OIL SPILL RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

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How can we mitigate for the Pris Nocle fish in Knight Island Passage?

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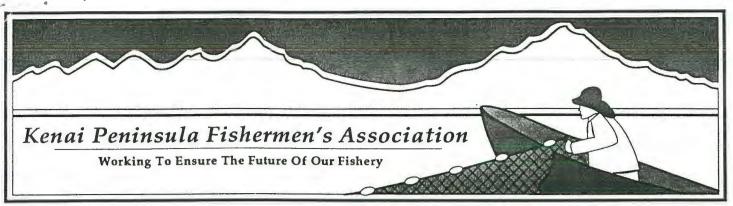
OTHER SPRINGER RESTROKEANTION COMMENTS

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Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Popler	Denson	
Box 6	89	
Hora.	AK 9963	



34824 Kalifornsky Beach Road · Suite E · Soldotna · Alaska · 99669 · (907) 262-2492

100 4/23/40

April 19, 1990

Oil Spill Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501 COPY

Dear Restoration Planners:

The Kenai Peninsula Fishermen's Association (KPFA) is a group of over 400 commercial fishermen, mostly setnetters, who fish salmon in the Cook Inlet area. Commercial fishermen in Cook Inlet have been impacted by oil spills during two of the past three years. In 1987, the tanker *Glacier Bay* spilled 150,000 gallons of crude oil when it went aground near Nikiski. The commercial fishing season was interrupted and an overescapement of about 900,000 sockeye salmon occurred in the Kenai River. The 1989 $Exxon\ Valdez$ spill of 11.0 million gallons +(??) also reached Cook Inlet and likewise interrupted commercial fishing periods. Again, one result was an overescapement into the Kenai River of approximately 900,000 sockeye salmon.

Sockeye salmon are a rearing species and the potential impacts from overescapement include damage to the rearing environment due to overcropping of zooplankton, which are their primary food supply. Early findings from ADF&G research indicate that both sockeye fry and smolt produced from these overescapements are smaller than normal. It will be several years before we know the full impacts to the life cycle of the sockeye salmon from these oil spills. Another impact that may have occurred to salmon in Cook Inlet from the <code>Exxon Valdez</code> oil spill is that of direct exposure of juvenile salmon to oil in the marine environment. Some mortality of salmon could have occurred, however, no programs were in place to study this possibility in Cook Inlet. There is also a possibility that there was some effect on the imprinting process of salmon smolts due to oil exposure. We do know that peak numbers of salmon smolts were present in upper Cook Inlet during the same time period that <code>Exxon Valdez</code> oil was present.

KPFA believes that upper Cook Inlet fisheries resources should be considered as part of the restoration planning process. We suggest that the most significant benefits might occur in the area of habitat protection. The Kenai River, which is our major salmon producer in central

Cook Inlet for both sport and commercial fisheries, is threatened with over-development. This was one of the major concerns expressed in the <u>Kenai River Comprehensive Management Plan</u>, completed in 1986.

Restoration funds could perhaps be utilized for purchase of wetlands adjacent to the river. Another idea would be to purchase development rights adjacent to the river. This is a program that has worked out well in a few east coast states where wetlands areas are beginning to be protected. There is also a need to complete inventory and mapping of wetlands areas adjacent to the Kenai River. These critical areas must first be identified in order to be protected.

We would urge you to consider the above concepts in the restoration planning process. We do not believe that marine birds and mammals need be overemphasized just because they were more visibly impacted. There will be some damage to fisheries resources documented, however because of the problems in studying marine fisheries resources much of the damage may go unobserved. Fisheries, both commercial and sport, are the backbone of Alaska's economy and lifestyle. Habitat protection is the most integral component in maintaining the health and insuring the future of our fisheries.

Thank you for considering our comments and good luck in the restoration planning process. If we can be of further help please don't hesitate to contact our organization.

Sincerely.

Loren B. Flagg

Executive Director

Fren B. Hazz



C.I.S.A. P.O. Box 4311 Homer, AK 99603

April 27, 1990

Alaska Department of Fish & Game Oil Spill Impact Assessment Restoration 333 Raspberry Road Anchorage, AK 99518-1599

Dear Oil Spill Restoration Planning Office:

I would like to thank you for coming to Homer and providing the local residents their opportunity to have input on the proposed restoration process of oil damaged areas due to the Exxon Valdez oil spill.

Though the area of the Outer Kenai Peninsula is a long way from Prince William Sound and where the oil spill occurred, some areas were damaged and impacted to the same extent, if not more.

Areas such as Windy Bay, Rocky Bay, Port Dick, Tonsina Bay, Nuka Bay, Gore Point, and Nuka Island, to name a few, were all victims of oil from the Exxon Valdez.

In the past one of the largest user groups of these areas has been the commercial salmon fisherman. We fish salmon in these areas on an annual basis and were denied that opportunity during 1989 due to the oil spill. At this point we don't know what the future holds.

We do feel we are one of the largest impacted user groups in this area. We would like to see the loss of fish rearing habitat quantified to the maximum extent possible and see these areas restored to their historic fish production levels and environmental state.

In some years, more than one of every three fish harvested in the entire lower Cook Inlet area has come from these areas.

Keeping that in mind, some things that can be done on the short term to mitigate the effects for salmon fisherman is the continued maintenance and operation of F.R.E.D. Division Projects in this area. The F.R.E.D. Division Facilities can also be used for incubation and reintroduction of salmon fry and smolt to areas that have potentially become barren due to oil in the intertidal areas and salmon spawning beds.

Long term mitigation could be the funding for projects such as the Paint River fish ladder and stocking programs. Purchase or buy-back of permanent logging rights for habitat protection of salmon streams could be another alternative.

Page 2

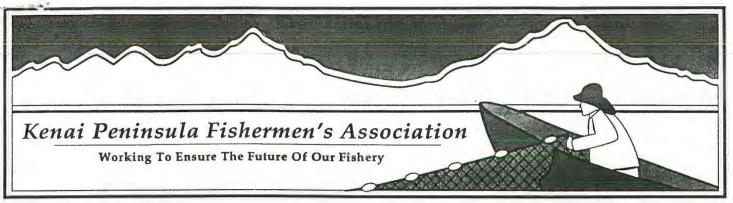
The two issues I want to stress are that there was considerable damage outside of Prince William Sound, the Outer Kenai Peninsula being one area, and the economic importance of this area to our fishery.

Thank you for your time and consideration.

Sincerely,

Brad Chisholm

1096



34824 Kalifornsky Beach Road · Suite E · Soldotna · Alaska · 99669 · (907) 262-2492

April 19, 1990

131

Oil Spill Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501



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Sincerely,

J. 1. 7.

Loren B. Flagg

Executive Director

Fren S, Hagg

MEMORANDUM

State of Alaska

TO:

Gregg Erickson

DATE: 03-09-90

FILE NO .: .

TH RU:

TELEPHONE NO.:

SUBJECT:

Sources of Support

for Oil Spill Exhibit

Stan Senner

The attached request came to me (unsolicited) from the President of the Pratt Museum in Homer. They are looking for support to underwiite the costs of their traveling oil-spill exhibition, "Darkened Waters." This is mot something we could justify supporting out of our restoration budget, but I am wandering if you can recommend any more promising avenues that should be explored within the State Government? If so, I will pass on the suggestion.

I am typing this on a typewriter taken right out of John Wayman's personal office. He loaned it to me for 30 days! It has no self-correcting modes device, as you can see.

Thank you for your consideration.

attachment: 1



HOMER SOCIETY OF NATURAL HISTORY PRATT MUSEUM 3779 Bartlett Street Homer, Alaska 99603



(907)235-8635

March 7, 1990

Stanley E. Senner Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, AK 99501

Dear Stan,

Although this is a formal letter, let me start by saying it is great you have been able to come back to Alaska. I look forward to working with you on some aspects of the research and planning related to oil spill restoration (except for speaking engagements!), and Ellen and I await your visit here in Homer, perhaps during the shorebird migration? I told you some time ago about the impressive exhibit the Museum has done on the oil spill and it seemed to me that your shop might be interested in knowing about it and perhaps participating in extending our message to the lower 48. Following is some descriptive boiler plate and enclosed is a brochure of the current exhibit and a budget for the traveling one.

The first anniversary of the Exxon Valdez oil spill will be here in a few days. Immediately following the spill last March, our Board of Directors ordered the staff to get together an exhibit detailing the first eight weeks of the spill, covering the geographic extent (large wall map), damage caused to wildlife and habitats (photographs and oiled specimens), clean-up efforts attempted (photographs and clean-up materials), biological impacts to the food chain (descriptive poster), social, economic, and psychological impacts created by the spill (interviews and photos), and public and political reactions to the spill (prevention, legislation, reactions) including weekly updates on the spill and its clean-up. Much of the work was done by volunteers and many of the photos and other materials were donated. Since the exhibit opened in June 1989, thousands of people from both Alaska and the lower 48 have been so impressed with the factual material that imparts a conservation ethic message, that they recommended we take the exhibit "on the road".

Consequently, we have made a commitment to create a traveling exhibit "DARKENED WATERS" by formulating a budget, hiring a professional museum exhibit planning consulting firm, contacting many agencies around the lower 48 who may wish to host the exhibit, and trying to raise funds for the project. The purpose of the exhibit is to present a comprehensive, factual account of the accident, response, clean-up efforts and impacts of the spill; to examine the significance of these events to other coastal regions exposed to chronic and catastrophic oil spills; and to relate the Exxon Valdez catastrophe to national and global problems associated with petroleum exploration, development, transportation, and consumption. We are negotiating the exhibit's travel with several organizations, for example the Smithsonian Institution and the Pacific Science Center, but we can not firm up any locations until we can guarantee completion of the exhibit. We plan to have the exhibit to its first location by September of this year and our expected audience for the exhibits currently projected two year trip around the lower 48 is 1,500,000 people.

We estimate that the total project will cost \$150,000; we have raised \$76,500 to date, of which \$34,000 comes from our own funds. We have received contributions from a number of sources as detailed in the enclosed budget sheet. Could we argue that although you are concerned with attempting to restore habitats and wildlife numbers to the way things were before the spill, that you are also equally concerned in getting the conservation ethic message, implicit in our factual exhibit, across to a large number of people regarding the immensity of the damage done, the tremendous difficulty in clean-up and habitat restoration and the facts that, 1. such spills can be prevented, 2. clean up can be considerably more effective if preparation is made before a spill occurs, and 3. by being conservative and more conscious of what products and uses are made of petroleum, we can decrease the demand for oil, thus reducing the probability of future spill damage?

If there is a chance we could get some funds from your office for this project, let me know how we can best apply. For more details on the actual project, you should talk to our Museum Director, Betsy Pitzman at 235-8635, but you can always call me at home!

Cheers,

George C. West President, Board of Directors

Encl

DARKENED WATERS TRAVELING EXHIBIT ON THE EXXON-VALDEZ OIL SPILL

PLANNING BUDGET March 1990

<u>Phase</u>	<u>Timeline</u>	Budget Category	Projected Costs
I.PLANNING \$48,200	7/89–4/90	Preliminary Exhibit Designers Fee Costs Guest Curator Museum staff Communications Administrative costs(15) Total-Planning	10,700 13,300 2,700 7,500 3,000 5,000 6,000 48,200
II.FABRICATION \$77,500	4/90-7/90	Exhibit Designers Fee Costs Guest Curator Museum staff Communications Administrative costs(5% Total-Fabrication	56,700 5,300 7,500 1,500 3,000 3,500 77,500
III.CIRCULATION \$24,300	9/90–9/92	Publicity/Promotion Museum staff Circulation costs Administrative Total-Circulation	5,000 5,000 8,300 <u>6,000</u> 24,300
TOTAL EXHIBIT CO	STS		150,000
Alaska A Alaska C Alaska H Anchorag Center f Center f Homer So National Prince W	ect contributor udubon Society onservation Fou umanities Forum e Audubon Societ or Alaskan Coasor Marine Conseciety of Natura Wildlife Feder illiam Sound Fu onal Equipment,	undation ety stal Studies ervation al History ration und	76,500

73,500

FUNDS NEEDED TO COMPLETE PROJECT

A PROFILE

of the tanker accident and events which followed is presented through photographs, maps, and other materials. Interpretive narrative gleaned from a broad spectrum of sources helps to describe and examine:

The events and known facts of the accident.

What happens in an oil spill.

The immediate environmental impacts.

Social, psychological, economic, and political impacts.

Containment, cleanup, and other mitigative efforts.

Questions of long-term environmental impact and recovery.

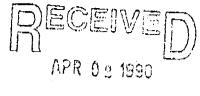
Implications for conservation and utilization of resources.



3779 Bartlett Street Homer, Alaska 99603 (907) 235-8635 **DARKENED WATERS** profile of an oil spill PRATT MUSEUM

RAW

Port William Facility of Shuyak Island P.O. Box 670556 Chugiak, Alaska 99567 Tel. (907) 688-2253



OSIAR DIV.

March 29, 1990

Judith A. Maxwell, Ph.D Senior Restoration Economist Alaska Department of Fish and Game P.O. Box 3-2000 Juneau, Alaska 99802-2000

Dear Dr. Maxwell:

We of Port William hope to assist you in your effort to restore the Kodiak area's pristine and life-supporting condition; that which existed before the Exxon oil spill.

In oil damaged areas or areas adjacent, we orge you to prohibit bird hunting of all species and to limit deer hunting drastically until extensive surveys can be made of wildlife losses.

Surveys of state and federal agencies should be collaborated and organized into small, efficient teams to avoid distress of wildlife, and local residents should be consulted and asked to participate when they are intimately familiar with a survey's area. I urge this not only for their knowledge of local oil damage, but for purposes of safety and efficiency as well. Meither bays, inlets, nor open waters should be attempted in unknown areas without benifit of knowledge of climate, terrain, and the dangers prevailing.

Survey crews should travel in skiffs outfitted with small engines to avoid disturbing wildlife. Aircraft should be restricted to flying altitudes of three hundred feet or higher. Choppers have created a negative impact; pilot's habits of hovering at from five to fifty feet over bird-nesting areas and beaches should be forbidden. This practice severely endangers survival of the young. We certify that we have suffered massive losses of bird and marine life in our area.

Results of surveys of large areas should never be depended upon, because those results may not necessarily be true of the whole of the area. Inspections and studies should be conducted over very small affected areas. Individual studies should be made of mollusks and herring. Back-water marshes and lagoons should not be ignored for, of course, that is where much life originates.

Cook Inlet is also in danger. What Rapid Response Program exists for the Kennedy and Stevens Passages?

Conflicting statements made to the public by state and federal agencies have done untold damage. DEC says we are hard nit; Division of Tourism says we're clean. Another example (we are prepared for future oil spills; we are not prepared) has resulted in public distrust in government quarantees of Rapid Response to future oil spills. Smill another has resulted in fear of wildlife consumption. The Anchorage DAILY NEWS has quered the Department of Pish and Game as saying that Shuyak Island was the third hardest hit area (with Exxon oil) which boasts a deer population, and that prudent deer hunters should nunt elsewhere. Yet, no official tests or surveys were conducted of Shuyak deer that we know of, and deer hunting on Shuyak Island has not been cancelled or even restricted. And the list goes on. These rumors, spread by officials are counterproductive; findings should be carefully authenticated, compared, and studied so that honest, candid statements may be made.

Concerns and constructive ideas of the public and small associations and cooperatives should be heard. Fear is rampant among the people we know; fear of tainted meat and other foods is only one example. We ourselves have repeatedly sent food samples to agencies for analysis and no response has been received. We are among a very few tideland property residents who have been directly hit by Exxon oil, and we have never had any inquiry, save yours, from any state or federal agency, or Exxon.

The Alaska Division of Tourism, the AVA, the various Visitor's and Convention Bureaus, and the Chambers of Commerce need some kind of overall unified guidance in order to promote Alaska tourism effectively rather than each organization desperately denying Exxon oil damage on their own, and in any way they can think of.

Alaska needs representation in Europe that can market not only Germany effectively, but the entire European market, indeed the world market.

Alaska tourism personnel should not be political appointments, but rather well trained, experienced tourism experts. The governor could appoint a special advisory committee of tourism-related business owners to work with a qualified state staff which would keep the Division of Tourism more in touch with the special needs for promoting tourism in Alaska. These businessmen could be tour operators, travel agencies, hotel and airline representatives, lodge owners, and charter boat operators,

Our Exxon oil spill can be a vehicle to a valuable learning experience to everyone in the tourism industry in Alaska. We are far too dependent on too short a tourist season; every possible effort should be focused on expanding public interest in visiting Alaska during winter months. There is much to be learned from the State of Florida—committee approaches, common goals, campaigning, and advance planning. They have fifty years

of hard experience behind them.

Exxon must not be held solely responsible, for business is known to be single-minded and must be regulated, but business should (and usually does) risk loss of license to operate when it violates the rules and regulations under which it is subject.

We look forward to working with the Department of Fish and Game in this huge and challenging team effort of so many able, determined people.

Sincerely yours,

Bruce Cooper, Agent Port William Facility

PAGE 3

5/15/90 Douglas Citson Zagoons everything is hunky along one Desnt know what can be done Mixed anothers Weed to rectify accident upset w/ Egon when they way is

5/15/20 Barbara Bolton Esson in Tooliak info - what dieussed Recovery, Rehab, Acq. = pes.

What agencies will be there?
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to tettemed by RPWG, which

will rep. all agencies who

are members (DEC, ADF4G, Nat Pks, EPA, etc.) \$

ON SEMERAL OF THE CONTROL OF THE CON

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#1) Immeniate ins complete Restoration to Set net Siles in Prince William Sours, Especially Main Bay 2) complete Restoration of birs Rookeries within Prince William Sours Also the Barren Islands
3) Clear up of All Bays that due to top on Currents, trapped and held on to oil Examples Knicht Island: Herring am Marsha Rays. Nucla Island Passace, Knicht Island Passace

I haven't seen these AREAS YET this fear, but
I would like to see All intelled AREAS Cleanes
this YEAR, Either by physical Removal And Replacement
of heavily oiled benches, and Also Further use
OF bloremediation

I would strengly favor acquisition of lands within Prince William Sound and Set Aside as Wild life Refuges. Especially in bird and sea lion Roo Keries. I would like to see protection seates 610cm to Barren Island Graup, bore Pt., Rubber Island, Cape Fairfield, Pay land the state can acquire in Pros! bet it!

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

James Pain Gle Box 374 Sewaro, Alaska 99664

KHWG

(e) I I SPECIAL RESTOREANTION (COMMENTS

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RE: Chugach Native Coxp Concerns.

Chugach Alaska or Chugach Alaska General
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for use of NATIVE PERSONELL TO Clear oil
From the Beeches on on NEAR The Culturally
significant areas CNC has IDENTIFIED.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Box 870053
Wasilla Alasku
99687

ON SPINISPSYORATION (ON MINES

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I wish you would have had this Mtgo.

When I could have come after work.

I think of spil Restoration should be immediately coordinated with local & nortive peoples.

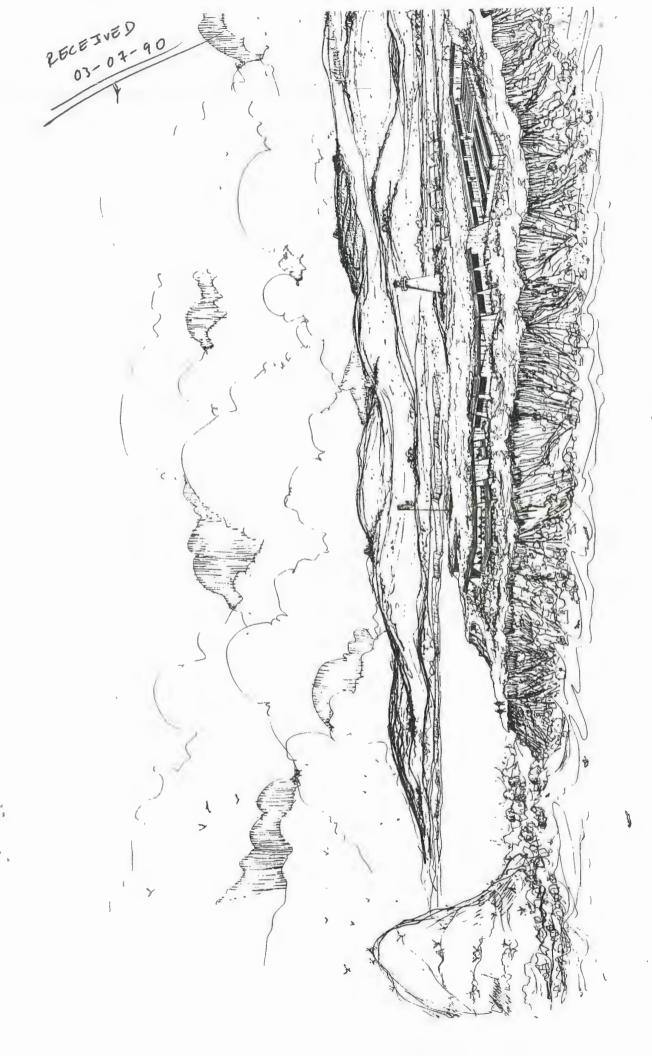
These people should have as much or more imput a decision making power as "professional".

I think it should be your responsibility to sook out this comment (knock on doors).

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

CLYDE VICARY 2158 SUNDISC Anchorage, AK 99508





Proposal for the Formation of an International Wildlife Center

Randall W. Davis, Ph.D. and Terrie M. Williams, Ph.D. International Wildlife Research
(A Non-profit Organization)

I. Introduction

The Exxon Valdez oil spill has demonstrated the need for a wildlife rehabilitation facility that can respond immediately to an oil spill along the southern Gulf Coast of Alaska. Of the marine mammals that could be affected by such a spill, sea otters are particularly vulnerable because they rely on fur for insulation in water. This proposal outlines the concept of a Wildlife Center that can rehabilitate oiled wildlife, especially sea otters, in the event of an oil spill. Additional functions include research and public education on oil spill contingency planning.

II. Purposes of the Wildlife Center

- A. <u>Rehabilitation</u> of oiled sea otters, seals and marine birds.
 - 1. Organizational center for directing the capture, cleaning and rehabilitation of sea otters, seals and marine birds.
 - 2. State-of-the-art rehabilitation facility at constant readiness.
- B. <u>Acquisition</u>, analysis and dissemination of information on wildlife oil spill contingency planning and the treatment of oiled wildlife.
 - 1. Generation of a data base on the effects of oil on wildlife and methods of treatment.
 - 2. International liaison with other organizations dedicated to treating oiled wildlife.
 - 3. Publication of recommendations on wildlife oil spill contingency planning that recognize the special needs of different marine habitats and their wildlife ("ecosystem approach").
- C. Research on the effects of oil on wildlife and methods of treatment.

- 1. Research on the physiological and toxicological effects of oil on wildlife.
- 2. Development and testing of improved methods of treating oiled wildlife.
- D. <u>Public education</u> on oil spill contingency planning and wildlife rehabilitation.
 - 1. Interpretative center for the presentation of educational displays and films on wildlife oil spill contingency planning.
 - 2. Training center for volunteers interested in the treatment and care of oiled wildlife.
 - 3. Information center for publications on wildlife conservation and resource development.

III. Administration

A. Dr. Randall William Davis, Co-Director

Comparative physiologist, Dr. Randall W. Davis, has been studying the physiological adaptations of marine mammals and birds for more than fifteen years.

Dr. Davis received his doctorate from the University of California at San Diego. His dissertation research focused on the metabolic adaptations of marine mammals for diving. Since then, his studies of sea otters, seals and penguins have taken him to polar and tropical regions.

In 1976, he began studying the effects of oil on sea otters and fur seals. From 1983-87, Dr. Davis was the Program Manager for two studies funded by the U.S. Dept. of the Interior on methods to mitigate the effects of an oil spill on sea otters. These studies led to the development of the first successful techniques to clean and rehabilitate oiled otters.

When the T/V Exxon Valdez ran aground in Prince William Sound in 1989, Dr. Davis was asked by the U.S. Dept. of the Interior and Exxon USA to be the Senior Director for the sea otter rescue effort. This program led to the successful rehabilitation and release of 224 oiled sea otters. Dr. Davis is currently Co-Director of International Wildlife Research and a researcher at the University of California at San Diego. He is preparing a report on the sea otter rescue program in Valdez that will include recommendations for oil spill contingency planning in Alaska and California.

B. Dr. Terrie M. Williams, Co-Director

Dr. Terrie M. Williams, an environmental physiologist, has been studying marine and terrestrial mammals for more than twelve years. Her studies have included the muscle

biology of sprinting cheetahs and diving seals, temperature regulation in swimming animals, and the aquatic behavior of sea otters, seals, and whales. These research programs have been conducted all over the world, from Arctic and Antarctic marine environments to South African deserts.

Dr. Williams received an undergraduate degree in Pre-Medical Sciences, and her doctorate in Physiology from Rutgers University. Her dissertation examined the energetics and thermoregulation of running and swimming in the smallest swimming mustelid, the North American mink.

For the past seven years, Dr. Williams has been studying the largest mustelid, the sea otter. She was the Principal Investigator on two Department of Interior studies that examined the effects of crude oil on sea otters. In 1984, she developed the procedure for cleaning oiled sea otters that was used extensively during the Exxon Valdez oil spill. During that spill, she directed the Valdez Sea Otter Rescue Center, the first facility to successfully clean, rehabilitate, and release sea otters and harbor seals impacted by oil.

Dr. Williams, who is Co-Director of International Wildlife Research, is currently investigating the histopathological and toxicological effects of oil on marine mammals. The results will be used to develop a diagnostic procedure for assessing petroleum hydrocarbon exposure for oiled wildlife.

IV. Facilities

The proposed Wildlife Center represents the state-of-the-art rehabilitation facility based on five years of research and the experiences gained from treating oiled sea otters and harbor seals in Alaska. The proposed plan also recognizes the need for continued research and the interest of the public in wildlife oil spill contingency planning.

- A. <u>Conceptual Design</u>. The modular design is divided into four parts (Figure 1):
 - 1. Animal rehabilitation. Facilities for cleaning, drying, critical care, veterinary clinic, food preparation, volunteer dressing area, holding pens and pools and pathology laboratory.
 - 2. Administration. Staff offices, secretarial area, communications center and conference room.
 - 3. Interpretive center and public education. Gallery and theater for educational displays and films, bookstore and classroom.
 - 4. Research. Computer center and data archives, laboratories, library and research staff offices.

B. <u>Site.</u> There are many potential sites for a Wildlife Center within the southern Gulf of Alaska, including Valdez, Homer, Seward and Cordova. Ideally, a site should be accessible by road, have an all-weather airport and have access to a sea water supply.

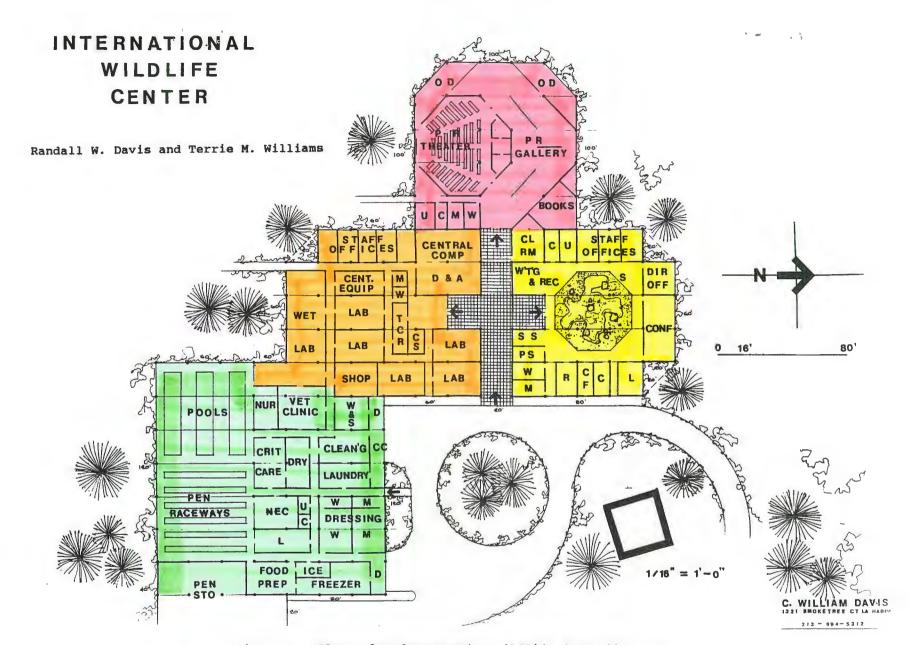


Figure 1. Floor plan for a marine wildlife (sea otters, pinnipeds and seabirds) rehabilitation facility. The floor plan is divided into four components: 1) green = animal cleaning and rehabilitation, 2) yellow = administration, 3) orange = research and 4) pink = public relations and education.

KEY TO FLOOR PLAN

1. Animal Rehabilitation (green)

C = custodial room

CC = cage cleaning area

Clean'g = animal cleaning room

Crit Care = critical care holding area

D = loading dock

Dressing = dressing rooms and lavatories for men and women staff

Dry = animal drying room

Food prep = kitchen for animal food preparation

Freezer = freezer for animal food

Ice = ice machines

L = staff lounge and eating area

Laundry = washing machines, dryers, water conditioners

Nec = necropsy room and pathology laboratory

Nur = nursery for sea otter pups

Pen raceways = raceways (spillways) for sea otter pens

Pen sto = storage area for sea otter pens

Pools = pools for sea otters and pinnipeds

U = utility room

Vet Clinic = veterinary clinic

W & S = weighing and sedation

2. Administration (yellow)

C = custodial

CF = central files

CL RM = class room

Conf = conference room

Dir Off = Director's office

L = lounge

M = men's lavatory

PS = plant security

R = reproduction

S = secretarial area

SS = secretarial staff

Staff Offices

W = women's lavatory

W'tg and Rec = waiting and reception area

3. Public Relations and Education (pink)

Books = book store

C = custodial

M = men's lavatory

OD = outside deck

PR Gallery = public relations gallery/educational displays PR Theater = public relations and education theater

U = utility room

W = women's lavatory

4. Research (orange)

Central Comp = central computer room

Central Equip = central equipment room

CS = chemical store room

D & A = data and archives (library)

Lab = dry laboratories

M = men's lavatory

Shop = machine shop

Staff Offices

TCR = temperature controlled room

W = women's lavatory

Wet Lab = wet laboratories

Appendix 1. Facility Specifications

I. Indoor Space

A.	Administration 1. Conference room for 30 persons 2. Reception/waiting area 3. Secretarial staff offices 4. Director's office 5. Administrative personnel (3 offices) 6. Reproduction room (xerox) 7. Central files room 8. Communications room (outdoor antenna) 9. Plant security / personnel ID room 10. Staff kitchenette	800ft ² 300ft ² 400ft ² 400ft ² 750ft ² 150ft ² 200ft ² 200ft ²
	11. Corridors/toilet/custodian/utility	920ft ²
	TOTAL	4400ft ²
В.	Animal Rehabilitation 1. Weighing and sedation 2. Animal cleaning room (6 stations) 3. Animal drying room 4. Critical care room 5. Animal food preparation room 6. Nursery 7. Veterinarian clinic 8. Utility room (laundry) 9. Dressing room for volunteers and staff 10. Personnel lunch room 11. Freezer space for animal food 12. Ice machine room 13. Corridors/toilet/custodian/utility	300ft ² 500ft ² 400ft ² 500ft ² 500ft ² 300ft ² 800ft ² 1300ft ² 500ft ² 500ft ² 200ft ² 1500ft ²
	TOTAL	7600ft ²
c.	Public Relations 1. Theater for 300 people 2. Lobby 3. Bookstore (wildlife and conservation) 4. Toilet/custodian/utility	3000ft ² 1500ft ² 500ft ² 1250ft ²
	TOTAL	62 50 ft ²

 D. Education/personnel training for animal rehabilitat 1. Lecture area/educational gallery 2. Control room (audiovisual) 3. Audiovisual storage 4. Classroom 5. Corridors/toilet/custodian/utility 	ion 1000ft ² 100ft ² 200ft ² 400ft ² 500ft ²
TOTAL	2200ft ²
E. Research 1. Central computer room (database and archives) 2. Dry laboratories (5 @ 600ft² each) 3. Central wet laboratory (overhead access door) 4. Research staff offices (5 @ 300ft² each) 5. Temperature controlled room 6. Central equipment room 7. Chemical store room 8. Carpentry and machine shop 9. Necropsy and pathology laboratory 10. Corridors/toilet/custodian/utility	1600ft ² 3000ft ² 1600ft ² 1500ft ² 400ft ² 400ft ² 150ft ² 800ft ² 2100ft ²
F. Supply and equipment storage	3000ft ²
G. Indoor atrium	10000ft ²
TOTAL INDOOR SPACE	45600ft ²

II. Outdoor Space

Α.	Concrete holding tanks (3 @ 10ft x 50ft x 6ft) and walkways (animal rehabilitation)	2400ft ²
в.	Concrete raceways for pens (6 @ 3ft x 50ft) and walkways (animal rehabilitation)	3000ft ²
c.	Cage cleaning facility (animal rehabilitation)	400ft ²
D.	Helicopter pad (animal rehabilitation)	10000ft ²
E.	Parking	80000ft ²
F.	Sea water treatment	300ft ²
G.	Landscaping	95000ft ²
	TOTAL OUTDOOR SPACE	191100ft ²

III. Land Requirements

- A. Land use summary
 - 1. Combined indoor and outdoor space for each function:
 - a. Animal rehabilitation = 26700ft² b. Administration = 4400ft²

 - c. Education = 2200ft^2
 - d. Research = 12150ft²
 - e. Public relations = 6250ft²
 - f. Parking, landscaping and misc. = 185000ft²
 - 2. Minimum site size = 236700ft² (5.4 acres)
 - 3. Optimum site size = 10 acres for campus-like environment and future growth
- B. Special requirements
 - 1. Should be within the range of Prince William Sound
 - 2. Proximity to sea water source



Environmental Protection Agency

Alaska Operations Office Room E551, Federal Building 701 C Street Anchorage AK 99513

Phone: (907) 271-5083

- Library - Shipyard Heavy eludustria Swa Fisheries * Swa Fisheries * to Skygeer.

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- Fish House

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Ways

OIL SPILL RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

RECEIVED MOTICE OF MEETING GO MARGARIT BRANSON) Some DAY AS MEETING, NOT MUCH ADVANCE LEAD-TIME NOTICE

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

GORDON WICHSTROM SQUARD EMPLOYMENT CENTER -AM DENT OR LABOR BOX 1009 SQUARD AK 99664

Address - Please leave if you Name would like to have further contact/mailings/notices of the restoration planning groups activities MORA/SEC/USCG-Seward P.O. Box 2449, Seward, AK 99664 CDR. Skwart McGee, Jk Bx 254 Seward, Ax 99664 Dean Kasischka



CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574 (907) 424-3447

January 5, 1990

Dave Kennedy NOAA HAZMAT SEATTLE WA 7600 Sand Point Way NE Seattle, WA 98115

Dear Mr. Kennedy:

It was a real pleasure to read through the material you faxed to me yesterday. As you indicated in our phone conversation, you apparently are aware that I have already been talking to several people from different agencies, land owners and interested groups along the same lines that are outlined in this summation.

if you recall my comments at the close of the workshops of November 28, 29, 30. I stated that based on what was shown there that our position on the use of chemicals would not change, we would openly oppose their use in Alaskan waters. Also based on what was shown in the workshops on bioremediation it was doubtful that we would be able to go along with that type of clean-up enhancement.

Your comments from time to time about the continued questions on the effectiveness of nutrient augmentation under your "Proposed Cleanup Program for 1990", lead me to feel reassured that the use of Inipol EAP22 is not being given blanket approval for wide spread use. After the workshops I called EPA and asked for copies of the data presented at the workshop on inipol because what I felt I saw there was that the use of any "fertilizers" including Inipol did not significantly enhance biodegradation. I have now in my hands the summary report prepared for the Office of Research and Development U.S. EPA as prepared by Nancy Sanders and Ellen Gray of Technical Resources, Inc. of Rockville, Maryland. This report clearly supports the impressions I got at the workshop, and based on this I must say that the use of "fertilizers" must be carefully considered.

With the afore stated comments included I am very pleased with your proposal for 1990. I feel that if we can proceed in this manner that there is an excellent chance of high success in the

1990 effort. I would like to point out that Kodiak has a large number of low energy areas that have been impacted by highly weathered oil and must be given close consideration.

This concludes my remarks, I only want to say again, thanks, for working so closely with us.

Sincerely,

CORDOVA DISTRICT FLSHERMEN UNITED

Jack Lamb

Vice President

cc: CDFU

Attachment 1 Reviewers Comments on NOAA Recommendation

DOI - Pamela Bergmann

Ms. Bergmann provided both substantive as well as editorial comment on several drafts of the recommendation. All substantive comments were incorporated in the final draft. Major points were as follows:

Comment

NOAA Response

FWS, NPS, and BIA reserve the right to decide if bioremediation or chemical cleaning agents are applied on their lands. Agreed. Applies to other land owners as well.

Current questions on the effectiveness of bioremediation should be resolved before proceeding with this technology.

Agreed.

If bioremediation is used it should not necessarily be limited to sheltered areas.

Agreed.

Bioremediation should only continue as long as results show a significant improvement over natural biodegradation.

Agreed.

Hand tools and small groups of workers suggested for removal of tar mats.

Agreed.

Suggested reference to Sec 106, National Historic Preservation Act, with respect to preservation of archaeological sites. Agreed.

Suggested adding a guideline to protect nesting areas and marine mammal pupping areas.

Agreed.

Tilling should not interfere with fisheries and should observe other land manager constraints. Least intrusive methods should be used.

Agreed.

DOA/Forest Service - John Knorr

Mr. Knorr indicated general agreement with the cleanup strategy contained in the recommendation.

EPA - Carl Lautenberger

Mr. Lautenberger indicated general agreement with the proposed approach.

Chugach Alaska Corporation - Plo Park and Peter Nagel

Comment

Oiled logs and tar mats should be dealt with in public and private areas as directed by affected landowners.

Tilling should be done only after consideration of other beach values.

Shoreline surveys should include Native agencies.

NOAA Response

Changed to areas of human use. Agreed with land owner consultation.

Agreed.

Agree that land owners should be involved in surveys.

Cordova District Fishermen United - Jack Lamb

Mr. Lamb provided his endorsement of the general strategy outlined in the draft proposal. His concern was as follows:

Comment

The effectiveness of nutrient augmentation has yet to be convincingly established. This technology should not be used until further evidence is presented.

NOAA Response

The EPA presentation at the Anchorage workshop left doubts which have not yet been clarified. Further evidence on the viability of bioremediation needs to be provided.

Prince William Sound Conservation Alliance - Nancy Lethcoe

Comment

NOAA Response

Debris should be picked up from all shorelines.

Agree.

Debris removal should be undertaken at least twice.

Agreed.

Shoreline survey be conducted in early March.

Weather conditions are not likely to allow an efficient survey that

carly.

Tar mats of any size should be removed.

We believe 6" to be the smallest size warranting removal.

Sierra Club Legal Defense Fund - Stewart Elgee

Mr. Elgee supported the general concept of the recommendation, but felt that the paper needed to include overall restoration and ecological goals. He further indicated his opinion that certain technological approaches had been excluded from the paper without adequate justification based on risk. He also expressed concern that tilling or other mechanical activity that might serve to further contaminate the shallow subtidal zone unless recovery methods were in place. He believes some testing may be appropriate to insure subtidal impacts do not result from mechanical disruption of the sediments.

Mayor of Valdez - Lynn Chrystal

Mr. Chrystal supported the general strategy outlined in the recommendation.

Mayor of Cordova - Robert Van Brocklin

Mr. Van Brocklin supported the general strategy outlined in the recommendation.

Mayor of Seward - Bill Noll

Mr. Noll supported the general strategy outlined in the recommendation.

Mayor of Kenai Borough - Don Gilman

Mr. Gilman supported the general strategy outlined in the recommendation. He indicated that local interests should be thoroughly involved in the planning process.

Exxon - Bob Mastracchio

Mr. Mastracchio indicated his agreement with several technical concepts in the recommendation, however felt that all options should be maintained until the shoreline is resurveyed.

Comment

Limit oil removal in contaminated shellfish areas to low-impact techniques.

Bioremediation has been established as a useful technique.

Debris removal should be limited . to areas which might have an adverse ecological effect.

Tilling should be limited to anaerobic environments and should be considered if less disruptive methods cannot be used. Tilling should not occur if it causes mixing of oiled material into unoiled sediments. Eliminate "post fishing season" restriction; replace with "not to interfere" with fishing.

NOAA Response

Agree that low-impact techniques, including bioremediation, should be attempted first, but excavation must be considered if chronic health threat remains.

While we believe the prognosis is positive, further public discussion of research data is warranted before final decisions are reached.

Floatable debris represents the greatest threat to fishing and recreational uses of the environment and should be removed wherever significant threats to these uses exist.

Agree.

North Pacific Rim - Len Vining, R. Rolland

Mr. Vining indicated support for the NOAA recommendation and found it to be "logically consistent." Specific comments were as follows:

Comment

Eliminate note that chronic shellfish contamination "appears to be limited to Windy Bay." Wait until expert panel establishes levels at which chronic effects may occur.

Importance of shellfish areas cannot be established by quantities alone. Native leaders need to be involved in selection of sites to be tested.

Cleanup activities should be controlled locally.

Cleanup schedule should mimize disruption of fishing and traditional subsistence activities.

Subsistence use areas should be included for bioremediation if techniques pose no health risks. Local communities need to be briefed on bioremediation.

Floatable oily debris should be removed wherever it occurs.

Kodiak Borough - Wayne Coleman

Mr. Coleman believes the recommendation places too much emphasis on the role of natural processes in the removal of oil. Monthly surveys indicate little evidence thus far in Kodiak of tar mat removal by natural processes. Agrees with taking an extremely conservative approach regarding chemicals. Agrees with cleanup objectives and limitations outlined in the recommendation. Believes public concerns regarding bioremediation must be resolved before proceeding with that technology. Recommends cleanup begin April 1. Other comments as follows:

NOAA Response

Agree. Sampling has not been broad enough to establish the assertion in the original NOAA statement nor have threshold levels been established for chronic effects.

Agree.

Disagree. Cleanup needs to controlled by FÖSC.

Agree.

Agree.

Agree.

Kodiak Borough (cont'd)

Comment -

Surface tar mats should be removed in all areas not just those of high recreational or biological value. Has concern with methods and monitoring statements.

Tilling should not be limited to close of fishing season.

NOAA Response

Disagree.

Agree if means can be found to avoid disruption of fishing through uncontrollable sheening.



JUNEAU

DECEIVED

JUN 1 1990

DEPARTMENT OF FISH AND GAME

May 31, 1990



VIWIS

Mr. John C. Dillow, III 9308 Cherry Hill Road, 706 College Park, MD 20740

Dear Mr. Dillow:

Thank you for your May 1 letter and your replenishing plan for Prince William Sound, "A Proposal for a Mariculture System in Alaska."

I have forwarded a copy of your letter and proposal to Commissioner Don Collinsworth, Department of Fish and Game, for his information.

Again, thanks for sharing your plan with me.

Sincerely,

5/S Steve Cowper

Steve Cowper Governor

cc/enc: Commissioner Don Collinsworth

A PROPOSAL FOR A MARICULTURE SYSTEM AY 18 1990
IN ALASKA

GOVERNORIO OFFICE

Prepared for

The Governor and State Legislature of Alaska

Ьγ

John C. Dillow III Marine Biology Student

May 1, 1990

John C. Dillow III 9308 Cherry Hill Rd. 706 College Park, Maryland 20740

May 1, 1990

Steve Cowper, Governor of Alaska Office of the Governor State Capitol Juneau, Alaska 99811-0101

Dear Governor:

I'm sure over the past year you have been hounded about the problems that were created after the Exxon Valdez spill. I feel that it is time to look for a positive solution to the problems that have arisen since then.

I have spent the last three months researching and constructing a plan that would replenish the environment, the economy and the confidence of the people in the oil industry.

Just as with any proposal there is a cost to this plan, but the benefits that will come from this far out weigh the costs. After a review of this plan I'm sure that you will see that it is something that is not out of the reach of the government.

Some type of plan needs to be initiated for the recovery of the Prince William Sound before there is nothing left for us to salvage. I hope that you give this proposal some serious consideration and pass the idea on to your colleagues.

Respectfully,

John C. Dillow III Marine Biology Student

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ABSTRACT

After the oil spill in the Prince William Sound the World started to realize the actual environmental devastation that had occurred. Through research that I have conducted I have not seen a plan that has approached the question of replenishing the environment. It is not too early to start thinking about this issue, even though the cleanup efforts are not finished.

The cost analysis associated with this project calls for an initial investment of \$1.2 million. This is not an absurd figure for the rewards that will benefit the investor. They will receive monetary rewards from crop production, the environment will be replenished and there will be research conducted simultaneously without any further cost to the investor.

This proposal lays out all the parts needed to start such a system. It has a multipurpose functionality that can not be compared to any other ecosystem of its kind.

INTRODUCTION

Subject and Purpose

After the recent oil spill in the Prince William Sound the community and the world were faced with a devastated ecological system. The system appeared to have a bleak future. The proposal that is being introduced plans to recreate the ecosystem that was lost and also to rejuvenate the economy.

Statement of Problem

Since the spill the Prince William Sound area has been depleted of marine life and surrounding wildlife. There is now a real need for some type of replenishing plan.

The people of the Sound who once had depended upon its resources for their livelihood are now going to have to do without unless something is done.

The Federal and State governments in past have been to slow to act, because they do not know where the resposibility lies. In a congressional brief prepared by Martin R. Lee on liability and compensation legislation, he referred to the current conventions as "hodgepodge" (CRS2-3). This needs to change so that replenishing programs can get started with no delay.

Need

Now that the marine resources have been depleted and the fisherman could lose sizeable amounts of revenue a mariculture system is possible solution.

This system will allow the avenues to be opened for research programs on marine life that has been infected by a major oil spill. This kind of research is not easily accessible and any opportunity for such studies to be performed should not go to waste.

Scope

The plan that will be proposed comprises:

- location of the mariculture system which discusses the role of cleanup
- 2. the steps that will be needed to achieve a mariculture system as a functioning plant
- a detailed cost sheet will be presented for the construction and setup of the plant
- 4. a look into the personnel that will be needed to maintain this plant and where they may come from
- 5. an examination of the feasibility by means of a cost/

PROPOSED PLAN

This Plan was designed to replenish the resources that were lost, regenerate money into the fishing industry and to give the possibilities of long-term research in a recovering environment.

Methods

The mariculture system that was proposed can be established by the following steps:

Cleanup and Liability

In this proposal we are going to assume that a proper plan for the cleanup has already been put into effect.

Liability appears to be a burning question in all of us right now. However if we refer to the Trans-Alaska Pipe-line Authorization Act (TAPAA) it states that the owner or operator is responsible for the first \$14 million and the Trans-Alaska Pipeline Liability Fund (TAPLF) is to cover the remaining amounts up to a total expenditure of \$100 million (Exxon Valdez Brief CRS-4). This seems to show that it is a cooperative cost/effort between the Exxon co. and the Federal government.

Location of System

The first item to look at is what type of toxins are still present in the water column or you can just ask yourself "How clean is this area?". The toxicity of the water must be the first and foremost thought when searching the site out.

Another part to consider during the search for the appropriate site is the presence of wind and/or wave action. This is an important aspect for two reasons: (1) if you have winds and/or waves that are too forceful they may prove to be destructive to the physical structures (2) if there is no wind and/or wave action there will be no horizontal circulation of the seas' surface and the water will become stagnant.

A small but not necessarily typical characteristic to look for are naturally occurring flotation devices. These could appear as islands, peninsulas and natural atolls which are just slightly submerged islands. The presences of these could help in cutting down the cost of construction of the plant.

<u>Establishment of a Polyculture System</u> Nutrients

The necessity and availability of nutrients is extremely important to the survival of the system. The nutrient requirements that will be demanded will change from species to species and it also depends on the

developmental stage of the species.

However a technique known as upwelling is found to be very successful. Upwelling can be either natural or it can be forced. This is when the nutrient rich waters of the deep (approx. 1000m) are pumped up to the surface.

Some direct feeding will probably be needed, but an excessive diet direct feeding is not good for any species. Direct feeding tends to place limitations on the species.

Selection of Species

When deciding on what should be cultured the first point of interest should be its market value (e.i.— Salmon). The species chosen should have a high market value. That way when it is produced there will be an existing market for your product.

Availability of juveniles is another characteristic that needs to be considered. Juveniles need to be available at any time so that it will insure annual production of the species. They also need to be available in large quantities which is necessary for a good yield

It is also helpful and less expensive if the species is a native to the area. A good example of this is the Giant Kelps (Macrocystis pyrifera) of the Alaskan Bay. This species is an excellent choose for the system for several reasons: • it produces food and shelter

- it can be used to produce potash, Acetone and Algin
- it is very easily transplanted

Construction

Actual construction of buildings, tanks, holding nets, etc. can be performed by professional carpenters, but all of this work should be closely monitored by several Biologist and experts on the species that have been selected for culturing. This will help to prevent some of the risks that may hinder the species growth.

Cautions

In choosing the proper species an analysis of that species specific sensitivity should be done. For instance, in the case of some bivalves they do not filter out the hydrocarbons that are present in waters that have been contaminated from an oil spill. This could possibly lead to destruction of the species and contamination of any products made from these bivalves.

Projected Costs

+ the survey for an appropriate site should be considered as part of the cleanup costs

```
Construction of 3 buildings for working space &
  storage
  * labor included in hourly figure
  3-bldgs. 50'x 100'(5000 sq.ft.)
  15000 sq.ft. x $42/sq.ft.
                                          $ 630,000.00
Construction of 2 Spawning Tanks
  4"x4'x4'x20'; solid concrete
  19 yds. con.x $40/yd.
                                                760.00
  Pumps: 4 x $1240
                                               4960.00
                                               5720.00
Construction of 3 Floating Nets (see fig. 10.1)
  • Flotation devices, anchors and anchor lines
    provided by Exxon
  * itemized for 1 net <25'x25'x12'>
  300' of 2"x4" x $.16/ft.
                                                  48.00
  6 shts. of .75"x4'x8' marine plywood
          6 x $16/ sheet
                                                  96.00
  1825 sq.ft. of predator net
          1825 x $8/sq.ft.
                                              14,600.00
  1045 sq.ft. of fine mesh net
         1045 \times $13/sq.ft.
                                              13,585.00
  Pumps: 2 x $124
                                   -
                                                 248.00
                                              28,577.00
                                                 <u>x</u>_3
                                              85,731.00
Construction of 4 bivalve cloisters <4'x40'x6'>
  (see fig. 10.5)
  * these are optional due to the sensitivity of
    bivalves available.
  • flotation devices provided by Exxon
  1800' of 2"x4" x $.16/ft.
                                                 288.00
  9 shts. of .75"x4'x8' marine plywood
          9 x $16/ sheet
                                                 144.00
                                                 432.00
                                                 x 4
                                                1,728.00
Transplant of Kelp <100 hours>
  Work Boats(4): 100 hrs. x $600/hr.
                                              60,000.00
                                          $
  Divers (5):
               100 hrs. x $375/hr.
                                              37,500.00
                                              97,500.00
Equipment (Cole-Parmer Instrument Co.)
  Turbidimeter & acessories
                                                  584.50
                                          套
  Water Test Kits
          5) Chlorine kits
                                                  243.75
          5) Dissolved Oxygen Kits
                                                  243.75
                                          $
          5) pH (wide range) kits
                                          $
                                                  217.50
          5) Amonnia, Nitrogen
                                          $
                                                  243.75
```

1,533.25 Labor Tanks: 40 hours x \$80/hr. 3,200.00 _ 20 hours x \$30/hr. = 600.00 Nets: 3,000.00 Crane \$3000/day == \$ Cloisters: 40 hrs. x \$40/hr. 1,600.00 8,400.00 \$ 150,000.00 Budget for purchases of species *this is possible to change due to affability of the species 980,612.25 Subtotal Overrun costs (20% of subtotal) 196.122.45 = TOTAL \$1,176,734.70 * these figures may vary due to transport of supplies to Alaska.

Personnel

The personnel will come from the surroundings areas. The work boats needed for construction purposes and harvesting can come from the unemployed fisherman whose boats have been used for cleanup vessels. Other general personnel can come from the Alaskans of the Sound.

Feasibility

The feasibility of this proposal can not be expressed on the basis of the initial investment alone. The benefits that will come from this must also be examined.

It is not at all incomprehensible for the Federal government and the Exxon co. to produce a sum of money approximately equal to \$1.2 million. This is only a small price to pay to try to put something back into the environment.

Systems such as these have already produced profitable returns for the Chinese, Koreans and Japanese. A mariculture system in the U.S. needs to happen. It is an expanding field that has many things yet to be discovered.

CONCLUSION

This system would give back to the investors more they could ever put in. They will replenish the environment, create revenue and produce much needed data for similar crisis that may occur.

This is a better investment than our present day agriculture that are society is so accustom to. Mariculture cost per unit drops as the time progresses whereas agriculture increases (see fig. 2.1). There is no reason why this system can not succeed without the proper attention and investment.

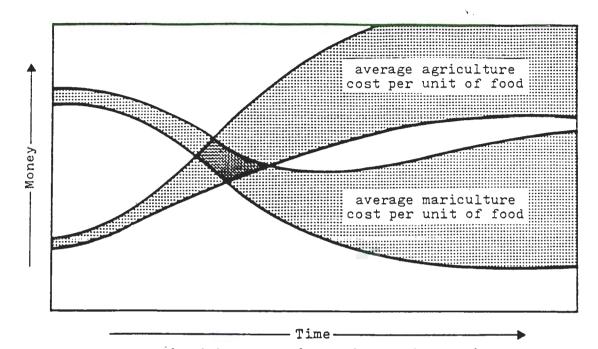


FIGURE 2.1 Postulated dynamics of agriculture and mariculture costs. It is suggested that the costs of food derived from agriculture will continue to rise as land available for agriculture decreases with expanding populations and increasing industrialization, and as fossil-fuel power becomes more precious. If population levels off, costs of agriculturally derived food will still rise as a result of approaching fossil-fuel exhaustion and the accompanying necessity to convert to other, less economical, energy sources, sources of fertilizers, and means of pest control. It is also suggested that because of the arable space available mariculture costs, by comparison, can decline markedly if capital is directed toward developing the necessary technology-particularly with respect to utilization of conservative energy sources and waste recycling. Mariculture costs might rise subsequently with general inflation. But they might also continue to decline with technological refinements. The expanding width of the curves, of course, represents increasing uncertainty with time. Note that this graph is conceptual rather than quantitative and that its spatial relationships have been selected to illustrate the concept rather than to predict quantitative relationships.

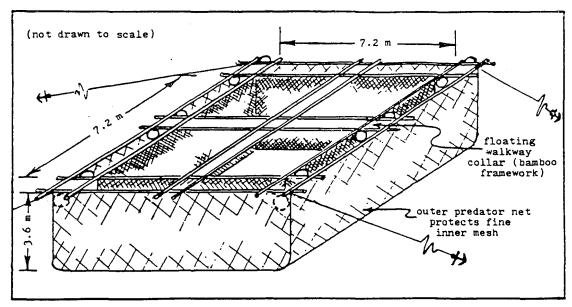


FIGURE 10.1 Double-layer net cage for unprotected waters. (Adapted from Milne [4].)

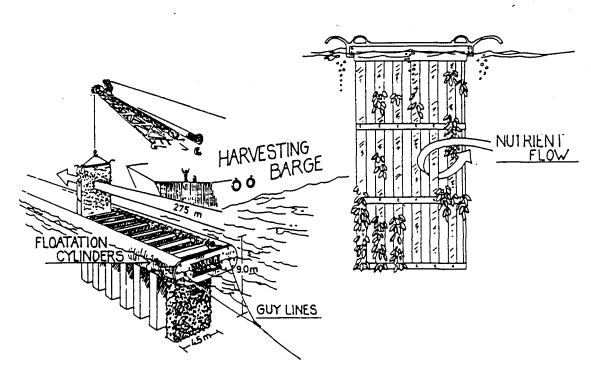


FIGURE 10.5 Conceptual drawing of an open sea oyster cloister.

John C. Dillow III 9308 Cherry Hill Road Apartment 706 College Park, Maryland (301) 474-0699 20740

EDUCATION 1986 - Present	University of Maryland, College Park, Mary Obtaining a Bachelors of Science degree in Biology. College expenses have been cover scholarships and a part time job (25-30 howeekly).	n Marine red by
1 982-1 986	Cardinal Gibbons High School, Baltimore, M	1aryland
EMPLOYMENT		
1 989-1 990 1 989-1 989 1 987-1 989 1 985-1 987	Chi Chi's Restaurante, Cook, Greenbelt, Ma UPS, Trailer Mechanic, Landover, Maryland Mullikin Trucking, Driver & Diver, Pasader Wade Construction, Carpentry Foreman, Pasa	na, Maryland
HONORS AND AWARDS	National Honors Society Member Senatorial Scholarship Recipient General State Scholarship recipient Medal Winner - National Teachers Association of Spanish and Portuguese National Football Hall of Fame Scholar Athlete	1986 1986-1990 1988-1990 1984-1985
OTHER	Language- Fluent Spanish	

Certified Diver- Openwater I and Openwater II NAUI Certification Experienced Wreck & Night Diver

WORK CITED

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- Hanson, Joe A.. <u>Open Sea Mariculture</u>. Pennsylvania: Dowden, Hutchison & Ross, 1974.
- Lee, Martin R., "The Exxon Valdez oil Spill", Environment and Natural Resources Policy Division, Dec. 29,1989, 1-9.
- Lee, Martin R., "Oil Pollution Liability and Compensation Liability After the Exxon Valdez Oil Spill", Environment and Natural Resources Policy Division, Jan. 22, 1990, 1-7.
- Limburg, Peter R.. <u>Farming the Waters</u>. New York: Beaufont Books, inc., 1980.
- Stevens, William K.. "Despite gains, dealing with big oil spills is still a struggle." The New York Times 27 June 1989, sec. C: 4.

MEMORANDUM

State of Alaska

14WG-

TO:

Gregg Erickson

DATE: 03-09-90

FILE NO.: .

TH RU:

TELEPHONE NO.:

271-2462

SUBJECT:

Sources of Support for Oil Spill Exhibit

Stan Senner

The attached request came to me (unsolicited) from the President of the Pratt Museum in Homer. They are looking for support to underwrite the costs of their traveling oil-spill exhibition, "Darkened Waters." This is mot something we could justify supporting out of our restoration budget, but I am wandering if you can recommend any more promising avenues that should be explored within the State Government? If so, I will pass on the suggestion.

I am typing this on a typewriter taken right out of John Wayman's personal office. He loaned in it to me for 30 days! It has no self-correcting exist device, as you can see.

Thank you for your consideratonn.

attachment: 1



HOMER SOCIETY OF NATURAL HISTORY PRATT MUSEUM 3779 Bartlett Street Homer, Alaska 99603



(907)235-8635

March 7, 1990

Stanley E. Senner Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, AK 99501

Dear Stan,

Although this is a formal letter, let me start by saying it is great you have been able to come back to Alaska. I look forward to working with you on some aspects of the research and planning related to oil spill restoration (except for speaking engagements!), and Ellen and I await your visit here in Homer, perhaps during the shorebird migration? I told you some time ago about the impressive exhibit the Museum has done on the oil spill and it seemed to me that your shop might be interested in knowing about it and perhaps participating in extending our message to the lower 48. Following is some descriptive boiler plate and enclosed is a brochure of the current exhibit and a budget for the traveling one.

The first anniversary of the Exxon Valdez oil spill will be here in a few days. Immediately following the spill last March, our Board of Directors ordered the staff to get together an exhibit detailing the first eight weeks of the spill, covering the geographic extent (large wall map), damage caused to wildlife and habitats (photographs and oiled specimens), clean-up efforts attempted (photographs and clean-up materials), biological impacts to the food chain (descriptive poster), social, economic, and psychological impacts created by the spill (interviews and photos), and public and political reactions to the spill (prevention, legislation, reactions) including weekly updates on the spill and its clean-up. Much of the work was done by volunteers and many of the photos and other materials were donated. Since the exhibit opened in June 1989, thousands of people from both Alaska and the lower 48 have been so impressed with the factual material that imparts a conservation ethic message, that they recommended we take the exhibit "on the road".

Consequently, we have made a commitment to create a traveling exhibit "DARKENED WATERS" by formulating a budget, hiring a professional museum exhibit planning consulting firm, contacting many agencies around the lower 48 who may wish to host the exhibit, and trying to raise funds for the project. The purpose of the exhibit is to present a comprehensive, factual account of the accident, response, clean-up efforts and impacts of the spill; to examine the significance of these events to other coastal regions exposed to chronic and catastrophic oil spills; and to relate the Exxon Valdez catastrophe to national and global problems associated with petroleum exploration, development, transportation, and consumption. We are negotiating the exhibit's travel with several organizations, for example the Smithsonian Institution and the Pacific Science Center, but we can not firm up any locations until we can guarantee completion of the exhibit. We plan to have the exhibit to its first location by September of this year and our expected audience for the exhibits currently projected two year trip around the lower 48 is 1,500,000 people.

We estimate that the total project will cost \$150,000; we have raised \$76,500 to date, of which \$34,000 comes from our own funds. We have received contributions from a number of sources as detailed in the enclosed budget sheet. Could we argue that although you are concerned with attempting to restore habitats and wildlife numbers to the way things were before the spill, that you are also equally concerned in getting the conservation ethic message, implicit in our factual exhibit, across to a large number of people regarding the immensity of the damage done, the tremendous difficulty in clean-up and habitat restoration and the facts that, 1. such spills can be prevented, 2. clean up can be considerably more effective if preparation is made before a spill occurs, and 3. by being conservative and more conscious of what products and uses are made of petroleum, we can decrease the demand for oil, thus reducing the probability of future spill damage?

If there is a chance we could get some funds from your office for this project, let me know how we can best apply. For more details on the actual project, you should talk to our Museum Director, Betsy Pitzman at 235-8635, but you can always call me at home!

Cheers,

George C. West

President, Board of

Directors

Encl

DARKENED WATERS TRAVELING EXHIBIT ON THE EXXON-VALDEZ OIL SPILL

PLANNING BUDGET March 1990

Phase	Timeline	Budget Category	Projected Costs
I.PLANNING \$48,200	7/89–4/90	Preliminary Exhibit Designers Fee Costs Guest Curator Museum staff Communications Administrative costs(15) Total-Planning	10,700 13,300 2,700 7,500 3,000 5,000 6,000 48,200
II.FABRICATION \$77,500	4/90–7/90	Exhibit Designers Fee Costs Guest Curator Museum staff Communications Administrative costs(5% Total-Fabrication	56,700 5,300 7,500 1,500 3,000 3,500 77,500
III.CIRCULATION \$24,300	9/90-9/92	Publicity/Promotion Museum staff Circulation costs Administrative Total-Circulation	5,000 5,000 8,300 <u>6,000</u> 24,300
TOTAL EXHIBIT CO.	STS	·	150,000
Alaska A Alaska C Alaska H Anchorag Center f Center f Homer So National Prince W	ect contributor udubon Society onservation Fou umanities Forum e Audubon Societor Alaskan Coasor Marine Conseciety of Natura Wildlife Feder illiam Sound Fu onal Equipment,	andation ety stal Studies ervation al History sation and	76,500

73,500

3/6/90

FUNDS NEEDED TO COMPLETE PROJECT

THE PRATT MUSEUM

presents

AN EXHIBIT

of the

EXXON VALDEZ OIL SPILL DISASTER

the first eight weeks and beyond

To Open June 23, 1989

-through June 1990-

Museum Open Daily 10 a.m. to 5 p.m. May through September

Winter Hours October through April
Open Noon to 5 p.m. Tuesday – Sunday
Closed January

Admission

Adults: \$3.00 Seniors: \$2.00

Children under 18 years and Homer Society of Natural History Members Free

THE EXXON VALDEZ

came to rest on Bligh Reef at 12:04 a.m., March 24, 1989. Through her broken hull, crude oil flushed unchecked into the waters of Prince William Sound from 8 of her 13 cargo tanks. Though the night was clear and the weather calm, the 987 foot supertanker had strayed far from the approved shipping lane to run aground inshore of the red navigational marker. By the evening of that day more than 10 million gallons of oil, enough to fill 92 average sized houses to the ceiling, covered the surrounding surface to a depth measurable in feet.

So began the Exxon Valdez disaster, the largest oil spill in the history of North America. As the weeks and months pass, it continues to spread environmental, social, economic, and political disruption far beyond Prince William Sound. The end remains a matter for speculation.



AFTER EIGHT WEEKS:

40–48% of the spilled oil was estimated to remain on the shore or in the water, 45% to have evaporated or dissolved, and 7½–15% to have been recovered.

729 miles of Alaskan coastline had been impacted by oil.

Not one beach had been "signed off" as clean by the Coast Guard.

Over 16,000 dead birds had been collected (an estimated 1–5% of the total killed to that time).

More than 650 dead sea otters had been collected.

Subsistence harvest had been stopped in the village of English Bay and elsewhere.

Over a dozen commercial fisheries or portions thereof had been cancelled.

Charter operators, lodges, and other recreation-related businesses reported decreased bookings and increased cancellations.

State and federal oil lease sales had been postponed in Cook Inlet and the Gulf of Alaska.

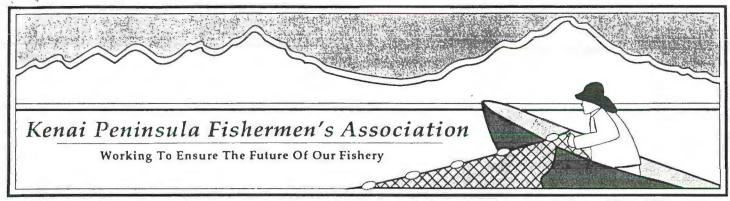
The Alaska legislature introduced 34 bills related to the spill, passing 11 into law.

Oil had been confirmed as far south as the Shumagin Islands, and as far north in Cook Inlet as Anchor Point.

This exhibit is supported in part by the Alaska Conservation Foundation, the Prince William Sound Cleanup and Rehabilitation Fund and other private contributions.



received 23 April 1990



34824 Kalifornsky Beach Road • Suite E • Soldotna • Alaska • 99669 • (907) 262-2492

April 19, 1990

Oil Spill Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501

Dear Restoration Planners

The Kenai Peninsula Fishermen's Association (KPFA) is a group of over 400 commercial fishermen, mostly setnetters, who fish salmon in the Cook inlet area. Commercial fishermen in Cook inlet have been impacted by oil spills during two of the past three years. In 1987, the tanker Glacier Bay spilled 150,000 gallons of crude oil when it went aground near Nikiski. The commercial fishing season was interrupted and an overescapement of about 900,000 sockeve salmon occurred in the Kenai River. The 1989 $Exxon\ Valdez\$ spill of 11.0 million gallons +(22) also reached Cook Inlet and likewise interrupted commercial fishing periods. Again, one result was an overescapement into the Kenai River of approximately 900,000 sockeye salmon.

Sockeye salmon are a rearing species and the potential impacts from overescapement include damage to the rearing environment due to overcropping of zooplankton, which are their primary food supply. Early findings from ADF&G research indicate that both sockeye fry and smolt produced from these over escapements are smaller than normal. It will be several years before we know the full impacts to the life cycle of the sockeye salmon from these oil spills. Another impact that may have occurred to salmon in Cook Inlet from the *Exxon Valder* oil spill is that of direct exposure of juvenile salmon to oil in the marine environment. Some mortality of salmon could have occurred, however, no programs were in place to study this possibility in Cook Inlet. There is also a possibility that there was some effect on the imprinting process of salmon smolts due to oil exposure. We do know that peak numbers of salmon smolts were present in upper Cook Inlet during the same time period that *Exxon Valder* oil was present.

KPFA believes that upper Cook Inlet fisheries resources should be considered as part of the restoration planning process. We suggest that the most significant benefits might occur in the area of habitat protection. The kenai River, which is our major salmon producer in central

Cook Inlet for both sport and commercial fisheries, is threatened with over-development. This was one of the major concerns expressed in the <u>Kenai River Comprehensive Management Plan</u>, completed in 1986.

Restoration funds could perhaps be utilized for purchase of wetlands adjacent to the river. Another idea would be to purchase development rights adjacent to the river. This is a program that has worked out well in a few east coast states where wetlands areas are beginning to be protected. There is also a need to complete inventory and mapping of wetlands areas adjacent to the Kenai River. These critical areas must first be identified in order to be protected.

We would urge you to consider the above concepts in the restoration planning process. We do not believe that marine birds and mammals need be overemphasized just because they were more visibly impacted. There will be some damage to fisheries resources documented, however because of the problems in studying marine fisheries resources much of the damage may go unobserved. Fisheries, both commercial and sport, are the backbone of Alaska's economy and lifestyle. Habitat protection is the most integral component in maintaining the health and insuring the future of our fisheries.

Thank you for considering our comments and good luck in the restoration planning process. If we can be of further help please don't hesitate to contact our organization.

Sincerely,

Loren B. Flagg Executive Director

Fren B, Hagg

128 3130 JEPWO

ON SERVICE RESIDENCE AND CONTRACTORS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Restoration of the environment damaged by the Exxon Valdez oil spill will require decades. It will largely be natural processes that result in the restoration of oil-impacted areas. It is important that those involved in restoration efforts, as well as the public, are not deceived into believing that restoration can be substantially accelerated through the expenditure of large amounts of money. The idea that total restoration is possible on a short-term basis has been fostered by statements made by those in positions of responsibility such as oil industry spokespersons, Coast Guard officials involved in the cleanup, and President Bush. The major effort in oil spill cleanup has been directed toward the oiled beaches. It is obvious that this is largely a cosmetic action that serves the interest of the oil industry ("out of sight, out of mind"). Also, the technology is not available to clean up oil present in the water column or on subtidal substrates.

Given the above circumstances, it is important that restoration monies that may become available not be spent in a frivolous and wasteful manner before natural weathering and recovery processes have had time to complete the "cleanup" of the oil and reestablishment of the primary producing organisms within the affected ecosystems. The concept of a restoration endowment fund that will assure the long-term availability of monies dedicated to enhancement of the natural environment affected by the spill appears to be an extremely effective method of addressing the restoration issue. It would also place emphasis on the extended period of time required for recovery from the spill and the concurrent need for extending the availability of restoration funds.

The Restoration Planning Work Group should also be cognizant of the importance of fully informing the public of what is involved in restoration of the areas affected by the oil spill. The public is understandably irritated and frustrated over the lack of information that is being made available from the assessment of the spill impact. This effort to inform the public should stress the complexity of the ecosystem relationships affected by the spill, the slow processes of recovery, and the need to closely monitor the changes that will be taking place over time. Such an educational process should be an integral and continuing part of the restoration plan. Other interests may tend to oversimplify and play down the values of the natural environment that have been lost or damaged by the spill, but an object of the restoration plan should be to maintain the focus of the public on the affected areas, the environmental values involved, and progress made in their recovery. To do so will assure continued public interest and pressure for protection of the natural environment from future oil spills or other human-generated threats to the environment.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

David R. Klein

Alaska Coop. Wildlife Research Unit

209 Irving Building, University of Alaska

Fairbanks, AK 99775-0990

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of "Ecological Restoration of Phis, and the Guff of AK"

(Annotated Biblingraphy) - EPA Cochming Dott (200 pes)

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"The Nostrice Oil Spill: Fate & Effects to May 31, 1859".

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Environment Council

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

L. M. Skilson

Corporation For 755

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OILESPIEL RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

R I would like to see fisheries embrancement work supported financially in The Cook Inlet Area - Specialic Buyers;

Paint River Fish Page DECE

Paint River Fish Pass Chalatra Lake Stocking Rogram DEGET



The vestoration Process has a very high petential to van away - due to lack of mandated citizen and industry advisory process. This work group is definitely a valid attempt to gain input, it will be interesting to see the citizente action taken-if it reflects this input.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

PAULA KEUHANE

PL BOX 112565

ANCHERAGE, AK 99511

345-7743

what is the kestoration planning process!

N-WG

Representatives of Federal and State agencies are participating in a Restoration Planning Work Group for the purpose of identifying restoration alternatives and making recommendations to the Trustees and the public. This process will involve consultations with the public and the scientific community.

Public participation in this process

began with a public Restoration Symposium on March 26 and 27 in Anchorage. A series of public Scoping Meetings has been scheduled for some of the communities directly affected by the oil spill. Several progress reports will be published to update the public on the results of the restoration planning and to invite additional comments.

The Restoration Planning Work Group wants to consider a wide range of restoration alternatives. To that end, the work group is committed to active public participation throughout the process. The public will be given the opportunity for formal review and comment on any final recommendations about restoration alternatives.

How Can You Participate?

You are invited to share your ideas and comments with the Restoration Planning Work Group. Please use the space below to present your comments and ideas or send additional comments by letter. We appreciate and value your assistance.

You may mail your response to: Oil

MAY | 0 1990

Spili Restroation Planning Office, 437

"F" Street, Suite 301, Anchorage, AK

99501, (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition projects? we contact you for additional information? Yes Organization (if anv) State AK Zip 9960 3

How Can You Participate?

You are invited to share your ideas and comments with the Restoration Planning Work Group. Please use the space below to present your comments and ideas or send additional comments by letter. We appreciate and value your assistance.

You may mail your response to: Oil

Spill Restroation Planning Office, 437 "E" Street, Suite 301, Anchorage, AK 99501, (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition projects? Acquire Gull Island May we contact you for additional information? Yes X Name Mike Nishimoto Organization (if any)

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Spill Restroation Planning Office, 437 "E" Street, Suite 301, Anchorage, AK 99501, (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition projects? limited resource organs tor OCRAN May we contact you for additional information? Yes ___ Organization (if any) Mailing Address BOX (808 ____ State AK Zip 99603

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What natural resources need the most attention? Do you have suggestions for restoration
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May we contact you for additional information? Yes Xell Yeno 907-424-7311
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What is the Restoration Planning Process?

TRUG

Representatives of Federal and State agencies are participating in a Restoration Planning Work Group for the purpose of identifying restoration alternatives and making recommendations to the Trustees and the public. This process will involve consultations with the public and the scientific community.

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You may mail your response to: Oil

Spill Restroation Planning Office, 437 "E" Street, Suite 301, Anchorage, AK 99501 (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition
projects?
Diffest gaurentee that assessment damage & research stormation be available to the public
So that Postaration can be planned accordingly
Drublic Education all ages from grammar school to senior citizens - teach the laws
and regulations of oil exploration and oil treansportation so that everyone understands the
pitfalls etc prior to another accident. This will help more informed voting & lobbying
and most definately better prevention of all disaster + onvironmental distruction.
Make this not only a state educational program but allow National Wildlys Federation
to have some fonding to also educate the public Dahonally.
3 Reestablish Widlije to imported areas - use damage assessment & research
information to be able to effectively restore in the most severe areas. Use all the service
available - Jish & Game, Park Secrice, audubon Society, Pratt Meuseam etc etc Prioritize
4) Continue to clean beaches and areas of impact however we research
information to releieve most afficient method along with legest toxic method.
Exive State Parks assistance in the management of tourists & increased recreations
awareness due to the beach cleaning awareness. This could also be included
under education - Impact areas are impopulated with minimal rescue resources.
@ gamentee that the fund is formable regenerating itself with
Protect or the money will be gone in 6 months
May we contact you for additional information? Yes MBt definately. No
Name Jodi Miller 235-4393
Organization (if any)
Mailing Address PO BOX 2870
Walling Address 10 Dox 20.5
City Homez State AK Zip 99603

5/15/90 Douglas Gilson Zyoc nu everything is hunky day of the some reeds to clean up some Doont know what can be done Miedenotono Need to rectify accident upset 1/4 for when they way is

Burbara Bolton Eston interliak Recovery, Rehalt, Acq. = est.

Save examples

What agencies will be there?

Anyone Jamy agency is welcome
to the held by fPWG, which
will rep. all agencies who
are members (OEC, ADF4G, Nat Pks,

FPA, etc.) \$\frac{1}{2}\$





PRINCE WILLIAM SOUND CONSERVATION ALLIANCE

P.O. Box 1697 Valdez, AK 99686 (907) 835-2799, 8006 Fax 835-5395

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Steve Kallick (SEACC, Juneau)

> Dr. Riki Ott (Cordova)

Gerald Sanger (Whittier) **Public Comments: Exxon Valdez Oil Spill Restoration**

Date: March 25, 1990

From: Nancy R. Lethcoe, Director

The Prince William Sound Conservation Alliance is a coalition of environmentalists, conservationists, recreation, tourism, fisheries, users and local people who wish to promote sound environmental policies for the Prince William Sound region; to help promote conservation of the Sound's natural resources, and to help promote education about the Sound's natural history, environmental concerns, and planning processes.

1. In what geographical locations should the funds be spent?

PWSCA supports restricting expenditures of restoration monies to the following types of projects:

- 1. restoration and/or protection of fish, wildlife, and invertebrate habitats in the oil impacted geographical regions;
- 2. restoration and/or protection of habitats outside of the oil impacted geographical region for wildlife, fish and invertebrate populations which both depend on these non-oil impacted areas and utilize Prince William Sound;
- 3. assessment and other research work on fish and wildlife habitat needs of resident or migratory species utilizing the oil impacted areas
- 4. educational and public informational displays designed to inform the public about the effects of oil on the marine environment and ways to prevent oil entering the marine environment, natural history of the oil impacted areas, and habitat needs of fish, animals, birds, and invertebrates found in the oil impacted areas;

Prince William Sound Conservation Alliance: Restoration of Oil Impacted Areas, p. 2

2. Habitat Protection:

PWSCA supports expenditures of restoration funds for projects that will help restore oil impacted areas as quickly as possible to their pre-oiling status and provide greater protection against future oiling. Such projects might include:

- 1. habitat acquisition through purchases from private and state land owners;
- /2. legislative action to achieve statutory state and federal habitat protection such as Critical Habitat legislation, marine and estuarine sanctuary, and wilderness legislation;
- 3. legislative action to achieve restrictions on development activities that could have a negative impact on the recovery of habitat and wildlife populations in the oil impacted areas;

PWSCA opposes the use of restoration funds for construction or development projects (such as mooring buoys, tent platforms, marine park facilities, land based research stations, hatcheries, etc.) in undeveloped oil impacted areas.

Businesses supporting PWSCA's recommendations:

Stan Stephens Charters Alaskan Wilderness Sailing Safaris entered on mailing 1157

RANG

DEPARTMENT OF NATURAL RESOURCES OIL SPILL PROJECT COORDINATION OFFICE FAX# 762-2290

FAX TRANSMITTAL

TO: Stan & Brian FAX NO. 271-2967
FROM: FRANKE
NUMBER OF PAGES (INCLUDING COVER PAGE)
DATE: 4 24 90
comments: STAN - Wa hat this guy
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IF YOU HAD PROBLEMS RECEIVING THIS FAX, CALL THE OIL SPILL PROJECT COORDINATION OFFICE AT 762-2295.

UNIVERSITY OF SOUTH ALABAMA

COLLEGE OF ARTS AND SCIENCES DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

> ARCHAEOLOGICAL RESEARCH LABORATORY



April 18, 1990

TELEPHONE: (205) 460-6347 BMSB 8 • MOBILE, ALABAMA 36688

FELEPHONE: (308) 491 AS13

Frankie Pillifant
Oil Spill Project Coordination Office
State of Alaska, Department of Natural Resources
P.O. Box 107005
Anchorage, AK 99510-7005

Dear Frankie:

It was a pleasure to meet you at the Prince William Sound symposium on the oil spill. We were wondering what input social science will have on restoration plans. I have included two copies of some recent research we have presented on the spill. Dr. Nancy Yaw Davis (Cultural Dynamics) has informed me that there is a recent report (black bound) from the Alaska Department of Natural Resources (?). I was wondering if you could send us a copy of this report, or a copy of a copy. We are presently preparing research plans to return to Cordova and some surrounding communities (Tatitlek, Chenega Bay, Valdez) for the second phase of our study. If we can be of assistance to you or your organization, please let us know. Thank you for your help, and we look forward to hearing from you.

Sincerely

Christopher L. Dyer Assistant Professor



RAUG

OHESE BEEN CONTRACTION (COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exzon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

GERALD H. CLARK

3300 FOSTER AVE

JUNEAU, AK 99801-1927

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Lynda Hyce

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Please fill in your name and	mailing address if you would li	ke to s	eceive f	uture i	mailings
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Mr. Dick Doherty Apt. 104 5211 Mockingbirs Dr. Anchorage Att. 99507

ONE SERVICE RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

minites of the Symposium.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

MEUSSA L. BATES
19432 FIRST ST.
EAGLE RIVER AK 99577

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

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Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

P. Box 67 01556 Chugiak alaska 99567

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The Nestura Orl Spell Regional Program
Paport 89-01

The Mestaria Orl Spill - Prelim. Evalvation of Impacts --

> I would like to get copies of the above 2 publications

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

GERALI) CLARK USDA-FOREST SERVICE DO BOX 21628 JUNEAU, AK 99802-1628

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PUT POR JUNE 30 REPORTS

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exron-Valdez oil spill.

TY CLARK

KSRM RADIO

HC2, BOX 852

SOLDOTNA, AK 99669

PAX #: 283-9177)

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Please send me a copy of environmental document Dot Helm 233 W. Beaver Palmer, AK 99645

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Dr. Gall Ivvine

Minerals Management Sorvice, EA

949 E. 36 Th Ave, Rm 110

Anchorage, AK 99508-4302

OHESPHEER RESTORATION COMMENTS

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I would who to receive a cops of Preliminary Draft: Ecological Restoration of Prince William Sound.

Please send to:

RANDAII DAVIS
WO EXXON
CALAIS II, BROPL
3301 C'St
ANCHORAGE, AK 99503

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Esological Restaration of Prince Williams Sound and
Gulf of Alaska. March 1990

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Please send copies of Restoration literature Pensewto.

Robert Aller

PRDC

1350 N.Y. Ave. NW, Swde 300

Washington, D.C. 20005

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Sorah Chasis NRDC 40 West 20th St. New York, N.Y. 10011

OND SPECIAL REPSYCON AND COMMENTS

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Please send EPA March 90 bibliography

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

7R. A. FINEBERG 401 8 to 51, #208 Juven AK 99801

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Maules Very much for this symposium!

I would like to receive the proceedings from this + I would also like to receive EPA's March 1990

Proliminary Draft Annotated Bibliography of Relevant literature

(Ecological Restrossion of PWS > GDA

Please send to.
Colleen Burgh

ADEC

3601 C St. Suite 1334

Anchorage AK

Anchorage AK

99503

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Colleen Burgh 12821 Mountain Pl. Anchorage AK 99516

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

I would LIKE A COPY OF THE ENVIRONMENTAL REPORT.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

JOE GALLANT

PO BOX 100360

ANCHORAGE AK. 99510

OHE SELLERESTORATION COMMENTS

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Please send Ecological Restoration of PWS + GA Annotated bibliography hor 1990

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Please provide a copy of the Literature Survey.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Gary Dowling - (m 2646 P. D. Box 2180 Houston, TX 77257-2180

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Please send me a copy of the Preliminary Restoration

Peport: a Bibliography, edited by the E.P.A.

(I saw a deck copy at the symposium but did not get the exact title: the document is bound with a soft brown cover page.)

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

George B. Davesport

Faultner Bon field Doogan + Holmes

SSO west 7 Trans. Suite 1000

Anchorage AK 99501

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Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

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JOSO FAIR MANN 2600 FAIR MANNS ST Hulmage, AK 99503

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Ecological historation of prince Hullian Sound and Lulbor alaska-annotated Bibliography
The nestuces oil Spill-prelim. Eval of Surports on west Goost of Vancouver Isl.

Prestoration & Wanagement Notes vol7, NO. I 1989

Please sendus the three publications

listed above Thank you

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Larry EThelbah Bureau of Fudian Affairs POBOX 3-8000 Uuneau, Alaska 99807

OHESPHER RESTORATION COMMISSIONS

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Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

ArThur N. Sheets 4003 GarField Anchorage, AK. 99503

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Ecological Restoration of Prince William Sound & Gulfof Alaska - annotated Bibilio.

The Nestucca oil Spill-Prelim Eval. OF Impacts on west coast of vancouver ISI.

Restoration & MgMT. Notes vol7, No.7, 1989 Please Fornish us with These Pubs.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Pamela A. Bergmann U.S. Dept. of Interion 1689 C St., Room 119 Anchorage, Alaska 99501-5176

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I would like to obtain copies of

- (1) "Bollutants in British Columbia's Marine environments" Environment Consla SOE Report No. 89-1
 - (2) Gruirenmental sensitivity maps for all 4 season displayed on the the wall

Thomas for your help Dr. Jesse Ford

c/o USEPA Environmental Protection Azerey
200 SW 35 th 5+

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Please fill in your name and mailing address if you would like to receive futu	Le manings
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Alease Send me a Copy of Ecological Historation of Prince William Sound and the Gulf of Aleska and The Nestucca Oil Spill:

Fate and Effects To May 31, 1989

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Geoffrey Smith P.O. Box 1634 Seward, Abuska 99664

OND SERVED RESIDENCE ON COMMENTS

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Would like a copy of the literature review, and of any subsequent reports issued by this Committee.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

DON C TOMLIN, PH.D.

NATURAL RESOURCES,

U.S. Bue. INDIAN AFFAIRS

1675 C STREET, ANCHORAGE 99501-5198

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Please send copies of the displaydocuments, as listed below to

Alaska Dept of Fish + (yome Habitat Division Library 333 Rospherry Road Anchorage Ak 99518-1595

Atton: Celia Rosen, Cibrarian

Ecological Restoration of Prine William Sound a tre Gulf of Alaska: An Annotated Bibliography in Relevant Literature. Prepared for EPH Office of Research & Development. Restoration Plaining Work Group. March 1993. Preliminary Draft.

Pollutants in British Columbia's Maure Environment. SOE Report No. 89-1, April 1986. Environment Cohada Series: A State of the Environment Report. By BH Koy Preliminary Draft.

Preliminary Draft.) Ecolopical Restoration of PNS & the crulled of Alaska an annotated by 11

Nestuca oil Spill: Preliminen Eval of Impacts on the west Coast of Vancovver Island Warch 89 2rd release. Environment Conada + BC Ministry of Env. by W. Duval, et al. BC Min of Env Pollutants in Butsh Columbia's Maure Environners SOF Fact Sheet No. 89-2. Env Conada Conservatare Protection. Seves: A state of the Environment Pact Sheet. Nestucca Oil Spillate Effects to May 31, 1989. Region 1 Brogian Report 89-01 By LE Harding -e JR Englar June 1989, Env. Brotecton + Conscivatai. Env. Collada. THE ABOVE OF THE PARTY OF THE P

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PLEASE SEND A COPY OF

"ECOLOGICAL RESTORATION OF

PRINCE WILLIAM SOUND AND GULF

OF ALASKA" MARCH 1990

THANK YOU

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

LEN VINING, NATURAL RESOURCE PLANNER C/O THE NORTH PACIFIC RIM 3300 C STREET HNCHORAGE, AK 99503

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Please put me on your mailing lost and send me a copy of your literature review of Ecological Restoration For Prince Willram Sound

Soul to
Torne Jorganson
Haska Biological Research, Inc.
P.O. Box 81934
Fairbanks, At 99708

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

I would like to receive a copy of the annotated Bibliography

"Eccloque" RESTORATION OF PRINCE WILLIAM SOUND + THE

GULF OF BLASKA . EPA MORAN 1990 / AND THE NESTUCER OIL SOIL BY DWING

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(808) 257-3416

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MAY I PLEASE HAVE A COPY OF THE FOLLOWING PUBLICATIONS SENT TO ME:

- · ECOLOGICAL RESTORATION OF PRINCE WILLIAM SOUND ANDTHE GULF OF ALASKA: AN ANNOTATED BIBLIDGRAPHY OF RELEVANT LITERARY MARCH 1990 (PRELIMINARY DAMPT) EPPA
- REHORD PROGRAM REDOKT 89-01, HARDING! ENGLER ENVIRONMENT CANADA
- POLISTATIS IN BRITISH COLUMBIAS MARINE ETHIRONMENT: A STATUS REPORT SOE REPORT NO. 89-1, B. H. KAY APRIL 1989 EMIRONMENT CANADA
- THE MESTUCCA OIL SPILL PRELIMINARY EVALUATION OF IMPACTS ON THE WEST COAST OF VANCOUNER WILLOW (SECOND PERENCE)
 ESL-ODING DUNL, HOPKINGON, OLHSTED, KASHINO
 ENVIRONMENT CANADA
- RESTORATION & MANAGERIANT MOTES
 VOL. 7, NO. 2
 VILLET 1989
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- EPA/600/8-89/073
 OFFICE OF REJEARCH: DEVELOPMENT
 WASH OC 20460
 AUGUST 1989

HANK FON

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TRYCK NYMAN & HAVES	
911 (w. 8TH)	
Facultina 99501	

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Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Marine Advisory Program
Box 830 Cordoral 94574

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Rease send color of Bibliography Of Blevant Literature

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

ALLEN E, SMITH, ALASKA REGIONAL DIRECTOR
THE WILDERNESS SOCIETY

490 WEST 7TH AVENUE, SUITE#210

ANCHORAGE, ALASKA 99501

OHESE BELLEVES OF A THE ON COMMISSION

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

THE PRELIMINARY DRAFT OF THE ECOLOGICAL
RESTORATION OF PRINCE WILLIAM SOUND AND THE GULF
OF ALASKA CONTAINS NO REFERENCES TO RESTORATION
OF ARCHAEOLOGICAL SITES (CULTURAL RESOURCES). SINCE SITE
RESTORATION MUST BE AN INTERGAL PART OF ANY FORM
OF TERRESTRIAL ECOLOGICAL RESTORATION, CULTURAL RESOURCES
MUST BE CONSIDERED.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

DR. ROBERT M. THOMAS

CENTRE FOR ARCHASOLDEICAL RESERVEN

LANGESTY OF MISSISSIPPI

UNIVERSITY Ma. 38677

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Please Send a copy of the Previous Draft of the /Ecblogical Restoration of PWS and the Gulfuf Ak, And all updates on Restorative action in PWS

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Tom Lakosh Box 616 Whittier Ak 99693

OHE SERVE RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.

Please Send me:

Ecological Restoration of Prince William Sound of the Gulf of Alaska

An annutated bibliography of Relevant Literature

March 1990 Preliminian Draft.

The Vestucea Oil Spill: Preliminary Evaluation of Impacts on the Wi Coast of Vancouver Island March 1989 - Eminonment Canada

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valgez oil spill.

KARL BECKER / NANCY BIRD BOX 1185 CORDOVA, ALASKA 99574

OHESPHEE RESTORATION COMMENTS

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Q_ A.

Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Charles & Mª Ree 2201 W 36 th au and, ak 99517

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STATE OF ALASKA

STEVE COWPER, GOVERNOR

DEPARTMENT OF FISH AND GAME

Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501 (907) 271-2462

10 May 1990

John P. Harville, Interim Director Prince William Sound Science Center P.O. Box 705 Cordova, Alaska 99574



Dear Dr. Harville:

Thank you for your recent letter regarding the oil spill restoration planning process. I have enclosed a brochure that gives an overview of our activities, particularly as they concern public participation.

The public scoping meeting about which you inquired was held in Cordova on 17 April. Judi Maxwell from ADF&G in Juneau and Gary Ahlstrand from the National Park Service in Anchorage chaired the meeting. I believe that Judi had been in touch with Rick Steiner and others in advance of the meeting, but I gather that information did not reach you.

Having participated in your conference on long-term research needs in early March, I am familiar with the Science Center's goals. The fact that we have already held a public scoping meeting in Cordova should be no obstacle to the Science Center's participation in the restoration planning process. We invite and seek your views at any time. If business brings you to Anchorage, please give me a call and we can arrange a meeting. Alternatively, we will give you a call in advance of our next visit to Cordova (I was just there for the last several days, but most of that time was spent on Montague island!).

Thanks again for your letter and your interest in the restoration planning process.

Sincerely,

Stanley E. Senner Restoration Scientist

Prince William Sound Science Center

Incorporated as Prince William Sound Science and Technology Institute

John P. Harville, Ph.D. Interim Director

May 4, 1990

Dr. Stanley E. Senner Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, AK 99501

Dear Dr. Senner:

From George West in Homer, I learned that your office is intending to hold a series of meetings around Prince William Sound to receive comments and suggestions concerning programs appropriate for future action. When might such a public meeting be scheduled in Cordova? The Prince William Sound Science Center should provide useful input for your consideration, since the Center has as its central mission the "comprehensive description, sustained monitoring, and more complete ecological understanding of Prince William Sound and its wetlands, river systems and drainage basin, to serve as information resource for decision—makers responsible for the conservation and development of those diverse and complex ecosystems." Enclosed for your reference is the complete PWSSC mission statement and a summary of the functions planned to carry forward that mission.

George West is a member of the multi-disciplinary Scientific Committee which provides scientific and technical advice to the PWSSC Board of Directors. Other members include researchers from the lower 48 involved in Prince William Sound projects, as well as scientists from the University of Alaska and from state and federal agencies with management responsibilities in the area.

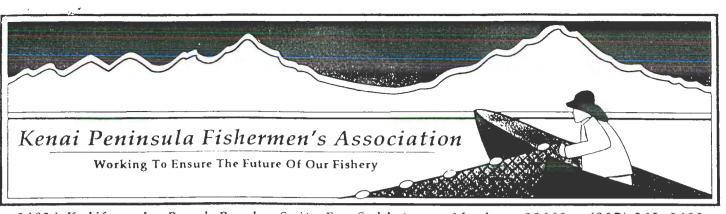
I would be interested in learning more about the mandate and responsibilities of the Oil Spill Restoration Planning Office. If documents are available describing those functions, I'd appreciate copies for incorporation in our files.

Yours sincerely,

John P. Harville, Interim Director

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34824 Kalifornsky Beach Road • Suite E • Soldotna • Alaska • 99669 • (907) 262-2492

April 19, 1990

Oil Spill Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501 COPY

Dear Restoration Planners

The Kenai Peninsula Fishermen's Association (KPFA) is a group of over 400 commercial fishermen, mostly setnetters, who fish salmon in the Cook Inlet area. Commercial fishermen in Cook Inlet have been impacted by oil spills during two of the past three years. In 1987, the tanker *Glacier Bay* spilled 150,000 gallons of crude oil when it went aground near Nikiski. The commercial fishing season was interrupted and an overescapement of about 900,000 sockeye salmon occurred in the Kenai River. The 1989 *Exxon Valdez* spill of 11.0 million gallons +(??) also reached Cook Inlet and likewise interrupted commercial fishing periods. Again, one result was an overescapement into the Kenai River of approximately 900,000 sockeye salmon.

Sockeye salmon are a rearing species and the potential impacts from overescapement include damage to the rearing environment due to overcropping of zooplankton, which are their primary food supply. Early findings from ADF&G research indicate that both sockeye fry and smolt produced from these overescapements are smaller than normal. It will be several years before we know the full impacts to the life cycle of the sockeye salmon from these oil spills. Another impact that may have occurred to salmon in Cook Inlet from the *Exxon Valdez* oil spill is that of direct exposure of juvenile salmon to oil in the marine environment. Some mortality of salmon could have occurred, however, no programs were in place to study this possibility in Cook Inlet. There is also a possibility that there was some effect on the imprinting process of salmon smolts due to oil exposure. We do know that peak numbers of salmon smolts were present in upper Cook Inlet during the same time period that *Exxon Valdez* oil was present.

KPFA believes that upper Cook Inlet fisheries resources should be considered as part of the restoration planning process. We suggest that the most significant benefits might occur in the area of habitat protection. The Kenai River, which is our major salmon producer in central

Cook Inlet for both sport and commercial fisheries, is threatened with over-development. This was one of the major concerns expressed in the <u>Kenai River Comprehensive Management Plan</u>, completed in 1986.

Restoration funds could perhaps be utilized for purchase of wetlands adjacent to the river. Another idea would be to purchase development rights adjacent to the river. This is a program that has worked out well in a few east coast states where wetlands areas are beginning to be protected. There is also a need to complete inventory and mapping of wetlands areas adjacent to the Kenai River. These critical areas must first be identified in order to be protected.

We would urge you to consider the above concepts in the restoration planning process. We do not believe that marine birds and mammals need be overemphasized just because they were more visibly impacted. There will be some damage to fisheries resources documented, however because of the problems in studying marine fisheries resources much of the damage may go unobserved. Fisheries, both commercial and sport, are the backbone of Alaska's economy and lifestyle. Habitat protection is the most integral component in maintaining the health and insuring the future of our fisheries.

Thank you for considering our comments and good luck in the restoration planning process. If we can be of further help please don't hesitate to contact our organization.

Sincerely,

Loren B. Flagg

Executive Director

nen 8, Hazz

P. 82 MUG



CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574 (907) 424-3447

January 5, 1990

Dave Kennedy NOAA HAZMAT SEATTLE WA 7600 Sand Point Way NE Seattle, WA 98115

Dear Mr. Kennedy:

It was a real pleasure to read through the material you faxed to me yesterday. As you indicated in our phone conversation, you apparently are aware that I have already been talking to several people from different agencies, land owners and interested groups along the same lines that are outlined in this summation.

if you recall my comments at the close of the workshops of November 28, 29, 30. I stated that based on what was shown there that our position on the use of chemicals would not change, we would openly oppose their use in Alaskan waters. Also based on what was shown in the workshops on bioremediation it was doubtful that we would be able to go along with that type of clean-up enhancement.

Your comments from time to time about the continued questions on the effectiveness of nutrient augmentation under your "Proposed Cleanup Program for 1990", lead me to feel reassured that the use of inipol EAP22 is not being given blanket approval for wide spread use. After the workshops I called EPA and asked for copies of the data presented at the workshop on inipol because what I felt I saw there was that the use of any "fertilizers" including Inipol did not significantly enhance biodegradation. I have now in my hands the summary report prepared for the Office of Research and Development U.S. EPA as prepared by Nancy Sanders and Ellen Gray of Technical Resources, Inc. of Rockville, Maryland. This report clearly supports the impressions I got at the workshop, and based on this I must say that the use of "fertilizers" must be carefully considered.

With the afore stated comments included I am very pleased with your proposal for 1990. I feel that if we can proceed in this manner that there is an excellent chance of high success in the

1990 effort. I would like to point out that Kodiak has a large number of low energy areas that have been impacted by highly weathered oil and must be given close consideration.

This concludes my remarks, I only want to say again, thanks, for working so closely with us.

Sincerely,

CORDOVA DISTRICT FLSHERMEN UNITED

Jack Lamb

Vice President

cc: CDFU

Attachment 1 Reviewers Comments on NOAA Recommendation

DOI - Pamela Bergmann

Ms. Bergmann provided both substantive as well as editorial comment on several drafts of the recommendation. All substantive comments were incorporated in the final draft. Major points were as follows:

Comment	NOAA Response		
FWS, NPS, and BIA reserve the right to decide if bioremediation or chemical cleaning agents are applied on their lands.	Agreed. Applies to other land owners as well.		
Current questions on the effectiveness of bioremediation should be resolved before proceeding with this technology.	Agreed.		
If bioremediation is used it should not necessarily be limited to sheltered areas.	Agreed.		
Bioremediation should only continue as long as results show a significant improvement over natural biodegradation.	Agreed.		
Hand tools and small groups of workers suggested for removal of tar mats.	Agreed.		
Suggested reference to Sec 106, National Historic Preservation Act, with respect to preservation of archaeological sites.	Agreed.		
Suggested adding a guideline to protect nesting areas and marine mammal pupping areas.	Agreed.		
Tilling should not interfere with fisheries and should observe other land manager constraints. Least intrusive methods should be used.	Agreed.		

DOA/Forest Service - John Knorr

Mr. Knorr indicated general agreement with the cleanup strategy contained in the recommendation.

EPA - Carl Lautenberger

Mr. Lautenberger indicated general agreement with the proposed approach.

Chugach Alaska Corporation - Plo Park and Peter Nagel

Comment

Oiled logs and tar mats should be dealt with in public and private areas as directed by affected landowners.

Tilling should be done only after consideration of other beach values.

Shoreline surveys should include Native agencies.

NOAA Response

Changed to areas of human use. Agreed with land owner consultation.

Agreed.

Agree that land owners should be involved in surveys.

Cordova District Fishermen United - Jack Lamb

Mr. Lamb provided his endorsement of the general strategy outlined in the draft proposal. His concern was as follows:

Comment

The effectiveness of nutrient augmentation has yet to be convincingly established. This technology should not be used until further evidence is presented.

NOAA Response

The EPA presentation at the Anchorage workshop lest doubts which have not yet been clarified. Further evidence on the viability of bioremediation needs to be provided.

Prince William Sound Conservation Alliance - Nancy Lethcoe

Comment

NOAA Response

Debris should be picked up from

Agree.

all shorelines.

Debris removal should be undertaken at least twice.

Agreed.

Shoreline survey be conducted

in early March.

Weather conditions are not likely to allow an efficient survey that early.

Tar mats of any size should be removed.

We believe 6" to be the smallest size warranting removal.

Sierra Club Legal Defense Fund - Stewart Elgee

Mr. Elgee supported the general concept of the recommendation, but felt that the paper needed to include overall restoration and ecological goals. He further indicated his opinion that certain technological approaches had been excluded from the paper without adequate justification based on risk. He also expressed concern that tilling or other mechanical activity that might serve to further contaminate the shallow subtidal zone unless recovery methods were in place. He believes some testing may be appropriate to insure subtidal impacts do not result from mechanical disruption of the sediments.

Mayor of Valdez - Lynn Chrystal

Mr. Chrystal supported the general strategy outlined in the recommendation.

Mayor of Cordova - Robert Van Brocklin

Mr. Van Brocklin supported the general strategy outlined in the recommendation.

Mayor of Seward - Bill Noll

Mr. Noll supported the general strategy outlined in the recommendation.

Mayor of Kenai Borough - Don Gilman

Mr. Gilman supported the general strategy outlined in the recommendation. He indicated that local interests should be thoroughly involved in the planning process.

Exxon - Bob Mastracchio

Mr. Mastracchio indicated his agreement with several technical concepts in the recommendation, however felt that all options should be maintained until the shoreline is resurveyed.

Comment

Limit oil removal in contaminated shellfish areas to low-impact techniques.

Bioremediation has been established as a useful technique.

Debris removal should be limited . to areas which might have an adverse ecological effect.

Tilling should be limited to anaerobic environments and should be considered if less disruptive methods cannot be used. Tilling should not occur if it causes mixing of oiled material into unoiled sediments. Eliminate "post fishing season" restriction; replace with "not to interfere" with fishing.

NOAA Response

Agree that low-impact techniques, including bioremediation, should be attempted first, but excavation must be considered if chronic health threat remains.

While we believe the prognosis is positive, further public discussion of research data is warranted before final decisions are reached.

Floatable debris represents the greatest threat to fishing and recreational uses of the environment and should be removed wherever significant threats to these uses exist.

Agree.

North Pacific Rim - Len Vining, R. Rolland

Mr. Vining indicated support for the NOAA recommendation and found it to be "logically consistent." Specific comments were as follows:

Comment

Eliminate note that chronic shellfish contamination "appears to be limited to Windy Bay." Wait until expert panel establishes levels at which chronic effects may occur.

Importance of shellfish areas cannot be established by quantities alone. Native leaders need to be involved in selection of sites to be tested.

Cleanup activities should be controlled locally.

Cleanup schedule should mimize disruption of fishing and traditional subsistence activities.

Subsistence use areas should be included for bioremediation if techniques pose no health risks. Local communities need to be briefed on bioremediation.

Floatable oily debris should be removed wherever it occurs.

NOAA Response

Agree. Sampling has not been broad enough to establish the assertion in the original NOAA statement nor have threshold levels been established for chronic effects.

Agree.

Disagree. Cleanup needs to controlled by FOSC.

Agree.

Agree.

Agree.

Kodiak Borough - Wayne Coleman

Mr. Coleman believes the recommendation places too much emphasis on the role of natural processes in the removal of oil. Monthly surveys indicate little evidence thus far in Kodiak of tar mat removal by natural processes. Agrees with taking an extremely conservative approach regarding chemicals. Agrees with cleanup objectives and limitations outlined in the recommendation. Believes public concerns regarding bioremediation must be resolved before proceeding with that technology. Recommends cleanup begin April 1. Other comments as follows:

Kodiak Borough (cont'd)

Comment

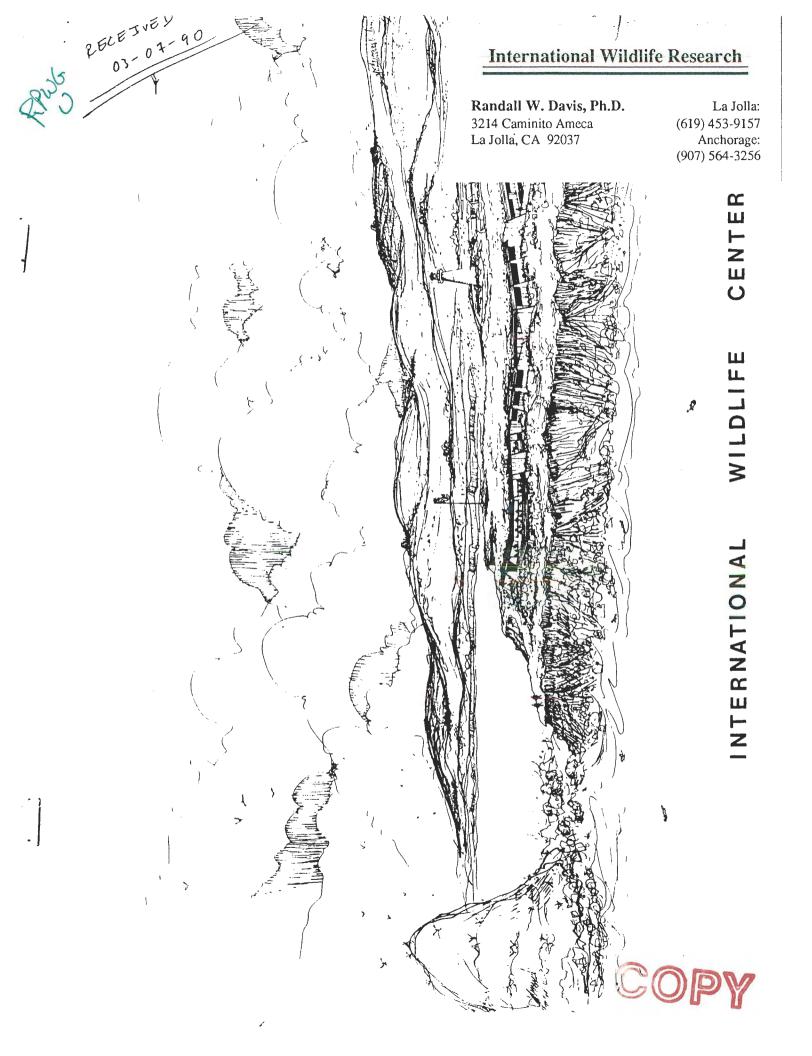
NOAA Response

Surface tar mats should be removed in all areas not just those of high recreational or biological value. Has concern with methods and monitoring statements.

Disagree.

Tilling should not be limited to close of fishing season.

Agree if means can be found to avoid disruption of fishing through uncontrollable sheening.



Proposal for the Formation of an International Wildlife Center

Randall W. Davis, Ph.D. and Terrie M. Williams, Ph.D. International Wildlife Research
(A Non-profit Organization)

T. Introduction

The Exxon Valdez oil spill has demonstrated the need for a wildlife rehabilitation facility that can respond immediately to an oil spill along the southern Gulf Coast of Alaska. Of the marine mammals that could be affected by such a spill, sea otters are particularly vulnerable because they rely on fur for insulation in water. This proposal outlines the concept of a Wildlife Center that can rehabilitate oiled wildlife, especially sea otters, in the event of an oil spill. Additional functions include research and public education on oil spill contingency planning.

II. Purposes of the Wildlife Center

- A. <u>Rehabilitation</u> of oiled sea otters, seals and marine birds.
 - 1. Organizational center for directing the capture, cleaning and rehabilitation of sea otters, seals and marine birds.
 - 2. State-of-the-art rehabilitation facility at constant readiness.
- B. <u>Acquisition</u>, analysis and dissemination of information on wildlife oil spill contingency planning and the treatment of oiled wildlife.
 - 1. Generation of a data base on the effects of oil on wildlife and methods of treatment.
 - 2. International liaison with other organizations dedicated to treating oiled wildlife.
 - 3. Publication of recommendations on wildlife oil spill contingency planning that recognize the special needs of different marine habitats and their wildlife ("ecosystem approach").
- C. <u>Research</u> on the effects of oil on wildlife and methods of treatment.

- 1. Research on the physiological and toxicological effects of oil on wildlife.
- 2. Development and testing of improved methods of treating oiled wildlife.
- D. <u>Public education</u> on oil spill contingency planning and wildlife rehabilitation.
 - 1. Interpretative center for the presentation of educational displays and films on wildlife oil spill contingency planning.
 - 2. Training center for volunteers interested in the treatment and care of oiled wildlife.
 - 3. Information center for publications on wildlife conservation and resource development.

III. Administration

A. Dr. Randall William Davis, Co-Director

Comparative physiologist, Dr. Randall W. Davis, has been studying the physiological adaptations of marine mammals and birds for more than fifteen years.

Dr. Davis received his doctorate from the University of California at San Diego. His dissertation research focused on the metabolic adaptations of marine mammals for diving. Since then, his studies of sea otters, seals and penguins have taken him to polar and tropical regions.

In 1976, he began studying the effects of oil on sea otters and fur seals. From 1983-87, Dr. Davis was the Program Manager for two studies funded by the U.S. Dept. of the Interior on methods to mitigate the effects of an oil spill on sea otters. These studies led to the development of the first successful techniques to clean and rehabilitate oiled otters.

When the T/V Exxon Valdez ran aground in Prince William Sound in 1989, Dr. Davis was asked by the U.S. Dept. of the Interior and Exxon USA to be the Senior Director for the sea otter rescue effort. This program led to the successful rehabilitation and release of 224 oiled sea otters. Dr. Davis is currently Co-Director of International Wildlife Research and a researcher at the University of California at San Diego. He is preparing a report on the sea otter rescue program in Valdez that will include recommendations for oil spill contingency planning in Alaska and California.

B. Dr. Terrie M. Williams, Co-Director

Dr. Terrie M. Williams, an environmental physiologist, has been studying marine and terrestrial mammals for more than twelve years. Her studies have included the muscle

biology of sprinting cheetahs and diving seals, temperature regulation in swimming animals, and the aquatic behavior of sea otters, seals, and whales. These research programs have been conducted all over the world, from Arctic and Antarctic marine environments to South African deserts.

Dr. Williams received an undergraduate degree in Pre-Medical Sciences, and her doctorate in Physiology from Rutgers University. Her dissertation examined the energetics and thermoregulation of running and swimming in the smallest swimming mustelid, the North American mink.

For the past seven years, Dr. Williams has been studying the largest mustelid, the sea otter. She was the Principal Investigator on two Department of Interior studies that examined the effects of crude oil on sea otters. In 1984, she developed the procedure for cleaning oiled sea otters that was used extensively during the Exxon Valdez oil spill. During that spill, she directed the Valdez Sea Otter Rescue Center, the first facility to successfully clean, rehabilitate, and release sea otters and harbor seals impacted by oil.

Dr. Williams, who is Co-Director of International Wildlife Research, is currently investigating the histopathological and toxicological effects of oil on marine mammals. The results will be used to develop a diagnostic procedure for assessing petroleum hydrocarbon exposure for oiled wildlife.

IV. Facilities

The proposed Wildlife Center represents the state-of-the-art rehabilitation facility based on five years of research and the experiences gained from treating oiled sea otters and harbor seals in Alaska. The proposed plan also recognizes the need for continued research and the interest of the public in wildlife oil spill contingency planning.

- A. <u>Conceptual Design</u>. The modular design is divided into four parts (Figure 1):
 - 1. Animal rehabilitation. Facilities for cleaning, drying, critical care, veterinary clinic, food preparation, volunteer dressing area, holding pens and pools and pathology laboratory.
 - 2. Administration. Staff offices, secretarial area, communications center and conference room.
 - 3. Interpretive center and public education. Gallery and theater for educational displays and films, bookstore and classroom.
 - 4. Research. Computer center and data archives, laboratories, library and research staff offices.

B. <u>Site.</u> There are many potential sites for a Wildlife Center within the southern Gulf of Alaska, including Valdez, Homer, Seward and Cordova. Ideally, a site should be accessible by road, have an all-weather airport and have access to a sea water supply.

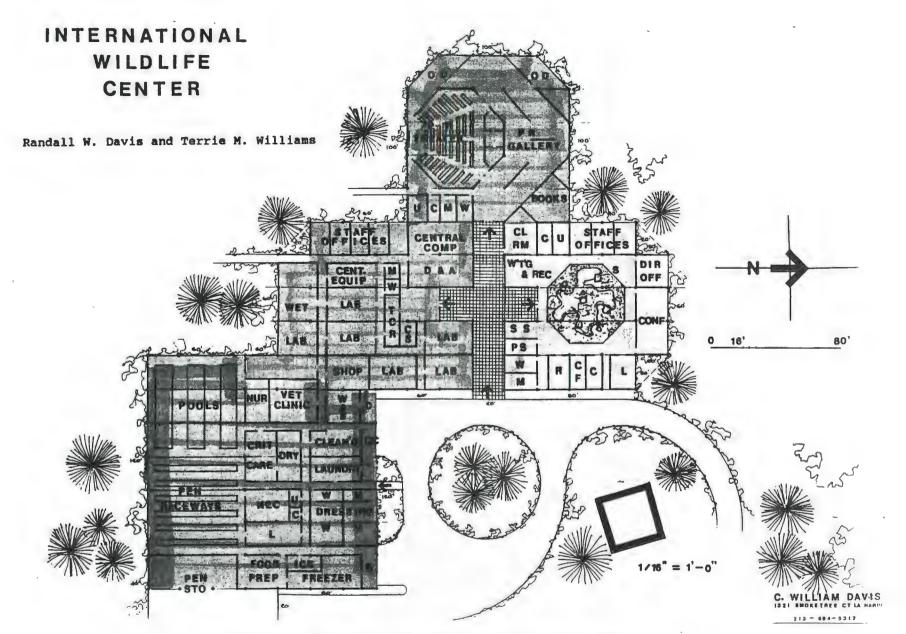


Figure 1. Floor plan for a marine wildlife (sea otters, pinnipeds and seabirds) rehabilitation facility. The floor plan is divided into four components: 1) green = animal cleaning and rehabilitation, 2) yellow = administration, 3) orange = research and 4) pink = public relations and education.

KEY TO FLOOR PLAN

1. Animal Rehabilitation (green)

C = custodial room

CC = cage cleaning area

Clean'g = animal cleaning room

Crit Care = critical care holding area

D = loading dock

Dressing = dressing rooms and lavatories for men and women staff

Dry = animal drying room

Food prep = kitchen for animal food preparation

Freezer = freezer for animal food

Ice = ice machines

L = staff lounge and eating area

Laundry = washing machines, dryers, water conditioners

Nec = necropsy room and pathology laboratory

Nur = nursery for sea otter pups

Pen raceways = raceways (spillways) for sea otter pens

Pen sto = storage area for sea otter pens

Pools = pools for sea otters and pinnipeds

U = utility room

Vet Clinic = veterinary clinic

W & S = weighing and sedation

2. Administration (yellow)

C = custodial

CF = central files

CL RM = class room

Conf = conference room

Dir Off = Director's office

L = lounge

M = men's lavatory

PS = plant security

R = reproduction

S = secretarial area

SS = secretarial staff

Staff Offices

W = women's lavatory

W'tg and Rec = waiting and reception area

3. Public Relations and Education (pink)

Books = book store

C = custodial

M = men's lavatory

OD = outside deck

PR Gallery = public relations gallery/educational displays

PR Theater = public relations and education theater

U = utility room

W = women's lavatory

4. Research (orange)

Central Comp = central computer room

Central Equip = central equipment room

CS = chemical store room

D & A = data and archives (library)

Lab = dry laboratories

M = men's lavatory

Shop = machine shop

Staff Offices

TCR = temperature controlled room

W = women's lavatory

Wet Lab = wet laboratories

Appendix 1. Facility Specifications

I. Indoor Space

Α.	Administration		
	1. Conference room for 30 persons		800ft ²
	2. Reception/waiting area		300ft ²
	3. Secretarial staff offices		$400 ft^2$
	4. Director's office		400ft ²
	5. Administrative personnel (3 offices	s)	750ft ²
	6. Reproduction room (xerox)	•	150ft ²
	7. Central files room		200ft ²
	8. Communications room (outdoor antenn	na)	200ft ²
	9. Plant security / personnel ID room	•	200ft ²
	10. Staff kitchenette		80ft ²
	11. Corridors/toilet/custodian/utility	Y	920ft ²
	TOTA	AL	4400ft ²
в.	Animal Rehabilitation		2
	 Weighing and sedation 		300ft ²
	Animal cleaning room (6 stations)		500ft ²
	3. Animal drying room		400ft ²
	4. Critical care room		500ft ²
	5. Animal food preparation room		500ft ²
	6. Nursery		300ft ²
	7. Veterinarian clinic		800ft ²
	8. Utility room (laundry)		300ft ²
	9. Dressing room for volunteers and s	taff	1300ft ²
	10. Personnel lunch room		500ft ²
	11. Freezer space for animal food		500ft ²
	<pre>12. Ice machine room 13. Corridors/toilet/custodian/utility</pre>		200ft ²
	13. Corridors/Collec/Cuscodian/uclific	Y	1500ft ²
	•	TOTAL	7600ft ²
c.	Public Relations		2
	1. Theater for 300 people		3000ft ²
	2. Lobby	1	1500ft ²
	3. Bookstore (wildlife and conservation)	on)	500ft ² 1250ft ²
	4. Toilet/custodian/utility		T7201f
	•	TOTAL	6250ft ²

D.	Education/personnel training for animal rehabilitat. 1. Lecture area/educational gallery 2. Control room (audiovisual)	ion 1000ft ² 100ft ²
	3. Audiovisual storage	200ft ²
	4. Classroom5. Corridors/toilet/custodian/utility	400ft ² 500ft ²
	TOTAL	2200ft ²
E.	Research	_
	 Central computer room (database and archives) Dry laboratories (5 @ 600ft² each) 	1600f t °
	3. Central wet laboratory (overhead access door)	1600ft
	4. Research staff offices (5 @ 300ft ² each)	1500ft ²
	5. Temperature controlled room	400ft
	6. Central equipment room	400ft
	7. Chemical store room	150ft
	 Carpentry and machine shop Necropsy and pathology laboratory 	800ft 600ft
	10. Corridors/toilet/custodian/utility	2100ft
	TOTAL	12150ft
F.	Supply and equipment storage	3000ft
G.	Indoor atrium	10000ft

II. Outdoor Space

A. Concrete holding tanks (3 @ 10ft x 50ft x 6ft) and walkways (animal rehabilitation)	2400ft ²
B. Concrete raceways for pens (6 @ 3ft x 50ft) and walkways (animal rehabilitation)	3000ft ²
C. Cage cleaning facility (animal rehabilitation)	400ft ²
D. Helicopter pad (animal rehabilitation)	10000ft ²
E. Parking	80000ft ²
F. Sea water treatment	300ft ²
G. Landscaping	95000ft ²
TOTAL OUTDOOR SPACE	191100ft ²

III. Land Requirements

- A. Land use summary
 - 1. Combined indoor and outdoor space for each function:
 - a. Animal rehabilitation = 26700ft² b. Administration = 4400ft²

 - c. Education = $2200 ft^2$
 - d. Research = 12150ft²
 - e. Public relations = $6250 ft^2$
 - f. Parking, landscaping and misc. = 185000ft²
 Minimum site size = 236700ft² (5.4 acres)

 - 3. Optimum site size = 10 acres for campus-like environment and future growth
- B. Special requirements
 - 1. Should be within the range of Prince William Sound
 - 2. Proximity to sea water source

A PROFILE

of the tanker accident and events which followed is presented through photographs, maps, and other materials. Interpretive narrative gleaned from a broad spectrum of sources helps to describe and examine:

The events and known facts of the accident.

What happens in an oil spill.

The immediate environmental impacts.

Social, psychological, economic, and political impacts.

Containment, cleanup, and other mitigative efforts.

Questions of long-term environmental impact and recovery.

Implications for conservation and utilization of resources.



3779 Bartlett Street Homer, Alaska 99603 (907) 235-8635



Port William Macility of Shuyak Island P.O. Box 670556 Chugiak, Alaska 99567 Tel. (907) 688-2253



OSIAR DIV

March 29, 1990

Judith A. Maxwell, Ph.D Senior Restoration Economist Alaska Department of Fish and Came P.O. Box 3-2000 Juneau, Alaska 99802-2000



Dear Dr. Maxwell:

We of Port William hope to assist you in your effort to restore the Kodiak area's pristine and life-supporting condition; that which existed before the Exxon oil spill.

In oil damaged areas or areas adjacent, we orge you to prohibit bird hunting of all species and to limit deer hunting drastically until extensive surveys can be made of wildlife losses.

Surveys of state and federal agencies should be collaborated and organized into small, efficient teams to avoid distress of wildlife, and local residents should be consulted and asked to participate when they are intimately familiar with a survey's area. I urge this not only for their knowledge of local oil damage, but for purposes of safety and efficiency as well. Neither bays, inlets, nor open waters should be attempted in unknown areas without benifit of knowledge of climate, terrain, and the dangers prevailing.

Survey crews should travel in skiffs outfitted with small engines to avoid disturbing wildlife. Also aft should be restricted to flying altitudes of three hundred feet or higher. Choppers have created a negative impact; pilot's habits of hovering at from five to fifty feet over bird-nesting areas and beaches should be forbidden. This practice severely endangers survival of the young. We certify that we have suffered massive losses of bird and marine life in our area.

Results of surveys of large areas should never be depended upon, because those results may not necessarily be true of the whole of the area. Inspections and studies should be conducted over very small affected areas. Individual studies should be made of mollusks and herring. Back-water marshes and lagoons should not be ignored for, of course, that is where much life originates

Cook Inlet is also in danger. What Rapid Response Program exists for the Kennedy and Stevens Passages?

Conflicting statements made to the public by state and federal agencies have cone untold damage. DEC says we are hard nit; Division of Tourism says we're cleam. Another example (we are scepa: md for future oil spills; we are non-prepared) has resulted in public distrust in government quarantees of Rapid Respense to future oil spills. Still another has resurred in fear of wildlife consumption. The Anchorage DAILY NEWS has quoted the Department of Pish and Game as saying that Shuyak Island was the third hardest hit area (with Exxon oil) which boasts a deer population, and that prudent deer hunters should nunt elsewhere. Yet, no official tests or surveys were conducted of Shuyak deer that we know of, and deer hunting on Shuyak Island has not been cancelled or even restricted. And the list goes on. These rumons, spread by officials are counterproductive; findings should be carefully authenticated, compared, and studied so that honest, candid statements may be made.

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Concerns and constructive ideas of the public and small associations and cooperatives should be heard. Fear is rampant among the people we know; fear of tainted meat and other foods is only one example. We ourselves have repeatedly sent food samples to agencies for analysis and no response has been received. We are among a very few tideland property residents who have been directly hit by Exxon oil, and we have never had any inquiry, save yours, from any state or federal agency, or Exxon.

The Alaska Division of Tourism, the AVA, the various Visitor's and Convention Bureaus, and the Chambers of Commerce need some kind of overall unified guidance in order to promote Alaska tourism effectively rather than each organization desperately denying Exxon oil damage on their own, and in any way they can think of.

Alaska needs representation in Europe that can market not only Germany effectively, but the entire European market, indeed the world market.

Alaska tourism personnel should not be political appointments, but rather well trained, experienced tourism experts. The governor could appoint a special advisory committee of tourism-related business owners to work with a qualified state staff which would keep the Division of Tourism more in touch with the special needs for promoting tourism in Alaska. These businessmen could be tour operators, travel agencies, hotel and airline representatives, lodge owners, and charter boat operators,

Our Exxon oil spill can be a vehicle to a valuable learning experience to everyone in the tourism industry in Alaska. We are far too dependent on too short a tourist season; every possible effort should be focused on expanding public interest in visiting Alaska during winter months. There is much to be learned from the State of Florida—committee approaches, common goals, campaigning, and advance planning. They have fifty years

•

of hard experience behind them.

Exxon must not be held solely responsible, for business is known to be single-minded and must be regulated, but business should (and usually does) risk loss of license to operate when it violates the rules and regulations under which it is subject.

We look forward to working with the Department of Fish and Game in this huge and challenging team effort of so many able, determined people.

Sincerely yours,

Bruce Cooper, Agent Port William Facility

PAGE 3



C.I.S.A. P.O. Box 4311 Homer, AK 99603

April 27, 1990



Alaska Department of Fish & Game Oil Spill Impact Assessment Restoration 333 Raspberry Road Anchorage, AK 99518-1599

Dear Oil Spill Restoration Planning Office:

I would like to thank you for coming to Homer and providing the local residents their opportunity to have input on the proposed restoration process of oil damaged areas due to the Exxon Valdez oil spill.

Though the area of the Outer Kenai Peninsula is a long way from Prince William Sound and where the oil spill occurred, some areas were damaged and impacted to the same extent, if not more.

Areas such as Windy Bay, Rocky Bay, Port Dick, Tonsina Bay, Nuka Bay, Gore Point, and Nuka Island, to name a few, were all victims of oil from the Exxon Valdez.

In the past one of the largest user groups of these areas has been the commercial salmon fisherman. We fish salmon in these areas on an annual basis and were denied that opportunity during 1989 due to the oil spill. At this point we don't know what the future holds.

We do feel we are one of the largest impacted user groups in this area. We would like to see the loss of fish rearing habitat quantified to the maximum extent possible and see these areas restored to their historic fish production levels and environmental state.

In some years, more than one of every three fish harvested in the entire lower Cook Inlet area has come from these areas.

Keeping that in mind, some things that can be done on the short term to mitigate the effects for salmon fisherman is the continued maintenance and operation of F.R.E.D. Division Projects in this area. The F.R.E.D. Division Facilities can also be used for incubation and reintroduction of salmon fry and smolt to areas that have potentially become barren due to oil in the intertidal areas and salmon spawning beds.

Long term mitigation could be the funding for projects such as the Paint River fish ladder and stocking programs. Purchase or buy-back of permanent logging rights for habitat protection of salmon streams could be another alternative.

Page 2

The two issues I want to stress are that there was considerable damage outside of Prince William Sound, the Outer Kenai Peninsula being one area, and the economic importance of this area to our fishery.

Thank you for your time and consideration.

Sincerely,

Brad Chisholm

Prince William Sound Science Center

Incorporated as Prince William Sound Science and Technology Institute

John P. Harville, Ph.D. Interim Director

May 4, 1990

Dr. Stanley E. Senner Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, AK 99501



Dear Dr. Senner:

From George West in Homer, I learned that your office is intending to hold a series of meetings around Prince William Sound to receive comments and suggestions concerning programs appropriate for future action. When might such a public meeting be scheduled in Cordova? The Prince William Sound Science Center should provide useful input for your consideration, since the Center has as its central mission the "comprehensive description, sustained monitoring, and more complete ecological understanding of Prince William Sound and its wetlands, river systems and drainage basin, to serve as information resource for decision—makers responsible for the conservation and development of those diverse and complex ecosystems." Enclosed for your reference is the complete PWSSC mission statement and a summary of the functions planned to carry forward that mission.

George West is a member of the multi-disciplinary Scientific Committee which provides scientific and technical advice to the PWSSC Board of Directors. Other members include researchers from the lower 48 involved in Prince William Sound projects, as well as scientists from the University of Alaska and from state and federal agencies with management responsibilities in the area.

I would be interested in learning more about the mandate and responsibilities of the Oil Spill Restoration Planning Office. If documents are available describing those functions, I'd appreciate copies for incorporation in our files.

Yours sincerely,

John P. Harville, Interim Director

DECEIVE

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501 (907) 271-2462

10 May 1990

John P. Harville, Interim Director Prince William Sound Science Center P.O. Box 705 Cordova, Alaska 99574



Dear Dr. Harville:

Thank you for your recent letter regarding the oil spill restoration planning process. I have enclosed a brochure that gives an overview of our activities, particularly as they concern public participation.

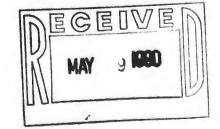
The public scoping meeting about which you inquired was held in Cordova on 17 April. Judi Maxwell from ADF&G in Juneau and Gary Ahlstrand from the National Park Service in Anchorage chaired the meeting. I believe that Judi had been in touch with Rick Steiner and others in advance of the meeting, but I gather that information did not reach you.

Having participated in your conference on long-term research needs in early March, I am familiar with the Science Center's goals. The fact that we have already held a public scoping meeting in Cordova should be no obstacle to the Science Center's participation in the restoration planning process. We invite and seek your views at any time. If business brings you to Anchorage, please give me a call and we can arrange a meeting. Alternatively, we will give you a call in advance of our next visit to Cordova (I was just there for the last several days, but most of that time was spent on Montague island!).

Thanks again for your letter and your interest in the restoration planning process.

Sincerely,

Stanley E. Senner Restoration Scientist



KW

Summary of Comments from the Public Scoping Meeting Held in Cordova, Alaska on April 17, 19°0

Gary Ahlstand, National Park Service, and Juli Maxwell, Alaska Department of Fish and Game, conducted the meeting which was held in the cafeteria of the Mt. Eccles Elementary School from 7:00 to 9:30 p.m. Nine people attended including a reporter from the local radio station, a logger, an oyster armer, a local businessman, a former Kodiak fisherman who is writing an article for Smithsonian magazine on the effects of the oil spill on the fishing industry, three employees from the Alaska Department of Fish and Game, and one representative from Alaska Department of Natural Resources.

Summaries of comments, questions, and suggestions made by participants:

Concerns were raised that planning for restoration was premature given the dearth of data from the damage assessment studies. Dr. John Teal's comment "that the best thing we can do to restore coastal habitats is to do nothing " was raised with a concern that people may not be able to accept the "do nothing" option.

- Some proportion of restoration funds should be spent on long term monitoring and research. Several participants complained that there has been little money available to do this type of research even though the need has been recognized.
- Commern was raised over the hatchery programs in the Gound. One participant noted that we knew little about the interaction of hatchery stock with wild stock and that this information was important, not only from the biological standpoint, but also to determine how to maximize the economic investment in these hatcheries.
 - Several attendees reported on the status of talks between local environmental groups and the major timber owners in the Sound regarding acquisition of timber rights. Their opinion is that agreement could be reached but that the lack of funds was a concern. They wanted to know if it would be possible to purchase certain tracts particularly those that will go on the cutting block this year before a settlement is reached with Exxon. There was concern that by the time the court case is settled all of the important tracts, from the standpoint of environmental quality, would have been logged.
- One respondent noted that the cleanup activities introduced many to the beauty of the Sound and that this may serve to attract more people which may ultimately have a more significant impact in the Sound than the oil

spill.

- Concern was raised over the loss of passive recreation sites boat moorings due to oiling. Since the same has occurred for many coastal areas favored by wildlife, it is likely that recreationists and marine mammals will compete for the few clean areas. One attendee said that the major source of degradation was people and poor management of same. He expressed the opinion that wildlife will re-establish itself and stabilize if people leave well enough alone.
- Recommendations on acquisitions included haulout/rookery areas for sea lions and seals and the buy back of gill net permits to both enhance fisheries and to protect marine mammals.
 - Several attendees emphasized the need for comprehensive planning due to the potential to spend a lot of money on restoration while producing nothing to show for it. Restoration and replacement activities, in particular, are likely to be a waste of money if oil spill contamination and other sources of contamination were not removed. Therefore, it is likely that more will be achieved via acquisition.
 - Regarding non-oil sources of contamination, one attendee recommended the removal of mine tailings and other mining and logging debris in and around the waters of the Sound, including old sheds which still contain dynamite. These are causing heavy metals to be released into the water column.
- One attendee also noted that since plastics cannot be recycled more than once that these should be eliminated altogether.
 - Concern was also raised regarding peoples' livelihoods. Would restoration seek to return the Sound to some earlier state of biological diversity which may mean that fishermen could not expect to receive their traditional catch quotas...would it be possible to give special consideration to commercial species in the restoration program?

Other questions and concerns raised:

- Do the government agencies have enough money to do adequate damage assessment?
- What is the quality of Exxon's damage assessment? Shouldn't their field activities be monitored?
- γ Does the U.S. Department of Justice have the right to

divert monies received in private suits against Exxon to the U.S. Treasury? How will settlement money be spent who will decide how it is allocated? If new resources are acquired which agency will manage them?

- The field officers of the trustee agencies expressed the desire to be more informed on restoration planning before the public is brought on board. They also suggested that the flyer be mailed to all area residents a general mailing to all postal boxes.
- How can the new legislature mandate to open the Sound to mariculture development be accommodated given the damage from the spill?
 - Several attendees recommended that the trust fund be managed so that funds will be available 20-50 years from now to undertake restoration and replacement projects when coastal habitats are healthy enough to support these activities.

JAM/mah

DRAFT

Summary of Comments from the Public Scoping Meeting Held in Valdez, Alaska on April 18, 1990

Gary Ahlstrand, National Parks Service, and Judi Maxwell, Alaska Department of Fish and Game, conducted the meeting which was held at the Valdez City Council Chambers from 7 to 9:30pm. Six people attended including two tour boat operators, a proponent of aquaculture from the state of Washington, a reporter from the local radio station, and members of the Prince William Sound Conservation Alliance.

Summary of comments and suggestions made by participants on the subject of restoration of damages from the Exxon Valdez oil spill:

- In order for the community to be able to educate themselves regarding restoration, it was suggested that the Literature Review be made available to local libraries and that the most relevant publications be noted for possible acquisition.
- Expand the oil spill curriculum being developed by Belle Mickelson (Cordova) to include information on restoration and, in particular, to explain the need to prevent other hazards and spills as well.
 - A number of participants at the meeting spoke of the gradual decline in environmental quality in the Sound and observed declines in wildlife numbers which they thought were directly attributable to marine pollution (i.e. dumping of oil, diesel tuel and garbage from boats) and due to boats disturbing wildlife.
- Clean-up garbage on beaches from sources other than the oil spill.
- Under the new Marine Pollution Act it will be illegal for boats to dump garbage and other wastes at sea - however, local governments do not have the resources to collect and recycle this garbage and will have to charge boat captains to pay for this service which will probably result in disposing garbage at sea inspite of the law. It was recommended that restoration funds be used to:
 - a) Educate skippers about the importance of not dumping refuse at sea and that trash compactors could be used to eliminate bulk (aluminum can compactors cost \$15).
 - b) Provide tenders to collect garbage directly from

boats at sea.

- c) Fund towns to initiate recycling programs particularly waste oil products.
- d) Set up small, local response teams to deal with small spills. There were 190 small spills recorded in Valdez in 1989 resulting in contamination of the Valdez Duck Flats. Alyeska currently does not have enough booms to protect this area from spills.
- e) A feasibility project which would handle/recycle oil and other marine garbage might be so successful that the state legislature may be willing to fund similar projects in the rest of Alaska.
- f) Also, communities need financial assistance to build wastewater and storm runoff treatment plants.
- g) The PWS Conservation Alliance will open an exhibit "Oil in the Marine Environment" next week and is seeking additional support to publish a brochure which could be distributed to boaters to educate them on the need to protect the environment and to eliminate these sources of waste.

The impetus for the above recommendations was the belief of several participants that restoration has little hope for success if the chronic and seemingly trivial sources of pollution in the Sound are not regulated. The group felt that a key component of restoration should be prevention of further damage so that the natural healing capacity of local ecosystems would be enhanced. In this regard, several participants also thought that it was important to curtail, at least in the short-run, human use impacts on the Sound. This would include changes in tish and game regulations, as well as, research.

- Study effects of boat distance from seal haulout/pupping areas, from eagles, etc. - then educate the public about these effects.
- Provide "talking guides" for captains to explain to passengers why it is important to view wildlife at a distance. In addition, supply captains with flyers to distribute to passengers explaining their responsibilities. This should reduce pressure on captains to get a little closer or to toot their horns in order to get action shots of seals jumping into the water.

The two tour boat operators said that the pressure on captains to take their boats in close proximity to wildlife areas was tremendous. Both have observed a 40 percent decline in the number of harbor seals prior to the spill while Dall porpoises and harbor





dolphins have been completely absent from the Sound since the spill. They felt that the tour boat business would not decline if all boats were restricted from disturbing wildlife areas and sea bird colonies.

 A marine report similar to the "Aviation Air Report" could also be used to educate the public on boater/passenger etiquette and responsibilities.

The need to change fish and game regulations was also discussed as was the desire to enhance the value of wildlife. In particular, it was recommended that the Alaska Department of Fish and Game stop referring to wildlife in consumptive use/harvest terminology and that the hunting and fishing seasons in the Sound be completely shut down for at least two to three years. One participant reported that a bush pilot operation from Anchorage had taken over 80 mountain goats in the nearby Port Fodagle area last year. It was also suggested that the river otter/mink trapping season be closed. Several participants favored designation of the Sound as a National Monument but thought this would not be politically feasible.

A number of attendees were concerned about the future of the Valdez Duck Flats. Certain parts of the Flats are owned by the local government and there has been discussion of developing this area including an extension of the public docks. It was recommended that ADF&G use AS Section 16.20 to declare this area to have "critical habitat status" - once classified, a permit would be needed before the area could be developed.

The Flats are the farthest most winter range for the Canada goose and also host a large population of sandpipers. In fact, there are more birds at the Flats in the winter than in the summer. Protection of this area should be considered before acquisitions are done outside of the region. Given the preference for more development activities in Valdez, several participants recommended that a brochure be developed that would explain the importance of the Duck Flats to the public. One participant suggested that it might be appropriate to invite the National Duck Woodcarvers convention to come to Valdez as a way to enhance the value of the Flats in the eyes of the public.

Several other "acquisition" opportunities were suggested. These included:

- a) Protection of humpback and orca "rubbing" beaches (Perry Island, South end of Knight Island)
- b) Protection and acquisition of otter and mink denning areas which requires more than stream side habitat.
- c) Protect and acquire nesting and roosting habitat for lesser and greater yellowlegs, great blue herons, marbled murrelets and yellow billed loons. Research







may be needed to determine how best to protect these species.

here was also support for funding research on whales, Dall's and harbor porpoises, and on the impacts of hatchery fish on wild stocks. Several attendees were opposed to hatchery projects which would not enhance wild stocks.

There was also concern that restoration could lead to a number of undesirable changes in the Sound. Several participants suggested that physical restoration be avoided - that it was better to leave the area alone. In particular, they did not want to see any permanent research stations established nor permanent boat moorings which would only increase public use and encourage boaters to go out without adequate equipment. One person mentioned a U.S. Forest Service study which shows the adverse effects of intensive human use. It was felt that it was better to sacrifice some areas to heavy use so that other areas could be preserved.

Overall, most of the attendees expressed a desire to limit additional commercial development in the Sound citing that the Sound was already overused. However, these same people expressed concern over how to accomplish this while finding some way to provide more economic opportunities to the native communities.

One participant also suggested a need to find more efficient ways to use energy and supported the use of restoration funds to pay for research on alternative fuels.

On the subject of public involvement, one participant suggested that if people are chosen to serve on a public advisory board that they be chosen according to their interests (commercial fishing, subsistence use, recreation, etc.) instead of by geographic location. She suggested that these interest groups be asked to supply a list of those that they would recommend as participants. These should be checked carefully by seeking references. This method was used to select a public group to work on the state Forest Practice Act with excellent results.

Finally, the group recommended that a booklet be published entitled, "50 Sample Things You Can do to Save the Sound."

JAM/mah

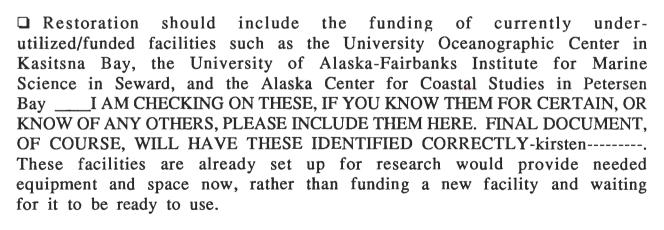
RAWG

Public Scoping Meetings

Restoration Planning Work Group

Public scoping meetings were held during the months of April and May in Anchorage, Cordova, Kodiak, Seward, Soldotna/Kenai, Valdez and Whittier. The purpose of these meetings was to obtain public input regarding the disposition of restoration funds as mandated under the Comprehensive Environmental Recovery Compensation Liability Act (CERCLA). These funds are currently managed by the Trustees appointed as mandated by CERCLA. The Trustees are the Department of Interior-National Parks Service, Fish and Wildlife Service and Bureau of Land Management; Department of Agriculture-Forest Service; and unique to this spill, the State of Alaska through the Department of Natural Resources.

Considering the small size of the communities where most of the meetings were held, the opening of the fishing season, and the short notice of the meetings, turnout was reasonably good. The trilogy of restoration-recovery, rehabilitation and acquisition of equivalent resources—was explained to the participants. Proposed/example restoration projects were presented to obtain feedback from the public. Many of the proposed (at the time of the meetings) were supported by the public. Many new ideas regarding the application of the definitions of restoration were applied to projects that members of the public would like to see implemented. Summaries of the individual meetings can be reviewed in appendix ---. In general, endorsement of the following principles was expressed by the participants of the scoping meetings:

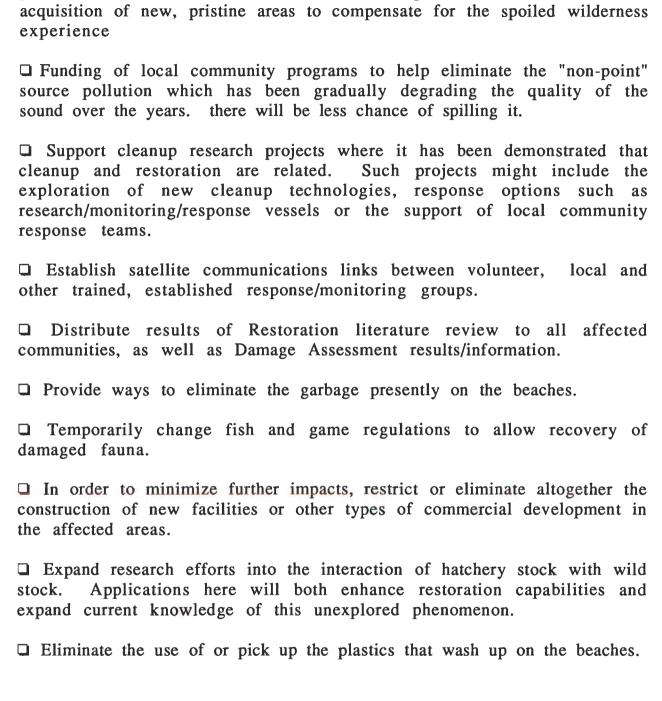


Restoration should include public information/education programs to enhance knowledge and understanding of the environment, the value of the nations' natural resources and the restoration process.

□ Long Term research at all levels (restoration, damage assessment, monitoring, etc.) should be supported. It was proposed at most of the

meetings to set up a foundation/grant program which would provide funding perpetually for this spill.

- ☐ Fisheries should be enhanced through available means such as expansion of existing facilities, construction of new hatcheries, enhancement of wild stocks, enhancement of unutilized river systems, etc.
- □ Timber rights in Kachemak State Park's China Poot Bay, English Bay Corporation lands, Chugach Alaska Corporation selections in the Kenai Fjords National Park, Chugach National Forest's Montegue Island and the proposed selection on Afognak Island, among others, should be purchased. If the purchase of entire tracts of timber in impractical, then the protection/acquisition of large (300+) foot buffer zones along visual/critical habitat areas could be considered. The idea here is to preserve existing habitat and prevent impact and environmental degradation in other areas, including those adjacent to shorelines impacted by the spill.
- ☐ Areas already impacted by previous logging activities could be replanted. Replanting of areas such as Afognak Island, the Rocky/Windy Bay area, among others, should include enhancement or construction of nursery facilities so viable, acclimated seedlings can be grown in quantity.
- □ Spill cleanup activities introduced many people to the PWS area who may want to return for recreational purposes. Management options for such an occurrence need to be explored. These options might include compilation of a data base of the status quo of the areas which may see increased visitation so as to measure the degree of impact in the future, expansion of existing facilities to accommodate increased visitation, and other projects to enhance visitor experience while protecting the areas that the public has come to enjoy.
- Acquisition of equivalent resources most often achieves greater results than any other use of restoration funds. The difficulty in returning an impacted area to its pre-impact condition makes acquisition advantageous in that other areas can be protected from similar or other impacts. Suggestions for acquisition from the communities included: supporting tax breaks for private owners who designate their land(s) as conservation purchase of important/critical habitat currently in private hands and designating these lands as protected; acquisition/protection of bird nesting sites such as Gull Island, the Valdez Duck Flats, Fox River Mud Flats, winter habitat outside the state, and seal rookeries currently in private holdings; upland nesting areas of pelagic sea birds (many nesting colonies, such as the Marbled Murrelet, need to be located and identified); purchase/protection of private lands along important anadramous water systems such as the Kenai River, and other areas which would enhance and protect natural resources and increase the pleasure and enjoyment of the



public who will visit these areas. Such acquisitions could include the

Future meetings are planned in the same communities for Fall 1990. This report will be made available prior to these meetings for public review. Further input will be incorporated into the restoration planning process for future years.

MEMORANDUM

STATE OF ALASKA

Department of Natural Resources Oil Spill Project Coordination Office

Distribution TO:

April 27, 1990 DATE:

FILE NO:

TELEPHONE NO.:

762-2295

FROM:

Frankie Pillifant

Damage Assessment/Restoration Manager

SUBJECT:

Restoration Public Scoping

Meetings; Seward - 04/16

Kenai | Soldotna - 04/17

This memo is a compilation of suggestions from the recent public restoration meetings which I attended on behalf of DNR, in conjunction with the ongoing work of the Restoration Planning Work Group (RPWG).

The purpose of the public scoping meetings was to facilitate dialogues on the options for restoration to damaged resources from the Exxon/Valdez oil spill. This is the first foray into the larger impacted communities. In the future the RPWG hopes to visit the smaller native villages, and to spend more time in the communities, meeting with the active interest groups. Other members of the RPWG were conducting meetings in Homer, Kodiak, Valdez, Cordova, and Whittier the week of April 16 through April 20, 1990.

SEWARD:

The Seward public meeting was held at the Institute of Marine Sciences Building. There were four members from the public in attendance. After Brian Ross (EPA) and I explained the purpose and definitions of the restoration process we opened the floor for public comments. Only one member of the public participated verbally. Initially comments centered around damages, what the studies were showing for damages, etc. Eventually we were able to draw responses from the participant concerning restoration.



- How will the public's trust in the oil industry and resource agencies be restored?
 - Suggestions:
- management changes for resources
- ad campaigns to show the public what is on-going in the affected areas.



Restoration should include the funding of currently under utilized facilities, such as the IMS, instead of funding new facilities such as the PWSSC.



Restoration should include public education forums, possibly in the form of paying or coordination of volunteers in the areas where projects may occur.



4. Restoration should include the set aside and long-term monitoring of natural resource areas. These would be designated sites where entire ecosystems would be monitored for the base information but where no type of activity, including camping or development would be allowed.



5. Agencies should match restoration funds to operate monitoring programs which would be run in a cooperative format by agencies or through a contractor.



6. All projects should strive to use local hire only. This could tie into the restoration of the psychological damage incurred.

The meeting was adjourned at approximately 9:15 p.m. We let the public know that we appreciated their participation and encouraged their continued involvement by filling out the fliers or contacting the resource agencies for further information. We indicated that the RPWG would be back sometime later in the summer/early fall when the clean-up and fishing seasons were ended. One participant suggested that we return as soon as Exxon pulls out of the clean-up to ensure we meet with folks while the situation is fresh in their minds.

KENAI/SOLDOTNA PUBLIC SCOPING MEETING:

04/17/90 Kenai Sports Center

We experienced another small turn-out in Kenai/Soldotna with seven public participants in attendance. The comments centered mostly around the fishing aspect of restoration.



1. The Kenai River is the major producer of fish on the Peninsula. As such, one restoration idea would be to acquire development rights along the river, possibly transferring them to the DPOR or the DLWM. This would help retain some of the integrity of the river banks. An addendum to this suggestion was a request from a representative of the Kenai Borough that restoration funds be used for mapping the drainage of the Kenai River to develop a current baseline i.d. of the water system. Damage to the fisheries would be easier to ascertain with this type of information. This suggestion was discussed by participants one point discussed was the Kenai Borough not fulfilling its mandate from the legislature and the River Management plan by creating zoning in the area.



2. Remove the opportunities for draining wetlands. Set up a fund for the mitigation of wetland areas in the affected zones.



3. Prevention as restoration was suggested. It is not clear at this point if restoration funds can be used for such an undertaking. This is one of the key legal issues still being reviewed.



4. Again, it was suggested that funds for restoration be used directly in affected areas only, and if possible create restoration projects that are physical examples, such as signage of projects.



5. Meet and review with the Regional Planning Teams the recommendations for management in the areas affected by the oil spill.

The Kenai meeting was adjourned at 9:00 P.M.

The time not spent holding public meetings in both Seward and Kenai was spent identifying and distributing to public places the Restoration flyers. These places included the federal and state agencies, libraries, local government and utilities offices.

cc: Gerald Gallagher Gary Gustafson Veronica Gilbert Priscilla Wohl



4/30/90

Summary of comments from the Public Scoping Meeting Held in Homer, Alaska April 18, 1990

Stan Senner, Alaska Department of Fish and Game, Sandy Rabinowich, US Fish and Wildlife Service and Kirsten Ballard, Environmental Protection Agency conducted the meeting which was held at the Homer Senior Center from 7:00 pm to 9:10 pm. Fourteen people attended including representatives from the State of Alaska Department's of Fish and Game and Natural Resources, a member of the Cook Inlet Seiners Association, local fishermen, a local artist, a representative of the USF&WS Maritime ______ Refuge, a local shop owner and a member of a local subsistence fisheries citizens group.

Summaries of comments, questions and suggestions made by participants:

-The need for in-the-field research/monitoring vessels was expressed. It was suggested that this type of vessel could combine research, recovery and restoration and at the same time take measures to prevent impact of a future oil spill.

-It was suggested that funds should be allocated for oceanographic research by enhancing existing facilities. This could be combined with enhancing or creating educational institutions and public ocean information centers (in conjunction with oil spill response centers).

-Long Term Ecological Research should be supported. A system to guarantee funding for assessing the damage oil pollution imposes on the environment. With the increase in tanker traffic, further research into cleanup techniques was discussed as applicable to inevitable future spills.

-A satellite communications system for research vessels was proposed. If such a system were in place, research/response vessels could be directed ASAP to remote spills.

-Expanding public education regarding oil spills. This could be accomplished by hiring a contractor to go to local schools for education or by supporting museum exhibits throughout state and nation. These could be combined with another educational program to give people a sense of responsibility about energy.

-Concern was raised regarding the areas which were impacted by oil, then cleanup efforts and now possibly further cleanup. Further disturbances of isolated areas should not be encouraged. This may need to be combined with management options to reduce impacts. It was suggested that baseline data should be gathered now before projected increases the spill areas will receive as a result of the spill. This data could be used regarding recreation so good management

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decisions could be made to help ensure good visitor experience. Ways to minimize of further impact should be explored-e.g. expansion of existing facilities rather than construction of new facilities or creation of further bureaucracy.

-The acquisition of timber rights was discussed at length. Ideas included:

-Buy up a 300+ foot buffer zone around streams and areas visible from the coast, etc. in areas which are selected for logging to reduce environmental and visual impact

-Support tree planting efforts (construction of a nursery, labor, etc.) in areas which have already been logged or which will be logged for restoration.

-Buy up in-holdings or timber rights which are within the State and National Parks.

-Buy up Net Operating Losses (NOL) timber rights

-Support a change in the law to prevent further sale of NOL's to protect areas

-Several ideas regarding the enhancement of fishery resources in impacted areas were expressed. This included construction of new salmon hatcheries. It was also suggested that rather than impacting the wilderness further, support for the expansion of existing hatcheries was a better way to enhance the fisherv resource while minimizing recreational/aesthetic impact). In areas where wild stocks have been impacted, it was suggested that rather than changing the stock in those streams, available enhancement techniques for stream enhancement should be used to expand/restore wild stocks without replacing with hatchery stocks.

-Support/implement studies 9 &10 from NRDA which have been cancelled or discontinued.

-Support special cleanups in especially pristine areas was suggested as a restoration project. These cleanups would use techniques which have been demonstrated to minimize the impact on the beaches and enhance natural or enhanced restoration.

-Acquisition of new lands came under favorable discussion. Among the ideas presented:

-To restore the wilderness experience, new, unspoiled areas must be acquired.

-Acquire seabird colonies currently in private holdings.

-Protect timbered slopes to protect marbled murrelet

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nesting areas.

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-Acquire habitat for migratory birds along the pacific flyway, such as wetlands in California, and possibly monies to work out an international effort to protect habitat in south american countries. The idea of spending dollars outside of Alaska was met with objection until it was discussed that if the birds that we spend millions of dollars to restore do not have a place to winter over, then the dollars here would be spent in vain. The participants then concurred that this would be a viable project.

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-Support further studies to expand knowledge of other migratory birds to provide information regarding other wetlands/habitat for protection/acquisition.

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-Review all sea lion and seabird colonies with respect to land status, the ultimate goal being acquisition or protection of these areas.

-Consolidate Middleton Island for acquisition.



-The concern regarding future and long term studies was recurrent. The need for long term studies of the effects of EVOS has been determined. After "the thrill is gone" from this spill, the participants expressed concern that necessary studies would no longer be funded. The idea to establish a trust fund and manage it so that monies are perpetually available for funding restoration, recovery, acquisition and enhancement projects was met with enthusiasm by the participants.



-Cleanup as it relates to restoration was discussed at length. It was suggested that cleanups should be studied on an experimental basis, money for local research on cleanup and restoration techniques, and support for the development of an informational repository for cleanup technologies developed during this and other spills to avoid the "re-invention of the wheel". It was pointed out that such projects must be related to the restoration process.



-Plastics problem is synergistic with the oil, especially in low energy areas. The plastics remain a persistent problem and tend to collect oil. It was suggested that areas could be restored by cleaning up plastics (nets, line, floats and other assorted flotsam). This could be combined with the support of solid waste options to cut down/eliminate debris at sea.



-The recent placement of sea lions on the threatened species list brought several under discussion. Fisheries and tour boat operations will be feeling an impact. It was suggested that restoration funds should support studies to establish the amount of impact fishing and oil has had on sea lions. Funds could also be used to support research to identify the cause (s) of the sea lion's decline before establishing restoration procedures.

-The concept of removing introduced predators at bird rookeries to enhance recovery of these colonies (replacement). This has been documented as a successful operation (literature available) was met with a favorable response and supported by participants.

-It was suggested that previously logged/deforested areas could be reforested or replaced (planting) or new areas acquired/protected (Afognak Island).

-The participants seemed unanimous in their frustration regarding the inaccessibility of NRDA results. Concern that potential restoration projects or needs could possibly be overlooked was expressed. Participants felt they could not evaluate all subjects (cleanup, damage assessment and restoration) without the whole picture available.

RPWG-

Brian's Notes

Summary of Comments from the Public Scoping Meeting Held in Kodiak, AK on May 21, 1990

** During the day, we met with NPS, USFWS, Ak Parks, City of Kodiak, and Borough of Kodiak representatives. We distributed flyers at all these locations and at KMXI Radio FM100.1 station.

Brian Ross, U.S. Environmental Protection Agency (U.S. EPA), Sandy Rabinowich, National Park Service (NPS) & Frankie Pillifant, Alaska Department of Natural Resources (ADNR), conducted the meeting which was held at the Kodiak High School, Choral Room from 7 to 9:30pm. Seven people attended plus one reporter from KMIX Radio FM 100.1

INRO: Brian Ross

RESTORATION TRILOGY: Sandy Rabinowitch

Summary of comments and suggestions made by participants on the subject of restoration of damages from the Exxon Valdez oil spill:

Concern about Inipol; subleathal effects; Kodiak doesn't need "Prince William Sound (PWS) solutions". Support for timber sale acquisition, especially regarding areas where clear cutting is up to water's edge (Better than "unholy" junkets for scientists to test Inipol).

Support for tighter restrictions on other wastes (discharges, etc) as alternate to direct recovery.

Kodiak affected differently from PWS (PWS had kill zones; Kodiak had spot zones that were killed) and needs different solutions. Most birds were lost in the Barrens area. Kodiak is rich in archeological resources. Many people saw these sites, placing them at more risk. Support for increased attention to protection of these sites.

Concern over Trustees. They are inaccessible, they shouldn't be in Washington D.C. Unhappy with U.S. Department of Interior (US DOT) in D.C., but happier with Alaska Department of Interior (ADOT). Based on lack of information on what is going on.

Regarding subsistence lifestyle; concern about health and safety and what will show up later in the food chain that is being missed at present. For example, because the harsh winter of 1989-90 drove deer into the intertidal areas, deer are eating kelp from oiled areas. Hearts and livers are "collection items" so spill is really

affecting how we can use our resources.

Wants the monitoring information made more available. Also concerned that archeological resources have been taken by Exxon crew and thinks they will not be returned.

Also expresses concern that stream enhancement work is needed where winter storms have not done what was expected and emerging salmon fry are dying. Has seen "more dead fry than usual" and wants to see closed state hatcheries brought on line for replacement.

Likes idea of library for education

Katmai Park much more visible and better known now as being valuable resource to Kodiak are. Wants to see National Park Service office kept open.

Wants to see inventory of "what is out there" in terms of old dumps, etc, including old military sites, funded for later follow-up.

Re: subsistence - a large impact mentally, as well as to quality/quantity of food collected

Re: quality subsistence - important to keep in mind that when ducks are in season, you eat many ducks for an extended period. When other things are in season, same thing. Not the same as occasional consumption patterns of non-subsistence users. So more concern regarding contaminants. Many deer here are collected on the beach too (see earlier comment). Deer livers are distributed among all area women, because they are afraid of chemicals in store-bought liver. Now what will they feel is safe for them to eat?

Need local laboratory where subsistence users can bring tissues for analysis at an affordable price. Feels this program would be a "Natural" for a grant.

FRANKIE: Juneau has been trying to get a lab for years, too. Public support needs to be voiced; needs to say what the communities priorities are.

Re; Public Info Also-direct mail to registered voters(i.e. a flier) Dispelling fears for both subsistence users and tourism. Need to get info out (via ASMI, Chambers of Commerce, etc. and/or magazine articles that reach "outsiders". on contamination or lack of contamination of different resources.

Expressed concern for need of appropriate funding for ongoing monitoring/studies, etc. (e.g. for NPS rangers, etc).

Suggested a new twist on the environmental trust fund idea "prevention is restoration" in a way. Maybe should think about a "legislative action trust fund". Oil lobby still as strong as ever, why not take some of their money and make our own lobby.



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Support for an environmental trust fund being invested in Alaska banks, not in lower 48 Savings & Loan's facilities.



Regarding monitoring: It should go further than just monitoring hydrocarbons. Test should be conducted for everything that 's been put into water from the original spill <u>plus</u> chemicals used in the cleanup (including butoxy-ethanol).

Tugidak - one side building - easy to have oil buried for years in such a situation??????????

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Needs to be put in format RPWG that other reports are in. U

Restoration of the Environment

Following the Exxon-Valdez Oil Spill

Scoping Meeting, Homer, Alaska

April 18, 1990 at 7:00 p.m.

Restoration Planning Officials Present: Stanley E. Senner, ADFG

Kirsten Ballard, USEPA

Sanford P. Rabinowitch, Nat. Park Service Conrad O. Kleveno, USEPA, Washington DC

Stan Senner

This public meeting is to invite comments and suggestions regarding the restoration process in the areas affected by the oil spill.

First of all, I would like to clarify what restoration is and is not. Restoration is not a beach cleanup. Restoration is the repairing of damaged resources. It is a long-term process which includes repairing damages and renewing the environment.

Federal law requires three mandates: restoration, replacement and acquisition of equivalent resources.

Restoration includes direct attempts to return an injured resource to its baseline condition or function. It is a hands-on approach. An example would be to rehabilitate a wetland or marsh by raking sediment to oxidize it, as well as reseeding it.

Replacement includes substitution of a new resource for an injured resource. An example is to use hatchery/aquaculture techniques to establish an entirely new fishery stock in lieu of one that had been severely damaged.

Acquisition of equivalent resources means to purchase or otherwise protect other resources that are similar or related to the injured resource in terms of ecological value, functions, or services provided. For example, if the wildlife habitat cannot be restored, one could compensate by buying land elsewhere as an alternative of direct restoration of injured habitats. Equivalent resources need not be confined to the direct spill area.

The terms are admittedly fuzzy and we need your help to define the position of the public, scientific community, fisheries, and others--a process we hope is driven more by the public and scientists rather than lawyers.

Members of the restoration planning committee are here to identify opportunities, not allocate funds. Ultimately, a Trustee will make the actual spending decisions.

Are there any questions?

Comment

Who will pay?

Response

Stan Senner

The planning process is jointly paid by the federal and state government. Restoration will be done with funds acquired from Exxon through a claim presented in court.

Comment

What about the case against Exxon regarding the SSO Mill. Isn't the case almost settled?

Response

Stan Senner

The case you are discussing is a criminal case. The civil case will yield much larger sums. It could be billions or more. It is terribly important to construct a plan for the funds.

Comment

What is the time frame?

Response

Stan Senner

If the settlement is close as represented in the papers, it could be next week. The legal claims process could go well into the next decade.

Kirsten Ballard

A question that is commonly asked is "if the case is not settled for five years, and immediate restoration is required, can Exxon be immediately held liable?"

Comment

What damage to resources are other people talking about (i.e., sea lions)?

Response

Stan Senner

Everyone is concerned about fisheries. Actual damage is not very clear at this time. Herring are showing a high level of abnormality. Salmon intertidal spawning streams are showing lower population. Unfortunately, they are not publicly discussing the impacts on resources. We have heard various public concerns regarding recreation, marine mammals, cultural art, and archaeological sites.

Sandy Rabinowitch

It is difficult, at this time, to put a cost/price on wildlife resources.

Kirsten Ballard

I was at the public meeting in Soldotna this week and a comment was made that land near the Kenai River should be purchased to protect them from future development and protect fisheries resources.

Comment

I am confused about acquisition of equivalent resources. How can the public be involved if they cannot see the data/information with regard to the oil spill? There should not be closed doors.

Comments

Carl Nostrad

I suggest funds be allocated to the University Oceanographic Center for research. There should be a vessel to research, recover, and restore the environment and at the same time take measures to prevent impacts of a future oil spill.

George West

I would suggest Long-Term Ecological Research (LTER). Establish a system in Alaska to guarantee funding. With the increase in tanker traffic there are bound to be more spills.

Carl Nostrad

There should be satellite communications between the environmental vessels.

George West

I am receptive to research.

In my opinion, the following are potential uses of the oil spill restoration funds:

- public education;
- · acquisition of habitat; and
- research on Alaskan marine ecosystems.

<u>Public Education</u>. One of the best uses of these funds may be in educating the public to, a) demand that legislation be passed to better control and regulate the oil transportation industry, and b) to reduce the public's dependency on petroleum. One of the best ways to provide public awareness and education is through exhibits that tell the story of the <u>Exxon-Valdez</u> oil spill, relate it to all other oil spills around the world, and describe how these spills impact our lives and our pocketbooks. As an example, such an exhibit is currently being planned for construction this year by the Pratt Museum in Homer.

The travelling exhibit is based on a 700-square foot exhibit that the Pratt Museum designed and fabricated immediately following the Valdez spill. The exhibit, titled "Darkened Waters: Profile of an Oil Spill" attracted 16,000 visitors in 1989 and has been nominated by the U.S. Fish and Wildlife Service in Alaska for the 1990 "Take Pride in America" award. The overwhelming reaction of visitors was that the museum must share the documentary with the rest of the nation. The museum has accepted that challenge by initiating the creation of a travelling version of the exhibit redesigned for broader national relevance, improved accessibility, and ease of travel. Professional exhibit designers are already under contract and, funds permitting, the exhibit will be ready to start its journey to eight locations around the United States in September of this year. The exhibit will travel to museums in major population centers of a three-year period. It is estimated that 1.5 to 2.0 million people will view it. The basic project will cost \$111,080, \$31,390 of which has been committed as of this date. The museum needs to raise \$79,690 by May 31, 1990, in order to meet projected time lines of fabrication of the exhibit this summer.

The message is not confined to the problems created by the spill in Alaska, although it uses the Prince William Sound spill as a poignant example. The exhibit has national relevance in that the same lack of planning and preparation for mitigating spills, that was so evident in the Valdez spill, exists everywhere in North America. The purpose of the exhibit is to enhance public awareness of the risks assumed in the transportation of oil. The exhibit also documents the benefits of petroleum use and presents profiles of individuals who emerged as heroes from the catastrophe, including local residents, agency officials, and industry representatives. The exhibit is not one of overt advocacy, but of facts and issues dramatically presented for audiences of all ages and abilities. The museum is sensitive to the controversial nature of the subject of this project. In hopes of reaching a large audience

not normally accessible through conservation organizations, the exhibit does not articulate a strong conservation message. However, the life-sized photographic images of the slick, the dead animals, audio tapes of local residents, and the wildlife artifacts of sea otters and oiled birds make the statement loud and clear. The visitor needs no further information to reach a logical conclusion, and in fact, further rhetoric would actually detract from the powerful images themselves. The exhibit should incite individuals to take appropriate actions to help resolve the national petroleum dilemma.

Acquisition of Habitat. In order to replace the bird populations that may have been decimated by the spill, it may be necessary to purchase property that would protect nesting sites, migration stop over and feeding areas, and wintering areas of the hardest hit species. Where colonial murre nesting areas are in private hands around the state, they should be purchased and deeded to an appropriate governmental authority. As an example, the murre colony on Gull Island in Kachemak Bay could be purchased and turned over to the Alaska Maritime National Wildlife Refuge. There may be other colonies in southcoastal, western, and northwestern Alaska that are now in private hands that could also be so dedicated. If the collecting of sea bird eggs for food is still allowed, this practice should be eliminated to assist in recovery of murres and other cliff nesters. Loons, especially yellow-billed loons, were hard hit by the spill. Little is known of their nesting locations on the north slope, but if areas can be identified, they could be preserved. There may be timbered areas around the coast that are nesting areas of murrelets and are in threat of being logged. These areas could also be purchased and preserved.

We estimated a 72 percent decline in numbers of surfbirds and black turnstones migrating through Homer in 1989 as compared with 1986. Numbers of mud flat feeding shorebirds dropped only 13 percent. These results may be related to the oil spill as it impacted outer gravel beaches, sites of turnstone and surfbird feeding, more than it soiled mud flats where dunlins, western sandpipers, and dowitchers feed. Perhaps protection could be given to known areas of high shorebird concentration around the southcentral coast through purchase or change in status of tidelands and coastlines. Areas such as the mud flats on the Fox River flats at the head of Kachemak Bay, Mud Bay, and Kamishak Bay are obvious choices.

We don't know much about wintering areas of the sea birds hit hardest by the spill, but some attempts at reducing incidental take of diving birds in drift nets might be helpful. Shorebirds that winter on the Pacific coast and in Central and South America suffer with the loss of appropriate feeding and loafing habitat in their winter quarters. Could the Alaskan project extend so far as to assist foreign countries in their bird and habitat protection programs?

Research on Alaskan Marine Ecosystems. Because we lacked a base line from which to measure changes, we have no real idea of how much the marine environment of Prince William Sound has been altered as a result of the Exxon-Valdez oil spill. Some sort of long-term ecological project must be established in Alaskan coastal waters, preferably at several sites, to provide a base line for comparison of natural vs. man-made impacts to the environment. We should already have in place a plan to monitor populations of marine invertebrates, fish, birds, and mammals along the coast and in offshore waters. Someone

should already be funded to monitor changes in ocean chemistry, nutrient availability, and plankton populations in the same waters. I am sure that there are many worthwhile projects that could be proposed to evaluate damages and to follow the changes induced by the input of crude oil. However, if we haven't started already on this research, it is almost too late for the Exxon-Valdez incident, but not too late for the next spill--maybe in Kachemak Bay or Cook Inlet.

Brad Chisholm

A restoration fund should be established to bring more people to the area and get them involved. There should be funding for hatcheries and enhancement.

Stan Senner

There are trade-offs. Proposed fish hatcheries would mean it would have to be a relatively remote natural area; this would not be feasible from a recreational stand point. Those concerns must be integrated into the restoration process.

Kirsten Ballard

The enhancement of fish hatcheries is already in place--there is a need for expanding and improving existing hatcheries.

Chris Moss

Stop the logging. There is too much clear cut area. The fjords are being cleaned out. Logging areas are too accessible. Timber rights should be purchased.

Stan Senner

Timber rights is one of the most frequently heard suggestions.

Brad Chisholm

Set buffer limitation--buy habitat protection.

Sandy Rabinowitch

In theory we can map buffers-there is a multitude of possibilities.

Brad Chisholm

There should be buffers established around eagle nests. In the Kenai Fjords an important area is Ketchna State Park.

Chris Moss

The Fjords are doomed. Much of the land is clear-cut and there has been no effort to replant.

Kerstin Ballard

Replanting is a good restoration idea.

Larry Smith

We need nurseries to grow seedlings to regenerate forests. There is not enough nursery action and reforestation is generally neglected.

Brad Chisholm

NOL (Neglest Operating Losses) seems to be a problem.

Sandy Rabinowitch

I'm not trying to put words in your mouth, but would you like a change of legislation?

Brad Chisholm

Yes.

Roger MacCampbell

Will the settlement be divided among trustees?

Stan Senner

We hope one general trust fund is established which would require two votes for administering funds--one state and one federal.

Roger MacCampbell

Is there a president in charge of the funds received from the Exxon-Valdez oil spill? Who will determine how funds will be distributed?

Stan Senner

It has not been determined how the funds from the criminal settlement will be used. However, the funds received from the civil suit are locked in by law and must be spent on either restoration, replacement, or acquisition of equivalent resources.

Nick Dudiak

Pink and Chum have been declining and there should be a concept developed to protect the rivermouth.

Port Gramko, Dog Fish Lake, Windy Right and Left, Port Dick Creek, Island Creek, Scenic Creek. (Confirm spelling of locations)

In the lower Cook Inlet, 68 to 71 percent of the salmon harvest over the past two years has been enhanced stock. There were several studies proposed-numbers 9 and 10 were canceled. I suggest that we identify and measure impacts and develop mitigation plans to accommodate future spills.

Stan Senner

Restoration information is not always taken into account. I would be eager to know what abstract studies you deem important to the restoration process.

Nick Dudiak

Remote site egg inkes.

Kirsten Ballard

Do you mean fish ladders?

Nick Dudiak

Yes, Pink River was a consideration.

We conducted testing--primarily damage assessment.

Stan Senner

Of the sites tested, were they all anadromous fish that had a lot of oil?

Nick Dudiak

At least traces of oil.

I would like to point out that the turnout is low because we are in the middle of herring season and fishing is very important to the community.

Roger MacCampbell

I am concerned with how the oil cleanup is going to affect the wilderness and state. People see the area and want to come back.

Baseline data is non-existent, ADF&G and the National Parks Dept, should be able to establish baseline data for high energy catch beaches.

Stan Senner

Are you suggesting use by people as opposed to environmental uses?

Roger MacCampbell

Yes, future use by people. More bureaucracy is not the answer--productive use (i.e. rangers and scientists).

Stan Senner

What is your suggestion?

Roger MacCampbell

My suggestion is to monitor the situation over the next few years.

Larry Smith

I believe the public, not the government, should decide whether or not to acquire more park land.

Chris Moss

I am opposed to funding baseline data because it is not directly related to the restoration process and would create conflicts.

Jerry Nugent

I am confused about the trust fund. Will it be a work group or financial group? Someone must develop a process to distribute the funds rightfully-possibly a financial plan.

Stan Senner

The trust fund is a pot of money for restoration project funding. A principal amount would be spent and a portion used as endowment. The endowment would ensure ongoing monitoring activities.

Jim Heinzen

I believe money was spent futilely on the cleanup because they didn't care. There seemed to be very little attempt to cleanup the oil. Independent research and projects were ignored. We need funding for local independent research, cleanup, and technology.

Brad Chisholm

We need to develop cleanup technology to prevent the problem if there is another oil spill.

Conrad Kleveno

There are three phases: cleanup, damage assessment, and the restoration stage. In order to fund long-term monitoring for cleanup research it must be related to the restoration process.

Jerry Heinzen

There needs to be funding for the trash problem on the beaches. This is an ongoing problem that has worsened since the spill. Debris does not cleanse itself since the spill--it collects oil.

Chris Moss

The sea lion population is of concern. The marmot is now on the threatened and endangered list and was impacted on Kodiak Island.

Poppy Benson

I would suggest funding of studies to find out why populations are crashing. Purchase haul outs and buffer areas. I would suggest eradicating the fox population in the Aleutians and off of the Alaskan peninsula. There should be further sea lion studies. Acquire timber habitat or long-term rights in Prince William Sound, Kenai peninsula, Kachemak Bay, and Afognak Island for bald eagles, marbled murrelets, and estuarine and scenic buffers.

Stan Senner

How do you feel about money being allocated to projects outside of Alaska.

Larry Smith

If we run out of projects, I suppose that would be acceptable.

Brad Chisholm

People outside of Alaska don't have to deal with the oil spill.

Jim Heinzen

What will be the source of the funds?

Stan Senner

Exxon, ultimately.

Kirsten Ballard

Birds will need a place to feed in the winter and we can purchase land outside of Alaska (i.e., California) so the population will flourish.

Stan Senner

The High Seas squid fishery could be shut down to benefit salmon resources.

Larry Smith

If the purchase of land outside of the state is for habitat protection, than I concur, otherwise, funds should remain in Alaska.

Brad Chisholm

In your opinion, how many hatcheries can we build?

Stan Senner

Probably two. Why the?

Comment

When will the report be available? July? Also, when will a report be published that will include the actual data and number of resources affected by the spill?

Stan Senner

There will be a publication in July summarizing the Symposium and public meetings-sort of a progress report. Hopefully there will be a refined product by the end of the year including specific damage assessments and a detailed restoration summary. Ideally, a damage assessment should be available as soon as possible. The sooner the better--it would give us something solid to focus on.

Brad Chisholm

I asked for information regarding a project and they said it was confidential.

Larry Smith

They cannot publish data that is not available. The dollar amounts will add input as will the number of resources.

Stan Senner

Hatcheries enhancement is important conceptually prior to the allocation of funds.

Brad Chisholm

People want to see where the oil spill happened, and how the area was affected. We could expand the facilities to accommodate peoples' needs, and to inform them of the detriment that the oil spill has done to the environment.

Poppy Benson

The bird cliffs on Middleton Island (private ownership) should be acquired outright, and buffers established.

Stan Senner

Are there any more questions or comments?

Sandy Rabinowitch

If you have ideas please write or call, in an effort to solicit any and every idea.

Stan Senner

We will be meeting informally with different organizations and groups to discuss restoration. If you are associated with an interest group or organization, please contact us.

Kirsten Ballard

Help yourself to the comment forms--please express your opinions. Ideas of co-workers are welcomed.

Larry Smith

What is the proposed deadline for comments?

Stan Senner

June 1, 1990, in order to be incorporated into the report, however, there is not a final deadline on restoration comments and suggestions.

Meeting concluded at approximately 9:08 p.m.

RPWG V

Summary of Comments from the Public Scoping Meeting Held in Seward, Alaska on April 16, 1990

This report is a compilation of suggestions from the recent public restoration meetings which I attended on behalf of DNR, in conjunction with the ongoing work of the Restoration Planning Work Group (RPWG).

The purpose of the public scoping meetings was to facilitate dialogues on the options for restoration to damaged resources from the Exxon/Valdez oil spill. This is the first foray into the larger impacted communities. In the future the RPWG hopes to visit the smaller native villages, and to spend more time in the communities, meeting with the active interest groups. Other members of the RPWG were conducting meetings in Homer, Kodiak, Valdez, Cordova, and Whittier the week of April 16 through April 20, 1990.

The time not spent holding public meetings in both Seward and Kenai was spent identifying and distributing to public places the Restoration flyers. These places included the federal and state agencies, libraries, local government and utilities offices.

SEWARD:

The Seward public meeting was held at the Institute of Marine Sciences Building. There were four members from the public in attendance. After Brian Ross (EPA) and I explained the purpose and definitions of the restoration process we opened the floor for public comments. Only one member of the public participated verbally. Initially comments centered around damages, what the studies were showing for damages, etc. Eventually we were able to draw responses from the participant concerning restoration.

Summaries of comments, questions, and suggestions made by participants:

- How will the public's trust in the oil industry and resource agencies be restored?
 - a) management changes for resources
 - b) ad campaigns to show the public what is on-going in the affected areas.
- Restoration should include the funding of currently under utilized facilities, such as the IMS, instead of funding new facilities such as the PWSSC.
- Restoration should include public education forums, possibly in the form of paying or coordination of volunteers in the areas where projects may occur.
- Restoration should include the set aside and long-term monitoring of natural resource areas. These would be designated sites where entire ecosystems would be monitored for the base information but where no type of activity, including camping or development would be allowed.
- Agencies should match restoration funds to operate monitoring programs which would be run in a cooperative format by agencies or through a contractor.
- All projects should strive to use local hire only. This could tie into the restoration of the psychological damage incurred.

FPW6-

Summary of Comments from the Public Scoping Meeting Held in Kenai/Soldotna, Alaska on April 17, 1990

This report is a compilation of suggestions from the recent public restoration meetings which I attended on behalf of DNR, in conjunction with the ongoing work of the Restoration Planning Work Group (RPWG).

The purpose of the public scoping meetings was to facilitate dialogues on the options for restoration to damaged resources from the Exxon/Valdez oil spill. This is the first foray into the larger impacted communities. In the future the RPWG hopes to visit the smaller native villages, and to spend more time in the communities, meeting with the active interest groups. Other members of the RPWG were conducting meetings in Homer, Kodiak, Valdez, Cordova, and Whittier the week of April 16 through April 20, 1990.

The time not spent holding public meetings in both Seward and Kenai was spent identifying and distributing to public places the Restoration flyers. These places included the federal and state agencies, libraries, local government and utilities offices.

KENAI/SOLDOTNA PUBLIC SCOPING MEETING:

04/17/90 Kenai Sports Center

We experienced another small turn-out in Kenai/Soldotna with seven public participants in attendance. The comments centered mostly around the fishing aspect of restoration.

Summaries of comments, questions, and suggestions made by participants:

- The Kenai River is the major producer of fish on the Peninsula. As such, one restoration idea would be to acquire development rights along the river, possibly transferring them to the DPOR or the DLWM. This would help retain some of the integrity of the river banks. An addendum to this suggestion was a request from a representative of the Kenai Borough that restoration funds be used for mapping the drainage of the Kenai River to develop a current baseline i.d. of the water system. Damage to the fisheries would be easier to ascertain with this type of information. This suggestion was discussed by participants one point discussed was the Kenai Borough not fulfilling its mandate from the legislature and the River Management plan by creating zoning in the area.
- Remove the opportunities for draining wetlands. Set up a fund for the mitigation of wetland areas in the affected zones.
- Prevention as restoration was suggested. It is not clear at this point if restoration funds can be used for such an undertaking. This is one of the key legal issues still being reviewed.
- Again, it was suggested that funds for restoration be used directly in affected areas only, and if possible create restoration projects that are physical examples, such as signage of projects.
- Meet and review with the Regional Planning Teams the recommendations for management in the areas affected by the oil spill.

The Kenai meeting was adjourned at 9:00 P.M.

The meeting was adjourned at approximately 9:15 p.m. We let the public know that we appreciated their participation and encouraged their continued involvement by filling out the fliers or contacting the resource agencies for further information. We indicated that the RPWG would be back sometime later in the summer/early fall when the clean-up and fishing seasons were ended. One participant suggested that we return as soon as Exxon pulls out of the clean-up to ensure we meet with folks while the situation is fresh in their minds.

H'66

Summary of Comments from the Public Meeting Held in Whittier Alaska May 31, 1990

Brian Ross, U.S. Environmental Protection Agency, and Stan Senner, Alaska Department of Fish and Game, conducted the meeting in the Kittiwake Room of the Begich Tower from 6:00 pm to 8:30 pm. Nine people attended including charter boat operator, deckhands, the president of the Deckhands Association, a retired fisherman, Members of the Alyeska Community Response Team and the Concerned Citizens Center, a gentleman who was retired from federal service and two people from Alaska Department of Environmental Conservation.

A general introduction of the planning process and the intent of the public meetings was given by Brian Ross. A summation of the Restoration Trilogy was given by Stan Senner.

A summary of the restoration ideas presented by the public is as follows:

- Seaweed should be harvested from unoiled areas and spread on beaches which are frequented by deer, to supply them with unoiled seaweed to eat. This may prevent starvation during the winter, when a lack of seaweed due to oil spill damage may be a problem.
- Local communities should be involved in the location identification, effort and monitoring of feasibility studies. At least an observer should be included since the degree of trust between the communities and agencies and Exxon has been severely eroded. A local observer would provide the opportunity for confirmation to the community that the reports, etc. being published regarding the condition of an area are accurate or believable.
- -What can be done to help the bottom fish? This year (1990 spring) represented the worst year ever for the bottom fishing fleet. Would like to see replacement efforts directed towards halibut and black cod.
- Provide a program for "replacement" of alternative industries as economic restoration vs. concentrating solely on environmental restoration. It was pointed out that funds could not go to any particular individual as the process for reimbursement through the civil courts is available. However, it was expressed that environmentally based financial/economic restoration that would benefit an entire community may be different.
- Restoration should include the enhancement of preventative measures. Locals, officials and the public in general should be satisfied with plans, logistics, etc. to prevent such an occurrence as the <u>Exxon Valdez</u> oil spill

KHWG-

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Summary of comments from the Public Scoping Meeting Held in Homer, Alaska April 18, 1990

Stan Senner, Alaska Department of Fish and Game, Sandy Rabinowich, US Fish and Wildlife Service and Kirsten Ballard, Environmental Protection Agency conducted the meeting which was held at the Homer Senior Center from 7:00 pm to 9:10 pm. Fourteen people attended including representatives from the State of Alaska Department's of Fish and Game and Natural Resources, a member of the Cook Inlet Seiners Association, local fishermen, a local artist, a representative of the USF&WS Maritime ______ Refuge, a local shop owner and a member of a local subsistence fisheries citizens group.

Summaries of comments, questions and suggestions made by participants:

-The need for in-the-field research/monitoring vessels was expressed. It was suggested that this type of vessel could combine research, recovery and restoration and at the same time take measures to prevent impact of a future oil spill.

-It was suggested that funds should be allocated for oceanographic research by enhancing existing facilities. This could be combined with enhancing or creating educational institutions and public ocean information centers (in conjunction with oil spill response centers).

-Long Term Ecological Research should be supported. A system to guarantee funding for assessing the damage oil pollution imposes on the environment. With the increase in tanker traffic, further research into cleanup techniques was discussed as applicable to inevitable future spills.

-A satellite communications system for research vessels was proposed. If such a system were in place, research/response vessels could be directed ASAP to remote spills.

-Expanding public education regarding oil spills. This could be accomplished by hiring a contractor to go to local schools for education or by supporting museum exhibits throughout state and nation. These could be combined with another educational program to give people a sense of responsibility about energy.

-Concern was raised regarding the areas which were impacted by oil, then cleanup efforts and now possibly further cleanup. Further disturbances of isolated areas should not be encouraged. This may need to be combined with management options to reduce impacts. It was suggested that baseline data should be gathered now before projected increases the spill areas will receive as a result of the spill. This data could be used regarding recreation so good management

decisions could be made to help ensure good visitor experience. Ways to minimize of further impact should be explored—e.g. expansion of existing facilities rather than construction of new facilities or creation of further bureaucracy.

-The acquisition of timber rights was discussed at length. Ideas included:

-Buy up a 300+ foot buffer zone around streams and areas visible from the coast, etc. in areas which are selected for logging to reduce environmental and visual impact

-Support tree planting efforts (construction of a nursery, labor, etc.) in areas which have already been logged or which will be logged for restoration.

-Buy up in-holdings or timber rights which are within the State and National Parks.

-Buy up Net Operating Losses (NOL) timber rights

-Support a change in the law to prevent further sale of NOL's to protect areas

-Several ideas regarding the enhancement of fishery resources impacted areas were expressed. This included the construction of new salmon hatcheries. It was also suggested that rather than impacting the wilderness further, support for the expansion of existing hatcheries was a better way to fishery resource enhance the while minimizing recreational/aesthetic impact). In areas where wild stocks have been impacted, it was suggested that rather than changing the stock in those streams, available enhancement techniques for stream enhancement should be used to expand/restore wild stocks without replacing with hatchery stocks.

-Support/implement studies 9 &10 from NRDA which have been cancelled or discontinued.

-Support special cleanups in especially pristine areas was suggested as a restoration project. These cleanups would use techniques which have been demonstrated to minimize the impact on the beaches and enhance natural or enhanced restoration.

-Acquisition of new lands came under favorable discussion. Among the ideas presented:

-To restore the wilderness experience, new, unspoiled areas must be acquired.

-Acquire seabird colonies currently in private holdings.

-Protect timbered slopes to protect marbled murrelet

nesting areas.

-Acquire habitat for migratory birds along the pacific flyway, such as wetlands in California, and possibly monies to work out an international effort to protect habitat in south american countries. The idea of spending dollars outside of Alaska was met with objection until it was discussed that if the birds that we spend millions of dollars to restore do not have a place to winter over, then the dollars here would be spent in vain. The participants then concurred that this would be a viable project.

-Support further studies to expand knowledge of other migratory birds to provide information regarding other wetlands/habitat for protection/acquisition.

-Review all sea lion and seabird colonies with respect to land status, the ultimate goal being acquisition or protection of these areas.

-Consolidate Middleton Island for acquisition.

-The concern regarding future and long term studies was recurrent. The need for long term studies of the effects of EVOS has been determined. After "the thrill is gone" from this spill, the participants expressed concern that necessary studies would no longer be funded. The idea to establish a trust fund and manage it so that monies are perpetually available for funding restoration, recovery, acquisition and enhancement projects was met with enthusiasm by the participants.

-Cleanup as it relates to restoration was discussed at length. It was suggested that cleanups should be studied on an experimental basis, money for local research on cleanup and restoration techniques, and support for the development of an informational repository for cleanup technologies developed during this and other spills to avoid the "re-invention of the wheel". It was pointed out that such projects must be related to the restoration process.

-Plastics problem is synergistic with the oil, especially in low energy areas. The plastics remain a persistent problem and tend to collect oil. It was suggested that areas could be restored by cleaning up plastics (nets, line, floats and other assorted flotsam). This could be combined with the support of solid waste options to cut down/eliminate debris at sea.

-The recent placement of sea lions on the threatened species list brought several under discussion. Fisheries and tour boat operations will be feeling an impact. It was suggested that restoration funds should support studies to establish the amount of impact fishing and oil has had on sea lions. Funds could also be used to support research to identify the cause (s) of the sea lion's decline before establishing restoration procedures.

-The concept of removing introduced predators at bird rookeries to enhance recovery of these colonies (replacement). This has been documented as a successful operation (literature available) was met with a favorable response and supported by participants.

-It was suggested that previously logged/deforested areas could be reforested or replaced (planting) or new areas acquired/protected (Afognak Island).

-The participants seemed unanimous in their frustration regarding the inaccessibility of NRDA results. Concern that potential restoration projects or needs could possibly be overlooked was expressed. Participants felt they could not evaluate all subjects (cleanup, damage assessment and restoration) without the whole picture available.

4/30/40

Summary of Comments from the Public Scoping Meeting Held in Whittier Alaska on April 19, 1990

Stan Senner, Alaska Department of Fish and Game, Kirsten Ballard, Environmental Protection Agency conducted the meeting in the Kittiwake room of the Begich Tower. The meeting lasted from 7:00 pm to 7:30 pm. Despite efforts at posting notices of the public meeting, and the effort made to hold the meeting in the building where almost everyone in Whittier lives, no one attended. Therefore there are no comments to summarize.

RANG

D R A F T summary
Prepared by Sandra Cosentino, DNR
Please review and comment.

Summary Public Scoping Meeting

Anchorage May 17, 1990

Restoration Planning Work Group members present: Brian Ross, EPA

Stan Senner, ADF&G Sandy Rabinowitch, NPS Frankie Pillifant, DNR Dave Gibbons, USFS

The meeting was held at the National Park Service headquarters from 7:00 - 9:30 p.m. 16 members of the public attended including a reporter from the Anchorage Times, representatives of Chugach Alaska The North Pacific Rim, and an environmental lawyer/sportfish representative. Most present identified issues, raised questions and offered suggestions. These are summarized by topic below.

Restoration Process

- 1. Should state that the restoration process is to enhance or speed up natural processes.
 - 2. The effects of oil not yet ascertained; the logical first step is to assess different ecological communities for speed of recovery by different techniques determine the relative damage of clean up techniques.
 - 3. Remove political constraints to making scientific decisions.
 - 4. Questions about time frame and concern that work on restoration begin this season. By the time lawsuits are settled, it may be too late to take effective actions.
- Questions about "clout" of the RPWG in implementing projects and directing agencies. Response was that RPWG role is advisory; that projects may take individual agency administrative decisions or legislative actions.
- 6. Concern that proceeds which may be derived from state lawsuit are not required by law to go toward restoration of damages.

 7 Is there any assurance that moneys from the federal damage assessment will go toward restoration since there is not a

Exxon

federal lawsuit for damages under the Clean Water Act?

- 7. Dealing with intangibles re. damage values; litigants will be far apart on the monetary value. Best to settle out of court and get on with restoration.
 - 8. The RPWG should make an effort to talk to tourism and recreation groups.

Funding for Restoration

- 1. When will restoration money be available? Are priorities being set for use of funds that agencies may make available prior to settling of lawsuits?
- 2. Suggest other funding sources for restoration such as a tax on state and oil producers. Resource agencies should spend money now and obtain reimbursement from damage assessment funds.
- 3. Buy back Bristol Bay oil leases with federal moneys received from the lease sales futtor Kon restoration fund.

Involvement of Native Villages

- 1. Chenega people think the resource base is desolate compared to the past. The RPWG should go to Chenega and other affected villages; it bad error not to include them in scoping process. Lynn Vining of The North Pacific Rim volunteered to assist the RWPG in setting up village meetings.
- 2. Look for strategies to reduce dependency and vulnerability to future events. There are very few sustainable development opportunities. Village people are primary users who depend on natural resources as part of their economy. Important to get their ideas and for the restoration process to consider diversification of the economic base.

Cultural Resources.

Are cultural resources a natural resource under CERCLA?

Acquisition

1. Encourage acquisition of equivalent resources. Skeptical that there are many restoration projects that can be done. By the end of litigation, it may be hard to document damage beyond initial mortality. However, there is loss of intrinsic value and use which needs to be balanced. Thus, it is important to

acquire lost habitat, use and intrinsic value.

2. Do not, for example, acquire unthreatened high value habitat or scenic areas. Acquire threatened areas such as timber harvest buffers wider than the 66' requirement in the Forest Practices Act.

3. Think broadly, look outside affected area. Create an Iliamna Wildlife Refuge which has high value caribou herds, important wild rainbow trout-remote recreation values and sockeye salmon runs and more. However, there are 400,000 acres of private native land. Propose purchasing conservation easements on the private land. This would create a greater cash flow than selling off recreational lots and allow continued subsistence use by local people. Provide further protection by prohibiting state land disposals.

5. Purchase conservation easements, not full title, from willing Native land owners in the coastal areas and along streams. Consider timber rights in coastal swatch from Afognak to SE Alaska and recreational land sale rights from Kodiak west across the Alaska Peninsula.

6. In Prince William Sound, restrict exploitation of some resources: logging (e.g., Big Islands Plan), mining, fishing restrictions. Purchase some of the limited entry permit to reduce use.

7. The oil went somewhere; predicts long term impact to benthic organisms. Close or limit drag fishing due to incidental catch and habitat disturbance to allow healing the benthic organisms. This is particularly recommended in the Port Wells and Passage Canal area out of Whittier. Heep these areas as a stocking, natural area for the more damaged adjacent areas.

8. Retain upland old growth for deer so further loss of their food base does not occur.

9. Address long-term pollutants as part of restoration. Clean up Whittier toxic dump and tank farms. Need contingency plans for oil shippers and clean up problem with community sewage leaking into waters. Community waste management is a valid restoration activity; clean water is the basis for all the species in the impact zones.

10. Use active "hands off"--cut off human activities in some areas such as bilge dumping, recreation.

egthappa 11. Ban hydroelectric development such as the Nellie Juan site.



12. Prevention of oil spills is part of restoration. Establish a harbor authority to regulate and monitor vessels and provide for safe transit of vessels.



13. Allow a tax write off in return for a conservation easement; call it a net operating loss. Require the spiller to purchase the easements soon after the spill.

Replacement



 Be careful not to increase impact with replacement projects; for example, building new public use cabins in non-oiled areas.

for Sandra MWG

Summary of Comments from the Public Meeting Held in Whittier Alaska May 31, 1990

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- Restoration should include the enhancement of preventative measures. Locals, officials and the public in general should be satisfied with plans, logistics, etc. to prevent such an occurrence as the <u>Exxon Valdez</u> oil spill

from ever occurring again. Can an "endowment" or trust fund be set up to provide continued funding?

A

- -Require logging companies, oil companies to provide restoration plan before timber harvesting, drilling, etc. occurs. This is something that miners are already required to provide. Restoration plans to address reclamation, planting and site grading should be standard operating procedure from others who impact the environment.
- Recreation areas that have been scheduled for no treatment (NTR-no treatment recommended) by the Coast Guard et al., recommended should be cleaned and restored. People in attendance at the meeting presented a map of Prince William Sound with pins that indicated the locations of high human use areas that were NTR. These sites are especially important to the large recreation industry based out of Whittier. People expressed their desire to recover, restore or acquire/protect new or privately owned recreation areas. The importance of a pristine wilderness experience cannot be dismissed when it comes to bringing business to the recreation industry. When does response end and clean up begin?
- Restoration should not begin until clean up is finished to local/land manager standards.
- Damage assessment data should be put on the table for all to see. If something is not being addressed because local people in-the-know don't know about it, then this is a "crime". Concern was expressed regarding the effects on plankton and fish that are possibly not being addressed. Also, any information regarding the mixing of the oil with the glacial flour that is mixed in with fresh water and hence on the top of the water column. Concern is that the oil could have mixed with the sediment and then sank in large sheets. How has this possibility been addressed? What is the damage to the bottom fish, the shellfish that the bottom fish feed on, etc. Local divers have gone down and come up with tar balls. Damage assessment information should be available for fisheries management.
- Forests should be replanted/replaced/restored to make up for all the paperwork the Exxon Valdez oil spill has generated. Paperwork reduction should also be employed.
 - Restoration Planning Work Group should go to Chenega and Tatitlik for scoping meetings.
 - Local people should be used whenever possible so that the communities benefit from the restoration/cleanup/scientific, etc. efforts.



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and his comments to your diagt 17 May 1990 ___ Rub Brian Ross Frankie Pillifont NPS Conference Room Souly Rabinowitch Anchorage, At 125 Sten Senner Dave Gibtons - Introduction by Brian; then stan - Juestion about examples of suspertions previously received (about restoration ideas) - Comment that "natural" restoration is sorres on to - Question about whether cultural resources are natural resources - Comment about further clean up may be a type of restoration = Additional comment about whether clean up (removal of oil)
beyond the "official clean up" will be port of restoration - Discussion about damage assessment results = Question about Inipol and its toxicity - Lots of what is being done should not be done (this from someone who spends 60 days (year in the sound) (Teff porker) relatively little to do in the way of direct restoration - would not support acquiring high quality but nox threatened scabind, colony sites (not because scabinds are

- encourages broad + flexible approach

-important To look at sites outside of area (especially)

- e.g., create Illamon NWR (bean, salmon, real, ate (PSTASIBH corporative and w/acquiring land) - Bristel Bay # already in Treasury - should use that more to buy book - provogement/legal restriction to ancourage recovery.
- fishing restriction, buy back LE recents, Peter Nagel from Chargach Inc is here Len Vining of - Juffer zones for lagging (Spot Shrimp in Port Welles)

lots of by-catch + destruction of benthis organism - toxic waste sewage control for coastal communities - contingency plans for tankers coming into Whittier - in: litary damped all kinds of staff in Passage - Port Welles could be a source et town for restoring other areas hit harden by spill -renoval of plastics to help marin mammale - restoration activity is active "honds-off" areas
-no human activity at all ("AKs Love Count") - Over-simplissie on spp. impacti -water needs to be restured Patyl - wastewater treatment in important could be restoration project Terlining - need to visit villages to get enjust Chenego Bey , Tatitlele

- need to look at strategies for sustainable economic base to diversify support for subsistence users

concern about whether of that are obtained go to restocation

- acquisition of land shouldn't, in most case, be of fee simple title, experially when Nation Sand in John concerned

- essemente, ata.

ANILCA trust dans

- private land in southern part of state in a timber issue
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 - haden authority to restrict passage of unrafe vessele
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 - in there a time recion after which domagese assessment will be concluded?

ancharage

- several comments about recycling oil, hogasolows writer, etc.

- Boy of Ider - solum um wiged out

-get conjectitive bide for againstion

- habitat

- threatened critein

- competitive process acquisition

(parker

- expression of enjoyent for settlement -get money sooner rather than later

- tox code.
- allowing Ufendants to mite off losses in storm
for conservation actions taken by commercian

- competisher bails may result in some key offerted lands being overlooked

- recomment of restitution law



OIL SPILL RESTORATION COMMENTS

Use this form for any comments you would like to have considered during the Restoration Planning process, or for any ideas you have about how aspects of the environment that may have been affected by the Exxon-Valdez oil spill might be restored. Turn in at the sign-in table, or return the form with your comments to the Restoration Planning Work Group, 437 E Street, Suite 301, Anchorage, Alaska 99501. Attach additional sheets if necessary.



Please fill in your name and mailing address if you would like to receive future mailings about Restoration Planning for the Exxon-Valdez oil spill.

Richard Smeriglio HCR 64 Box 505 Seward AK 99664

What is the Restoration Planning Process?

Representatives of Federal and State agencies are participating in a Restoration Planning Work Group for the purpose of identifying restoration alternatives and making recommendations to the Trustees and the public. This process will involve consultations with the public and the scientific community.

Public participation in this process

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The Restoration Planning Work Group wants to consider a wide range of restoration alternatives. To that end, the work group is committed to active public participation throughout the process. The public will be given the opportunity for formal review and comment on any final recommendations about

toration alternatives.

How Can You Participate?

You are invited to share your ideas and comments with the Restoration Planning Work Group. Please use the space below to present your comments

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You may mail your response to: Oil

Spill Restroation Planning Office, 437 "E" Street, Suite 301, Anchorage, AK 99501, (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition May we contact you for additional information? Yes Organization (if any) Mailing Address HCR City Seward















Restoring the Environment After the Oil Spill

Alaska Department of Fish and Game Oil Spill Impact Assessment & Restoration 333 Raspberry Road Anchorage, Alaska 99518-1599

Environment
After the
Exxon Valdez
Oil Spill

Spring 1990

The Exxon Valdez oil spill has received an enormous amount of attention since that fateful Good Friday, March 24, 1989. Most of the attention has concerned the fate and clean-up of the oil and its impacts on wildlife, the environment, and the people who live, work, and play in Prince William Sound and the western Gulf of Alaska. The stories about clean-up and damages are important and still unfolding, but there is a new subject that deserves attention—RESTORATION.

How can we work together to restore natural resources affected by the oil spill? The State of Alaska and the United States Government are cooperating to identify different needs, alternatives, and priorities for environmental restoration, and we need your help. The purpose of this brochure is to describe the restoration planning process and how you can participate.

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Fisheries Enhancement Projects :
Discoverging Tourism to previously limited use areas
Discontaining Development of wetland Areas
River otter research and protection
Viewing The vast Gulfof Alaska as a limited resource to be wholly protected,
Discouraging mountain bike use in the outer coast of the Kenzi Peninsula.
Stop coastal and offshore drilling + stop the use of Innopol Fertilizer.
Discontinue Forest destruction for the benefit of few
Monopolizing of resources should become less profitable
Less disruptive cleaning of previously untouched coastlines
Removal of loads of garbage from Exxon and Volunteer clean up sites
Stopping of the ANWAR oil discovery programs
Discontinue removal of oil injured sea offers and birds/let them die in pea
More discussion of environmental issues in coastal communities
Discontinue selling lumber to Japan for use as Computer Paper.
Recovery of Fish Markets devestated by the Exon spill
Study of salmon internal organs for crude oil or hydrocarbon toxicity
study of the ocean floor where dispersants were used
May we contact you for additional information? Yes
Name Daniel Perry
Organization (if any)
Mailing Address BOX (808
City HOMER State AK Zip 99603













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What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition projects? Seabirds such as murres and murrelets. May we contact you for additional information? Yes X Name Mike Nishimo Organization (if any). Mailing Address 407 Rangeview City HomeR

every 11 8101 Keey 11

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Environment
After the
Exxon Valdez
Oil Spill

Spring 1990

The Exxon Valdez oil spill has received an enormous amount of attention since that fateful Good Friday, March 24, 1989. Most of the attention has concerned the fate and clean-up of the oil and its impacts on wildlife, the environment, and the people who live, work, and play in Prince William Sound and the western Gulf of Alaska. The stories about clean-up and damages are important and still unfolding, but there is a new subject that deserves attention—RESTORATION.

How can we work together to restore natural resources affected by the oil spill? The State of Alaska and the United States Government are cooperating to identify different needs, alternatives, and priorities for environmental restoration, and we need your help. The purpose of this brochure is to describe the restoration planning process and how you can participate.

How You Can Help

What is the Restoration Planning Process?

NEWS

Representatives of Federal and State agencies are participating in a Restoration Planning Work Group for the purpose of identifying restoration alternatives and making recommendations to the Trustees and the public. This process will involve consultations with the public and the scientific community.

Public participation in this process

began with a public Restoration Symposium on March 26 and 27 in Anchorage. A series of public Scoping Meetings has been scheduled for some of the communities directly affected by the oil spill. Several progress reports will be published to update the public on the results of the restoration planning and to invite additional comments.

The Restoration Planning Work Group wants to consider a wide range of restoration alternatives. To that end, the work group is committed to active public participation throughout the process. The public will be given the opportunity for formal review and comment on any final recommendations about restoration alternatives.

How Can You Participate?

You are invited to share your ideas and comments with the Restoration Planning Work Group. Please use the space below to present your comments and ideas or send additional comments by letter. We appreciate and value your assistance.

You may mail your response to: Oil

Spill Restroation Planning Office, 437 "E" Street, Suite 301, Anchorage, AK 99501, (907) 271-2461.

What natural resources need the most attention? Do you have suggestions for restoration, replacement, or acquisition that assessment damage & research intermention be available May we contact you for additional information? Yes MV3 Name Jodi Miller Organization (if any) _ Zip 99603















Restoring the Environment
After the Atter the Oil Spill

Alaska Department of Fish and Game
Oil Spill Impact Assessment & Restoration
333 Raspberry Road
Anchorage, Alaska 99518-1599

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