kachemak Bay, to Seldovia and Port Graham and on down to the English Bay drainage. This epidemic is destroying or will destroy the current forest resource. PGC has negotiated a twenty year Forest Management Agreement, with the first timber sale totaling 30 million board feet. In addition, some of the timber from the allotments has been sold. Logging and road building has begun and will increase in the future.

NEED FOR THE PROJECT

A. Statement of Problem

There is a need to develop a cooperative and common land ethic and resource stewardship plan on all the lands in and adjacent to the Port Graham watershed. Road locations, standards and use and logging practices should not damage the streams, wetlands, riparian areas or in any way damage the subsistence resources. Through this land use ethic, the subsistence resources should be enhanced and not diminished by these roads and forest practices.

B. Rationale/Link to Restoration

A common cooperative and acceptable plan by all landowners and residents of Port Graham will help accomplish these objectives.

The subsistence resource may be protected and enhanced and it will also increase the subsistence resource for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location

Port Graham, off of Kachemak Bay on the southwest tip of the Kenai Peninsula.

COMMUNITY INVOLVEMENT

The Port Graham Village Council (PGVC) will be contracted by the Kenai Peninsula Borough's Economic Development District (EDD) to manage the project. Port Graham residents will be cooperative resource planners and facilitators for this project. Full involvement of all owners of the 36 allotments will be stressed. Specialists, planners and resource specialists will be contracted with on as needed basis for this project.

PROJECT DESIGN

A. Objectives

Prepare a cooperative master land ethic and resource stewardship plan for all the private and public lands in the Port Graham drainage. The plan will address the protection, enhancement and best management practices available and will be designed to protect and enhance the subsistence resources.

B. Methods

The Port Graham Village Council (PGVC) will consult with elders, key allotees, PGC, SNA, CAC, BIA and other village leaders to determine the best approach to develop the plan. Community meetings will be held to discuss the best approach for planning and cooperation needed.

1. PGVC will finalize the planning approach.

2. General community planing meetings will be held.

3. Special meetings on resource development and bark beetle infestations will be held.

4. Special meetings on all resources and uses by a resource specialist.

5. Value of subsistence resource

Development of resource protection and enhancement guidelines will be accomplished. Field trips will be used to discuss the proposed land and resource ethics and stewardship. Community meetings will be held, along with individual meetings with land owners to work toward consensus and full acceptance of the plan.

C. Cooperating Agencies, Contracts and Other Agency Assistance

PGVC will be the lead government entity. The Trustee Agency will be ADF&G, who will contract with the ARDOR-Kenai Peninsula Borough Economic Development District (KPB-EDD), who will in turn prepare a contract with PGVC. The corporations, federal and state agencies will provide their own funding.

SCHEDULE

A. Measurable Project Tasks for FY 97
(October 1, 1996 to September 30, 1997)

Oct-Dec PGVC will meet with allotees and other landowners and develop the planning process.

Jan-June Meet with allotees and land owners, discuss resources and uses. Inventory past subsistence uses. Identify opportunities for enhancement.

July-Sept. Conduct field trips with resource professionals and elders, other key subsistence users. Develop draft ethics and stewardship guidelines.

B. Project Milestones and Endpoints

1. Draft planning process. FY 97

2. Finalize planning process and involvement.

3. Review resource & subsistence threats, uses and development.

4. Develop draft land ethics & resource stewardship.

5. Review all resources, uses and subsistence in the field.

6. Revise planning process FY 98

7. Revise draft land ethics & resource plan. Review impacts in the field.

8. Draft Plan & Review with all landowners.

9. Coordinate with all landowners for approval and commitment to the plan. FY 99

C. Completion Date:

This cooperative land planning process with the corporations and the 36 allotment owners and their families will strive for commitment through involvement. The planning process will work with, and around the subsistence gathering activities of the village residents.

Projected completion date is September 1999.

PUBLICATIONS AND REPORTS

An annual report and final report will be prepared.

PROFESSIONAL CONFERENCES

Port Graham Village Council project manger, plan coordinator and facilitator will attend the Alaska Resource and Subsistence Conferences, National Inter-Tribal Wildlife and Fisheries and Timber Conferences plus the annual EVOS conferences and other EVOS meetings.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project will be coordinated with the other PGVC projects and those of the Port Graham Corporation. Coordinated trips to conferences will be stressed.

PROPOSED PRINCIPAL INVESTIGATOR

Port Graham Village Council
Port Graham, Alaska 99663

Elenore McMullen—Village Chief
Fran Norman—Administrator
Walter Meganack, Jr.—Project Coordinator

PERSONNEL

Elenore McMullen—Village Chief
Fran Norman—Administrator
Walter Meganack, Jr.—Project Coordinator

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

ARDOR-Kenai Peninsula Borough
Economic Development District
Sherry Biggs
Assistant Executive Director

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Personnel		$0.0						
Travel		$0.0						
Contractual		$422.6						
Commodities		$0.0						
Equipment		$0.0						
Subtotal		$422.6						
General Administration		$21.0						
Project Total		$443.6	$450.0	$350.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract	422.6
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$422.6

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
Personnel		$288.5						
Travel		$5.4						
Contractual		$74.0						
Commodities		$14.5						
Equipment		$12.5						
Subtotal		$394.9	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$27.7						
Project Total		$422.6	$416.0	$334.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		40.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

5 of 8

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
Name	Position Description		Budgeted	Costs	Overtime	FFY 1997
	Resource Consultant		1.0	16200	500	16.7
Walter Meganack, Jr	PGVC Personal		4.0	8500	500	34.5
John Hall/Arvid Hall	Consultants		5.0	13500	1000	68.5
Fran Norman	PGVC Personal		4.0	6500	500	26.5
Elenore McMullen	PGVC Personal		4.0	6500	500	26.5
	PGVC Resident		4.0	6500	500	26.5
	PGVC Resident		4.0	6500	500	26.5
	PGVC Resident		4.0	6500	500	26.5
	PGVC Resident		4.0	6500	500	26.5
	Administrative Support		6.0	1600	200	9.8
						0.0
						0.0
	Subtotal		40.0	79	5.2	
					Personnel Total	$288.5

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
RT Port Graham -Anchorage	180	8	24	50	2.6
RT Anchorage Port Graham	180	4	8	100	1.5
RT Port Graham-Homer	80	10	20	25	1.3
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$5.4

1997

Prepared:

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Boat Charter	30.0
Helicopter Charter	16.0
Field equipment lease	24.0
Fixed wing surveys	4.0
Contractual Total	$74.0

Commodities Costs:	Proposed
Description	FFY 1997
Field supplies	12.0
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Commodities Total	$14.5

1997

Prepared:

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
Portable GIS Computer W/software	1	12.5	12.5
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$12.5

Existing Equipment Usage: Description	Number of Units

1997

Project Number: 97261
Project Title: Port Graham Village Corporation Landowner Ethic
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Project Title: Shoreline Inventory, Protection and Enhancement of Shorelines on PGC Lands.

Project Number:	97262
Restoration Category:	General Restoration.
Proposer:	Port Graham Corporation
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$595,700
Cost FY 98	$650,000
Cost FY 99	$630,000
Geographic Area:	Port Graham Corporation lands on the eastern and southern coasts of the Kenai Peninsula—specifically Port Graham, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay.
Injured Resource/Service:	Subsistence

ABSTRACT

Inventory and assess all shorelines Port Graham Corp lands, (210 Miles) on the coastline from the Ailalik Peninsula to the Port Graham Drainage in Kachemak Bay. Assess damaged shoreline habitat. Study methods of enhancement and recovery of damaged populations. Determine protection needs, productivity and value and prepare special land use plans for protection and enhancement and potential for increasing subsistence resources for Port Graham residents. The study area will be on Port Graham Corp. lands which total 112,000 acres, all of which have important shorelines. Research, study, inventory, assess, protect and enhance shoreline areas.

INTRODUCTION

PGC owns 210 miles of shoreline that have 120 to 150 miles of important salmon streams that are associated with them. And, an unknown number of marine mammals and seabird rookeries and other areas with high subsistence values.

This project will be conducted by PGC personnel and PGC shareholders on these important lands, to determine the type condition and protection measures needed and further opportunities for enhancement of many of these lands in order to increase the subsistence resources for PGC residents.

Evaluation and inventory of damage to shorelines in the study area. On site inspections, inventory of damaged resources will be accomplished by professional biologists. Restoration of habitat and possible enhancement projects to encourage damaged populations of marine mammals and seabirds to recover to pre-spill levels.

NEED FOR THE PROJECT

A. Statement of Problem

Oil Spill Damage to Shoreline Habitat on the Eastern Kenai Peninsula.
Lack of knowledge of the extent, range and quality of the habitat. Assessment of damage to resource. Restore and enhance resource to pre-spill levels. The traditional subsistence resource has been damaged. Some subsistence resources may never recover to their pre-oil spill levels. There is a need to substitute and increase the subsistence resources for the residents of Port Graham.

The protection and enhancement projects will increase the level of subsistence resources that come from the marine shoreline ecosystems.

B. Rationale/Link to Restoration

Inventory, evaluate and enhance for protection of resources to increase subsistence resource for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location

The shorelines of PGC lands are located in Port Graham drainage and Kachemak Bay, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay. The estimated shoreline in PGC ownership is: Chugach Island; 15 miles, Chugach Bay, Windy Bay & Rocky Bay; 50 miles, Thunder & Black Bay; 18 miles, EastArm/Nuka Bay: 25 miles, West Arm/Surprise Bay; 32 miles, West Arm/Yalik & Beauty Bay: 20 miles, Ailalik Bay: 25 miles, Northwest Lagoon: 15 miles, Paguna Arm: 10 miles.

COMMUNITY INVOLVEMENT

This project will have upwards of 60 percent direct involvement of Port Graham residents and PGC shareholders. Also, Nanwalek and Seldovia elders and residents will be utilized for information. This project will be the direct responsibility of PGC. Through the training of PGC people for the field and office work, the depth of understanding of the shoreline resource will be enhanced. This will develop an awareness of the needs for protection and enhancement of these valuable resources.

Port Graham, Nanwalek and Seldovia residents will be consulted as to their local knowledge of these areas. Local hire for field work will be used extensively.. Study area is remote, extensive use of locals boats and housing will be required. Seminars with these communities will be conducted to assess possible enhancement and/or restoration projects. Subsistence use will be noted and assessed for pre and post spill utilization.

PROJECT DESIGN

1. Inventory, assess and develop protection and enhancement projects on the marine shoreline ecosystem on PGC lands.

2.Prepare protection and enhancement projects which will be directed to improving the existing subsistence resources as a substitution and compensation for the lost and damaged subsistence resources for the residents of Port Graham.

3. Develop project plans to enhance or protect the subsistence resources in these areas.

B. Methods

Research: Consult with professional marine biologist and hydrologists and mangers in ADF&G (Fish & Habitat) and the National Park Service (NPS). Acquire Maps, aerial photos, ADF&G records and reports. Research other agency files for relevant data. Contract with professional consultants. Finalize project plan, recruit and train PGC shareholders and residents for office and fieldwork. Prepare inventory assessment forms, maps and photos and methods for inventory and assessment. Meetings with subsistence and other users for use of watersheds, etc.

Field: Organize crew, map and evaluate marine ecosystems along the coast. Hire professional marine biologist to map marine ecosystem shorelines analyze physical and chemical characteristics. Inventory past and current resources. There are approximately 26 major watersheds with estuaries where PGC has a substantial ownership. These are important drainages for subsistence resources. Initial inventory in Port Graham will take place in Port Graham, will be used as training ground for rest of project. Next stage will be the Rocky-Windy Bay area. Develop marine ecosystem shoreline database with a GIS system.

Complete remaining marine ecosystem shoreline inventories in Nuka and Aialik Bays during second year. Develop protection and enhancement projects and field check proposals.

Year 2: Continue Field Tasks: Continue field work in Nuka and Ailalik Bays

Post Field: Report on findings, Evaluate, Protection, Enhancements.

Year 3: Continue Field Tasks:

Post Field: Report on findings, Evaluate, Protection, Enhancements.

C. Cooperating Agencies, Contracts and Other Agency Assistance

ADF&G will be the lead trustee agency. The Kenai Peninsula Borough Economic Development District will contract with the Port Graham Corp. for the entire project. Cooperation will be needed with the NPS, USF&WS and the USFS.

SCHEDULE

A. Measurable Project Tasks for FY 97

October 1, 1996 to December 1996: Assemble maps & photo data. Coordinate project with ADF&G. Hire consultant.

January 1997 to May 1997: Develop final plan. Hire personnel, develop maps, photos &data. Consult with users.

May 1997: Train field crews.

June 1997 to September 1997: Conduct surveys in Port Graham, Kachemak Bay, Rocky & Windy Bay, Chugach Bay & Chugach Island. Begin surveys in Nuka & Ailalik Bay.

October 1997 to May 1998:

B. Project Milestones and Endpoints

October 1996 to September 1997: Start inventory and assessment. Compete 60-75% of marine ecosystem shorelines.

October 1997 to September 1998: Complete inventory of all marine ecosystem shorelines and lagoons. Revisit important marine ecosystem shorelines for development, protection and enhancement projects.

October 1998 to March 1999: Develop project plans for enhancement and protection projects for EVOS funding.

April 1999 to September 1999: Complete surveys. Prepare draft survey reports and prepare final reports and data.

C. Completion Date

January 1999 to September 1999: Complete report and review and develop protection and enhancement projects. Complete plans and request for restoration funding.
Annual Reports: Annual Reports will be prepared. The survey reports, database and accompanying maps will be made available to ADF&G and NPS where appropriate. A final report will be prepared on the subsistence resource enhancement phase of this project.

PROFESSIONAL CONFERENCES

The project results will be presented at the appropriate EVOS conferences and technical sessions and other conferences.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project will be coordinated with all ADF&G and PGC/EVOS Projects: Upland and Nearshore/Shoreline salmon stream projects. It will be integral part of the PGC Shorelines/Riparian/Watershed Project and the PGC Shoreline Inventory Project.

The results will be used in the Proposed Port Graham Village Council and Port Graham Landowners and Land Use Ethic EVOS projects.

PROPOSED PRINCIPAL INVESTIGATOR

This project will be organized and managed by the following agencies and entities:

Trustee Agency:	**Alaska Dept. of Fish & Game**
ARDOR:	**Kenai Peninsula Borough** **Economic Development District** **Will be the state contracting agency**
Contractor:	**Port Graham Corporation** **Patrick Norman-President** **Walter Meganack, Jr.-Project Manager** **P.O. Box 6689** **Port Graham, Alaska 99663**

PERSONNEL

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

Professional consultants will be contracted with after the approval of this project and consultation with ADF&G, USFWS & NPS.

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
Personnel		$0.0						
Travel		$0.0						
Contractual		$571.8						
Commodities		$0.0						
Equipment		$0.0						
Subtotal		$571.8	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$23.9						
Project Total		$595.7	$650.0	$630.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract	571.8
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$571.8

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Personnel		$406.8						
Travel		$5.6						
Contractual		$88.0						
Commodities		$15.5						
Equipment		$18.5						
Subtotal		$534.4						
Indirect		$37.4						
Project Total		$571.8	$628.0	$616.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		52.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
		Professional Biologist	2.0	16200	500	32.9
	W. Meganack, Jr/Norman	PGVC Personal	6.0	8500	500	51.5
	John Hall/Arvid Hall	Consultants	6.0	13500	1000	82.0
		PGVC Shareholder	6.0	6500	500	39.5
		PGVC Shareholder	6.0	6500	500	39.5
		PGVC Shareholder	6.0	6500	500	39.5
		PGVC Shareholder	6.0	6500	500	39.5
		PGVC Shareholder	6.0	6500	500	39.5
		PGVC Shareholder	6.0	6500	500	39.5
		Administrative Support	2.0	1600	200	3.4
						0.0
						0.0
		Subtotal	52.0	79	5.2	
					Personnel Total	$406.8

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
	RT Port Graham -Anchorage	180	8	16	50	2.2
	RT Anchorage Port Graham	180	4	16	100	2.3
	RT Port Graham-Homer	80	8	20	25	1.1
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$5.6

1997

Prepared:

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Reseach Boat Charter	30.0
Helicopter Charter	48.0
Field equipment lease	10.0
Contractual Total	$88.0

Commodities Costs:	Proposed
Description	FFY 1997
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Purchase air photos	4.5
Purchase SPOT Satellite Imagery	8.5
Commodities Total	$15.5

1997

Prepared:

Project Number:97262
Project Title: Port Graham Coastline Assessment
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
Portable GIS System/link/Computer system	1	18.5	18.5
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$18.5

Existing Equipment Usage: Description	Number of Units

1997

Project Number: 97262
Project Title: Port Graham Coastline Assessment
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Project Title: Assessment, Protection and Enhancement of Salmon Streams on Port Graham Corp. Lands

Project Number:	97263
Restoration Category:	General Restoration.
Proposer:	Port Graham Corporation
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	None
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$1,404,600
Cost FY 98	$1,400,000
Cost FY 99	$1,200,000
Geographic Area:	Port Graham Corporation lands on the eastern and southern coasts of the Kenai Peninsula—specifically Port Graham, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay.
Injured Resource/Service:	Subsistence.

ABSTRACT

Port Graham Corporation will conduct an inventory and assessment of the approximately 25-30 salmon streams on their 112,000 acres of land. Protection and enhancement projects will be proposed. Streams will be classified as Class I, II & III and fish populations and potential populations will be inventoried. Port Graham Residents and corporate shareholders will be used to conduct the survey.

INTRODUCTION

Port Graham Corporation owns 112,000 acres of the land that stretches fro Port Graham drainage to Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay. There are approximately 25 to 30 major salmon streams on these lands and an equal or greater number of lesser tributaries. Also, there are 11 to 15 major lakes and lagoons on or adjacent to PGC lands.

The PGC shareholders and residents of Port Graham are dependent on these salmon streams and the salmon they produce for subsistence needs.

All major and minor streams will be inventoried and evaluated as to stream class (Class I, II &III) and channel type definition. Protection and restoration projects will be developed from the inventory. Professional resource personnel will supervise the project. PGC shareholders will be utilized extensively for the field and office work.

PGC will develop a computerized stream data file and relate it to the aerial photo and map data on a GIS and study the need to integrate this data with the proposed wetlands/riparian watershed project and the nearshore/shoreline project.

The supervision, control and use of PGC shareholders for this project will provide for the high quality protection and enhancement of these valuable resources by the owners and stewards of the land and the users of the subsistence resource.

NEED FOR THE PROJECT

A. Statement of Problem

The traditional subsistence resource has been damaged. Some subsistence resources may never recover to their pre-oil spill levels. There is a need to substitute and increase the subsistence resources for the residents of Port Graham.

Oil Spill Damage to Salmon Stream Habitat on the Eastern Kenai Peninsula.
Lack of knowledge of the extent, range and quality of the habitat. Assessment of damage to resource. Restore and enhance resource to pre-spill levels. Study effects of logging, tourism and other developments on impacted resource-Pink, Chum & Coho Salmon and trout.

B. Rationale/Link to Restoration

The inventory and assessment of all salmon producing and potential producing streams and lakes will provide the basis for the protection and enhancement of the salmon streams. This in turn will increase the subsistence resource and substitute and

compensate for their damaged and lost resources. The protection and enhancement of these streams will not only aid the subsistence users but also the impacted commercial and sport users.

Inventory, evaluate and enhance for protection of resources to increase subsistence resources for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location: Southern and Eastern Coast of the Kenai Peninsula

These streams are located in Port Graham drainage and Kachemak Bay, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay.

COMMUNITY INVOLVEMENT

This project will have upwards of 60 percent direct involvement of Port Graham residents and PGC shareholders. Also, Nanwalek and Seldovia elders and residents will be utilized for information. This project will be the direct responsibility of PGC Through the training of PGC people for the field and office work, the depth of understanding of the streams and the fisheries resource will be enhanced. This will develop an awareness of the needs for protection and enhancement of these valuable resources.

Port Graham, Nanwalek and Seldovia residents will be consulted as to their local knowledge of these streams and their historic levels of spawning return. Local hire for field work will be used extensively.. Study area is remote, extensive use of locals boats and housing will be required. Seminars with these communities will be conducted to assess possible enhancement and/or restoration projects. Subsistence use will be inventoried and assessed for pre and post spill utilization.

PROJECT DESIGN

A. Objectives

1. Inventory, assess and develop protection and enhancement projects on the major salmon streams and lakes on PGC lands.

2. Protection and enhancement projects will be directed to improving the

subsistence resources as a substitution and compensation for the lost and damaged subsistence resources for the residents of Port Graham.

B. Methods

Research: Consult with professional fisheries biologist and mangers in ADF&G (Fish & Habitat) and the National Park Service (NPS) Acquire Maps, aerial photos, ADF&G records and reports. Research other agency files for relevant data. Contract with professional fisheries consultants. Finalize project plan, recruit and train PGC shareholders and residents for office and fieldwork. Prepare inventory assessment forms, maps and photos and methods for inventory and assessment. Meetings with subsistence and other users for use of watersheds, etc.

Field: Organize crew, map and evaluate streams from headwaters to coast. Hire professional fisheries biologist to map stream analyze physical and chemical characteristics. Inventory past and current fisheries. Initial inventory in Port Graham, use as training ground for rest of project. Next stage will be the Rocky-Windy Bay area. Develop stream database with a GIS system. Complete remaining streams in Nuka and Aialik Bays during second year. Develop protection and enhancement projects and field check proposals.

Year 2: Continue Field Tasks: Continue field work in Nuka and Ailalik Bays

Post Field: Report on findings, Evaluate, Protection, Enhancements.

Year 3: Continue Field Tasks:

Post Field: Report on findings, Evaluate, Protection, Enhancements.

C. Cooperating Agencies, Contracts and Other Agency Assistance

ADF&G will be the lead trustee agency. The Kenai Peninsula Borough Economic Development District will contract with the Port Graham Corp. for the entire project. Cooperation will be needed with the NPS, USF&WS and the USFS.

SCHEDULE

A. Measurable Project Tasks for FY 97

October 1, 1996 to December 1996: Assemble maps & photo data. Coordinate project with ADF&G. Hire fisheries consultant.

January 1997 to May 1997: Develop final plan. Hire personnel, develop maps,

photos &data. Consult with users.

May 1997: Train field crews.

June 1997 to September 1997: Conduct surveys in Port Graham, Kachemak Bay, Rocky & Windy Bay, Chugach Bay & Chugach Island. Begin surveys in Nuka & Ailalik Bay.

October 1997 to May 1998:

B. Project Milestones and Endpoints

October 1996 to September 1997: Start inventory and assessment. Compete 60-75% of streams.

October 1997 to September 1998: Complete inventory of all streams and lakes. revisit important streams for development, protection and enhancement projects.

October 1998 to March 1999: Develop project plans for enhancement and protection projects for EVOS funding.

April 1999 to September 1999: Complete surveys. Prepare draft survey reports and prepare final reports and data.

C. Completion Date

January 1999 to September 1999: Complete report and review and develop protection and enhancement projects. Complete plans and request for restoration funding.

Projects: **Woody Debris**
Fish Ladders
Excavate Rock/Falls
Others

PUBLICATIONS AND REPORTS

Annual Reports: Annual Reports will be prepared. The survey reports, database and accompanying maps will be made available to ADF&G and NPS where appropriate. A final report will be prepared on the subsistence resource enhancement phase of this project.

PROFESSIONAL CONFERENCES

The project results will be presented at the appropriate EVOS conferences and technical sessions and other conferences.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project will be coordinated with all ADF&G and PGC/EVOS Projects: Upland and Nearshore/Shoreline salmon stream projects. It will be integral part of the PGC Wetlands/Riparian/Watershed Project and the PGC Shoreline Inventory Project.

The results will be used in the Proposed Port Graham Village Council and Port Graham Landowners and Land Use Ethic EVOS projects.

PROPOSED PRINCIPAL INVESTIGATOR

This project will be organized and managed by the following agencies and entities:

Trustee Agency: **Alaska Dept. of Fish & Game**

ARDOR: **Kenai Peninsula Borough**
Economic Development District
Will be the state contracting agency

Contractor: **Port Graham Corporation**
Patrick Norman-President
Walter Meganack, Jr.-Project Manager
P.O. Box 6689
Port Graham, Alaska 99663

PERSONNEL

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

The professional fisheries consultant will be contracted with after the approval of this project and consultation with ADF&G.

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$0.0						
Travel		$0.0						
Contractual		$1,364.8						
Commodities		$0.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$1,364.8	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$39.8						
Project Total		$1,404.6	$1,400.0	$1,200.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Salmon Stream Assessment
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Salmon Stream Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract	1,364.8
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$1,364.8

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Salmon Stream Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97263
Project Title: Port Graham Village Salmon Stream Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
Personnel		$675.2						
Travel		$6.3						
Contractual		$560.0						
Commodities		$15.5						
Equipment		$18.5						
Subtotal		$1,275.5	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$89.3						
Project Total		$1,364.8	$1,326.0	$1,154.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		90.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Village Salmon Stream Assessment
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
Name	Position Description		Budgeted	Costs	Overtime	FFY 1997
	Professional Biologist		4.0	16200	1000	65.8
W. Meganack, Jr/Norman	PGVC Personal		11.0	8500	2000	95.5
John Hall/Arvid Hall	Consultants		11.0	13500	2000	150.5
	PGVC Shareholder		12.0	6500	2000	80.0
	PGVC Shareholder		12.0	6500	2000	80.0
	PGVC Shareholder		7.0	6500	500	46.0
	PGVC Shareholder		7.0	6500	500	46.0
	PGVC Shareholder		7.0	6500	500	46.0
	PGVC Shareholder		7.0	6500	500	46.0
	Administrative Support		12.0	1600	200	19.4
						0.0
						0.0
	Subtotal		90.0	79	11.2	
					Personnel Total	$675.2

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
RT Port Graham -Anchorage	180	10	30	50	3.3
RT Anchorage Port Graham	180	4	16	100	2.3
RT Port Graham-Homer	80	8	4	25	0.7
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$6.3

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Village Salmon Stream Assessment
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Reseach Boat Charter	300.0
Helicopter Charter	160.0
Field equipment lease	100.0
Contractual Total	$560.0

Commodities Costs:	Proposed
Description	FFY 1997
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Purchase air photos	4.5
Purchase SPOT Satellite Imagery	8.5
Commodities Total	$15.5

1997

Prepared:

Project Number: 97263
Project Title: Port Graham Village Salmon Stream Assessment
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
Portable GIS System/link/Computer system	1	18.5	18.5
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$18.5

Existing Equipment Usage: Description	Number of Units

1997

Project Number: 97263
Project Title: Port Graham Village Salmon Stream Assessment
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Project Title: Inventory, Assessment, Protection & Enhancement of Wetlands & Riparian Areas on PGC Lands

Project Number:	97264
Restoration Category:	General Restoration.
Proposer:	Port Graham Corporation
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$417,800
Cost FY 98	$400,000
Cost FY 99	$380,000
Geographic Area:	Port Graham Corporation lands on the eastern and southern coasts of the Kenai Peninsula—specifically Port Graham, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay.
Injured Resource/Service:	Subsistence

ABSTRACT

Inventory all wetlands Port Graham Corp lands, on the Ailalik Peninsula to the Port Graham Drainage in Kachemak Bay. Assess wetland/riparian habitat. Study methods of enhancement and recovery of wetland/riparian areas. The study area will be on Port Graham Corp. lands which total 112,000 acres, all of which have important wetlands and lakes. Research, study, inventory, assess, protect and enhance wetlands /riparian areas.

INTRODUCTION

This restoration project on PGC lands is designed to provide projects to protect and enhance the subsistence resource. Evaluation and inventory of damage to wetlands in the study area. On site inspections, inventory of damaged resources will be accomplished by professional biologists. Restoration of habitat and possible enhancement projects to encourage the increase the populations of bears, moose and waterfowl etc.

The objective is to increase the upland subsistence resource as a substitute to compensate for the loss of the marine subsistence resources, which were used extensively by Port Graham residents before the *Exxon Valdez* Oil Spill.

NEED FOR THE PROJECT

A. Statement of Problem

Oil Spill Damage to Wetland Habitat on the Eastern Kenai Peninsula.
Lack of knowledge of the extent, range and quality of the habitat. Assessment of damage to resource. Restore and enhance resource to pre-spill levels. The traditional subsistence resource has been damaged. Some subsistence resources may never recover to their pre-oil spill levels. There is a need to substitute and increase the subsistence resources for the residents of Port Graham.

The protection and enhancement projects will increase the level of subsistence resources that come from the uplands on adjoining streams, lakes and marine shoreline ecosystems.

B. Rationale/Link to Restoration

Inventory, evaluate and enhance for protection of resources to increase subsistence resource for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location

The uplands/wetlands of PGC lands are located in Port Graham drainage and Kachemak Bay, Chugach Bay, Windy Bay, Rocky Bay, Chugach Island, Yalik Bay, Nuka Bay, Two Arm Bay, Harris Bay and Aialik Bay.

COMMUNITY INVOLVEMENT

This project will have upwards of 60 percent direct involvement of Port Graham residents and PGC shareholders. Also, Nanwalek and Seldovia elders and residents will be utilized

for information. This project will be the direct responsibility of PGC Through the training of PGC people for the field and office work, the depth of understanding of the wetland/upland resource will be enhanced. This will develop an awareness of the needs for protection and enhancement of these valuable resources.

Port Graham, Nanwalek and Seldovia residents will be consulted as to their local knowledge of these areas. Local hire for field work will be used extensively.. Study area is remote, extensive use of locals boats and housing will be required. Seminars with these communities will be conducted to assess possible enhancement and/or restoration projects. Subsistence use will be inventoried and assessed for pre and post spill utilization.

PROJECT DESIGN

1. Inventory, assess and develop protection and enhancement projects on the riparian areas, wetlands flood plains and overall watersheds on PGC lands.

2. Prepare protection and enhancement projects which will be directed to improving the subsistence resources as a substitution and compensation for the lost and damaged subsistence resources for the residents of Port Graham.

3. Develop project plans to enhance or protect the subsistence resources in these areas.

B. Methods

Research: Consult with professional wildlife biologist and hydrologists and mangers in ADF&G (Fish & Habitat) and the National Park Service (NPS) Acquire Maps, aerial photos, ADF&G records and reports. Research other agency files for relevant data. Contract with professional consultants. Finalize project plan, recruit and train PGC shareholders and residents for office and fieldwork. Prepare inventory assessment forms, maps and photos and methods for inventory and assessment. Meetings with subsistence and other users for use of watersheds, etc.

Field: Organize crew, map and evaluate streams from headwaters to coast. Hire professional biologist to map wetlands analyze physical and chemical characteristics. Inventory past and current resources. There are approximately 26 major watersheds that PGC has a substantial ownership. These are important drainages for subsistence resources. Initial inventory in Port Graham, use as training ground for rest of project. Next stage will be the Rocky-Windy Bay area. Develop wetland database with a GIS system. Complete remaining wetlands in Nuka and Aialik Bays during second year. Develop protection and enhancement projects and field check proposals.

Year 2: Continue Field Tasks: Continue field work in Nuka and Ailalik Bays

Post Field: Report on findings, Evaluate, Protection, Enhancements.

Year 3: Continue Field Tasks:

Post Field: Report on findings, Evaluate, Protection, Enhancements.

C. Cooperating Agencies, Contracts and Other Agency Assistance

ADF&G will be the lead trustee agency. The Kenai Peninsula Borough Economic Development District will contract with the Port Graham Corp. for the entire project. Cooperation will be needed with the NPS, USF&WS and the USFS.

A. Measurable Project Tasks for FY 97

October 1, 1996 to December 1996: Assemble maps & photo data. Coordinate project with ADF&G. Hire consultant.

January 1997 to May 1997: Develop final plan. Hire personnel, develop maps, photos &data. Consult with users.

May 1997: Train field crews.

June 1997 to September 1997: Conduct surveys in Port Graham, Kachemak Bay, Rocky & Windy Bay, Chugach Bay & Chugach Island. Begin surveys in Nuka & Ailalik Bay.

October 1997 to May 1998:

B. Project Milestones and Endpoints

October 1996 to September 1997: Start inventory and assessment. Compete 60-75% of wetlands.

October 1997 to September 1998: Complete inventory of all wetlands and lakes. revisit important wetlands for development, protection and enhancement projects.

October 1998 to March 1999: Develop project plans for enhancement and protection projects for EVOS funding.

April 1999 to September 1999: Complete surveys. Prepare draft survey reports and prepare final reports and data.

C. Completion Date

January 1999 to September 1999: Complete report and review and develop protection and enhancement projects. Complete plans and request for restoration funding.

Annual Reports: Annual Reports will be prepared. The survey reports, database and accompanying maps will be made available to ADF&G and NPS where appropriate. A final report will be prepared on the subsistence resource enhancement phase of this project.

PROFESSIONAL CONFERENCES

The project results will be presented at the appropriate EVOS conferences and technical sessions and other conferences.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project will be coordinated with all ADF&G and PGC/EVOS Projects: Upland and Nearshore/Shoreline salmon stream projects. It will be integral part of the PGC Wetlands/Riparian/Watershed Project and the PGC Shoreline Inventory Project.

The results will be used in the Proposed Port Graham Village Council and Port Graham Landowners and Land Use Ethic EVOS projects.

PROPOSED PRINCIPAL INVESTIGATOR

This project will be organized and managed by the following agencies and entities:

Trustee Agency: **Alaska Dept. of Fish & Game**

ARDOR: **Kenai Peninsula Borough**
Economic Development District
Will be the state contracting agency

Contractor: **Port Graham Corporation**
Patrick Norman-President
Walter Meganack, Jr.-Project Manager
P.O. Box 6689
Port Graham, Alaska 99663

PERSONNEL

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

The professional fisheries consultant will be contracted with after the approval of

this project and consultation with ADF&G.

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$0.0						
Travel		$0.0						
Contractual		$397.4						
Commodities		$0.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$397.4	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$20.4						
Project Total		$417.8	$400.0	$380.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed FFY 1997
Description	
Contract	397.4
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$397.4

Commodities Costs:	Proposed FFY 1997
Description	
Commodities Total	$0.0

1997

Prepared:

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$276.8						
Travel		$4.6						
Contractual		$56.0						
Commodities		$15.5						
Equipment		$18.5	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$371.4	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$26.0						
Project Total		$397.4	$1,326.0	$1,154.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		33.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
Name	Position Description		Budgeted	Costs	Overtime	FFY 1997
	Professional Biologist		2.0	16200	500	32.9
W. Meganack, Jr/Norman	PGVC Personal		6.0	8500	1000	52.0
John Hall/Arvid Hall	Consultants		5.0	13500	1000	68.5
	PGVC Shareholder		3.0	6500	500	20.0
	PGVC Shareholder		3.0	6500	500	20.0
	PGVC Shareholder		3.0	6500	500	20.0
	PGVC Shareholder		3.0	6500	500	20.0
	PGVC Shareholder		3.0	6500	500	20.0
	PGVC Shareholder		3.0	6500	500	20.0
	Administrative Support		2.0	1600	200	3.4
						0.0
						0.0
	Subtotal		33.0	79	5.7	
					Personnel Total	$276.8

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
RT Port Graham -Anchorage	180	4	30	50	2.2
RT Anchorage Port Graham	180	2	16	100	2.0
RT Port Graham-Homer	80	4	4	25	0.4
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$4.6

1997

Prepared:

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Reseach Boat Charter	30.0
Helicopter Charter	16.0
Field equipment lease	10.0
Contractual Total	$56.0

Commodities Costs:	Proposed
Description	FFY 1997
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Purchase air photos	4.5
Purchase SPOT Satellite Imagery	8.5
Commodities Total	$15.5

1997

Prepared:

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
Portable GIS System/link/Computer system	1	18.5	18.5
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$18.5

Existing Equipment Usage: Description	Number of Units	

1997

Project Number: 97264
Project Title: Port Graham Wetlands Assessment
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Project Title: Subsistence Enhancement on PGC Uplands, Planting of Willows for Moose Browse

Project Number:	97265
Restoration Category:	General Restoration.
Proposer:	Port Graham Corporation
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	No
Duration:	FY97 to FY99
Cost FY 97:	$334,000
Cost FY 98	$350,000
Cost FY 99	$350,000
Geographic Area:	Southern Kenai Peninsula, Port Graham, Rocky & Windy River Drainages
Injured Resource/Service:	Subsistence

ABSTRACT

Inventory all moose habitat on Port Graham Corp lands, in the Rocky & Windy River to the Port Graham Drainage in Kachemak Bay. The planting of specific willow species will increase the moose browse on the fall winter and spring range of the moose. Plantings will be along the existing logging road system, which totals over 100 miles. The enhancement of the moose habitat and increase in the population for subsistence resources will allow the Port Graham residents to substitute this subsistence resource for the lost and damaged marine subsistence resources caused by the *Exxon Valdez Oil Spill.*

INTRODUCTION

Port Graham residents marine subsistence resources were severely damaged or lost due to the *Exxon Valdez Oil Spill* This project is designed to increase the upland moose population by planting willows for moose browse. These planting will be made along the existing and proposed logging roads and cutting units in known winter, spring and summer moose habitat. PGC has over 100 miles of road in these drainages. Port Graham will have a connection between the village and the Rocky-Windy Bay road system in 1996 or 97'. There is resident moose population that can expand if more winter range can be added.

The increase in the moose population will benefit the subsistence users in Port Graham. The subsistence resource will be increased and substituted for the loss of the marine subsistence resource.

NEED FOR THE PROJECT

A. Statement of Problem

The majority of the residents of Port Graham relied on the marine resources surrounding the southern Kenai Peninsula. These resources and the subsistence use were severely impacted by the *Exxon Valdez Oil Spill*. Upland subsistence resources can be enhanced to compensate for these losses.

B. Rationale/Link to Restoration

This project will increase the moose population and increase the upland subsistence resources to compensate for the loss of subsistence resources for Port Graham residents and others for compensation of loss caused by the *EXXON Valdez Oil Spill.*

C. Location

Southern Kenai Peninsula: located in Port Graham drainage and Kachemak Bay, Windy Bay and Rocky Bay on Port Graham Corporation lands.

COMMUNITY INVOLVEMENT

Port Graham residents will be consulted as to their local knowledge of the moose populations and habitat and their historic levels. Local hire for field work will be used extensively. This will be a Port Graham Corporation project , planned and carried out by PGC management, shareholders and residents. Professional and technical advice will come from PGC forestry consultants and ADF&G personnel as needed. Subsistence use

of moose will be inventoried and assessed for pre and post spill utilization and then five years after these plantings are completed.

PROJECT DESIGN

A. Objectives

Increase the available moose browse for the resident moose population by planting willows along roads, old log landings and other selected areas. The critical winter range areas will be planted first. The objective is to increase the moose population so that more moose are available for subsistence harvest.

B. Methods

1. Consult with ADF&G Habitat & Game Biologists.

2. With agency data and assistance, map fall winter and spring ranges, including rutting and calving areas.

3. With DNR Plant Materials Nursery & USFWS (KNWR) and other personnel, determine best species of willow to plant, locate sources and methods and timing to obtain cuttings.

4. Locate key and priority areas to plant. Locate and mark on photos and maps in Rocky and Windy River drainages first.

5. With PGC shareholders, secure cuttings supply.

6. Plant Key areas first, with PGC shareholders & residents.

7. Refine operation and procedure for next year's planting.

8. Continue the same planting program in Port Graham in second and third year.

9. Analyze results and produce yearly project report by PGC.

C. Cooperating Agencies, Contracts and Other Agency Assistance

ADF&G Habitat and Game will be the lead trustee agency. The Kenai Peninsula Borough Economic Development District will contract with the Port Graham Corp. for the entire project. Cooperation will be needed with the USF&WS and the DNR Plant Materials Center, and the USFS for research.

ARDOR-KPB Economic Development District will contract with Port Graham Corp. who will administer the project.

SCHEDULE

A. Measurable Project Tasks for FY 97 (October 1, 1996 to September 30, 1997)

1. Collect agency and moose range data. Select willow species & cutting location.

2. Inventory potential planting sites & locate on maps, photos and on the ground.

3.Refine location of source of willow cuttings. Secure landowners approval.

4. PGC shareholders collect willow cuttings.

5. Plant willow cuttings in June.

6. Inventory survival of cuttings in September.

B. Project Milestones and Endpoints

October 1, 1996 to March 1997: Develop final plan. Hire personnel, develop maps, photos & data. Determine appropriate willow species. Consult with users.

April to May 1997: Train field crews Secure willow cuttings.

June 1997: Plant willow cuttings in Rocky & Windy Bay drainages..

July 1997 to September 1997: Evaluate cuttings. Locate additional planting areas.

October 1997 to March 1998: Evaluate project and refine. Produce annual report.

May 1998 to September 1998: Continue plantings in rocky and Windy Bay drainages. Begin Project in Port Graham bay drainage.

October 1998 to May 1999: Refine project and evaluate. Produce annual report.

April 1999 to September 1999: Concentrate project on Port Graham drainage. Prepare report and additional project plans.

C. Completion Date

January 1999 to September 1999: Complete report and review enhancement project.

PUBLICATIONS AND REPORTS

Yearly Reports: Yearly reports plus a final report will be prepared.

PROFESSIONAL CONFERENCES

PGC and its consultants will attend the EVOS conferences and other special (and appropriate) wildlife conferences, especially those with an emphasis on moose habitat, and ecology and forestry conferences.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This will be coordinated with the other PGC proposed projects on stream and wetlands surveys.

PROPOSED PRINCIPAL INVESTIGATOR

This project will be organized and managed by the following agencies and entities:

Trustee Agency: **Alaska Dept. of Fish & Game**

ARDOR: **Kenai Peninsula Borough**
Economic Development District
Will be the state contracting agency

Contractor: **Port Graham Corporation**
Patrick Norman-President
Walter Meganack, Jr.-Project Manager
P.O. Box 6689
Port Graham, Alaska 99663

PERSONNEL

John L. Hall & Arvid J. Hall of Taiga Resource Consultants will be the technical advisors and managers who will assist Walter Meganack, Jr.

The professional wildlife biologists will be secured with ADF&G assistance.

LITERATURE CITED

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$0.0						
Travel		$0.0						
Contractual		$315.2						
Commodities		$0.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$315.2	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$18.8						
Project Total		$334.0	$350.0	$350.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Moose Browse Enhancement
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract	315.2
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$315.2

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$244.2						
Travel		$5.4						
Contractual		$28.0						
Commodities		$5.0						
Equipment		$12.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal		$294.6	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$20.6						
Project Total		$315.2	$325.0	$275.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		29.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Name: Port Graham

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
Name	Position Description		Budgeted	Costs	Overtime	FFY 1997
	Professional Biologist		2.0	16200	500	32.9
W. Meganack, Jr/Norman	PGVC Personal		4.0	8500	500	34.5
John Hall/Arvid Hall	Consultants		4.0	13500	1000	55.0
	PGVC Shareholder		4.0	6500	500	26.5
	PGVC Shareholder		4.0	6500	500	26.5
	PGVC Shareholder		4.0	6500	500	26.5
	PGVC Shareholder		2.0	6500	500	13.5
	PGVC Shareholder		2.0	6500	500	13.5
	PGVC Shareholder		2.0	6500	500	13.5
	Administrative Support		1.0	1600	200	1.8
						0.0
						0.0
	Subtotal		29.0	79	5.2	
					Personnel Total	$244.2

Travel Costs:		Ticket	Round	Total	Daily	Proposed
Description		Price	Trips	Days	Per Diem	FFY 1997
RT Port Graham -Anchorage		180	8	24	50	2.6
RT Anchorage Port Graham		180	4	8	100	1.5
RT Port Graham-Homer		80	10	20	25	1.3
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$5.4

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Name: Port Graham

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Vehicle Leases	12.0
Fixed wing surveys	8.0
Field equipment lease	8.0
Contractual Total	$28.0

Commodities Costs:	Proposed
Description	FFY 1997
Office supplies	0.5
Paper	0.5
Postage	0.5
Maps	0.5
Photos	0.5
Purchase air photos	2.5
Commodities Total	$5.0

1997

Prepared:

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Name: Port Graham

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
Field equipment	1	12.0	12.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.	**New Equipment Total**		$12.0

Existing Equipment Usage: Description	Number of Units	

1997

Project Number: 97265
Project Title: Port Graham Browse Enhancement
Name: Port Graham

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Port Graham Floating Skiff Dock for Subsistence Harvesters

Project Number:	97267
Restoration Category:	General Restoration
Proposer:	Port Graham Village Council
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	
Duration:	1st year, 1-year project
Cost FY 97:	$062,500
Cost FY 98:	$000,000
Cost FY 99:	$000,000
Cost FY 00:	$000,000
Cost FY 01:	$000,000
Cost FY 02:	$000,000
Geographic Area:	Port Graham Bay, Lower Kenai Peninsula
Injured Resource/Service	Subsistence

ABSTRACT

Provide funding for a floating skiff dock for use by the residents of Port Graham to store skiffs used for subsistence activities. At present, skiffs must be stored on land, often far from the water, this makes it difficult for residents to take advantage of good harvesting weather. This further limits subsistence use, which was injured by the *Exxon Valdez* oil spill. Storing skiffs on the water, where they are ready for use, would allow subsistence users to make better use of harvesting opportunities. This would partially mitigate the local impacts of the spill on subsistence resources and uses.

INTRODUCTION

Subsistence harvests and uses of fish and game in Port Graham were impacted by the *Exxon Valdez* oil spill. In 1989, the year of the spill, subsistence harvests in Port Graham were 122 pounds per person as compared with 227 pounds per person in 1987. This decline was due to both fear of contamination to wild foods, and because the oil spill clean-up prevented harvest activities. Although harvest levels have rebounded, subsistence harvesters report that some resources have become more scarce since the oil spill. This means that they now have to travel further and have to expend more time and effort to harvest the same amount of resources. There are few roads and trails nearby, so most of the additional travelling is done by skiff.

At present there is no dock suitable for the storage of skiffs, and few suitable stretches of beach. Skiffs are stored on land, usually in the owners yard. This makes it difficult to take advantage of brief spells of favorable weather for harvesting. It is necessary to haul the skiff down to the beach, often using a borrowed truck, and put the skiff in the water, moving the truck to another location, so it will be out of the way of others wanting to launch skiffs. Then all of the relevant harvesting and safety gear must be loaded into the skiff before launching. After the harvesting trip is completed, all of this must be done again in reverse. Unload the skiff, borrow the truck again, and so on. This can add several hours on to a brief harvesting trip, reducing the amount of time one has to actually hunt, fish and gather. If there were a floating dock available for subsistence user, skiffs could be stored on the water, ready for use throughout the harvesting season. Likewise, much of the needed gear could be stored on board. This would allow for a more efficient use of the hours available for harvest activities.

Encouraging the use of skiffs for subsistence harvesting would also reduce the harvest pressure on damaged local stocks of resources, such as clams. This would allow the local resource populations to recover from spill injuries more quickly. In addition, it would target harvests away from clam beaches which are the focus of restoration efforts (Chugach Clam Restoration Project 96131, 97131).

Making skiff storage and access easier would also encourage safer skiff use. People will be more likely to come home when the weather turns bad, if they know they can get back on the water easily when the weather improves.

NEED FOR THE PROJECT

A. Statement of Problem

Difficulty in storing and accessing skiffs is impeding the recovery of subsistence harvests and uses that were damaged by the oil spill. While subsistence levels have rebounded, subsistence harvesters report that they now have to travel further and have to expend more time and effort to harvest the same amount of resources. There are few roads and trails nearby, so most of the additional travelling is done by skiff.

B. Rationale/Link to Restoration

Providing a floating skiff dock would allow skiffs to be stored on the water, this would in turn allow subsistence users to make more effective use of brief spells of favorable weather for harvest activities, partially restoring lost subsistence services. It would reduce the harvest pressure on damaged local stocks of resources, including clams which are the focus of restoration efforts (Chugach Clam Restoration Project, 96131, 97131). As a side benefit, making skiff storage and access easier would encourage safer skiff use.

C. Location

The skiff dock would be located adjacent to the community of Port Graham, in Port Graham Bay, on the Lower Kenai Peninsula. The benefits of the project would primarily accrue to the residents of Port Graham, and to the local stocks of injured species.

COMMUNITY INVOLVEMENT

The idea for this project came from the residents of Port Graham. Local people will be in charge of every stage of the project, including planning, construction, use, management and maintenance of the facility.

PROJECT DESIGN

A. Objectives

1. To provide for easier storage and access to skiffs used for subsistence harvest activities, thereby increasing harvest efficiency, and promoting the recovery of the subsistence harvests and uses.
2. Reduce harvest pressure on local stocks of injured resources, especially those targeted by restoration efforts, thereby enhancing recovery.
3. Promoting safer skiff use.
4. Further the goal of community involvement in the restoration process.

B. Methods

The Alaska Department of Fish and Game, Division of Subsistence would enter into a contract with the Port Graham Village Council to plan and construct a floating skiff dock, with fish cleaning stations, for the storage of skiffs used for subsistence harvest activities by the residents of Port Graham. A skiff loading ramp would also be constructed along the shoreline under the same contract. The loading ramp would provide an easier way to get skiffs in and out of the water at the beginning and end of the harvest season.

The Port Graham Village Council would order the materials needed to build the facility. A boat will be leased to transport the materials from Homer to Port Graham.

A crew of four local residents would be hired to construct the dock and ramp. The work would be coordinated by the Port Graham Village Council. The Village Council would also be responsible for hiring, and payroll.

The completed dock and ramp will be managed and maintained by the Port Graham Village Council.

ADF&G will negotiate the contract, monitor contract performance, process invoices under the contract, and provide assistance to the Village Council as needed. At the conclusion of the project, ADF&G will write a a final report for submission to the Trustee Council.

C. Cooperating Agencies

SCHEDULE

A. Measurable Project Tasks for FY97 (October 1, 1996-September 30, 1997)

October	Negotiate contract between ADF&G and the Port Graham Village Council
November-March	Project planning, design of dock, selection of location, obtain necessary permits
April	Order building materials
May	Hire work crew, begin construction of dock and ramp
June	Complete construction of dock and ramp
August	Port Graham Village Council report to ADF&G
September	Final report on project submitted

B. Project Milestones and Endpoints

All four project objectives will be met when construction of the dock and ramp are completed, and in use, beginning in June 1997.

C. Completion Date

June 1997

PUBLICATIONS AND REPORTS

No publications are anticipated as a result of this project. The Port Graham Village Council will provide a brief written report to ADF&G by August 31, 1997, describing the planning and construction of the facility. ADF&G will submit a final project report to the Trustees by September 30, 1997.

PROFESSIONAL CONFERENCES

No participation in professional conferences is anticipated as a result of this project.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project complements the efforts of several on-going restoration projects including the Community Involvement and Use of Traditional Knowledge Project (96052, 97052), the Chugach Clam Restoration Project (96131). It also furthers the work towards subsistence restoration begun under the Subsistence Foods Safety Project (93017, 94279) and the Resource Abnormalities Study (950279).

PROPOSED PRINCIPAL INVESTIGATOR

Walter Meganack, Jr.
c/o Port Graham Village Council
P.O. Box 5510
Port Graham, Alaska 99603
Phone: (907) 284-2227
Fax: (907) 284-2222

PERSONNEL

Walter Meganack, Jr.: Is a lifelong subsistence user, and is the local facilitator for Port Graham under the Community Involvement Project (96052).

A crew of four local residents will be hired to construct the dock and ramp.

1997 EXXON VALDEZ TRUS COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997
Personnel		$4.5
Travel		$0.8
Contractual		$52.8
Commodities		$0.0
Equipment		$0.0
Subtotal	$0.0	$58.1
General Administration		$4.4
Project Total	$0.0	$62.5
Full-time Equivalents (FTE)		0.1
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
$0.0	$0.0	$0.0	$0.0	$0.0	

Dollar amounts are shown in thousands of dollars.

Comments:

1997

Prepared:

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUS[illegible] COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
Undetermined	Subsistence Resource Specialist II	16A	1.0	4.5	0.0	4.5
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		1.0	4.5	0.0	
					Personnel Total	$4.5

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
2 rt Anchorage to Port Graham plus 4 days per diem	0.2	2	4	0.1	0.8
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.8

1997

Prepared:

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Port Graham Village Council for planning and construction of dock and ramp	
4A Linkage	52.8
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$52.8

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997
Personnel		$10.4
Travel		$0.0
Contractual		$6.0
Commodities		$0.0
Equipment		$33.2
Subtotal	$0.0	$49.6
Indirect		$3.2
Project Total	$0.0	$52.8
Full-time Equivalents (FTE)		5.2
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
$0.0	$0.0	$0.0	$0.0	$0.0	

Dollar amounts are shown in thousands of dollars.

Comments:

1997

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Name: Port Graham Village Council

FORM 4A
Non-Trustee
SUMMARY

Prepared: 4/15/96

1997 EXXON VALDEZ TRUS' :OUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
	Undetermined	Skilled Laborer	1.3	2.0		2.6
	Undetermined	Skilled Laborer	1.3	2.0		2.6
	Undetermined	Skilled Laborer	1.3	2.0		2.6
	Undetermined	Skilled Laborer	1.3	2.0		2.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		Subtotal	5.2	8.0	0.0	
					Personnel Total	$10.4

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$0.0

1997

Prepared:

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Name: Port Graham Village Council

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUS COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Boat lease (for transport of building materials to Port Graham)	6.0
Contractual Total	$6.0

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Name: Port Graham Village Council

FORM 4B
Contractual & Commodities DETAIL

Prepared: 4/15/96

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
Materials to build floating skiff dock	1	30.0	30.0
Set of chain and anchors	1	3.2	3.2
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$33.2

Existing Equipment Usage: Description	Number of Units
Set of tools needed to construct ramp and assemble dock	1

1997

Project Number: 97267
Project Title: Port Graham Floating Skiff Dock for Subsistence Harvesters
Name: Port Graham Village Council

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Funding for Educational Harvest Trips: Port Graham

Project Number:	97268
Restoration Category:	General Restoration
Proposer:	Port Graham Village Council
Lead Trustee Agency:	ADF&G
Cooperating Agencies:	
Alaska SeaLife Center:	
Duration:	1st year, 3-year project
Cost FY 97:	$022,000
Cost FY 98:	$022,000
Cost FY 99:	$022,000
Cost FY 00:	$000,000
Cost FY 01:	$000,000
Cost FY 02:	$000,000
Geographic Area:	Port Graham Bay, Lower Kenai Peninsula
Injured Resource/Service	Subsistence

ABSTRACT

Since the *Exxon Valdez* oil spill, there is a scarcity of some key resources close to Port Graham. Subsistence users have been forced to travel further to harvest sufficient resources. Because such trips are expensive, participation in these trips has been limited to the most experienced and productive harvesters. This has meant that young adults and teenagers have had less of a chance to participate and gain experience than was the case before the oil spill. This project would provide funding to allow for additional trips, which would reduce the average cost of such trips, reduce the pressure to harvest as much as possible on each trip, and provide for the inclusion of young adults and teenagers on harvesting trips. This would partially restore the system of education in harvest activities that existed before the oil spill.

INTRODUCTION

Subsistence harvests and uses of fish and game in Port Graham were impacted by the *Exxon Valdez* oil spill. In 1989, the year of the spill, subsistence harvests in Port Graham were 122 pounds per person as compared with 227 pounds per person in 1987. This decline was due to both fear of contamination to wild foods, and because the oil spill clean-up prevented harvest activities. Although harvest levels have rebounded, subsistence harvesters report that some resources have become more scarce since the oil spill. This means that they now have to travel further and have to expend more time and effort to harvest the same amount of resources. There are few roads and trails nearby, so most of the additional travelling is done by skiff.

Because such harvesting trips are expensive, participation in the trips has been limited to the most experienced and productive harvesters. This has meant that young adults and teenagers have had less of a chance to participate and gain experience than was the case before the oil spill. This also reduces the level of interaction between active harvesters and young people in Port Graham. As reflected in the Restoration Plan: "There is particular concern that the oil spill disrupted opportunities for young people to learn subsistence culture, and that this knowledge may be lost to them in the future (Chapter 5, pg 23)". The Restoration Plan includes reintegration of the cultural values provided by gathering, preparing, and sharing of food into community life as a recovery objective for subsistence. This project would help reach that objective for Port Graham residents.

Subsistence practices are best taught by participation. To try to teach young people about subsistence in any other way would be to remove it from its proper context. Subsistence is about more than just food. It is also about cooperation and cohesiveness in the community, as well as about links to past and future generations. This sense of continuity and connectedness helps young people to understand their place in the world. This can be very important to the well being of the community and the individuals who live there. When subsistence is removed from its context, much of this meaning is lost.

This project would provide funding to allow for additional harvesting trips. This would reduce the average cost of such trips, thereby reducing the pressure to harvest as much as possible on each trip, in turn allowing young adults and teenagers to be included on harvesting trips. This would partially restore the system of education (or apprenticeship) in harvest activities that existed before the oil spill.

NEED FOR THE PROJECT

A. Statement of Problem

Resource scarcity since the oil spill has forced subsistence users to travel further to harvest sufficient resources. Young people are not being taken along on these trips because they are expensive and efficiency is paramount. This means young people are being deprived of the opportunity to learn harvesting techniques, and are also being deprived of the social, psychological and cutural benefits of participating with others in

an activity essential to the comon good of their community. This project would help restore subsistence services damaged by the oil spill. It could also reduce harvest pressure on damaged resource populations close to the community, some of which are the subject of other restoration projects (for example the Chugach Region Clam Restoration project, 96131 and 97131).

B. Rationale/Link to Restoration

This project will help the recovery of subsistence services by furthering the reintegration of cultural values provided by gathering, preparing, and sharing of food into community life in Port Graham.

It could also help the recovery of injured resource populations close to the community, some of which are the subject of other restoration projects, by encouraging harvest efforts away from the community.

Since this project was proposed by the community and would be managed by local residents, the project would also further the goal of involving local people in the restoration process.

C. Location

The project would involve residents of the community of Port Graham, on the Lower Kenai Peninsula.

COMMUNITY INVOLVEMENT

The idea for this project came from the residents of Port Graham, and would directly involve the residents of that community.

PROJECT DESIGN

A. Objectives

1. To provide funding for educational harvest trips away from the community of Port Graham.
2. Encourage the apprenticeship of young people in harvest activities.
3. Enhance the recovery of local populations of injured resources by encouraging harvests away from the community.
4. Further the goal of community involvement in the restoration process.

B. Methods

ADF&G would enter into a cooperative agreement with the Port Graham Village Council to manage the project. The Port Graham Village Council in turn, would hire local boats to transport and house participants during harvest trips. Funds would be provided for the hiring of boats and crews and for supplies for the trip. The Village Council would ensure that participants include an appropriate mix of experienced harvesters, young adults and teens.

The Port Graham Village Council will submit a brief descriptive report to ADF&G. The report will describe the harvest trips, including an assessment of the successes and problems of the project from the community's point of view.

ADF&G will negotiate the contract, monitor contract performance, process invoices under the contract, and provide assistance to the Village Council as needed. At the conclusion of the project, ADF&G will write a a final report for submission to the Trustee Council.

C. Cooperating Agencies

SCHEDULE

A. Measurable Project Tasks for FY97 (October 1, 1996-September 30, 1997)

October	Negotiate contract between ADF&G and the Port Graham Village Council
October	Port Graham Village Council hires boats and crews, and selects participants
October-November	Two harvest trips
January-May	Two harvest trips
August 31	Port Graham Village Council submits report on trips and expenditures to ADF&G
September 30	ADF&G submits final project report to the Trustees

B. Project Milestones and Endpoints

The project is anticipated to run for three years, with four harvest trips during each year. It is difficult to predict when the project objectives will be met, since so many variables are involved. The complete recovery of subsistence services is dependent upon the complete recovery of all resource populations in the area, as well as the reintegration of subsistence values into community life. The effectiveness of the project will need to be evaluated annually.

C. Completion Date

The project, as proposed would end in September 1999. However, there would be a need to evaluate the effectiveness of the project and the state of recovery of subsistence services at that time to determine whether further funding would be justified.

PUBLICATIONS AND REPORTS

No publications are anticipated as a result of this project. The Port Graham Village Council will provide a brief written report to ADF&G by August 31, 1997, evaluating the effectiveness of the project from the community's point of view. ADF&G will submit a final project report to the Trustees by September 30, 1997.

PROFESSIONAL CONFERENCES

No participation in professional conferences is anticipated as a result of this project.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

This project complements the efforts of several on-going restoration projects including the Community Involvement and Use of Traditional Knowledge Project (96052, 97052), and the Chugach Clam Restoration Project (96131). It also furthers the work towards subsistence restoration begun under the Subsistence Foods Safety Project (93017, 94279) and the Resource Abnormalities Study (950279).

PROPOSED PRINCIPAL INVESTIGATOR

Walter Meganack, Jr.
c/o Port Graham Village Council
P.O. Box 5510
Port Graham, Alaska 99603
Phone: (907) 284-2227
Fax: (907) 284-2222

PERSONNEL

Walter Meganack, Jr.: Is a lifelong subsistence user, and is the local facilitator for Port Graham under the Community Involvement Project (96052).

The project will also involve the hire of one or more local boats and crew.

In addition, local harvesters and youth will particpate in the project.

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$4.5						
Travel		$0.8						
Contractual		$15.0						
Commodities		$0.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$20.3	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
General Administration		$1.7						
Project Total	$0.0	$22.0	$22.0	$22.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		0.1						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Prepared:

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY
4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/ Step	Months Budgeted	Monthly Costs	Overtime	Proposed FFY 1997
Name	Position Description					
Undetermined	Subsistence Resource Specialist II	16A	1.0	4.5	0.0	4.5
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		1.0	4.5	0.0	
					Personnel Total	$4.5

Travel Costs:	Ticket Price	Round Trips	Total Days	Daily Per Diem	Proposed FFY 1997
Description					
Anchorage-Port Graham	0.2	2	4	0.1	0.8
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.8

1997

Prepared:

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract with Port Graham Village Council to hire boats and crews and oversee the project	
4A Linkage	15.0
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$15.0

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$1.6						
Travel		$0.0						
Contractual		$10.0						
Commodities		$2.0						
Equipment		$0.0	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$13.6	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$1.4						
Project Total	$0.0	$15.0	$15.0	$15.0	$0.0	$0.0	$0.0	
Full-time Equivalents (FTE)		1.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Name: Port Graham Village Council

FORM 4A
Non-Trustee
SUMMARY

Prepared:

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
	Walter Meganack Jr.	Project Manager	1.0	1.6	0.0	1.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		Subtotal	1.0	1.6	0.0	
					Personnel Total	$1.6

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$0.0

1997

Prepared:

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Name: Port Graham Village Council

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Boat(s) and crew(s), $2,500 per harvest trip, 4 trips	10.0
Contractual Total	$10.0

Commodities Costs:	Proposed
Description	FFY 1997
Supplies for trips, food to supplement harvested wild foods, first aid supplies, erc, $500 per trip, 4 trips	2.0
Commodities Total	$2.0

1997

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Name: Port Graham Village Council

FORM 4B
Contractual & Commodities DETAIL

Prepared: 4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	

1997

Project Number: 97268
Project Title: Funding for Educational Harvest Trips: Port Graham
Name: Port Graham Village Council

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Subsistence Marine Mammal Management Project (The Status of Subsistence Marine Mammals in the Lower Cook Inlet/Kachemak Bay Region.)

Project Number:	97271
Restoration Category:	Monitoring & Restoration Subsistence?
Proposer:	Seldovia Village Tribe, IRA
Lead Trustee Agency:	
Cooperating Agencies:	
Alaska SeaLife Center:	
Duration:	1st year, 3-year project
Cost FY 97:	$108.4
Cost FY 98:	$112.9
Cost FY 99:	$112.9
Cost FY 00:	
Cost FY 01:	
Cost FY 02:	
Geographic Area:	Lower Cook Inlet / Kachemak Bay
Injured Resource/Service:	Harbor Seal, Sea otter, Subsistence

ABSTRACT

This restoration project is directed toward marine mammals in the Lower Cook Inlet/Kachemak Bay region of Alaska - specifically sea otter, stellar sea lions and harbor seals. While there have been several studies conducted since the *Exxon Valdez* oil spill attempting to document its environmental impact, there have been few reliable studies conducted in the Seldovia area. Therefore, Seldovia Village Tribe in association with Nanwalek and Port Graham communities, will conduct a comprehensive population study of marine mammals in their region with the view to managing the resource on a sustainable basis.

INTRODUCTION

Since the *Exxon Valdez* oil spill in 1989, many traditional food sources taken from the sea have been jeopardized by pollution. Among those affected are the harbor seal, sea otter, and stellar sea lion. This in turn has impacted upon the Native population in the Seldovia area.[1]

Historically, Seldovia (Chesloknu) has been inhabited by a range of Native people over the millennia, ranging from the Inuit, through to the coastal Tanaina Natives, Athabascan Natives from the Alaskan interior, and the Aleut people from the Alaskan coastal islands.Over time, the region has absorbed several different bands of Natives, so that today, Seldovia Village Tribe reflects a diverse cultural and ethnic heritage. This history is a history of struggle - against the natural elements, against invaders and colonizers, and in more recent times, against economic and cultural deprivation.

Modern Seldovia originated in the late 19th century as a Russian trading post. The local economy was subsistence based and was supplemented by marketing furs at the trading post. By the 1920s Seldovia was considered more as a "white frontier town" and less as a "Native village". The population increased as many Scandinavian fishermen emigrated there. The commercial fishing boom during the 1920s brought canneries, salteries, hotels, shops, a public school, saloons and even a dance hall to Seldovia. When the boom subsided, Seldovia settled into a stable population and economy, which persisted until very recently.

In the 1980s the area, heavily dependent upon the seafood industries, witnessed the collapse of the King crab industry and more recently, a drastic decline in the commercial salmon fishing industry - the backbone of the local economy. With the area being unsuitable for most agricultural enterprises, and the rapid decline of key industries in the local economy, many of the Native and non-Native people in the area have been made either unemployed or under employed. This, added to the relatively high cost of living - most things have to be shipped in to Seldovia, has made it difficult for many families to sustain themselves.[1]

Consequently, many people are relying on more traditional, subsistence methods of surviving, namely, hunting and gathering. The residents of the modern Seldovia area have always engaged in such activities, but now, more than ever before, it has become a matter of necessity. The combination of having a greater number of people dependent upon subsistence in order to support their families, and the destruction of animals and their habitat by pollution, is bound to put increasing pressure on the subsistence game supply.[2]

In view of this situation, Seldovia Village Tribe believes that it is of critical importance for it to document the current state of its subsistence resources, and marine mammals in particular. This is important for at least three reasons:

(1) A sustainable subsistence marine game supply is vital to the well being of the local Native people.

(2) If the marine subsistence resources are being depleted, the Tribe needs to identify the source(s) of this decline, the rate of decline and where those sources are declining.

(3) An accurate assessment of the subsistence resources is necessary in order for the Tribe to develop a resource management plan to restore and safeguard its subsistence food supply and maintain an ecological balance in the area.

NEED FOR THE PROJECT

A. Statement of Problem

The basic problem is that there is increasing pressure on traditional subsistence food sources in the Lower Cook Inlet/Kachemak Bay area. This is in part due to increasing economic hardship in the region generally, and in part, due to the destruction and damage to marine life and their habitat as a result of the *Exxon Valdez* oil spill.

However, while there have been numerous studies carried out in an effort to document the ecological impact of the *Exxon Valdez* oil spill, the Lower Cook Inlet/Kachemak Bay area has received relatively minor attention, and none recently. This is especially true of the Seldovia area.[3]

All indications are that *some* damage was caused to marine animals by the *Exxon Valdez* oil spill in the area. In addition, it is thought that the marine animals may have also experienced population pressure from an increase in subsistence hunting by local Natives. But to date, there is very little hard core data either substantiating or refuting these suspicions.

B. Rationale

Native groups in the region are anxious to determine the actual state of marine animals in the region for the purpose of subsistence. It is their desire to establish the size and growth rate of these populations so that they can effectively manage these resources on a sustainable basis.

This is not possible however, without monitoring and research on a sustained basis. This necessarily includes physically counting the animals, as well as surveying the local Native Alaskans to ascertain the actual number of animals being taken for subsistence purposes, when, and where they are taken, their sex and age (adult/immature).

C. Location

The project will take place in the Kachemak Bay/Lower Cook Inlet area and encompass the villages of Seldovia, Port Graham, and Nanwalek. It is planned that the whole of Kachemak Bay, including the east side of the Lower Cook Inlet from Point Adam to Adam Point, will be monitored for marine animals. Included in the area will be Seldovia bay, Kasitna bay, Jakalof bay, Tutka bay, Sadie Cove, Yukon Island and China Poot. The villages of Nanwalek, Port Graham and Seldovia will be surveyed to obtain data on the subsistence needs of local Natives and the actual type and number of animals taken, when and where.

COMMUNITY INVOLVEMENT

The actual research design for the survey will require community involvement. In order to test the appropriateness of the questions, a focus group comprising of village residents, will be conducted. Their participation and feedback will have a direct impact upon the survey design and its implementation.

Additionally, village meetings will be held to inform the local communities involved, of what is being undertaken and solicit their support for the project, including the community surveys. They will also be kept informed once the project is underway, by way of Quarterly village meetings.

The resource management team will be selected from the community. One member from each of the three Tribal Councils will be appointed to the team. Additionally, one community member from each

village will be elected by their respective village, to sit on the management team[board]. The Team will convene Quarterly meetings. The venue will be on a rotating basis, with each village taking turns to host the meetings.

With respect to counting the animal populations, local Native hunters will be hired - one from each village. Also, the boats utilized in the monitoring process will be hired from local Natives.

PROJECT DESIGN

A. Objectives

(1) Carry out a detailed study of existing subsistence marine mammals in the Lower Cook Inlet/Kachemak Bay area.

This will involve counting and monitoring traditional subsistence marine sources, specifically sea otters, harbor seals, and stellar sea lions. When are they most plentiful (or scarce), and where? This will be carried out over an initial three year period.
This will allow the researchers to determine if there are any fluctuations in the animal population in the short run.

(2) Carry out a survey in the three local communities to find out which marine animals are being utilized for subsistence purposes in the region. It is anticipated that the initial survey will take 6-8 months from the design stage to the tabulation of results.

Follow up surveys will be conducted at the end of Year 2 and Year 3. Each follow up survey will take 3 months from survey to data tabulation. This is necessary to get a complete picture of the state of the subsistence resources. It is important to correlate subsistence consumption with changes in the animal population.

This survey will include both Natives and non-Natives. Three area villages will be surveyed - Port Graham, Seldovia, and Nanwalek. Surveying both groups is important. It is known that Natives take a number of the identified animals for subsistence purposes. What is not known is whether non-Natives account for any of the marine animal deaths.

While it is illegal for non-Natives to kill marine animals for subsistence or commercial purposes, it is possible that some animals are killed accidently, such as becoming ensnared in fishing nets or are destroyed when raiding fishing nets. If they do, it is important to identify which animals, how many, when, and under what circumstances they are killed.

(3) Establish a resource management plan.

Once the Tribe has identified the extent of its subsistence resources and their characteristics (e.g. migration patterns, growth/decline rate etc), and a knowledge of what the subsistence needs are within the community, it will then be in a position to evaluate what can be taken, when, how much, and by whom. These are vital elements in planning for the preservation and utilization of resources on a sustainable basis.

B. Methods

Basic hypotheses:

(1) The harbor seal population is declining by a rate of at least 5% per year.

(2) The sea otter population is declining at a rate of at least 5% per year.

(3) The stellar sea lion population is declining by at least 5% per year.

(4) Subsistence take (kill) by Natives will be greatest during the haul out season.

(5) Killing of all three species by non-Natives will be highest from June-August.

(6) The combined subsistence and non-Native kill total will be insufficient to account for the population decline.

Since the first year of research will be primarily used to establish base line statistics, further hypotheses will be proposed after the first year's data is compiled. The idea is to keep the research as simple as possible. Null hypotheses have been proposed and simple Chi Square tests will be applied utilizing bivariate and multivariate analysis.

With respect to monitoring marine animals, the basic research method will be to go out in a boat and physically count the designated animal species within specific physical parameters. This will be done one day every two weeks for the duration of the project (three years). This will allow the researchers to determine population changes over time by location. It will also allow them to determine patterns of migration, birth rates (by counting pups), mortality rates etc.

By attempting to physically count every animal within a designated area, the sample size should be statistically valid. It will be impossible to count every single animal, but by counting every visible specimen within a designated area, the vast majority will be accounted for. By repeating this process in the same location every two weeks, a valid sample size will be established.

The community subsistence survey will utilize the survey questionnaire. Interviews will be conducted via telephone. Where telephones are unavailable, the project director will visit the household and conduct a face to face interview utilizing the questionnaire.
An attempt will be made to survey every household, thereby establishing the validity of the sample (since N=universe).

The community survey data will be cross-tabulated with the animal count to establish population size, mortality rates, population concentrations, ages and sex ratios of the populations. It will also allow the researchers to determine when the highest number of animals are killed by humans and this can in turn be cross-tabulated with overall population size and changes observed. The purpose of this is that it will help the Resource Management Team ascertain when the best time to take the various species is, to minimize the overall attrition rate on the population.

SCHEDULE

A. Measurable Project Tasks for FY97 (October 1, 1996-September 30, 1997)

October 1-December 31:	**Hire a project director** on full time basis to oversee the project.
October 1-December 31:	**Prepare NEPA Compliance Documents.**
October 1-December 31:	**Hire a consultant** (e.g. Marine biologist) to train the project director and team in how to research their subsistence resources. The consultant will provide other technical assistance as needed. The hiring of a biologist, resource management expert or similar, is anticipated.
October 1-December 31:	**Hire three local hunters** from the three identified villages to carry out marine animal counts.
October 1-December 31:	**Establish hire of boat(s)** for preliminary research and marine animal counts. These will be hired from local hunters and fishermen.
October 1-January 31:	**Establish a Resource Management Team.**
January 2-February 28:	**Establish and conduct focus group** for community subsistence survey.
January 6-31:	**Hold Quarterly community meetings,** hold elections for Resource Management Team representatives.
January 6-31:	**Appoint Tribal Council representatives** to the Resource Management Team.
January 2-September 30:	**Conduct a detailed study (count)** of marine animal resources.
January 22-25:	**Attend** the Annual Restoration Workshop.
March 24-July 31:	**Conduct** the consumer subsistence survey.
April 11:	**Marine animal** monitoring progress report due.
April 14-30:	**Quarterly community meetings** with Resource Management Team.
June 27:	**Subsistence survey** progress report due (submit to Resource Management Team).
July 11:	**Marine animal** monitoring progress report due.
July 14-31:	**Quarterly community meetings** with Resource Management Team.

August 1-August 31:	**Analyze** community survey data.
August 15:	**Subsistence survey progress report** due (submit to Resource Management Team).
Sept. 1-September 30:	**Write and submit Survey report** to Resource Management Team.
September 30:	**Develop** a resource management plan.
September 30:	**Annual Report** from Project Director due to Resource Management Team.

B. Project Milestones

* **Hire a project director** on full time basis to oversee the project.

Time line: 1-3 months (to hire). The position is for 3 years minus the time required to hire the project director. Anticipated hire from January 1997-September 1999.

* **Hire a consultant** (e.g. Marine biologist) to train the project director and team in how to research their subsistence resources. The consultant will provide other technical assistance as needed. The hiring of a biologist, resource management expert or similar, is anticipated.

Time line: October 1996-September 1999. An initial 2-3 day training session, followed by 1 and 2-day sessions at intervals to be determined in consultation with the Tribal Council, project director and the consultant, for technical assistance purposes. Up to 60 consultancy days will be budgeted for, over a three year (36 month) period.
Of this, 30 days will be allowed for from October 1-September 30 in Year 1(1996-97).

* **Hire three local hunters** from the three identified villages to carry out marine animal counts.

Time line: January 1997-September 1999. They will be utilized on a part-time basis for 32 months at an average of 1 day per week each.

* **Establish hire of boat(s)** for preliminary research and marine animal counts. These will be hired from local hunters and fishermen.

Time line: January 1997-September 1999. This breaks down as 65 rental days per boat.

*** Establish Resource Management Team**

To coordinate the project, evaluate research results and activities, and develop a resource management plan, a Resource Management Team will be established. The team will be comprised of representatives from each of the three villages.

- Establish criteria for deciding which resources are most important. This will be established by way of the initial tri-village survey, village meetings, and consulting with local elders and hunters. A Resource Management Team will be established comprised of representatives from the three villages.

Time Line: Established by end of January 1997 continuing through September 1999.

* **Establish and conduct focus group** for community subsistence survey.

- Design survey questionnaire to be directed at both Native and non-Native communities.

- Establish a pre-test format. This is where the researcher - in this case, the project director, gets a group of people together to test the suitability of the survey. They should be representative of the community. Do they understand the questions? As part of the screening process, the focus group will be tested with a preliminary trial phone survey interview.

Time Line: Commence in January 1997, end by February 28, 1997.

* **Hold Quarterly community meetings.**

Time Line 1996-97: January 6-31, April 14-30, July 14-31, October 13-31.
1997-99: January Weeks 2-4, April Weeks 2-4, July Weeks 3&4,
October Weeks 2-4. In 1999, the final Quarterly Meeting will be held in Weeks 3&4 of September.

* **Conduct a detailed study (count)** of marine animal resources.

- The project director and the local Native hunters from the three previously identified villages will be responsible for carrying out population counts and monitor patterns of migration, haul out times (when they have pups, shed their fur), sex, and approximate age distributions of the marine animal populations. The research team will also attempt identify the general state of health of the marine animals.

Time Line: January 1997-September 1999.

* **Marine animal** monitoring reports.

Time Line **1997:** Progress reports April 11, July 11, November 30 (Annual).
1998: Progress Reports March 31, June 30, September 30 (Annual).
1999: Progress Reports March 31, June 30, September 30 (Annual).

* **Conduct** the consumer subsistence survey.

- Seldovia Village Tribe has gained valuable experience in social research from past projects and does not anticipate the need to hire a social research consultant for this phase of the project. If one is deemed necessary, they will be hired in a troubleshooting role on a per diem basis.

- Make the necessary adjustments to the survey resulting from the focus group feedback, and distribute it to the community through the mail. The Tribe plans to use a phone survey in an effort to raise the participation rate. In a previous survey carried out by SVT in 1993, they had a 43% response rate using a mail in survey. Hopefully, the response rate will be higher using the phone - if a little more expensive!

  The survey will be mailed out and then people will be contacted by phone later. That way there won't be any surprises on the part of the public.

- The idea is to survey *every* household within the Seldovia Village, Port Graham, and

Nanwalek Tribal Areas - or at least as many as possible! The relatively small population means that this is not an unrealistic goal.

- The survey results will be fed in to the database and a report sent to the management group. By keeping the results on a database, it can be compared in later years to see if there have been any changes.

Time Line: Initially, March 24-November 30, 1997. Follow up surveys and presentations will be conducted May-September in both 1998 and 1999.

The initial community subsistence survey will be completed by September 1997 .
A written report will be submitted to the Management Team by September 30 1997, and the results disseminated to the three participating communities during the month of October 1997. This will take two forms: (a) Printed results and conclusions expressed in lay terms; (b) An oral presentation at village meetings. This will allow interested parties to ask questions, seek clarification and offer their input into the process.
This process will be repeated in 1998 and 1999 with slightly different time lines. Surveys will be conducted May-June. The reports will be submitted by July 31, and community meetings held in the month of September for both 1998 and 1999.

* **Annual Report** from Project Director due to Resource Management Team.

Time line: November 1997, 1998, September 1999.

* **Annual Report** due to Trustee Council.

Time Line: April 15, 1998, 1999, 2000.

* **Develop** a resource management plan.

- Develop a resource management plan to conserve and utilize the resources in a responsible manner. This may include putting restrictions on certain resources, using such mechanisms as quotas, or even outright bans on certain sources in order to safeguard them for the future.

- Present the research findings to the Resource Management Team comprising of members from the three representative villages. Also, to propose to the three Native tribes a joint responsibility plan to manage the resources within the tri-tribal Area.

Time line: September 1997-September 1999. No serious plan can be developed until after the first year's data has been compiled. The development of the management plan will be ongoing from the end of September 1997 through September 1999.

Subsistence survey: Progress reports will be presented to the Resource Management Team by June 27, and August 15, with the final report due September 30 for FY 1997.
For FY 1998 and 1999 reports will be due by June 30 and August 31.

Animal Monitoring: Progress reports will be presented to the Resource Management Team by June 27, and August 15, with the first annual report due September 30 for FY 1997.

For FY 1998 and 1999, progress reports will be submitted by November 30, 1997, February 28 1998 /99, May 31, 1998/99 and the annual report by September 18, 1998/99.

C. Completion Date

The project completion date is September 30 1999. Final report to be submitted to Trustee Council by April 15, 2000.

PUBLICATIONS AND REPORTS

Although none are anticipated at this time for the first year, consideration will be given to submitting reports for peer review based on the recommendation of the Resource Management team and the Trustee Council. Annual reports will be submitted to the Trustee Council . A Resource Management plan developed by the end of the project.

PROFESSIONAL CONFERENCES

January 22-25: **Attend** the Annual Restoration Workshop.

PERSONNEL

All positions for this project will be hired. The Seldovia Village Tribe has a very qualified management which oversees many projects.

The Seldovia Village is headed by Mr. Fred Elvsaas, and managed by Ms. Crystal Collier. The Seldovia Village Tribe contracts its accounting needs to Ms. Darlene Crawford to oversee the tribe's bookkeeper.

Fred. H. Elvsaas, is the President of both the Tribe and the Seldovia Native Association, Inc. He has been at the helm of SNA for over 20 years, using his experience in business to manage many economic projects, both large and small. Mr. Elvsaas' leadership has accounted for SNA's success.

Crystal Collier, is the Director of the Tribe, on the Tribal Council, and the Corporate Secretary for SNA. Ms. Collier was responsible for the Tribe's successful bid for IRA status. Under her guidance, the Tribe has obtained and successfully administered contracts and grants from IHS, BIA, HUD and ANA. She has also successfully brought the Tribe into a Title III Compact with the Indian Health Service.

Darlene Crawford, is the Vice President of Finance for SNA. She has worked closely with Mr. Elvsaas for over 20 years, and has contributed greatly to the successful ventures of SNA. She is an accomplished accountant, and lends her experience to the Tribe by managing their financial accounts.

LITERATURE CITED

1 Alaska Dept.of Fish and Game(1996)Wild Resource Harvests and Uses, Offshore Oil&Gas Development, and the *Exxon Valdez* Oil Spill in Seldovia
Division of Subsistence Anchorage AK 99518

2 Wolfe, Robert, Craig Mishler(1995)
The Subsistence Harvest of Harbor Seal and Sea Lion by Alaska Natives 1994
Technical Paper #236 Alaska Dept. of Fish and Game Division of Subsistence
Juneau Alaska.

3 Ibid (both sources) see also
Kelly, B., J. Anthony, L. Jemison(1994)
Status and Trends of Harbor Seal and Sea Otter Populations in Prince William Sound and the Lower Cook Inlet, Alaska. Sea Otter Commission,
Fairbanks AK 99708.

SELDOVIA NATIVE ASSOCIATION, INC.

P.O. DRAWER L

SELDOVIA, ALASKA 99663

(907) 234-7625 • 234-7890

January 19, 1996

Mr. Hoyt Ogle
Subsistence Project Director
Seldovia Village Tribe
P.O. Drawer L
Seldovia, Ak. 99663

Dear Mr. Ogle:

This letter will show our support for the coordination of applications from the villages of Nanwalek, Port Graham and Seldovia for any restoration, and baseline studies for seal, sealions and sea otters.

We appreciate your work in the subsistence area, and are willing to do what we can to aid any grant or application. Today, the Board of Directors unanimously voted support for your endeavors.

Sincerely,

Seldovia Native Association, Inc.

Kim T. Collier
Vice President

KTC/dc

Seldovia Village Tribe

P.O. Drawer L
Seldovia, Alaska 99663
(907) 234-7898 Fax: (907) 234-7637

RESOLUTION # 96-04

A RESOLUTION AUTHORIZING SELDOVIA VILLAGE TRIBE TO APPLY FOR AND ADMINISTER AN EXXON VALDEZ OIL SPILL (EVOS) TRUSTEE COUNCIL, GRANT.

WHEREAS, the Seldovia Village Tribe is a federally recognized Alaska Native IRA Tribe, and

WHEREAS, the best interest of our people requires that the Tribal Governments take an active role in the resource management activities in their usual and accustomed areas to promote the continued supply of subsistence resources and the protection and preservation of our traditional and natural resources; and

WHEREAS, the resident of the community of Seldovia use and or depend upon the marine mammals for food, traditional arts and crafts, and for our spiritual and cultural well being since time immemorial; and,

WHEREAS, the people of the community of Seldovia are very concerned about health of the marine mammal population and desire to take action to help restore the population to healthy levels; and,

NOW, THEREFORE, BE IT RESOLVED by the Tribal Council of the Seldovia Village Tribe that we authorize the application for funding to the **EXXON VALDEZ OIL SPILL (EVOS) TRUSTEE COUNCIL** grant.

BE IT FURTHER RESOLVED that Tribal President Fred H. Elvsaas be authorized to sign the grant application.

This resolution was duly adopted by at a Seldovia Tribal Council meeting held April 12, 1996, by the following vote; Ayes 7 Nays 0 Abstain 0

APPROVED:
Fred H. Elvsaas
Fred H. Elvsaas
President

ATTEST:
Crystal Collier
Crystal Collier
Secretary

PORT GRAHAM CORPORATION

P.O. BOX 5569 • PORT GRAHAM, ALASKA 99603-5569 • (907) 284-2212 • FAX 284-2219

February 22, 1996

Hoyt Ogle
Seldovia Tribe
P.O. Drawer L
Seldovia, AK 99663

Dear Mr. Ogle,

This letter is to express our support of coordinated applications for restoration and baseline studies for seal, sealions and sea otters.

Sincerely,

Patrick Norman, President
PORT GRAHAM CORPORATION

PN/vfy

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997						
Personnel		$60.0						
Travel		$10.0						
Contractual		$15.5						
Commodities		$0.0						
Equipment		$1.2	LONG RANGE FUNDING REQUIREMENTS					
Subtotal	$0.0	$86.7	Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Indirect		$21.7						
Project Total	$0.0	$108.4	$112.9	$112.9				
Full-time Equivalents (FTE)		48.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:
Indirect costs are based on a 25% rate. Seldovia Village Tribe's current federal indirect rate is 47.3%. The difference in the rate will be supplied by other tribal indirect funds.
Costs for reports, community involvment and workshop attendance are either in the appropriate line items (e.g. Travel and Per diem) or covered in personnel and indirect.

1997

Prepared:

Project Number: 97271
Project Title: Subsistence Marine Mammal Management Project
Name: Seldovia Village Tribe, I.R.A.

FORM 4A
Non-Trustee
SUMMARY

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
	1 position	Project Director	12.0	2.7		32.4
	1 position	SVT Village Liason/assistant	12.0	1.3		15.6
	3 positions	Resource surveyor	8.0	0.5		4.0
		Resource surveyor	8.0	0.5		4.0
		Resource surveyor	8.0	0.5		4.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		Subtotal	48.0	5.5	0.0	
					Personnel Total	$60.0

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
	Anchorage Restoration Workshops	0.2	2	6	0.2	1.6
	Village visits, Project director (4 trips to each, hiring, survey coordination)	0.1	8	8	0.0	0.8
	Village visits, Village Liason (2 trips to each, coordination)	0.1	4	4	0.0	0.4
	Seldovia visits, Resource Counters (7 trips, project meetings, port call)	0.1	14	0	0.0	1.4
	Resource Management meetings (6 trips to one village by other four)	0.1	24	12	0.0	2.4
	Contractual Travel (8 trips for training and technical assistance)	0.2	8	18	0.1	3.4
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$10.0

1997

Prepared:

Project Number:
Project Title: Subsistence Marine Mammal Management Project
Name: Seldovia Village Tribe, I.R.A.

FORM 4B
Personnel
& Travel
DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Marine Biologist or a Resource Management expert for training, research and technical assistance throughout the project. (Calculated at $300 per day with 30 days needed.)	9.0
Boat Hires. Local vessels will be hired for use in the mammal counts. 26 vessel days at $250 per day.	6.5
Contractual Total	$15.5

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Prepared:

Project Number:
Project Title: Subsistence Marine Mammal Management Project
Name: Seldovia Village Tribe, I.R.A.

FORM 4B
Contractual & Commodities DETAIL

4/15/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
Global Positioning Satellite System (GPS), portable	1	0.6	0.6
Mustang Survival suites	3	0.2	0.6
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$1.2

Existing Equipment Usage: Description	Number of Units	

1997

Project Number:
Project Title: Subsistence Marine Mammal Management Project
Name: Seldovia Village Tribe, I.R.A.

FORM 4B
Equipment
DETAIL

Prepared:

4/15/96

Chenega Chinook Release Program

Project Number:	97272
Restoration Category:	General Restoration; Replacement of Injured Resources and Services
Proposer:	Prince William Sound Aquaculture Corporation
Lead Trustee Agency:	AK. Dept. of Fish and Game (ADF&G)
Cooperating Agencies:	None
Alaska SeaLife Center:	
Duration:	4th year, 5 year project
Cost FY 97:	$45,000
Cost FY 98:	$48,500
Geographic Area:	Crab Bay, Prince William Sound
Injured Resource/Service:	Pink Salmon and Other Subsistence Resources and Services

ABSTRACT

Chinook salmon incubated and reared at the Wally Noerenberg Hatchery (WNH), PWS, will be released in Crab Bay, adjacent to the native community of Chenega. Adult salmon returning to the site of release will provide replacement resources and associated services injured by the *Exxon Valdez* oil spill. Two releases have taken place (1994, 1995) as part of this multi year project. Adult salmon will begin returning in 1996 and 1997, with larger numbers projected at nearly 1,000 adult fish, returning in 1998 and thereafter.

INTRODUCTION

Chinook salmon smolts are planned for release at Crab Bay as part of an ongoing Trustee Council program to replace injured subsistence resources and services. The first release was proposed in 1992. However, due to the lengthy review and permitting procedures required to implement such a restoration project, the first release of 50,000 chinook salmon smolt could not be executed until the summer of 1994. Chinook smolt were again released in May, 1995. Chinook salmon return varying between adult ages of 4 and 7 years. A few adults are anticipated to begin returning in 1996, with nearly 1,000 returning in 1998 as the age classes build and releases continue.

Chinook salmon returning to WNH will be harvested as brood stock. Eggs will be taken and incubated at the hatchery. Resultant fry will be reared for an additional year to smolt size and 50,000 will be targeted for release at Crab Bay. This annual cycle will continue through 1998.

NEED FOR PROJECT

A. Statement of Problem

Oil spilled from the ruptured tanks of the *Exxon Valdez* spread throughout much of the waters of Prince William Sound (PWS). In the wake of this disaster, numerous species and populations of marine resources were impacted. Direct oiling of salmon spawning streams, intertidal beaches, marine mammals, and birds, resulted in injury and in some instances death of affected organisms. In particular, pink salmon were injured and are still classified as not recovering. As consequence from the injury to the marine resources, associated human activities based in the harvest and utilization of injured resources were curtailed and described as injured services.

B. Rationale/Link to Restoration

Heavy oiling and injury occurred in Southwest PWS in the immediate vicinity of the village of Chenega Bay. Local subsistence harvesting of marine resources was impacted. In 1992 residents of Chenega Bay proposed to the Alaska Department of Fish and Game to begin a release of hatchery incubated chinook salmon *Oncorhynchus tshawyscha* to replace injured marine resources and restore subsistence harvesting services to local residents.

The recovery objective for subsistence is 'healthy and productive resources at pre-spill levels, and people are confident that those resources are safe to eat'. Although chinook salmon were not historically an important subsistence resource in the vicinity of Chenega, these fish will provide a replacement resource during local resource recovery.

C. Location

The location for the release is in Crab Bay, located near the village of Chenega Bay on Evans Island in PWS.

COMMUNITY INVOLVEMENT

Residents of Chenega will be contracted through this project to provide local support in feeding, care and monitoring of the smolts until they are released from holding pens which will be temporarily anchored at the release location.

PROJECT DESIGN

A. Objectives

The key objective of this project is to provide a return of adult chinook salmon to subsistence users at Crab Bay. The release objective is 50,000 smolts. The adult return objective, based on a marine survival estimate of 2% from smolts to adults, is 1,000 fish. Chinook salmon are a multi age species, therefore, returns will not meet the expected potential until fish of ages 4, 5, 6 and 7 return following 4 years of releases. Preceding the 1998 return, fewer numbers of adults of ages 4 and 5 year fish will return in 1996 and 1997.

1. Annually release 50,000 chinook salmon smolts at Crab Bay.

2. Produce a projected annual return to Crab Bay of approximately 1,000 adult chinook salmon beginning 1998 with lesser numbers in 1996 and 1997.

3. Replace injured resources and services to subsistence users in the vicinity of Crab Bay, PWS.

B. Methods

Annually, 820,000 chinook salmon eggs have been taken at PWSAC's Wally Noerenberg hatchery (WNH) on Esther Island. Brood stock are harvested from among adult chinook salmon returning to the hatchery. Following incubation, hatch and outmigration from incubator trays, chinook fry are reared in raceways at WNH for one year. Prior to release, chinook smolts are transferred to saltwater net pens at the hatchery or to remote release sites for a short period of saltwater rearing.

In the spring of 1997, 50,000 chinook smolt will be taken from WNH and transported via barge and fry/smolt transport tanker to Crab Bay. The smolt will be released into a 350 m^3 (40 ft X 40 ft X 5 ft) net pen anchored in Crab Bay. Smolts will be reared for approximately two to three weeks at the site for imprinting and additional growth prior to release. Technical support for the incubation, hatching and feeding of the smolts will be provided by PWSAC. Residents of Chenega village will be contracted, trained in smolt feeding and rearing, and paid for services.

C. Cooperating Agencies, Contracts and Other Agency Assistance

Contracts include: 1) Contract between Alaska Department of Fish and Game and Prince William Sound Aquaculture Corporation to provide, rear, and release 50,000 chinook salmon smolts at Crab Bay. This contract will enable payment by the lead agency to PWSAC for salmon smolt and services (broodstock harvest, egg-take, incubation, rearing and transportation). PWSAC operates the only hatchery in PWS which cultures chinook salmon. 2) Contract for services between PWSAC and Chenega Bay (Chenega Corporation) for residents to provide onsite care and feeding for smolts during netpen rearing and imprinting phase at Crab Bay. Residents of Chenega Bay are locally available throughout the day to monitor the netpen and

feed the smolt on a prescribed schedule. 3) Barge contract to transport chinook salmon smolts from Wally Noerenberg Hatchery to Crab Bay.

SCHEDULE

A. Measurable Project Tasks for FY 97 (October 1, 1996 - September 30, 1997)

April 96 to May 97:	Smolt rearing (brood year 95)
March 97 to April 97:	Outmigration of brood year 96 fry
May 1 to June 1:	Install netpen at Crab Bay
May 14 to June 7:	Feed and imprint smolts
June 1 to June 30:	Dismantle and remove netpen
July 1 to August 1:	Take chinook eggs for incubation
August 1 to March 15:	Incubation
September 1 to Sept. 30:	Final reporting

B. Project Milestones and Endpoints

Objective 1: Annually release 50,000 chinook salmon smolts at Crab Bay. This objective is measurable throughout project life (through FY 98) by accounting for smolts transported and released at Crab Bay.

Objective 2: Produce a projected annual return to Crab Bay of approximately 1,000 adult chinook salmon beginning 1998 with lesser numbers in 1996 and 1997. There will be no method by which to ascertain the actual total adult return. However, observations on harvest numbers will be requested from Chenega residents.

Objective 3: Replace injured resources and services to subsistence users in the vicinity of Crab Bay, PWS. This will be accomplished by having adult chinook salmon return to Crab Bay for harvest. The degree of project success will in part be dependent on numbers of returning fish and on ability of users to harvest them.

C. Completion Date

Annually, smolt releases will be completed by June. Adult brood stock harvest occurs during June, eggs incubated during the late summer and fall months. Resultant fry are then reared for an additional year in fresh water to reach physiological maturity for release into salt water. Adults will begin returning to Crab Bay in 1996 from the 1994 release. Returns will grow in number until consecutive year releases return together as 4, 5, 6 and 7 age fish. More than 1,000 adults are expected to return beginning 1998, and will continue to do so if smolts are released on an annual and ongoing basis.

PUBLICATIONS AND REPORTS

Annual reports will be submitted to the Trustee Council through FY 98. Annual reports will address success of smolt transfer and release, numbers of smolt released and indications of project success as fish mature and begin their adult returns. A final report will be submitted in

1999 which will give better perspective of project success at the adult return phase, even though smolt releases will discontinue under Trustee funding in FY 98. Annual reports will be submitted in April of the year following the FY funding.

PROFESSIONAL CONFERENCES

No specific conference attendance is planned at this time.

COORDINATION AND INTEGRATION OF RESTORATION EFFORT

The Chenega chinook release project has been proposed and coordinated through the PWS-Copper River Regional Planning Team. Members on the Team include ADF&G personnel; project permitting by ADF&G is contingent on RPT recommendations and commissioner approval. These coordinated actions assure integration with ADF&G management objectives for wild stock conservation and restoration.

EXPLANATIONS OF CHANGES IN CONTINUING PROJECTS

There are no changes proposed for the FY 97 season.

PROPOSED PRINCIPAL INVESTIGATOR

Name	Jeff Milton
Affiliation	PWSAC, Production Manager
Mailing Address	P.O. Box 1110, Cordova, AK 99574
Phone number	(907) 424-7511
Fax number	(907) 424-7514
e-mail address	n/a

PERSONNEL

Personnel needed to carry out project include:

- Jeff Milton: project leader - oversight, coordination, transportation, reporting;
- Andrea Tesch: hatchery manager - hatchery site management and quality assurance;
- fish culturists - egg-take, incubation and rearing;
- Chenega residents - netpen feeding.

Jeff Milton

Work experience

1995-date: Production manager for PWSAC. Oversees operations of five salmon hatcheries producing five species of Pacific salmon. Works with the PWSAC and regional planning groups to develop fish production goals. Responsible for achievement of hatchery production objectives. Works with ADF&G and other state and federal agencies to assure the PWSAC enhancement program is in compliance with regulations and required permits. Works with hatchery staff, fish culture industry, ADF&G and scientific community to develop research goals for the enhancement program.

1995-1994: WNH hatchery manager, PWSAC. Responsible for all phases of fish culture and production at hatchery.

1993-1994: MBH hatchery manager, PWSAC. Responsible for all phases of fish culture and production at hatchery.

1992-1993: CCH hatchery manager, PWSAC. Responsible for all phases of fish culture and production at hatchery.

Education

1982-1987: Oregon State University, B.S. Degree in Fisheries Biology.

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997	LONG RANGE FUNDING REQUIREMENTS					
			Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
Personnel	$6.3	$0.0						
Travel	$0.0	$0.0						
Contractual	$42.1	$42.1						
Commodities	$0.0	$0.0						
Equipment	$0.0	$0.0						
Subtotal	$48.4	$42.1						
General Administration	$3.9	$2.9						
Project Total	$52.3	$45.0	$48.5					
Full-time Equivalents (FTE)		0.0						
	Dollar amounts are shown in thousands of dollars.							
Other Resources								

Comments:

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Agency: Alaska Department of Fish and Game

FORM 3A
TRUSTEE
AGENCY
SUMMARY

Prepared: 4/9/96

1997 EXXON VALDEZ TRUS..EE COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:		GS/Range/	Months	Monthly		Proposed
Name	Position Description	Step	Budgeted	Costs	Overtime	FFY 1997
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
	Subtotal		0.0	0.0	0.0	
					Personnel Total	$0.0

Travel Costs:	Ticket	Round	Total	Daily	Proposed
Description	Price	Trips	Days	Per Diem	FFY 1997
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
					0.0
				Travel Total	$0.0

1997

Prepared:

Project Number: 97272
Project Title: Chenega Chinook Release Program
Agency: Alaska Department of Fish and Game

FORM 3B
Personnel
& Travel
DETAIL

4/9/96

1997 EXXON VALDEZ TRUS..._ COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract with Prince William Sound Aquaculture Association	42.1
When a non-trustee organization is used, the form 4A is required. **Contractual Total**	$42.1

Commodities Costs:	Proposed
Description	FFY 1997
Commodities Total	$0.0

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Agency: Alaska Department of Fish and Game

FORM 3B
Contractual & Commodities DETAIL

Prepared: 4/9/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

New Equipment Purchases: Description	Number of Units	Unit Price	Proposed FFY 1997
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage: Description	Number of Units	Inventory Agency

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Agency: Alaska Department of Fish and Game

FORM 3B
Equipment
DETAIL

Prepared: 4/9/96

1997 EXXON VALDEZ TRUS.__ COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Budget Category:	Authorized FFY 1996	Proposed FFY 1997
Personnel	$27.9	$27.9
Travel	$0.7	$0.7
Contractual	$10.2	$10.2
Commodities	$1.3	$1.3
Equipment		$0.0
Subtotal	$40.1	$40.1
Indirect	$2.0	$2.0
Project Total	$42.1	$42.1
Full-time Equivalents (FTE)		10.0
Other Resources		

LONG RANGE FUNDING REQUIREMENTS

Estimated FFY 1998	Estimated FFY 1999	Estimated FFY 2000	Estimated FFY 2001	Estimated FFY 2002	
$63.7					

Dollar amounts are shown in thousands of dollars.

Comments:

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Name: Prince William Sound Aquaculture Corporation

FORM 4A
Non-Trustee
SUMMARY

Prepared: 4/9/96

1997 EXXON VALDEZ TRUS COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

Personnel Costs:			Months	Monthly		Proposed
	Name	Position Description	Budgeted	Costs	Overtime	FFY 1997
	J. Milton	Project Leader	1.0	5200		5.2
	A. Tesch	Hatchery Manager	1.0	4300		4.3
	G. Clark	Fish Culturist	2.0	2600		5.2
	Vacant	Fish Tech	3.0	2200		6.6
	Vacant	Fish Tech	3.0	2200		6.6
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
		Subtotal	10.0	16500.0	0.0	
					Personnel Total	$27.9

Travel Costs:		Ticket	Round	Total	Daily	Proposed
	Description	Price	Trips	Days	Per Diem	FFY 1997
	One round trip to Anchorage for project leader: RT @ $224	224	1	3	150	0.7
	$150 per day perdiem for 3 days.					0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
					Travel Total	$0.7

1997

Prepared:

Project Number: 97272
Project Title: Chenega Chinook Release Program
Name: Prince William Sound Aquaculture Corporation

FORM 4B
Personnel
& Travel
DETAIL

4/9/96

1997 EXXON VALDEZ TRUSTEE COUNCIL PROJECT BUDGET
October 1, 1996 - September 30, 1997

Contractual Costs:	Proposed
Description	FFY 1997
Contract with Chenega community to provide support personnel for rearing, feeding, monitoring and release of smolts at Crab Bay.	1.5
Contract for barge services to move smolts from Wally Noerenberg Hatchery to Crab Bay.	8.7
Contractual Total	$10.2

Commodities Costs:	Proposed
Description	FFY 1997
Fish food for rearing of smolts	1.3
Commodities Total	$1.3

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Name: Prince William Sound Aquaculture Corporation

FORM 4B
Contractual & Commodities DETAIL

Prepared: 4/9/96

1997 EXXON VALDEZ TRUS[illegible] COUNCIL PROJECT BUDGET

October 1, 1996 - September 30, 1997

New Equipment Purchases:	Number of Units	Unit Price	Proposed FFY 1997
Description			
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
Those purchases associated with replacement equipment should be indicated by placement of an R.		**New Equipment Total**	$0.0

Existing Equipment Usage:	Number of Units	
Description		

1997

Project Number: 97272
Project Title: Chenega Chinook Release Program
Name: Prince William Sound Aquaculture Corporation

FORM 4B
Equipment
DETAIL

Prepared:

4/9/96