

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

R
55

Title of Project:

Long-term epidemiology study to monitor health

Justification: (Link to Injured Resource or Service)

of oil spill workers

Direct link to injuries caused by cleanup

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

See letter in 104-01

DEC

Estimated Duration of Project: _____

Estimated Cost per Year: _____

Other Comments: _____

Name, Address, Telephone:

Riki Ott
Oil Reform Alliance
211 - 4th St., Suite 112
Juneau, AK 99801

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

fold here

PLACE
STAMP
HERE

Exxon Valdez Trustee Council
645 G St.
Anchorage, Alaska 99501

Attn: 1993 Work Plan

Illness tied to Exxon cleanup is cited in spate of lawsuits

By William P. Coughlin
GLOBE STAFF

A handful of volunteer Alaska oil-spill workers and a tugboat captain, who have filed suits claiming they were poisoned by exposure to a combination of crude oil vapor and toxic cleanup agents after the Exxon Valdez spill, may constitute the tip of a legal iceberg.

Three suits seeking millions of dollars in damages have been filed in Alaska and federal courts. Environmentalists and people involved in the cleanup say many more such suits may be filed as potential victims trace illnesses back to their oil spill work.

Randall Scarlett, a partner in Melvin Belli's San Francisco law firm, is bringing one of the three suits. "and we are getting five calls a day on these types of cases. . . . We alone could end up with 200 to 300 of these cases."

Belli said his firm already has upwards of 1,500 suits stemming from the spill, most of them against Exxon Corp. on behalf of fishermen, canneries, and other businesses that had losses.

Named as defendants in the three personal injury suits are Exxon Corp. and two subsidiaries, Exxon Shipping Co. and Exxon Pipeline Co.; Veco Inc. of Anchorage, Exxon's hired supervisory cleanup firm, and Arctic Tug and Barge Co., also of Anchorage.

An Exxon spokesman in Houston declined comment, saying he wondered "why the toxic exposure lawsuits made news." However, officers for other firms explained their positions in interviews.

Scarlett and George M. Kapolchok, an Anchorage lawyer, have filed one suit on behalf of Timothy Jon Burt of Juneau and his wife, Laurie Anne. Burt worked for Martech Inc., a firm employed by Exxon to assist in the cleanup, cleaning sludge inside large enclosed tanks with high pressure jet sprayers.

The complaint says Burt suffered "devastating permanent and totally disabling injuries" and "must rely on compressed or concentrated oxygen to sustain his life." In accusing Exxon of negligence in hiring an "incompetent firm," Burt's claim also says that his wife had to quit her job to care for him.

In a complaint filed against Veco, Carmen Olsen of Fairbanks says she became severely ill while she was working for Veco using chemical solvents to clean clothes used by workers who had used the chemical Inipol to help clean up the oil spill. She said she continues "to this day to suffer diminished lung capacity, dizziness, skin lesions, headaches and neurological disorders."

Veco's president, Pete Leathard, commenting on the suit, said, "We're in the process of working to determine if people really got sick as a result of Inipol." Leathard said the chemical is a fertilizer used to promote bacteria growth to break down the oil.

Leathard conceded that other suits have been filed by people who describe similar symptoms. "But whether it was caused by the fertilizer or some other reason, I don't know," Leathard said. He said Veco provided safeguards, protective clothing and breathing apparatus for its workers, and "our position is we don't see how it could have caused any problems."

In the third case, a federal suit filed against Arctic Tug and Barge Co., Thomas Pickworth of Anchorage, son of one of the owners of the company, makes claims similar to Olsen's. Pickworth's suit says that after "exposure to toxic compounds . . . he became extremely ill . . . and is

Jo Anne Pickworth said Thomas eventually was examined by a doctor who diagnosed his symptoms as those of chemical reaction, and he was sent to a Dallas clinic where he is under treatment.

"Everyone who sustained damage was injured by either aspiration of oil itself - that is, actually getting liquid into their lungs - or by inhalation of fumes evaporating from the product," Scarlett said.

He said the victims were poisoned by a "synergistic" combination of toxins - fumes, including benzene, toluene, xylene, and other components of crude oil, and by fumes from supposedly harmless cleaning agents the workers were given to scour away the oil itself.

"There is no doubt some of these individuals are going to die," he said.

He said only one treatment center in the nation, headed by Dr. William Rea in Dallas, specializes in these cases, and they now are getting "increasing numbers of calls from people who were exposed up there." Rea declined to comment.

David Driver of Augusta, Ga., said he became sick after he managed a Veco Co. barge that housed oil spill workers, but has recovered. He estimates that 12,000 people were "unnecessarily" exposed to toxins.

The crucial part of the story, he said, "is that these people volunteered and were trying to clean up the environment, and now they are getting very sick."

We are getting five calls a day on these types of cases. . . . We alone could end up with 200 to 300 of these cases.'

RANDALL SCARLETT
San Francisco lawyer

completely disabled from duty as a seaman in any capacity."

His tugboat and barge were leased by Exxon for the cleanup.

Jo Anne Pickworth, secretary treasurer of the firm and Thomas Pickworth's stepmother, said he became sick after Exxon sprayed some chemical from a helicopter.

"They thought it was flu," Jo Anne Pickworth said, and later ar-

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<input type="checkbox"/>	E-MISC.

Oil Reform Alliance
211 4th Street, Suite 112
Juneau, Alaska 99801

ANC TIMES 4/16/92

Workers allege illnesses tied to Exxon Valdez cleanup

By **RCSANNE PAGANO**
ASSOCIATED PRESS

A group of Exxon Valdez cleanup workers is seeking millions of dollars in compensation for illnesses they say are linked to exposure to crude oil fumes and cleaning agents.

The suits filed in federal and state courts name Exxon Corp.,

Exxon Shipping Corp. and Exxon Pipeline Co., as well as two local contractors that supplied cleanup help following the nearly 11 million gallon spill in 1989. It was the worst oil spill in U.S. history.

An Exxon spokesman in Anchorage declined comment Wednesday on the pending lawsuits, except to say that throughout the

cleanup — which is entering its fourth year — the company believed it and its contractors had complied with safety regulations.

One of the lawsuits is set for trial in state court here next month. It asks unspecified damages for an Augusta, Ga., man who came north to manage a barge that housed oil spill work-

ers.

Anchorage-based lawyer George M. Kapolchok said Wednesday his client, David Driver, has lingering skin problems caused by exposure that Kapolchok says violated Occupational Safety and Health Administration rules.

Driver's suit names the local

oilfield service company VECO International.

VECO was Exxon's prime contractor for the multibillion-dollar cleanup stemming from the Exxon Valdez tanker accident. VECO International is owned by Bill Allen.

Pete Leathard, VECO president. See Cleanup, back page

Cleanup

Continued from page A1

dent, said Wednesday the company tested its workers, and provided protective clothing and gear to guard against toxic exposure.

"To my knowledge, everything was deemed safe," Leathard said.

Driver told Valdez radio KCFU he was captain of a barge that housed workers cleaning oily beaches with a chemical known as Inipol.

Although the crew was told it was safe, Driver said he refused to work anywhere near an Inipol site after he found out the chemical occasionally caused blood to show up in workers' urine.

Kapolchok said he also was representing Timothy Burt of Juneau who claims he got sick

two years ago while working at a cleanup site in Seldovia, about 160 miles southwest of Anchorage on Kachemak Bay.

The suit asks for compensation for pain and suffering for Burt and his wife, Laurie Ann, as well as the costs of medical care and rehabilitation.

"I believe Tim is worse off than a quadriplegic," Kapolchok said.

"We've got a guy who is permanently disabled at 32 years old, who's got a wife and child. He has severe headaches, he's got to drag around an oxygen tank and he's got a whole host of other problems," Kapolchok said.

Burt says he was working for Anchorage-based Mertech Inc. in June 1989 when he was given only a rain suit and a paper filter mask as he was sent in to clean crude oil residue collected in two tanks.

The lawsuit says one of the

tanks was 14-foot-tall and had a hatch in the roof for ventilation. Burt says he spent about three hours in one tank and about 30 minutes in the other. He used a high-pressure steam hose that Kapolchok claims, forced toxic vapors into the air for Burt to inhale.

The Boston Globe reported Sunday that Melvin Belli's San Francisco law firm was receiving calls daily from former cleanup workers and had taken at least one of the lawsuits.

Complaints about improper gear and safety procedures date to the earliest phases of cleanup, when crews returning from oily Prince William Sound beaches said crude oil fumes were making them sick.

Ernie Piper, who was assigned to monitor the cleanup as an aide to then-Gov. Steve Cowper, said Wednesday the first six weeks fol-

lowing the spill were "a confusing time."

"My personal belief is there was insufficient monitoring of workers then, but not knowingly, or negligently," Piper said.

"It was just that nobody knew what they were dealing with. It was a confusing time."

Piper, who recently resigned after nearly two years as the state's on-scene coordinator, said he did not know specifics of the latest lawsuits.

But he said workers assigned as late as July following the spill in March might still have been exposed to crude oil irritants such as benzene.

"I've been plenty critical of Exxon for a lot of things," Piper said, "but for the most part, given the hardships of what was out there and running a safety program, they did a pretty good job. They were genuinely careful."

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1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

DAMAGE ASSESSMENT

* Restoration Framework, 1992, pp 43-44.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

Natural Product Natural Life Restoration Ppt-Proposal A

Justification: (Link to Injured Resource or Service)

Shoreline worms are affected by the EVOS - Clean up residual oil

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

Monitor the presence of shoreline worm populations and their movement

Use a commercial product to clean oil Environmental 75

Estimated Duration of Project: 1 year

Estimated Cost per Year: \$ 788,000.00

Other Comments:

Name, Address, Telephone:

Jerry Dale Rusber
Rusber's Services
HC 33 Box 2866
Wauilla, AK 99687
907 373 6001

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

Natural Product Natural Life Restoration RePropose 13

Justification: (Link to Injured Resource or Service)

Cleanup oil from beaches (EVOF oil)

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

Use commercial product Environmental 75 and monitor Beach worms.

Estimated Duration of Project: 1 year

Estimated Cost per Year: cost not specified

Other Comments:

Name, Address, Telephone:

Jerry Dale Risher

Risher's Services

HC 33 Box 2866

Wainan, AK 99687

907 373 6001

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

Rusher's Services

HC 33 BOX 2866
WASILLA, AK 99687

Rusher's Environmental 75
Oil Spill Clean-up

FAX (907) 373-6001
OFFICE (907) 376-9275

Exxon Valdez Trustee Council
Attn: Mr. Dave Gibbons & Council

February 6, 1992

Jerry Rusher RUSHER'S SERVICES

Thank you for this opportunity
PRIORITY PROJECT **NATURAL PRODUCT NATURAL LIFE RESTORATION**

The endorsements for consideration of a fair trial in the process of restoration of this PRIORITY PROJECT speaks for itself. The largest Native Corporation land owner in the Prince William Sound, CHUGACH ALASKA CORPORATION, the largest individual land owner, ELLAMAR PROPERTIES, INC and small parcel property owners on Knight Island.

First, some very interesting numbers that led to this *PRIORITY PROJECT* In the 1989 Exxon Valdez Spill, 40% of the oil was recovered and three years later 41% was recovered from the Cook Inlet Spill, a gain of 1%. According to Dr. John Teal, a Senior Scientist "After 20 years we can still find OIL." This tells me two very important facts; clean-up technology was inadequate and the restoration technology was inadequate. The eyes of the world are on us to see what approach will be made. As a proud Alaskan, I hope the Exxon Valdez Trustee Council will take the lead position on restoring the shorelines from twenty years of sub-surface oil.

A lead position could be the attention and consideration of this PRIORITY PROJECT. Scientific data from 1989, 1990 placement of Environmental-75 surface and sub-surface has shown beach worms are attracted to the controlled test sites in greater numbers and greater health than any other site on the shoreline. The beach worms are very important to the bird migration in the Prince William Sound. They are a part of the food chain. With strip application of Environmental-75, a natural restoration can occur by attracting beach worm movement to speed the rates of natural degradation of subsurface and surface contamination. In layman terms, worm movement would aerate the soil of the shorelines. Placement target date May 1, 1992. THE FUTURE IS WHAT WE DO NOW. The opportunity to help a natural ARMY of workers to restore the shorelines of Alaska is at our disposal.

I would ask the Council if May 1, 1992 can be a reality?

Jerry Rusher
Jerry Rusher

Document ID Number	920601061
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Rusher's Services

Rusher's Environmental 75
Oil Spill Clean-up

HC 33 BOX 2866
WASILLA, AK 99687

FAX (907) 373-6001
OFFICE (907) 376-9275



February 6, 1992

TO: EXXON VALDEZ TRUSTEE COUNCIL

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ECOLOGICAL/ENVIRONMENTAL MONITORING

Pre-Proposal: A

Pre-Proposal A: SHORELINE WORM LIFE MONITORING is an ecological/environmental monitoring project that will identify present and future impacts on the ecosystems of the Prince William Sound and the Gulf of Alaska.

SHORELINE WORM LIFE MONITORING (SWLM) is a monitoring project that can use natural life in place on our shorelines to indicate several very important present and potential impacts from oil transportation.

Using controlled monitoring sites on Latouche Island, Knight Island, Naked Island, Foul Bay and Junction Island can determine the rates of degradation of surface and subsurface oil by shoreline worm movement and sample bag analysis.

Surface placement of E-75 bags would determine the amount of oil from the Exxon Valdez oil spill currently being released to the waters of the Prince William Sound and the Gulf of Alaska. Subsurface placement of E-75 sample bags would determine the rate of degradation that can occur by the movement of the worms. The combination of surface and subsurface placement will help determine degradation rate. Scientific data has shown beach worms are attracted to the controlled test site in greater numbers and in better health than any other site on the shoreline.

Beach worms that are naturally found on our shorelines are beneficial to the food chain of the Prince William Sound bird migration.

Test data shows that beach worms are natural life working to put oxygen into subsurface and surface shorelines.

With E-75 sample bag application, a natural clean-up can occur by attracting beach worm movement to speed the rates of natural degradation of subsurface oil.

Data shows that other natural life is attracted to the controlled test site. A one to three year monitoring project would determine if worm life can create a faster degradation and improve water quality for all life.

End results would be an ECOLOGICAL/ENVIRONMENTAL MONITORING TOOL to determine present and future degradation rates of oil spills or releases in the oil transportation process.

Anticipated annual costs: \$388,000.00
Monthly costs: \$ 32,333.33

Cost summary: Administrative, placement and sample collection, worm health analysis, worm count, analytical tests and monthly implementation of charts and graphs for annual submission of data to _____ for present and future ECOLOGICAL/ENVIRONMENTAL MONITORING PROJECTS.

Sincerely,



Jerry Dale Rusher
Environmental Affairs

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Rusher's Environmental 75
Oil Spill Clean-up

HC 33 BOX 2866
WASILLA, ALASKA 99687

Fax (907)373-6001
Office (907)376-9275

SHORELINE RESTORATION

February 6, 1992

TO: EXXON VALDEZ TRUSTEE COUNCIL

PRE-PROPOSAL B

PRIORITY PROJECT: NATURAL PRODUCT NATURAL LIFE RESTORATION

In 1989 & 1990 scientific data has shown positive results in the application of Environmental 75 on the shorelines PRINCE WILLIAM SOUND EXXON VALDEZ OIL SPILL.

Environmental 75 is a natural non-toxic product.
(diatomaceous earth)

Scientific data has shown beach worms are attracted to the controlled test site in greater numbers and greater health than any other site on the shoreline.

Beach worms natural life in place on our shorelines right now are beneficial to the food chain of the PRINCE WILLIAM SOUND bird migration.

Test data shows that beach worms are natural life working to put oxygen into the subsurface and surface of our shorelines.

With strip application of Environmental 75 a natural clean-up can occur by attracting beach worm movement to speed the rates of natural degradation of subsurface and surface contamination.

RESULTS A CLEAN AND RESTORED ENVIRONMENT FOR ALL LIFE

This *NATURAL PRODUCT NATURAL LIFE RESTORATION* will help Mother Nature by 3 to 5 years and with the least amount of environmental damage to the biological and ecological system of the PRINCE WILLIAM SOUND AND THE GULF OF ALASKA.

THE FUTURE IS WHAT WE DO NOW

Jerry D. Rusher
Jerry D. Rusher
ENVIRONMENTAL AFFAIRS

Document ID Number

920601062

- A-92 WPWG
- B-93 WPWG
- C-RPWG
- D-PAG
- E-MISC.

Rusner's Services

Rusner's Environmental 75
Oil Spill Clean-up

HC 33 BOX 2866
WASILLA, ALASKA 99687

Fax (907)373-6001
Office (907)376-9275

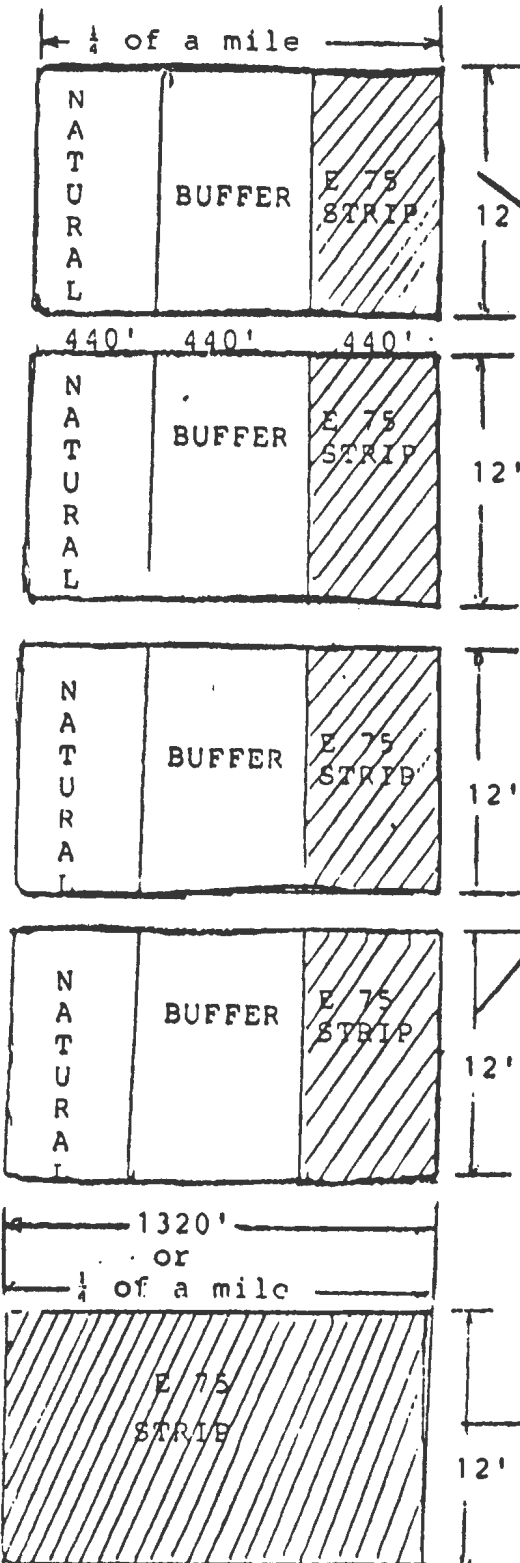
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- B-93 WPWG
- C-RPWG
- D-PAG
- E-MISC.

COSTS FOR E 75 RESTORATION

SHORELINE RESTORATION



1/3 of a mile in four
different sites \$12,723.00

COST PER MILE COULD BE LESS
BECAUSE OF VOLUME APPLICATION.

COST COULD BE LESS PER MILE
WITH LOCAL APPLICATION. (residents)

E 75 STRIP 20' SEPARATION 12' TO 15'
LONG. (subsurface or surface)

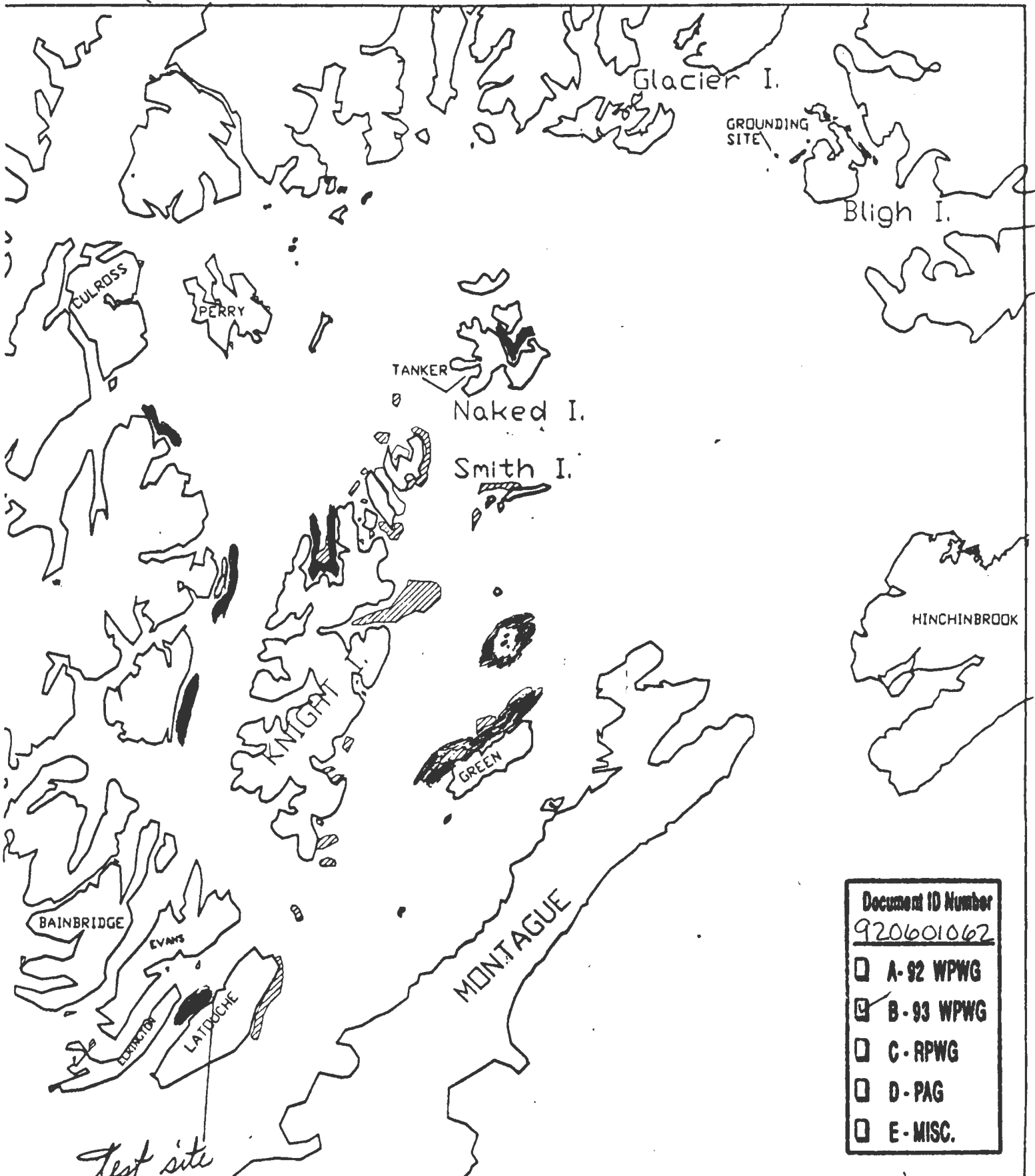
1/4 of a mile \$9,451.00

12,723

OIL SPILL

148°

147°



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Rusher's Services

Rusher's Environmental 76
Oil Spill Clean-up

RUSHER'S SERVICES
HC 33 Box 2866
Wasilla, Ak. 99687

TELEPHONE
907-376-9275
FAX: 907-373-6001

*D. Gibbons
cc: RF/DRE*

LETTER OF TRANSMITTAL

DATE: Feb. 10/1992

SENT TO: U.S. Dept of Agriculture

Forest Service

Attn: Mike Barton Fax 586-7840

Page 1 of 2

REF: to 3:30 teleconference today of the EXXON
VALDEZ TRUSTEE COUNCIL meeting.

****PRIORITY PROJECT****

Document ID Number
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Urgent

*Even though Mr. Rusher
wanted this proposal
included in the 1992
budget (it was not) it is
an idea for next year.
That's why I put this
in "B-93 WPWG."*

Rebecca

Jerry Dale Rusher

Rusher's Services

Rusher's Environmental 75
Oil Spill Clean-up

HC 33 BOX 2866
WASILLA, ALASKA 99687

Fax (907)373-6001
Office (907)376-9275

TO EXXON VALDEZ TRUSTEE COUNCIL

FEBRUARY 10, 1992

REF: PROPOSAL A-B

PRIORITY PROJECT

** NATURAL PRODUCT NATURAL LIFE RESTORATION **

Document ID Number
920601059

- A-92 WPWG
- B-93 WPWG
- C-RPWG
- D-PAG
- E-MISC.

The most cost effective and budgetwise solution to the placement of this PRIORITY PROJECT on the 1992 budget is to use duplication dollars in the amount of \$1,071,850.00 that the council has in 13 projects at this time.

20 percent duplication:	CO ST1A	\$100,000.00		
	CO ST8	16,000.00		
	CO ST3B	49,000.00		
	PROJECT TOTAL	<u>\$165,700.00</u>	-20%	\$33,140.00
22 percent duplication:	103	\$500,000.00		
	103	200,000.00		
	PROJECT TOTAL	<u>\$750,000.00</u>	-22%	\$165,000.00
23 percent duplication:	ST1	\$950,000.00		
	ST8	175,000.00		
	ST4	160,000.00		
	TS1	150,000.00		
	ST1	800,000.00		
	PROJECT TOTAL	<u>\$2,235,000.00</u>	-23%	\$514,050.00
28 percent duplication:	R101	\$ 44,500.00		
	R101	540,000.00		
	R102	700,000.00		
	PROJECT TOTAL	<u>\$1,284,500.00</u>	-28%	\$359,660.00
THE TOTAL OF 13 PROJECTS		<u>\$4,435,200.00</u>		
THE TOTAL OF DUPLICATION OF 13 PROJECTS				<u>\$1,071,850.00</u>

THE OPPORTUNITY TO HELP A NATURAL ARMY OF WORKERS TO RESTORE THE SHORELINES OF ALASKA IS AT OUR DISPOSAL.

SINCERELY
Jerry Dale Rusher
JERRY DALE RUSHER
ENVIRONMENTAL AFFAIRS

ID # 920601061

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

Checked for Completeness

- ID stamped/Input completed
- Name
- Affiliation
- Costs

Category *Manipulation & Enhancement*
~~Restoration Management Actions~~

Lead Agency
DEC

Cooperating Agency(ies)
NOAA

Y N Passed initial screening criteria

type: coastal hab.

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

RESTORATION PROJECT

TITLE OF PROJECT:

Restoration Of Mussel Beds.

- A-92 WPWG
 B-93 WPWG
 C-RPWG
 D-PAG
 E-MISC.

JUSTIFICATION:

NRDA studies established that mussel beds in areas of heavy pollution, including the land owned by Chenega Corporation continue to be heavily polluted on account of mussel population entrapping oil, which remains fresh and unweathered, resulting in continued contamination of the food supply and food chain. See also DEC Internal Memorandum.

DESCRIPTION OF PROJECT:

- A. Goals: To clean out contaminated mussel beds and the underlying oil, and thereafter to respat the clean beds with uncontaminated blue mussels.
- B. Objective: To remove a source of continuing pollution threatens, if not restored, the food chain in Prince William Sound, to remove the threat of unweathered oil, and to determine the number of barrels of unweathered oil buried beneath the mussel beds.
- C. Location: Southwestern Prince William Sound, including Chenega Island, Knight Island, Evans Island, Bainbridge Island, and the area surrounding Bainbridge Passage.
- D. Rationale: The NRDA Studies have established the continuing treat to the restoration of the Sound on account of contamination entrapped by the mussel beds.
- E. Technical Approach: To be determined.

ESTIMATED DURATION OF PROJECT: 1-2 years.

ESTIMATED COST PER YEAR: \$500,000.

OTHER COMMENTS:

The State of Alaska determined some time ago the continuing threat of oiled mussel beds. See memoranda.

NAME, ADDRESS, TELEPHONE:

CHENEGA CORPORATION
 Charles W. Totemoff, President
 P.O. Box 60
 Chenega Bay, Alaska 99574
 (907) 573-5118

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

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Title of Project:

Mussel Bed Treatment

Justification: (Link to Injured Resource or Service)

Food chain problem with Harlequin Ducks, et al.

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

It may be possible to spray a water insoluble hardener into the mussel thread matrix where the oil is trapped. This hardening agent would trap and isolate the oil as long as four months, or during the summer season. When the non-toxic hardening agent becomes brittle, cracks and breaks up, it will probably take the oil with it when it is washed from the mussel beds, the hardener will prevent the sea birds and ducks from ingesting the oil-contaminated detritus. It will also provide a good solid matrix for collection of a new detritus beds, which will eventually serve as food for the birds.

There are commercial materials available that can be used which will harden even under water, but the material will most likely be applied to the mussel beds during low tides. The material would be hand-sprayed from a back-pack dispenser. There is a possibility one treatment would be sufficient.

Estimated Duration of Project: Two summers - 1993-1994

Estimated Cost per Year: \$500,000.00 per year

Other Comments: This is highly experimental and should be tried in the field in 1992 before broad application is permitted.

Name, Address, Telephone:

Martech USA, Inc.
300 E. 54th Av.

Anchorage, AK 99518

Attn: Gary Lawley

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Document ID Number

920018314

A-92 WPWG

B-93 WPWG

C-RFWG

D-PAG

E-MISC.

Title of Project:

Mussel Bed Treatment

Justification: (Link to Injured Resource or Service)

Food chain problems with Harlequin Ducks, et al.

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

The first priority would be to find suitable treatment habitat, i.e., rock surfaces with mussel beds that are presently in use by Harlequin Ducks. These materials could be peeled back by hand using specially designed shears. An enzyme can then be sprayed on both the rock surface and the underside of the mussel mat to identify the oil. It could then be sprayed with high volume, low velocity water to wash off the liquified oil. The oil would still float and could be collected by snare boom or skimmed from the water surface by mechanical methods. The cleaned mussel bed mat could be laid back on the rock surface it came from (one end is always left attached) and rock stapled in place. It should restabilize immediately and provide clean feeding grounds immediately.

This project would be labor-intensive and only a few large bays or selected areas treated in 1993. The project, if successful in 1993, could be greatly expanded in 1994.

Estimated Duration of Project: Summer - 1993 - 1994

Estimated Cost per Year: \$250,000.00 for the first year.

Other Comments: This would be expensive per unit area but would have a high probability for success.

Name, Address, Telephone:

Martech USA, Inc.

300 E. 54th Av.

Anchorage, AK 99518

Attn: Gary Lawley

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

Natural Product Natural Life Restoration Proposal A-D

Justification: (Link to Injured Resource or Service)

Cleanup oiled beaches

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

"The opportunity to help a natural army of workers to restore the shorelines of Alaska is at our disposal."

Estimated Duration of Project: 1 year

Estimated Cost per Year: 1,071,850.00

Other Comments:

Name, Address, Telephone:

Jerry Dale Ruster
Ruster Services
HC 37 Box 2866
Wasilla, Ak. 99687
907 376 9275

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

ID # 920601059

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

 / Checked for Completeness

- / ID stamped/Input completed
- / Name
- / Affiliation
- / Costs

 / Category

Restoration - Manipulation

 / Lead Agency

ADEC

Cooperating Agency(ies)

Y N Passed initial screening criteria

unknown

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

1993 PROJECT SCORING SHEETCritical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- | | | | |
|---|---|-------------------------------------|---|
| — | — | <input checked="" type="checkbox"/> | 1. Linkage to resources and/or services injured by the <u>Exxon Valdez</u> oil spill. |
| — | — | <input checked="" type="checkbox"/> | 2. Technical feasibility.* |
| — | — | <input checked="" type="checkbox"/> | 3. Consistency with applicable Federal and State laws and policies.* |

Comments:

* Restoration Framework, 1992, pp 43-44.

RESTORATION PROJECT

TITLE OF PROJECT:

Restoration Of Windy Bay Mussel Beds.

JUSTIFICATION:

NRDA studies established that mussel beds in areas of heavy pollution, including the Windy Bay Area of the Lower Kenai Peninsula continue to be heavily polluted on account of mussel population entrapping oil, which remains fresh and unweathered, resulting in continued contamination of the food supply and food chain. The Subsistence Food Health Task Force has identified Windy Bay mollusks as highly toxic.

DESCRIPTION OF PROJECT:

- A. Goals: To clean out contaminated mussel beds and the underlying oil, and thereafter to respat the clean beds with uncontaminated blue mussels.
- B. Objective: To remove a source of continuing pollution threatens, if not restored, the food chain in Windy Bay area, to remove the threat of unweathered oil, and to determine the number of barrels of unweathered oil buried beneath the mussel beds.
- C. Location: Windy Bay, Lower Kenai Peninsula.
- D. Rationale: The NRDA Studies have established the continuing treat to the restoration of the Sound on account of contamination entrapped by the mussel beds.
- E. Technical Approach: To be determined.

ESTIMATED DURATION OF PROJECT: 1-2 years.

ESTIMATED COST PER YEAR: \$500,000.

OTHER COMMENTS:

The State of Alaska determined some time ago the continuing threat of oiled mussel beds. See memoranda.

NAME, ADDRESS, TELEPHONE:

PORT GRAHAM CORPORATION
Patrick Norman, President
P.O. Box P.G.M.
Port Graham, Alaska 99603
(907) 284-2212

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<input type="checkbox"/>	E-MISC.

JUN 15 REC'D

**PORT
Graham**
CORPORATION

P. O. BOX PGM • PORT GRAHAM • ALASKA 99603-8998 • (907) 284-2212 • FAX 284-2219

FACSIMILE TRANSMISSION

DATE: 6-15-92 TIME: 4:15

DELIVER TO: Dave Gibbons

COMPANY NAME: Restoration team

Fax Number: (907) 276-2128

Total transmitted: _____
(including this page)

RE: restoration proposals from Port Graham

FROM: Pat Norman
PORT GRAHAM CORPORATION

MESSAGE: Originals in the mail

Document ID Number

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- C-RPWG
- D-PAG
- E-MISC.

ID # 920615-291-02

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

Checked for Completeness

- ID stamped/Input completed
- Name
- Affiliation
- Costs

Category Rest. Manip. or Endowment

Lead Agency DEC

Cooperating Agency(ies) NOAA ADF&G

Y N Passed initial screening criteria

type: F/S

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

JUN

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EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

Shoreline Assessment

Justification: (Link to Injured Resource or Service)

Determine on an annual basis the condition contaminated beaches

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

Ongoing monitoring of oiled beaches listed as contaminated sites. The goal being to assure the sites are returning to pre-oil spill conditions. The objective will be to visit each site during the summer season. The only way we will be able to maintain a credible image with the public is to visit each contaminated site on an annual basis and prepare a written report listing the condition of the beach. The best method will be to establish a listing of each beach still containing oil. A physical visit to each of these beaches will be made by a team who will conduct a survey. The survey will consist of surface observations, photographs for the permanent record, and the digging of test pits to determine the depth of any oil. It is estimated the first year some 50 to 80 sites that will be checked during year one.

It is probable that each year the public will express concerns about specific beaches. Should there be sufficient cause to visit one of these sites the team would attempt to include as many of these locations as possible for survey.

Estimated Duration of Project: Four years with a project assessment at the end of year four.

Estimated Cost per Year: Year 1: \$90,000, year 2: \$85,000, year 3: \$80,000, year 4: \$75,000

Other Comments:

Name, Address, Telephone:

David Bruce

ADEC-EVOS Project

410 Willoughby Ave., Suite 105

Juneau, AK 99801-1795

907 465 5322

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

Checked for Completeness

ID stamped/Input completed
Name
Affiliation
Costs

Category Restor. Monitoring

Lead Agency DEC

Cooperating Agency(ies)

Y N Passed initial screening criteria

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
FORMAT FOR IDEAS FOR RESTORATION PROJECTS

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- B-93 WPWG
- C-RPWG
- D-PAG
- E-MISC.

Title of Project:

Electronic Archiving of Exxon Valdez Response Records

Justification: (Link to Injured Resource or Service)

Preserve in a useable format the record of the State response activity.

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

The records of the response activities of the Ak. Depts. of Environmental Conservation, Fish and Game, and Natural Resources will be placed in an electronic data base.

The information obtained by the state agencies will be of value to future restoration activities, researchers, and historians. The initial observations and sightings are essential to establishing damage assessment baselines and determining the rates of recovery.

The goal is to have the early information available. The objective will be to organize the information in a manner that will assist users in rapid and efficient retrieval. The documents are presently located in Anchorage. The Exxon Valdez oil spill is the best documented large scale oil spill. The records have significant value. Under current state law all documents must be turned over to the State Archivist when the agency no longer needs them or goes out of existence. The Response Center is closing down during early state FY 93. Once the records are placed in Archives they are the responsibility of the Archivist to preserve. Current policy is to allow only review of the documents in the Archives building located in Juneau. It is estimated there are 1,000,000 documents.

Contracting the work versus doing in house is under consideration. We are leaning towards in house, as at the conclusion we would have equipment that would then be available to the Administrative Directors office for documenting their records.

Estimated Duration of Project: two years

Estimated Cost per Year: year 1: \$450,000, year 2: \$300,000

Other Comments:

Name, Address, Telephone:

David Bruce
ADEC-EVOS Project
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795
907 465 5322

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Name
Affiliation
Costs

Category

~~Ad~~ Tech. Support

Lead Agency

~~DSC~~ DSC

Cooperating Agency(ies)

Y

N

Passed initial screening criteria

type: ~~services support~~ technical

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

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FORMAT FOR IDEAS FOR RESTORATION PROJECTS

DEC Box 1 (71)

Title of Project:

Beach sub-surface oil recovery

Justification: (Link to Injured Resource or Service)

To reduce leaching of oil, to speed up sub-surface recovery

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

Identify the most heavily oiled beaches and implement a plan to flush sub-surface oil. boom and recover.

Estimated Duration of Project: 4 months

Estimated Cost per Year: no idea

Other Comments:

Name, Address, Telephone:

Kelly G. Carlisle

Box 731

Whittier, Ak. 99693

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.



P.O. Box 608
Whittier, Alaska 99693

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MAY 28 REC'D

L.J. Evans
Exxon-Valdez Oil Spill Restoration Team
645 "G" Street
Anchorage, AK 99501



It is unfortunate that this opportunity for meaningful input into the PWS restoration process was impaired by these misunderstandings. The question is: how can we, collectively, avoid such disappointments in the future? This leads to my more general comments about the public process.

Logistically, the restoration team should develop a single point of contact in each community and clearly define the expectations for local support and assistance.

Advertising the meeting and publicizing the issues to be discussed should be coordinated with strong support from the restoration team.

Lack of attendance at these public meetings, particularly relating in any way to the *Exxon-Valdez* oil spill, is often misconstrued to mean there is a lack of interest by the citizens of this region. I do not find that to be true; rather, most people in this community are willing and anxious to engage in lengthy discussions about the spill, the response, the cleanup, lingering impacts, restoration, and contingency plans. The record will indicate that a great number of people have expressed their concerns on numerous occasions. The diminishing attention to these issues may very well have resulted from that effort on the part of the public in the past seemingly not having any effect on decision-making.

As we discussed on the phone, one way for the restoration team to get a clear understanding of the concerns and priorities of the residents of the region impacted by the *Exxon-Valdez* oil spill is to review the voluminous record of public testimony already given in this regard. Indeed, the testimony the restoration team would have heard in Whittier from myself and others would have included the following questions, all of which have been expressed on numerous occasions in the past:

- What is the status of shellfish studies, particularly shrimp? Are there any indications about the revitalization of that fishery in Prince William Sound?
- Are there studies underway to determine the extent or implications of oiled sediments that have settled to the bottom in deep water areas beyond the intertidal zones?
- How does the restoration team plan to address the issue of contaminated blue mussels and their effect on the food chain?
- To what extent will "restoration" mean "further removal of oil from selected beaches"? Are there plans to specifically address the concerns of subsistence users that may include further cleanup? Are traditional recreation areas going to be restored to allow unimpaired use?
- Will restoration include the field testing of new beach cleanup technology, particularly to remove and recover the large quantities of subsurface oil?
- Will the restoration team have a presence in the local communities of

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Prince William Sound and the rest of the impacted region? Will there be local offices? Will job announcements be posted locally?

Notably, these are all questions, but questions that embody the local concerns about our economic interests, the overall ecological recovery process, and the social and cultural well-being of our community and our neighbors. Few of us have the time to adequately study the restoration publications and provide meaningful critique or recommendations. In my opinion, the process would be much improved if the restoration team spent time in the communities, talking about local concerns and explaining the priorities and limitations of the settlement agreement. For the best possible results, this dialogue should take place before so much effort has been put into formulation of the proposed plans.

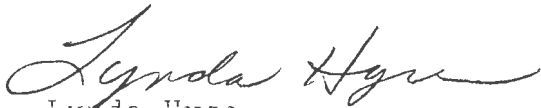
Because local residents are directly and adversely affected by the oil spill impacts to the natural resources, it is reasonable to expect that positive impacts may result from the restoration projects. Unfortunately, during three years of cleanup that expectation did not materialize. It is difficult to believe that a \$2.5 billion project could take place in a region which is simultaneously experiencing a decline in economic health. I think I told you about a 1990 meeting with Admiral Kime and the Oiled Mayors. I listened to local government representatives from Cordova to Kodiak discuss the process of social and economic healing taking place in their communities. Mayor Fink was the last speaker and made it clear that he did not agree with the opinions of the oiled mayors. He indicated that the *Exxon-Valdez* cleanup had been the best thing to happen to Anchorage in several years. Most of us in the impacted region do not want the restoration process to be the second best thing that happens in Anchorage.

The quality of the restoration process will be much enhanced if local concerns and knowledge are fully incorporated. That takes more than a two or three hour stay and a public hearing. It requires a presence in the region, the ability to listen to the local people, and a mechanism for utilizing local resources. The end result will provide a better chance for restoration, probably cost much less, and will generate more public confidence in the process.

I am enclosing a written comment from Kelly Carlisle, Mayor of Whittier, who left for commercial fishing on May 13th. Three people in the community are reviewing the restoration publications and may provide additional written comments.

I hope we have an opportunity to discuss these matters further. The task of assuring public input into the restoration process is a difficult one, and I appreciate your determination and efforts.

Sincerely,



Lynda Hyce
Acting City Manager

c.c. Mayor Kelly Carlisle

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Unique — even in Alaska!

May 23, 1991

THE CITY OF WHITTIER

Document ID Number

920528045

L. J. Evans
Exxon-Valdez Oil Spill Restoration Team
645 "G" Street
Anchorage, AK 99501

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- B-93 WPWG
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- D-PAG
- E-MISC.

Subject: Public Meeting in Whittier & Additional Comments

Dear L.J.:

As we discussed last week, I want to apologize on behalf of the City of Whittier for the confusion and misunderstandings that led to a less-than-successful public meeting here in Whittier. First of all, let me attempt to explain some specifics, then I will continue with some general comments about how the public process might be improved.

The week during which the E-V Restoration Team meeting was scheduled here in Whittier was a very busy one for us. The Regional Citizen's Advisory Council held its quarterly meeting here all day Friday, and RCAC's Oil Spill Prevention and Response Committee met Thursday afternoon from 1 to 5. In addition, the community was preparing for the first annual Prince William Regatta to kickoff from here on Saturday A.M., and the Black Cod commercial fishing opening was moved up to May 15 from May 18.

My own confusion about the time change occurred because I attempted to finalize all arrangements for these events early in the week, coordinating with my assistant Connie O'Guinn. On Tuesday, she had not received verification from you that the time change was approved. She did, however, clarify the location of the meeting with your office at that time and inquire about any assistance the restoration staff would need. Had we known before Thursday afternoon that transportation was necessary, we would have made those arrangements. When the request for transportation was received Thursday, some erroneous assumptions were made since, at the time, I was on my way to Portage to pick up another party.

I must admit I was surprised when I arrived at the Council Chambers at about 5:45 and found no one there. I spoke to several other people who were also there, and we waited until after 6 PM to decide that for some reason the meeting was not taking place. Some RCAC folks had come to Whittier Thursday evening specifically to attend the E-V Restoration meeting. I understand that your people were not clear about the location and ended up at the OSPRC meeting in the BTI which explains where they were at 6 PM.



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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

/ Checked for Completeness

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Name
Affiliation
Costs

/ Category

Restoration - manipulation

/ Lead Agency

DEC

Cooperating Agency(ies)

Q N Passed initial screening criteria

type: coastal hab.

RANKING H M L Rank Within Categories

H M L Rank Overall

Project Number - if assigned

1993 PROJECT SCORING SHEETCritical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- | | |
|------------------------------|---|
| <u>/</u> <u> </u> <u> </u> | 1. Linkage to resources and/or services injured by the <u>Exxon Valdez</u> oil spill. |
| <u>/</u> <u> </u> <u> </u> | 2. Technical feasibility.* |
| <u>/</u> <u> </u> <u> </u> | 3. Consistency with applicable Federal and State laws and policies.* |

Comments:

* Restoration Framework, 1992, pp 43-44.

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**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
 FORMAT FOR IDEAS FOR RESTORATION PROJECTS**

Title of Project:

RAPID RESTORATION OF WEATHERED CRUDE-CONTAMINATED BEACH SUBSURFACE MATERIAL

Justification: (Link to Injured Resource or Service)

Complete beach decontamination with immediate production of clean beach material and associated wash waters.

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

A pilot-scale demonstration of a real-time beach material decontamination process is proposed. The objective of the demonstration is to refine a conceptual treatment process to a workable, full-scale system. The treatment process involves: 1) cobble and soil washing to remove weathered crude from beach material; 2) on-site separation and concentration of the crude from the wash water using hyperfiltration; and 3) biodegradation of concentrated crude in bioreactors. The benefit of this process is that beach materials are immediately cleaned and returned to the beach of origin. Large volumes of crude-contaminated water (low contaminant concentration) are immediately cleaned producing low volumes of highly concentrated waste water; clean water can be discharged immediately. The bioreactors can be small, minimizing nutrient and bacteria requirements. The overall benefit of the pilot-study is to prove the process and provide engineering data for full-scale units.

Estimated Duration of Project: 9 months

Estimated Cost per Year: \$800,000 (entire project)

Other Comments:

The project as envisioned by SBP Technologies, Inc. would be directed by two co-investigators: James G. Mueller, Ph.D. (SBP) and Allen Mearns (NOAA), both experienced Prince William Sound investigators.

Name, Address, Telephone:

Dr. Clayton R Page, III
 SBP Technologies, Inc.
 2155-D West Park Court
 Stone Mountain, GA 30087
 (404) 498-6666

ID # 92061526B

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

Checked for Completeness

- ID stamped/Input completed
- Name
- Affiliation
- Costs

Category
Restoration Manipulation and/or Enhancement

Lead Agency
DEC

Cooperating Agency(ies)

Passed initial screening criteria

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

9206152 BG

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

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| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Technical feasibility.* |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Consistency with applicable Federal and State laws and policies.* |

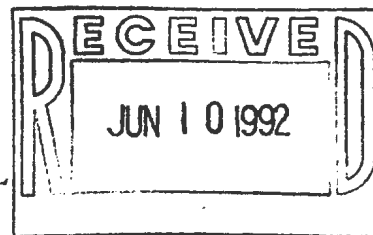
Comments:

* Restoration Framework, 1992, pp 43-44.

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EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL



IDEAS FOR RESTORATION PROJECTS

Title of Project: Hydrodynamic purging of oil from contaminated beaches, Prince William Sound, Alaska

Justification: Washing oil from the beaches of Prince William Sound using hot- and cold-water washes was not as effective as desired in removing oil. Water applied to the beach during low tide washed only some of oil into the Sound, where it was skimmed or soaked up with oil absorbent material. Water applied to the beach also creates a strong downward flow of water into the beach materials. This downward flow carried contaminants into the beach substrate where contamination may persist for many years. A preferred alternative would move water and contaminants upward toward the surface.

Description of Project: Technology in the form of high-speed, air-rotary drill rigs is available to rapidly and cleanly install injection wells to modest depths. If the depth of installation is 20 ft or less, several wells can be installed in an hour, and water can then be injected beneath the oil layer. This injection will cause upward migration of water and oil to the surface where the oil can be skimmed off and removed. If water can be effectively injected in sufficient quantities, the hydrodynamics of ground-water flow will aid removal of the oil rather than hinder it, as is the case for surface washing. The fundamental process is simple; however, the application of the method has many problems and uncertainties. How closely must the wells be spaced? Will the upward flow of water create sand boils which would temporarily increase sediments in the water column? Will the quantity of oil removed be adequate to justify the expense? Can nutrients also be injected through the wells to increase microbial activity and degrade the oil faster? The objective of the project will be to determine whether hydrodynamic purging of oil using injection wells is desirable, environmentally sound, and cost effective.

Two test sites will be chosen: one on a coarse beach and one on a sand beach. A series of injection wells and monitoring wells will be installed using a track-mounted, air-rotary drill rig. The injection wells will be installed to 20 ft or to the top of bedrock, whichever is less. High volume pumps will be connected to the wells and water will be injected during low tide when the beach is exposed. The beach will be physically inspected for sand boils, blow-outs, and other evidence of paths in which flow rates are too high. Pumping rates will be adjusted to minimize surface disruption. Oil purged to the surface will be skimmed with absorbent materials. Pumping will then be continued through a tidal cycle or longer. Water levels and directions of ground-water flow will be monitored. Quantities of oil removed will be estimated. Well spacing will also be varied to improve flow to the surface.

Following the first year's experiments, computer models of the hydrodynamic system will be created to optimize the pumping rates and well spacing to remove oil without undesirable environmental effects. The models will only simulate the water, not the two-phase oil-water mixture, but can be used to optimize pumping. The models and the results of the first year's activities will be used for additional field tests during 1994. One or more of the sites will be monitored for an extended period of time. That monitoring is not part of the present proposal, however.

Estimated Duration of Project: Two years

Estimated Cost per Year: \$500,000

Other Comments: The project will incur substantial costs for contractual services for the drill rig and the barge to transport the rig. Actual costs will depend on these contractual requirements.

Name, Address, Telephone:

Philip J. Carpenter, District Chief

U.S. Geological Survey

4230 University Drive, Suite 201

Anchorage, AK 99508-4664

(907) 786-7100

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1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

ID # 920615-27-35

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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- ID stamped/Input completed
- Name
- Affiliation
- Costs

Category Manipulation & Enhancement
~~Restoration Management Actions~~

Lead Agency DEE

Cooperating Agency(ies) DOI - USGS

Y N Passed initial screening criteria

type: coastal hb.

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

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JUN-15-1992 16:29 FROM SBP - ATLANTA, GEORGIA TO BATON ROUGE

Document ID Number
92061527
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EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

RAPID RESTORATION OF WEATHERED CRUDE-CONTAMINATED BEACH SUBSURFACE MATERIAL

Justification: (Link to Injured Resource or Service)

Complete beach decontamination with immediate production of clean beach material and associated wash waters.

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

A pilot-scale demonstration of a real-time beach material decontamination process is proposed. The objective of the demonstration is to refine a conceptual treatment process to a workable, full-scale system. The treatment process involves: 1) cobble and soil washing to remove weathered crude from beach material; 2) on-site separation and concentration of the crude from the wash water using hyperfiltration; and 3) biodegradation of concentrated crude in bioreactors. The benefit of this process is that beach materials are immediately cleaned and returned to the beach of origin. Large volumes of crude-contaminated water (low contaminant concentration) are immediately cleaned producing low volumes of highly concentrated waste water; clean water can be discharged immediately. The bioreactors can be small, minimizing nutrient and bacteria requirements. The overall benefit of the pilot-study is to prove the process and provide engineering data for full-scale units. In addition, short and long-term ecological impacts of implementing the potential remedial action on a practical scale will be assessed.

Estimated Duration of Project: 9 months

Estimated Cost per Year: \$800,000 (entire project)

Other Comments:

The project as envisioned by SBP Technologies, Inc. would be directed by two co-investigators: James G. Mueller, Ph.D. (SBP) and Allen Mearns (NOAA), both experienced Prince William Sound investigators.

Name, Address, Telephone:

Dr. Clayton R Page, III
SBP Technologies, Inc.
2155-D West Park Court
Stone Mountain, GA 30087
(404) 498-6666

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.



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SBP Technologies, Inc.

2165-D West Park Court • Stone Mountain, Georgia 30087 • (404) 498-6686 • FAX (404) 498-8711

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<input type="checkbox"/> E-MISC.

Date: 6-15-92

FACSIMILE TRANSMISSION

TO: Dave R. Gibbons

Company: Exxon Valdez Oil Spill Restoration Team

Fax Number: 907-276-7118

FROM: ~~SBP~~ Clayton Page

Comments: _____

Total Number of Pages (including Cover Sheet): 2

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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 / Affiliation
 / Costs

 / Category
Restoration enhancement

 / Lead Agency
~~NOAA~~ DBC

 Cooperating Agency(ies)
NOAA

N Passed initial screening criteria
Type: coastal habitat

RANKING H M L Rank Within Categories

 H M L Rank Overall

 Project Number - if assigned

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

/ _ _ 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.

/ _ _ 2. Technical feasibility.*

/ _ _ 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

SUBSISTENCE RESTORATION PROJECT

TITLE OF PROJECT:

Chenega Bay Subsistence Restoration Project.

JUSTIFICATION:

Due to the oil spill, subsistence resources were either grossly polluted or population seriously reduced. Because oil remains in the environment, we believe that further clean up work is necessary.

DESCRIPTION OF PROJECT:

- A. Goals: To remove oil from heavily contaminated sites in order to advance restoration.
- B. Objective: To remove oil left behind after the FINSAP program, particularly at Sleepy Bay and Evans Island.
- C. Location: Southwestern Prince William Sound.
- D. Rationale: The NRDA Studies have established that the presence of oil has caused a serious loss of certain population. It follows that as long as oil presents a threat, which it continues to do in areas of gross contamination, that the oil must be removed.
- E. Technical Approach: Type A manual pick up.

ESTIMATED DURATION OF PROJECT: 2-5 years.

ESTIMATED COST PER YEAR: \$200,000.

OTHER COMMENTS:

Local Response Project activities establish that Chenega is well able to remove oil from the beach front area.

NAME, ADDRESS, TELEPHONE:

CHENEGA CORPORATION
Charles W. Totemoff, President
P.O. Box 60
Chenega Bay, Alaska 99574
(907) 573-5118

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- B-93 WPWG
- C-RPWG
- D-PAG
- E-MISC.

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Name
Affiliation
Costs

Category
Rest. Manup. or Enhancement

Lead Agency
DEC

Cooperating Agency(ies)

Passed initial screening criteria

type: F/S

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

DNR Box 1 (295)

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EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project: Providing Public Access to Oil Spill GIS Databases Using ArcView in a PC Windows environment.

Justification: (Link to Injured Resource or Service)

Data collected during the EXXON VALDEZ oil spill provide an important asset for future management of the natural resources in Prince William Sound. The key to the effective utilization of these data will be in making their existence and basic structure known to the widest possible audience.

Description of Project: (e.g. goal(s), objectives, location, rationale technical approach)

Goals: Make GIS data generated during the EXXON VALDEZ oil spill available for public use in a low cost and easy to use personal computer environment.

Objective: Translate ARC/INFO GIS databases into a format that can be searched and manipulated with simple menus in ArcView running on standard DOS personal computers.

Location: Test sites will be established at the Oil Spill Public Information Office in Anchorage and the Center for Fisheries and Ocean Studies in Juneau.

Rationale: The GIS databases generated for monitoring the cleanup and assessing the damages caused by the EXXON VALDEZ oilspill constitute one of the most complete natural resource databases developed for a marine habitat. Now that litigation concerns have diminished, the primary concern should be to make this database accessible to managers, scientists, and the public. The widespread knowledge of the availability of these data will ensure that what has been gathered will be utilized to the fullest and that the databases will be systematically updated to maintain their usefulness.

Technical Approach: The natural resource data generated by the State of Alaska during the EXXON VALDEZ oil spill are currently maintained as ARC/INFO databases. This GIS database system offer very powerful tools for storing, manipulating, and displaying these types of data. However, this database system requires a large investment of capital for both the software and the hardware on which it runs. In addition, efficient utilization of the software requires a significant investment in personnel training. ARC/INFO has recognized these limitations of its database system and has developed ArcView as a low cost tool for use in accessing and exploring ARC/INFO databases by people who aren't trained as GIS specialists. In this project we will develop a menu and icon driven interface that will provide for access to all the available databases generated

Estimated Duration of Project: One year

Estimated Cost per Year: \$ 110,000 < possible change to \$120,000 - 2 versions submitted >

Other Comments: This project will be conducted in cooperation with Richard McMahon at the Department of Natural Resources. We will also work with Carrie Holba at the Oil Spill Public Information Center and Michael Stekoll at the Juneau Center of Fisheries and Ocean Sciences.

Name, Address, Telephone:

Dr. Larry Deysher
 Coastal Resources Associates
 2270-L Camino Vida Roble
 Carlsbad, CA 92009
 619/438-0588

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ID # 920612236-02

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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- Affiliation
- Costs

Category
Technical Support Management Act

Lead Agency
ONR

Cooperating Agency(ies)
DOT-FWS

Y N Passed initial screening criteria

Type: 615

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

1993 PROJECT SCORING SHEET

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project: Establishment of User-friendly Geographic Information System and Remote Sensing Demonstration Center for the Public.

Justification: Restoration of the spill area will require a long-term commitment. This proposal recommends establishing an accessible GIS and remote sensing demonstration center (available to school children and other citizens) in the towns affected by the Exxon Valdez oil spill.

Description of Project:

Establish in the towns of Homer, Seward, Valdez, Cordova, Chenega Bay and Kodiak a minimum of one Apple Macintosh Computer running a "user-friendly" GIS software package such as GAIA Software. Data to be made available to the public might include the following: 1) Satellite images and aerial photographs of the spill area, 2) thematic vegetation maps of the spill area, 3) still photographs and video pertinent to the spill, 4) digitized U.S. Geological Survey maps showing roads, hydrography, elevation and geopolitical boundaries etc., 5) taped interviews with key people involved in the restoration (which could be updated regularly), and 6) progress and final reports suitable for public viewing.

Actions:

- Select relevant data to be incorporated.
- Build prototype system and then duplicate it for the communities involved.
- Involve local schools and teachers as system managers to run and maintain the system as part of science curriculum.
- Hold periodic open houses for the community to present new data and explain system features.

Estimated Duration of Project: 10 Years

Estimated Cost per Year: \$72,000 (decreasing each year)

Name, Address, Telephone:

Richard Podolsky, PhD
235 West 56th Street #20N
New York, NY 10019-4330
Tel: (212) 246-4686 or 6054; FAX: (212) 246-6074

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- ✓ Costs

✓ Category

Restoration - Enhancement Management Actin

Lead Agency

DNR

Cooperating Agency(ies)

Y N Passed initial screening criteria

Type : COIS

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

1993 PROJECT SCORING SHEETCritical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

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|------------------------------|---|
| <u>/</u> <u> </u> <u> </u> | 1. Linkage to resources and/or services injured by the <u>Exxon Valdez</u> oil spill. |
| <u>/</u> <u> </u> <u> </u> | 2. Technical feasibility.* |
| <u>/</u> <u> </u> <u> </u> | 3. Consistency with applicable Federal and State laws and policies.* |

Comments:

* Restoration Framework, 1992, pp 43-44.

USDA Box 2 (16)

29821
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Title of Project: Chugach National Forest Heritage Interpretive Centers

Justification:

One of the most significant injuries to Cultural Resources as a result of the Valdez Oil Spill was vandalism resulting from increased knowledge of site location. Mitigation of this injury involves educating the public as to why they should not loot or deface sites. Understanding the extent of injury and interpreting cultural resources for the public requires a place for archaeological analysis to take place, and also a place for the public to both view and experience interpretation of cultural resources. Vandalized and otherwise injured sites discovered during the course of the Oil Spill have not yet been evaluated for their significance in understanding the prehistory of Prince William Sound.

Description of Project:

This project calls for the development of a permanent Heritage Interpretive Center which will function as an educational center for the public and a base for ongoing research on the Chugach National Forest, and two seasonally operating Interpretive Centers. The permanent center will provide 40,000 sq.ft for archaeological/cultural laboratory/analysis space and permanent storage for collections. Interpretive areas for public educational displays will also be provided, including collections stored in "open stacks" accessible to visitors; static and "living history" displays, including settlement reconstructions; user-friendly computer stations; and other interpretive exhibits and tools.

The seasonally operating centers will present educational material in a similar manner, but will be more focused on the immediate area. Archaeological excavations in the vicinity of seasonal centers will provide a view of how such information is obtained, and coordinated Passports in Time projects will allow public participation in the process. Small lab facilities at each seasonal center will allow preliminary processing of cultural remains. Interpretation at all centers will be coordinated with appropriate Native or historical organizations.

Estimated Duration of Project: 3 years for full construction and start-up

Estimated Cost per Year: \$12 million construction costs for all 3 centers.

Other Comments: Potential partners: Chugach Alaska Corporation, Kenaitze Tribe, Kenai Peninsula Historical Society

Name, Address Telephone:

Bruce Van Zee, Forest Supervisor
Chugach NF
201 East 9th Ave.
Anchorage, AK 99501

Technical Contact: Linda Finn Yarborough

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920615298	
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ID # 92061529-21

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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ID stamped/Input completed
Name
Affiliation
Costs

_____ Category
Mgmt Action

_____ Lead Agency
USFS

_____ Cooperating Agency(ies)

Y N Passed initial screening criteria

_____ type: arch.

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

29817

Title of Project: Nuchek Heritage Interpretive Center

Justification:

One of the most significant injuries to Cultural Resources as a result of the Valdez Oil Spill was vandalism resulting from increased knowledge of site location. Mitigation of this injury involves educating the public as to why they should not loot or deface sites. Understanding the extent of injury and interpreting cultural resources for the public requires a place for archaeological analysis to take place, and also a place for the public to both view and experience interpretation of cultural resources.

Development of an Interpretive Center at Nuchek, on Hinchinbrook Island, in cooperation with Chugach Alaska Corporation's tourist development plans in the Nuchek area, would divert tourism from injured sites in the Oil Spill area to a historic area with more controlled access. At the Center, the public could view interpretive exhibits, including reconstructions and living history demonstrations, as well as participate in archeological investigation and documentation of historic and prehistoric sites in the immediate area. There is precedence for interpretive centers as restorative measures in the Anasazi Heritage Center in Colorado.

Description of Project:

This project calls for the development of a seasonally operating Interpretive Center at the historic Russian/Alaska Native site of Nuchek, on Hinchinbrook Island. This center would provide a small amount of laboratory and analysis space, where preliminary processing of cultural remains could be done. The major focus of the center would be interpretive areas for public educational displays, where collections may be viewed in both static and "living history" situations. This could include settlement reconstructions, user-friendly computer stations for visitor use, and photo exhibits.

The seasonally operating center would present regional educational material, as well as focusing on the immediate area. Archaeological excavations in the vicinity could provide a view of how such information is obtained, and coordinated Passports in Time projects will allow public participation in the process. Interpretation would be coordinated with Chugach Alaska Corporation, and village organizations with an interest in the interpretation.

Because the prehistoric and historic inhabitants of the Oil Spill area interacted with residents of other parts of Southern Alaska, effective interpretation of Oil Spill area cultural resources must take these relations into account.

Estimated Duration of Project: 3 years for full construction and start-up

Estimated Cost per Year: \$3 million construction costs

Other Comments: Potential partners: Chugach Alaska Corporation, Village corporations, Tourism/guiding enterprises

Name, Address Telephone:
 Bruce Van Zee, Forest Supervisor
 Chugach NF
 201 East 9th
 Anchorage, AK 99501

Technical Contact:
 Linda Finn Yarborough

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ID # 920615298-17

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Name
Affiliation
Costs

Category

Agmt Action Manipul. Enhancement

Lead Agency

USFS

Cooperating Agency(ies)

Y

N Passed initial screening criteria

RANKING H M L Rank Within Categories

H M L Rank Overall

Project Number - if assigned _____

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
FORMAT FOR IDEAS FOR RESTORATION PROJECTS

USDA Box 2 29849
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Title of Project:

Oil Spill Restoration Support Services and Facilities

Justification: (Link to Injured Resource or Service)

As a result of the oil spill, support services and facilities have been in short supply in In the spill area of PWS. This has resulted in a great deal of lost time and added cost associated with rental houses and charter boats. There are no facilities available in PWS and other locations in the spill area.

Description of Project:(e.g. goal(s), objectives, location, rationale, and technical approach)

Objective: Construct one or two full service facilities in the oil spill area. these facilities will provide housing, laboratory, fuel storage, warehouse, cooking, and meeting areas to support oil spill restoration and monitoring activities. The facilities must serve from 30 to 60 people at one time. Additional facilities would be satellite facilities located near the project areas. These would normally consist of a cabin, that can be moved as the projects change or need dictates. Additional benefits will be public information and education. The benefit of this project would be to provide on site housing and reduce the need for high cost charter boats. Much of the work would be done out of skiffs dispatched from the central facility. Additional, much time would be saved by not having to return to cordova or some other full service site for support.

Locations: Location would be selected at a later date depending on the support needs and available land. I suggest potential sites on northern Knight Island and Green Island or Montague Island. Satellite facilities would be located in sites responsive to future restoration projects and monitoring needs.

Estimated Duration of Project: Three years

Estimated Cost per Year: Year#1-\$600,000, Year#2-\$4,700,000, year#3-\$800,000 per facility and will vary for the satellite facilities from \$10,000 to \$100,000.

Other Comments:

Name, Address Telephone:

Bruce Van Zee

Forest Supervisor

201 East 9th, Suite 206

Anchorage, AK 99501

Oil Spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

Technical Contact:

Ken Holbrook, Fish Biologist

271-2819

Document ID Number
920615298
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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS



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ID stamped/Input completed
Name
Affiliation
Costs

Category Tech Support

Lead Agency USFS

Cooperating Agency(ies)

Y

Passed initial screening criteria

RANKING H M L Rank Within Categories

H M L Rank Overall

Project Number - if assigned

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

29848

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Title of Project:

Communication system for oil spill program

Justification: (Link to Injured Resource or Service)

The Exxon Valdez Oil Spill resulted in a dramatic increase in the number of people and boats using the spill area, studying and monitoring the impacts of the spill. The start up of the restoration program will increase this usage resulting in an increased need for communication and a reliable safety net. Communications have been difficult and some what limited due to the available systems. Installation of a cellular phone system in the oil spill area would provide a safety net for the program and be available to the public for information and safety.

Description of Project:(e.g. goal(s), objectives, location, rationale, and technical approach)

Contract the installation of a cellular phone system for the oil spill area. The location of the facilities will depend on the area of coverage. Safety, support, and communication are the reasons for installing a system of this nature. An added benefit would be a public information number in the spill area that can provide the public with up to date information on the activities on-going in the restoration program and on site explanation of impacts.

Locations:

Location of the facilities to support this system would be dependant on area and percent reliable coverage. The overall area would be the oil spill area.

Estimated Duration of Project: Installation would take 1 to 2 years

Estimated Cost per Year: vary depending on the extent of coverage

Other Comments: Benefits would be for the life of the program

Name, Address Telephone:

Bruce Van Zee
Forest Supervisor
201 East 9th, Suite 206
Anchorage, AK 99501

Oil Spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

Technical Contact:

Ken Holbrook, Fish Biologist
271-2819

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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Name
Affiliation
Costs

_____ Category Tech Support

_____ Lead Agency USFS

_____ Cooperating Agency(ies)

Y N Passed initial screening criteria

_____ type: services

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

29811
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Title of Project: Prince William Sound Scenic Byway: Nomination and Interpretive Plan

USDA Box 2 (57)

Justification:

Recreational visits to Prince William Sound decreased as a result of the Oil Spill. Nominating the marine highway and cruise ship routes as a Scenic Byway would enhance the recreational resources. It would also serve as a mechanism to more fully inform and educate visitors about the Sound and its restoration before, during, and after their visit.

Description of Project:

The National Forest Scenic Byway program has been very successful at bringing together the public and private sectors to promote tourism along outstanding travel routes. Prince William Sound is an outstanding area consisting of the "best of the best" in natural, cultural and visual resources. It is also a main transportation route for the Alaska ferry system and major cruise ship lines. This project would seek National Forest and state designation of major marine travel routes in PWS as Scenic Byways.

In addition to seeking byway designation, this project would develop an interpretive plan for the route. The interpretive plan would identify significant resources along ferry and cruise ship routes for interpretation, develop interpretive themes, and recommend interpretive media such as shipboard naturalist programs, travel guides, audio and video tapes, brochures, signage, etc. All programs and products would be designed to be accessible for all ages and abilities.

Strong involvement and support by land managing agencies, AK Marine Highways, native corporations, local communities, cruise ship operators, and other interested parties is essential for the success of this project.

Estimated Duration of Project: 1 year

Estimated Cost per Year: \$70,000

Name, Address Telephone:

Bruce Van Zee _____
Forest Supervisor _____
201 East 9th _____
Anchorage, AK 99501 _____
(907) 271-2525

Oil Spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

Technical Contact: _____

Sarah Bevilacqua _____
(907) 271-2509

Document ID Number
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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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ID stamped/Input completed
Name
Affiliation
Costs

Category

Mgmt Action

Lead Agency

USFS

Cooperating Agency(ies)

ADNR

Y

N

Passed initial screening criteria

type: education

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

Title of Project: Wild Fish Stock Information Assessment

Justification: Information data base that will guide and prioritize on the ground enhancement activities for the injured cutthroat, dolly varden, coho salmon, pink salmon and all other freshwater fish and anadromous fish in PWS.

Description of Project: Recognizing the cultural, social, economic, and health benefits of maintaining genetic diversity, in 1973 Congress passed the Endangered Species Act (ESA), setting forth a policy that we would not be indifferent to the loss of plant and animal species. In addition to the ESA, the National Forest Management Act (1968) requires the maintenance of viable populations of all native and desirable non-native vertebrates by maintaining plant, animal, and habitat diversity. The Prince William Sound has long been a significant producer of wild salmon in Alaska. These salmon stocks, along with other fish species, support a diverse, economically important, and culturally significant fisheries. As witnessed by the collapse of the salmon fisheries in the Columbia River, as well as numerous other drainages in Washington, Oregon, Idaho, and California, fish stocks in the Prince William Sound are not immune to depletion. The recent Exxon Valdez oil spill has further heightened awareness for the vulnerability of wildlife species to habitat destruction. To maintain the genetic diversity, and hence, the commercial, subsistence and sport fisheries in the Sound, thereby; avoiding legal and social complications associated with threatened or endangered species, it is imperative that systematic land planning measures be taken now.

To manage habitat for the fish populations that were affected by the Exxon Valdez oil spill, the Forest Service and other federal and state agencies require adequate knowledge of where the populations exist, their significance (eg., biological, commercial, and cultural), habitat limiting factors, susceptibility to disturbance, and potential impacts to the populations. Currently, a substantial amount of information on fish in Prince William Sound is available. However, the amount and variety of information available is somewhat overwhelming. Not only is the information unconsolidated but furthermore it is not available in a format that allows the Forest Service, as a land manager, to readily make use of it with regards to maintaining population diversity.

We propose to systematically compile and review existing information on all wild freshwater and anadromous fish stocks in the Sound, making this information available in a readily useable format, which is catalogued by stream and species. The ultimate goal is to use the information to evaluate and prioritize fish stocks based on their biological, economic, and cultural significance. Compiling and reviewing the existing information will be the first step towards systematically identifying the various fish stocks (including those that were injured as a result of the Exxon Valdez oil spill), defining potential impacts on them, and developing appropriate programs for maintaining or enhancing them.

Project Duration: 2 years.

Estimated Cost per Year: \$50,000.

Name, Address, Telephone:

Bruce Van Zee
Forest Supervisor
Chugach National Forest
201 E. 9th Avenue, Suite 206
Anchorage, AK 99567

Technical contact: Kim Barber 217-2836

Programs for Document ID Number	
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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Name
Affiliation
Costs

Category ~~Monitoring~~ Manage Actions

Lead Agency USFS

Cooperating Agency(ies) ADFG

(Y) N Passed initial screening criteria

type: F/S

RANKING H M L Rank Within Categories

H M L Rank Overall

Project Number - if assigned _____

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

<input type="checkbox"/>	A-92 WPWG
<input checked="" type="checkbox"/>	B-93 WPWG
<input type="checkbox"/>	C-RPWG
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<input type="checkbox"/>	E-MISC.

Title of Project: *Fucus* Restoration Feasibility Study

USDA
Box 2

69

Justification: (Link to Injured Resource or Service)

The dominant algal species, *Fucus*, in the intertidal was severely damaged by the oil spill and subsequent clean-up and has not yet recovered.

Description of Project: (e.g. goal(s), objectives, location, rationale, technical approach)

Goals: Restore *Fucus* populations to the upper intertidal zones affected by the oil spill and subsequent clean-up activities.

Objective: To determine the feasibility of restoring *Fucus* by reseeding the affected areas on a biodegradable substratum.

Location: Experiments will be conducted in Herring Bay, Knight Island, Prince William Sound.

Rationale: Early results of our experiments in Herring Bay indicate that natural recruitment of *Fucus* in some habitat types will be very slow. Large areas of rocky intertidal habitat in Herring Bay, for example, which were intensely cleaned during the summer of 1989, are still devoid of *Fucus* populations due to reproductive failure. Attempts to grow *Fucus* germlings on seeded plates failed due to desiccation and the effects of high substrate temperature. The recovery of *Fucus* on denuded sites can be enhanced by providing microhabitats with conditions more suitable for embryo survival and growth, i.e. higher moisture and lower substrate temperatures. We plan to provide these conditions with biodegradable erosion-control fabric.

Technical Approach: In this study we propose to test a method of restoring *Fucus* populations to affected areas by using biodegradable erosion-control fabric that has been seeded with *Fucus* embryos. There are many versions of this product developed for a variety of terrestrial applications. We will conduct a series of tests to determine the optimum fabric type to maintain sufficient moisture for embryo survival yet provide enough open space for light and growth of juvenile plants. We will eliminate the potential egg dispersal problem by seeding the erosion-control fabric with *Fucus* embryos or by including fertile adult plants. We will also provide unseeded strips of fabric to test whether embryo seeding is necessary to produce new populations of plants in these environments. The cost effectiveness of this procedure for large scale restoration will be assessed.

Estimated Duration of Project: Two Years

Estimated Cost per Year: \$70,000

Other Comments: This project could be combined with the *Fucus* recovery monitoring studies to realize cost savings, especially with respect to logistics. This is a cooperative project with Coastal Resources Associates.

Name, Address, Telephone:

Dr. Michael S. Stekoll
University of Alaska
11120 Glacier Highway
Juneau, AK 99801
907-789-4579

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

ID # 920/10229-01

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

✓
Checked for Completeness

- ID stamped/Input completed
- Name
- Affiliation
- Costs

✓
Category
Manipulation + Enhancement

✓
Lead Agency
USFS

Cooperating Agency(ies)

Y N Passed initial screening criteria

type - Clt

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

NDA Box 2 (92)

R
55

TITLE OF PROJECT: PHOTO-IDENTIFICATION STUDIES OF PRINCE WILLIAM SOUND KILLER WHALES

JUSTIFICATION: To monitor natural recovery of injured populations of killer whales occurring in Prince William Sound.

DESCRIPTION OF PROJECT: The primary objectives would be to 1) enumerate the number of whales inhabiting Prince William Sound, 2) determine reproductive and mortality rates of Prince William Sound killer whales, and 3) establish population trends over time. Photo-identification studies would be conducted each year from June to September employing similar methods as those completed by the National Marine Mammal Laboratory for the years 1989 through 1991. Although the main base of operation would be the southwestern sector of Prince William Sound, other areas of Prince William Sound would be visited routinely to document the presence or absence of killer whales. Additional information on killer whale occurrence would be obtained through aerial surveys and the existing killer whale sighting network. Exact details of field methods are available upon request and are described in detailed in previous NRDA/Restoration reports.

ESTIMATED DURATION OF PROJECT: Ten years.

ESTIMATED COST PER YEAR: \$120.0K

OTHER COMMENTS: None at this time.

NAME, ADDRESS, TELEPHONE:

Drs. Marilyn E. Dahlheim and Thomas R. Loughlin
National Marine Fisheries Service
National Marine Mammal Laboratory
7600 Sand Point Way N. E.
Seattle, Washington 98115
206/526-4020 or 4040.

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USDA
BOX 2 (142)

29903
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55

Title of Project:

Oil Spill Injured Resources Literature Research and Review

Justification:

A voluminous amount of information on resources injured in the 1989 oil spill is becoming available to managers. Remaining abreast of the currently growing knowledge base is a time consuming effort, but necessary to assure effective restoration activities.

Description of Project:

Goal: To remain updated on life history and habitat requirements of injured resources, and habitat and species response to oiling and restoration efforts.

Objective: Take two weeks each year to research and review literature on injured species biology and habitat restoration, enhancement and maintenance.

Objective: Update literature files of non-oilspill information on populations in Prince William Sound from other state and federal agencies.

Objective: Obtain Department of Fish and Game data base of streams in National Forest Land and update yearly; this would be maintained in a data file easily accessible at the district office.

Objective: Maintain information gathered in a computer-based reprint library to facilitate retrieval and use.

Location: Research would be conducted both at the oil spill library located in the Simpson Building, Anchorage, and at the Federal Building Library. Information gathering would not be limited, however, to literature review as consultation with experts should also be pursued. The reprint library would be maintained at the district office.

Estimated Duration of Project:

Ongoing.

Estimated Cost per Year:

\$6,500

Other Comments:

Name, Address, Telephone:

Charla Sterne
Wildlife Biologist,
Glacier Ranger Station
PO Box 129
Girdwood, AK 99587
907-783-3242

or Kate Wedemeyer
Fisheries Biologist

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920615299
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Title of Project: Prince William's Campground

(212)

29814

R
JJ

Justification:

USDA Box 2

Recreation use of the Sound decreased or was displaced immediately after the spill. Use in some areas in the southern part of the Sound are still impacted to some degree. As a partial result of the publicity generated by the oil spill, a new demand for recreation different than either scenery viewing from cruise ships or primitive camping appears to be developing among some segments of the public.

Description of Project:

GOALS: (1) Provide a facility for visitors desiring a more social-based camping experience than available at isolated, small cabins; and (2) provide a facility that enables visitors to experience the landscape and resources of PWS they have seen portrayed in oil spill coverage.

PROJECT: The proposal is to develop a campground of 30-60 units, depending on the demand analysis, equipped with cabins rather than traditional tent pads and RV sites. Such a facility would be designed to provide a rustic "base camp" for day trips, as well as meet the demand for cabins by groups larger than can be accommodated at existing, isolated cabins. The campground would be located along the Alaska Marine Ferry Route and would be serviced by a shuttle boat connecting the facility with the Ferry. It would also be located to connect with existing and proposed trail systems on land and water. Proximity to fishing, glacier viewing, and wildlife viewing opportunities is essential. Interpretation of the tidewater ecosystems and the cultural history of the Sound, including the oil spill, would be incorporated into the facility design and operation.

Estimated Duration of Project: Five to seven years for feasibility analysis through construction phases, followed by permanent operation of the facility.

Estimated Cost per Year: Five year funding schedule is FY 93 - \$70,000; FY 94 - \$100,000; FY 95 - \$500,000; FY 96 - \$500,000; FY 97 - \$500,000.

Other Comments: Prince William of Great Britain will be invited to dedicate the facility. Involvement by the British royal family would provide positive media coverage for Prince William Sound and the recovery efforts, as well as highlight exploration of southcentral Alaska by English explorers. We will propose developing the facility in partnership with Operation Raleigh, a conservation and development program sponsored by Prince Charles for young adults of the British Commonwealth. Operation Raleigh has mounted expeditions to the Chugach National Forest in the past.

Name, Address, Telephone:

Technical Contact:

Bruce Van Zee, Forest Supervisor
Chugach National Forest
201 E. 9th Ave
Anchorage, Alaska 99501
(907)271-2500

Susan Rutherford, Staff Officer
Dave Hackett, Recreation Specialist

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920615278	
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COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Checked for Completeness

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Name
Affiliation
Costs

Category

Agent Action Equip Enhancem

Lead Agency

USFS

Cooperating Agency(ies)

Y N

Passed initial screening criteria

type: recreation

RANKING H M L Rank Within Categories

 H M L Rank Overall

Project Number - if assigned _____

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June 15, 1992

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EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL
RESTORATION PROJECT PROPOSAL, JUNE 10, 1992

Title of Project: Heritage Information Replacement

Justification (Linkage to Injured Resource): Replaces archaeological data lost/destroyed by spill response

Description of Project: The prehistory of Prince William Sound is very poorly understood. Even the most basic information, the locations of sites, was largely unknown prior to the 1989 spill. Many new sites were discovered during archaeological surveys within oiled segments, but survey locations were dictated by oiling, not by a rational, statistically valid research design. When new sites were discovered, their evaluation was difficult because no established cultural chronological framework existed. Some archaeological data was lost or destroyed during spill response through inadvertent or intentional means. This project is intended to replace, insofar as possible, lost opportunities to learn about the prehistory of Prince William Sound through the most direct and efficient means: excavation of carefully chosen archaeological sites that have the most potential to establish a cultural chronology. In Phase I, the best sites would be selected through examination of existing survey data, additional survey of unsurveyed coastlines with high potential to contain undiscovered sites, and testing of sites to determine depth, age, extent, and degree of preservation. From this data, a small number of sites with the most potential can be chosen for excavation. Phase II activities would include preparing an excavation strategy, logistical planning, and actual excavation of the sites using standard archaeological techniques established for the coastal zones of Alaska and the Pacific Northwest. Phase III activities will include analysis of the recovered material and wide dissemination of the results in both scholarly and popular formats.

Estimated Duration of Project: 6 years (2 for each phase)

Estimated Cost per Year: \$200,000

Other Comments: The results would benefit all Alaskans. It would also greatly enhance our ability to efficiently respond to any future spills by providing site location data for incorporation into oil spill contingency plans.

Judith E. Bittner
Office of History and Archaeology
Alaska Division of Parks and Outdoor Recreation
Department of Natural Resources
P.O. Box 107001
Anchorage, AK 99510-7001
[907] 762-2622

COVER WORKSHEET FOR 1993 IDEA SUBMISSIONS

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Name
Affiliation
Costs

Category
Pest. Manip. or enhancement

Lead Agency
DNR

Cooperating Agency(ies)
US FWS USFS

Y N Passed initial screening criteria

type arch.

RANKING H M L Rank Within Categories

 H M L Rank Overall

_____ Project Number - if assigned _____

Critical Factors

Potential projects must meet all of the following to be considered further. Check the blank for "yes", "no", or "unknown".

YES NO UNKNOWN

- 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill.
- 2. Technical feasibility.*
- 3. Consistency with applicable Federal and State laws and policies.*

Comments:

* Restoration Framework, 1992, pp 43-44.