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Comments Received to March 1, 1991

Federal Register Notice

 Exxon Company, U.S.A. John Seddelmeyer, Chief Attorney

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- American Petroleum Institute (API)
 G. William Frick, Vice President and General Counsel
- Heller, Ehrman, White & McAuliffe Attorneys for Alyeska Pipeline Service Company (Alyeska)
- 4. University of Alaska Fairbanks, School of Agriculture and Land Resources Management Glenn Patrick Juday, Assistant Professor of Forest Ecology
- 5. Adler, Jameson & Claraval Attorneys for Alaska Sportfishing Association
- 6. Michael S. O'Meara, Homer
- 7. Ken Castner, Homer Salmonidae Mortalis
- 8. Dr. George C. West, Homer
- 9. Mike Nishimoto, Homer
- 10. Natural Resources Defense Council
- 11. National Parks and Conservation Association (NPCA) Mary Grisco, Alaska Regional Director
- 12. National Trust for Historic Preservation David A. Doheny, Vice President and General Counsel
- Pacific Seabird Group Malcolm C. Coulter, Chairman
- 14. The North Pacific Rim (TNPR) Richard Rolland, Executive Director
- 15. Chugach Regional Resources Commission Arnold Melsheimer, Chairman
- 16. Kodiak Area Native Association Brenda L. Schwantes, Tribal Operations Coordinator

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17. Bahamian Refining Corporation Fred Finell, Jr., President

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- 18. Bird Treatment and Learning Center Linda D. Simmons, Executive Director
- 19. National Wildlife Federation Doug Wolf, Counsel, Alaska Issues

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1 Etxon Company, USA (Shipping G.) John Seddelmeyer, Chief Attorney 2 / American Petrolovin Institute (API) G. William Frick, Vice President & General Coursel " 3 Heller, Ehrman, White & McAuliffe - for Alyeska Byreline Service Company ("Alyeska") 14 Clenn Patrick Juday, University of Alaska Fairbanks (School of Alg & Land Reserves Mangerman) Assistant Professor Of Forest Ecology and Artusha Ecological Reserves Coordinator 50 Adler, Jameson, & Claraval (Rey. Sportfishing Ass. etc.) Attorneys-at-Law b Michael S. O'meara, Homer A, C curator of Pratt Musuem spill exhibit 1 Ken Castner, Homer Salmonidae Mortalis 18 Dr. George C. West, Homer C, N. 19 - Mike Nishimito, Homer A, N, F V16 V ARDC (Notural Resources Defense Council) $A_1 C, D, G, H, EI$ 11 - MPGA- NATIONM PARKS AND CONSERVATION ASSOCIATION (NPCA) Mary Grisco Ale Regional A, L 12 NAMONAL TRUST FOR HISTORIC PRESERVAMONT L, Apavid A. Doheny, Vice President & General Counsel PACIFIC SEABIRD GROUP C, F Malcolm C. Coulter, Chairman

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SPECIAL PROJECTS JOHN SEDDELMEYER CHIEF ATTORNEY

April 12, 1991

Secretary Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, Alaska 99501

Gentlemen:

The attached document provides Exxon Shipping Company's comments on the Draft 1991 Restoration Work Plan for the Valdez spill. Some of the principal points are summarized below.

First and foremost, the Draft Plan does not contain information vital to understanding and evaluating the proposed restoration activities. There is a complete lack of information concerning the nature and extent of the resource injuries which would justify active restoration measures, or why the proposed restoration activity is the preferred restoration alternative. Without this information, no one can determine whether the proposed activities are necessary or reasonable. Information concerning the nature and extent of the injuries to the natural resources impacted by the oil spill is a prerequisite to evaluating and proposing restoration activities.

The Draft Plan does not incorporate and follow the restoration planning procedures set forth in the DOI NRDA regulations. These procedures require that a range of restoration options, including natural recovery, are considered and that the cost-effective alternative is selected. They also require that the restoration project be limited to measures which restore or replace the resource services to no more than their baseline. Projects are chargeable to the potentially responsible party only if they satisfy these standards.

In particular, the Draft Plan does not require selection of the cost-effective restoration alternative nor is it limited to restoration of the injured resources to their baseline service levels. While the Draft Plan provides for consideration of the

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Secretary

cost effectiveness and reasonableness of costs of the restoration project, it does not require selection of the cost-effective alternative. It is also unclear how the Draft Plan evaluates cost effectiveness under its own standards. Furthermore, much of the proposed 1991 restoration planning activities appear to be basic scientific research being conducted under the guise of restoration feasibility studies.

Finally, the major thrust of the restoration work proposed in the Draft Plan appears to be focused on the acquisition of strategic habitats and recreation sites with absolutely no justification that these acquisitions represent the best means of restoring the injured resource. Instead, the restoration program seems primarily directed toward addressing impacts on resources caused by activities other than the oil spill. While such impacts may be legitimate environmental concerns, they are not relevant to the Trustees' obligation to devise a sensible and reasonable restoration plan to address injuries caused by the oil spill. .

Very truly yours,

John Seddelmeyer / by M.D.

JS:rmm Attachment

EXXON SHIPPING COMPANY

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THE DRAFT 1991 RESTORATION WORK PLAN FOR THE EXXON VALDEZ OIL SPILL

> REVIEW COMMENTS APRIL 12, 1991

This document provides Exxon Shipping Company's ("ESC") comments on the Draft 1991 Restoration Work Plan published in the <u>Federal Register</u> on March 1, 1991 (46 Fed. Reg. 8898). The Draft 1991 Restoration Work Plan ("Draft Plan") is comprised of restoration planning and initial implementation activities under consideration by the Trustee Council for 1991. A revised 1991 Restoration Work Plan ("Final Plan") is expected to be published in the <u>Federal Register</u> in Spring 1991.

Since the Draft Plan does not contain all the information necessary to evaluate the proposed restoration activities, ESC's comments will primarily identify the missing information and point out the standards which should be used to evaluate restoration activities. The NRDA regulations promulgated by the Department of Interior, 43 C.F.R. Part 11, ("DOI regulations") constitute the best available procedures for conducting and implementing a natural resource damage assessment and consequently provide the standards under which proposed restoration activities must be evaluated. These regulations require that the 1991 Restoration Work Plan be judged by its ability to identify the necessity for, and the reasonable costs of, restoration of injured resources. It is against these standards that ESC has evaluated the Draft Plan's merits and offers its comments. 3

Part 1: General Concerns

The Draft Plan contains insufficient information to evaluate the proposed restoration activities.

The March 1, 1991 Notice states, in part: "The Trustees and EPA have chosen to present this document to obtain public comment and to invite suggestions about other restoration activities that should be considered." The Notice also states that: "The Trustees intend to provide an opportunity for meaningful public review and comment on all restoration implementation activities." However, the Plan does not contain information vital to understanding and evaluating the proposed restoration activities. Additionally, the Draft Plan's lack of information on the results of the Trustees' damage assessment studies seriously impedes one's ability to suggest alternative restoration activities or measures. Sound technical information concerning the nature and extent of the injuries to the natural resources impacted by the oil spill is a prerequisite to evaluating and proposing restoration activities.

The DOI regulations require the use of specific information to determine the necessity for, and the reasonable costs of, a restoration plan. To comply with the DOI regulations and to allow for meaningful review, the Final Plan must provide the following information:

- A complete description of the natural resource to which the restoration project is directed.

- A description of the injured resource's baseline.
- A description of the injury suffered by that resource, including the injury's pathway and an estimate of the amount of the resource which has been impacted.
- The specific locations of the injured resources.
- An estimate of the foregone benefit or service level reduction caused by the injury.
- A valuation of the loss attributable to the foregone benefit or service level reduction.
- An explanation of how the proposed restoration project will remedy the identified injury, as well as an estimate of the time required to achieve full restoration.
- A description of alternative restoration measures, including natural recovery, as well as an estimate of the time to achieve full restoration using those alternatives.
- A cost-effectiveness analysis which justifies selection of the proposed restoration activity in lieu of the alternatives, including natural recovery.

Without the above information, the EPA, the Trustees, the Potentially Responsible Parties (PRP), and the public cannot determine whether the proposed restoration activities are necessary or cost-effective. Conversely, with this information all the parties can evaluate the proposed restoration activities against objective standards. This information will also assure the parties that the proposed restoration activities are

necessary and will make a meaningful contribution to restoration of the injured resources. Without this information, the parties can only speculate on the limited information provided as to the appropriateness of the proposed activities.

The Final Plan must incorporate and follow appropriate restoration planning procedures to determine necessary restoration work.

The Draft Plan describes four proposed implementation projects. Whether any of these proposed activities qualify as a necessary restoration project depends upon its being the cost-effective restoration alternative which will restore the injured resource to its baseline. Without the information described in the above section, no one can determine if these proposed activities constitute necessary restoration work.

ESC believes that it is especially important that the Final Plan incorporate and follow the procedures set forth in the DOI regulations (and, in particular, those found in 43 C.F.R. Sec. 11.81 and Sec. 11.82) in determining necessary restoration projects. These procedures ensure that a range of restoration options, including natural recovery, are considered and that the cost-effective alternative is selected. These procedures also require that the restoration project be limited to measures which restore or replace the resource services to no more than their baseline. Finally, these procedures provide that a restoration alternative that involves the acquisition of land for federal management shall not be developed unless in the judgment of the

federal agency acting as trustee, such acquisition constitutes the only viable method of obtaining the lost services.

ESC believes that the only restoration work which is chargeable to the PRP is that which can be justified under the principles embodied in the DOI regulations as necessary restoration work. Activities and projects which do not satisfy these principles may be desirable projects from a conservation or preservation viewpoint, but they do not constitute chargeable restoration costs. Whether any of the proposed 1991 restoration activities can be justified is dependent upon the Final Plan incorporating and following the restoration planning procedures set forth in the DOI regulations.

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Part 2: 1991 Restoration Planning and Implementation Activities

The proposed planning process does not require the selection of the cost-effective restoration alternative and is not limited to restoration of the injured resources to their baseline.

The Draft Plan states that "evaluation of potential restoration alternatives will consider such factors as: . . . cost effectiveness and reasonableness of costs of the restoration project in light of the value or ecological significance of the resource." ESC believes that the restoration planning process should not just consider the cost effectiveness of the restoration alternative but require selection, as do the DOI regulations, of the cost-effective alternative. Furthermore, the reasonableness of the cost of a restoration project must be evaluated through a cost-benefit analysis. This, in turn, requires a valuation of the benefits associated with the proposed restoration project.

The Draft Plan states that a "key goal" of the restoration planning activities is to "identify life history requirements, limiting factors, and environmental processes that are especially sensitive or that may be enhanced." These goals seem to go beyond identifying cost-effective restoration measures which will return the injured resources to their baseline. Another example is the 1990 Restoration Feasibility Studies and the Restoration Feasibility Studies being considered for 1991. These studies appear to be basic scientific research rather than necessary

restoration work. More importantly, the studies have been or are being undertaken before there has been any determination or quantification of injury to the resource in question. ESC believes that it is premature to conduct restoration feasibility studies before the injury is first quantified and understood. Without this understanding, it is difficult to see how one can design a meaningful restoration program or test its feasibility. ESC believes the planning process contained in the Final Plan should require selection of the cost-effective restoration alternative and be limited to identifying and evaluating restoration activities that restore the injured resources to their baseline.

Based on the information contained in the Draft Plan, the proposed 1991 restoration activities are not justified.

As noted in our earlier comments, there is insufficient information to determine whether the proposed 1991 restoration activities constitute necessary restoration work. The Draft Plan does not even contain a rudimentary injury determination to inform the reader of the nature and extent of the injury let alone any explanation of why the proposed restoration activity is the best restoration alternative. Consequently, the Draft Plan does not adequately justify the proposed 1991 restoration activities. In addition to correcting the major deficiencies already discussed in these comments, the Final Plan should also address the following project specific comments:

<u>Restoration of the Beach Wild Rye Community</u>: At a minimum, the specific locations of the injured rye grass communities should be identified in the Final Plan, and a comparison of the results expected from natural recovery and transplanting/fertilizing should be provided.

Public Information and Education Project: Assuming that this project will allow injured resources to recover more rapidly by minimizing harmful human disturbances in a cost-effective manner taking into account restrictions on human use, the information should be limited to how to avoid disturbing the resources in question. If information concerning changes to the ecosystem resulting from the oil spill is considered necessary to achieve the project's objective, ESC believes that a balanced and objective assessment of those changes will emphasize both the temporary effect of the oil spill and the rapid and robust recovery which has already occurred and continues in the oil spill area. Otherwise, this project will misinform the public of the true nature and extent of the injuries to the resources and undermine the credibility of the information presented by the project.

Salmonid Stocks and Habitat Restoration: Based upon the information provided, it appears that this project contemplates activities which go beyond restoration of an injured resource to its baseline levels. Specifically, the

project contemplates construction of spawning channels and fish ladders to overcome physical and hydrological barriers. These may very well be desirable conservation or fish management projects but they appear to be designed to enhance the resources beyond their baseline. Additionally, these measures are not consistent with the wilderness character of the area.

Protection of Strategic Fish and Wildlife Habitats and

Recreation Sites: ESC is troubled by the scope of this project in that it does not appear to be limited to the oil spill area. No information is given to explain the need to protect habitats or recreation sites outside the area impacted by the oil spill to address injuries related to the oil spill. In any event, ESC has serious concerns whether the activities contemplated by this project can be justified as cost effective compared to natural recovery or other more direct restoration measures.

American Petroleum Institute 1220 L Street, Northwest Washington, D.C. 20005 202-682-8240



G. William Frick Vice President and General Counsel

April 12, 1991

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, Alaska 99501

Prince William Sound and Gulf of Alaska Draft Re: Restoration Work Plan for 1991, 56 Fed. Reg. 8898 (March 1, 1991)

Dear Trustee Council Members:

The American Petroleum Institute (API) welcomes this opportunity to comment on the Draft 1991 Restoration Work Plan now under consideration. API is a national trade association whose corporate and individual members are engaged in all facets of the petroleum industry. API's members therefore have a direct interest in the appropriateness of restoration plans developed by public trustees for natural resources.

Due to an insufficiency of supporting information, API is handicapped in its ability to meaningfully comment on the reasonableness of this Draft Restoration Plan. Specifically, the Draft Plan lacks documentation of the extent of alleged injuries or the cost-effectiveness of the proposed alternative restoration measures. API urges the Trustees to render such information in its revised Restoration Work Plan and to consider the attached, additional comments of the API on the Draft Plan.

Sincerely, A. William Fruch

Attachment

The American Petroleum Institute ("API") submits the following comments on "Draft 1991 Restoration Work Plan" ("Draft Work Plan") for the Exxon Valdez oil spill, published by the Environmental Protection Agency on behalf of Federal and State Trustees and dated March 1, 1991. API, in its comments filed on the 1989 and 1990 assessment plans, pointed out that those plans fail to: (1) include the results of previous studies and other information vital to understanding and evaluating the proposed activities, and (2) comply with the procedures set forth in the Department of Interior's Natural Resource Damage Assessment Regulations. In addition, API questioned the nature of some of the studies planned as concentrating on "basic" or general research. To a large extent, these same criticisms apply to the Draft 1991 Restoration Work Plan as well.

In the comments which follow, API reviews and comments upon the 1991 restoration planning and implementation activities. In particular, API notes:

- The Draft Work Plan lacks adequate information crucial to understanding and evaluating the proposed restoration activities, thereby frustrating meaningful public comment;
- o The restoration planning process proposed in the Draft Work Plan fails to require selection of the costeffective restoration alternative and limit restoration projects to measures required to restore the injured resources to the conditions which would exist absent a spill.
- Major parts of the proposed restoration projects appear to be directed toward habitats not affected by the spill.

The expenditures associated with the assessment of injury and the quantification of damage to the resources of Prince William Sound are unprecedented. API maintains that this information should be available to the public so that meaningful review and comment on the proposed restoration activities can be made. The restoration activities discussed the Draft Work Plan cannot be justified as either necessary or reasonable given the lack of supporting information. API urges the Trustees to provide adequate information to support its proposed restoration activities and to adopt the restoration planning procedures contained in the DOI regulations to ensure that all restoration activities are both necessary and reasonable.

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Discussion of Comments

o The Draft Work Plan lacks adequate information crucial to understanding and evaluating the proposed restoration activities, thereby frustrating meaningful public comment.

Ability to provide meaningful review and comment on the Draft Work Plan is frustrated by the lack of information necessary to properly evaluate the proposed restoration activities. This lack of information also impedes API's ability to suggest alternative restoration activities or measures. Sound technical and scientific information concerning the nature and extent of the injuries to the natural resources impacted by the oil spill must be available if the public is to evaluate and propose restoration activities.

Whether any of the proposed restoration projects qualifies as necessary restoration work depends upon the project being a costeffective restoration alternative which will restore the injured resource to the condition which would exist absent the spill. Without the proper information, no one can determine whether a proposed project constitutes necessary restoration work. While a project may be desirable from the viewpoint of environmental conservation or protection, the cost of a project can only be chargeable to the potentially responsible party under the NRDA framework if the project constitutes necessary restoration work.

The DOI regulations provide a reasoned and disciplined process for assessing resource injuries and determining necessary restoration work and costs. This process envisions that certain information will be available to evaluate proposed restoration projects. This information includes a complete description of the nature and extent of resource injury, an estimate of the amount of the resource which has been impacted or service level reduction, a valuation of the loss attributable to the injury, a description of alternative restoration measures, including natural recovery, and the costs and time associated with each restoration alternative. Whether the Trustees elect to follow the DOI regulations or not, this information is crucial to determining whether the proposed restoration activities are necessary or reasonable. Without this information, no one can determine whether the proposed restoration work plan is appropriate. API strongly recommends that the revised restoration work plan contain sufficient information, including the results of the prior damage assessment studies so that interested parties can evaluate the appropriateness of the proposed restoration activities.

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je Poj o The restoration planning process proposed in the Draft Work Plan fails to require selection of the costeffective restoration alternative and limit restoration projects to measures required to restore the injured resources to the conditions which would exist absent the spill).

As currently written, the Draft Work Plan only requires the cost effectiveness and reasonableness of cost of the restoration project to be considered by the Trustees. API strongly believes, and the DOI regulations clearly state, that selection of the cost-effective restoration alternative must be required. Whether the cost of a restoration project is reasonable should depend upon the results of a cost-benefit analysis which requires evaluation of the benefits associated with the proposed project. By incorporating these requirements in the planning process, the restoration work plan will ensure that only necessary restoration projects are undertaken.

The Draft Work Plan also states that a "key goal" of the restoration planning activities is to "identify life history requirements, limiting factors and environmental processes that are especially sensitive or that may be enhanced." These goals appear to go beyond identifying cost-effective restoration measures which will return the injured resources to conditions which would exist absent a spill. Additionally, the restoration feasibility studies undertaken in 1990 and proposed for 1991 appear to be basic scientific research rather than necessary restoration work. This is especially true since the studies have been or are being undertaken before there is documentation of injury to the resource in question. API urges the Trustees to limit the restoration planning activities to those which are necessary to restore injured resources to conditions which would exist absent a spill.

 Major parts of the proposed restoration projects appear to be directed towards habitats not affected by the spill.

The proposed Protection of Strategic Fish and Wildlife Habitats and Recreation Sites Project appears primarily aimed at protecting resources, (i.e., uplands) which were not impacted by the oil spill. While protection of such resources may in some part aid the recovery of resources injured by the oil spill, API has reservations whether this is the most cost-effective restoration alternative. Similarly, but to a lesser extent, the Salmonid Stocks and Habitat Restoration Project contains elements (i.e., construction of fish ladders and spawning channels) which appear to be designed to modify the preexisting ecosystem rather than address a demonstrable injury.

As stated earlier, API believes that restoration work should be limited to projects which are necessary to restore the injured

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resources to conditions which would exist absent a spill. This requires consideration of natural recovery as a restoration alternative and its selection if it is the most cost-effective alternative. In light of the rapid recovery which has already occurred in Prince William Sound, API urges that the revised restoration work plan rigorously evaluate all proposed restoration activities to ensure that they are both necessary and reasonable.

Specific Comments on the Proposed Restoration Projects.

There is inadequate information to determine whether the proposed 1991 restoration projects constitute necessary restoration work. The Draft Work Plan does not describe the nature and extent of the injury to the resources or give any justification as to why the proposed restoration activity is the preferred alternative. In addition to correcting the major deficiencies noted in the above comments, the revised work plan should also address the following specific comments:

o Restoration of the Beach Wild Rye Community.

The areas of the injured Rye Grass communities should be identified, and a discussion of the results expected from natural recovery and transplanting/fertilizing should be provided.

o Public Information and Education Project.

Allegedly, the stated purpose of this project is to allow injured resources to recover more rapidly by minimizing harmful human disturbances. Assuming that this constitutes a cost-effective restoration alternative, the project should be limited to distributing information on how to avoid disturbing the injured resources.

o Salmonid Stocks and Habitat Restoration.

It appears that this project includes the activities which go beyond restoring the injured resource to the condition which would exist absent the spill. Specifically, the construction of spawning channels and fish ladders to overcome physical hydrological barriers appears to be directed toward improving the quality of streams beyond their pre-spill level. API also questions whether these activities are consistent with the wilderness character of the area. Most importantly, API questions the need for any salmon restoration project given the lack of documented injury to the resource.

 Protection of Strategic Fish and Wildlife Habitats and Recreation Sites.

3

The project appears to be focused primarily on protecting resources (e.g., uplands) that were not impacted by the oil spill. This is

evidenced by the fact that the project's scope appears not to be limited to the Oil Spill area. API would also point out that acquisition of land for federal management should only be considered if it is the sole viable restoration alternative. API urges the Trustees to implement all other viable restoration alternatives, including natural recovery, in lieu of this project and to use all possible means that exist under federal and state statutes and regulations to protect these habitats and recreational sites. Specifically, the Trustees should consider enforcing Alaska law [AS 41.17.010 - AS 41.17.950] to prevent harvesting of timber in those areas where protection is required.

The trustees have stated they will provide further opportunity for public comment on the 1991 restoration plan (see 56 Fed. Reg. 8902). API reserves the right to review and comment further on the draft 1991 Restoration Work Plan when additional information is made available to the public.

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HELLER, EHRMAN, WHITE & MCAULIFFE

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April 12, 1991

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RALPH H. PALUMBO

Secretary Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage AK 99501

Trustee Council P.O. Box 20792 Juneau, AK 99802

> Re: <u>Draft 1991 Restoration Work Plan for the EXXON</u> VALDEZ Oil Spill

Dear Restoration Planning Work Group and Trustee Council:

This letter is filed on behalf of Alyeska Pipeline Service Company ("Alyeska"). The Trustee Council has requested comments on the Draft 1991 Restoration Work Plan for the Exxon Valdez Oil Spill ("1991 Draft Plan").

The 1991 Draft Plan, as presented in the Federal Register, is only a cursory description of the activities planned and lacks the basic information necessary for evaluating the proposed restoration activities. Moreover, the Trustees have not released the technical and scientific information upon which these proposed activities are presumably based. Without access to that information, it is impossible to determine whether the proposed activities are necessary, reasonable, and cost-effective.

The Trustees have stated that they intend to provide further opportunity for public comment on the 1991 Restoration Plan "[a]fter detailed descriptions for each project are available." 56 Fed. Reg. at 8902 (March 1, 1990). Alyeska will reserve its

Restoration Planning Work Group Trustee Council April 12, 1991 Page 2

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comments, if any, until such time as more detailed project descriptions and/or the underlying scientific and technical studies are released.

Very truly yours,

HELLER, EHRMAN, WHITE & MCAULIFFE

Ralph H. Palumbo

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MENUNAT Agricultural and Forestry Instruction and "xperiment Station **Fublic Service** 907) 474-7188 (907) 474-7083 School of Agriculture and Land Resources Management University of Alaska-Fairbanks Fairbanks, Alaska 99775-0080 me: 3:35 a.m./p.m DATE DELIVER TO: SECRETARY, RESTORATION PLANNING WORK GROUP OFFICE: OK SPILL RESTORATION PLANNING OFFICE FAX MESSACE BUILDING: 437E. ST. SUITE 301 ANCHORAGE, AK 99501 PHONE: COVER PAGE PLUS 2 PAGES. JUDAY AND LAND RESOURCES MANAGEMENT FROM: O'NEILL BLDG. UAF FAIRBANKS, AK P9775 OFFICE: 509 74-6717 907-4 PHONE: 4-74/39 FAX NUMBER: (O'_{I} COMMENTS:



Division of Forest Sciences School of Agriculture and Land Resources Management University of Alaska Fairbanks Fairbanks, Alaska 99775-0080 (907)474-7188 April 15, 1990

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, Alaska 99501 FAX (907) 271-2467

and the second

I would like to offer this letter and the proposal it contains as a response to the March 1, 1991 Federal Register notice [WH-FRL-3810-8] that calls for public comments on the proposed Prince William Sound and Gulf of Alaska 1991 Draft Restoration Work Plan Notice.

I have reviewed the federal register notice and the (pink-covered) 1991 State/Federal Natural Resource Damage Assessment and Restoration Plan for the Exxon Valdez Oil Spill published by the Trustee Council. In general the studies outlined appear appropriate to the goal of litigation-related damage assessment, but I have generally found it difficult to judge spill-related activities because of the secrecy. I can say that I believe that is important and would be very useful to restoration goals to initiate a much more comprehensive and explicitly integrated long-term monitoring program on the condition ('health") of the interacting marine, intertidal, and shoreline resources of Prince William Sound and southcoastal Alaska.

My study (Juday 1990, 1991) of Green Island Research Natural Area in the Sound has indicated that the intertidal and shoreline ecosystem is highly dynamic, that there is no single "baseline" condition, and that oil has had quite variable effects. I would urge that the places in the notice and program that refer to a "baseline" in the spill-affected area be appropriately modified. In addition, this dynamic character makes it crucial to understand the natural background of change in order to determine the true nature of recovery on treated and untreated beaches. I believe that a continuation of my study would make a contribution to such an understanding.

As a result, I would like to propose that the Restoration program fund an \$80,000 investigation of third and fourth year recovery of beach and intertidal ecosystems at Green Island RNA. The study would emphasize biodiversity, and measure cover/abundance of intertidal and shoreline plants and animals. We can relate differences to degrees of oiling, and we have detailed maps of what are new buried pools of oil. I would assign a graduate student to the project and supervise the work. I also have the cooperation of Nora Foster, Coordinator of Aquatic collections at the University of Alaska Museum. We have established a series of permanently marked transects and 17 E

plots that have been measured in 1989 and 1990. Continuation of this monitoring study, from Restoration funding would be an efficient use of the dollars, because it would benefit from the previous investment.

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My proposed study would contribute to restoration foreibility study 1 on the re-establishment of Fucus, study 2 on the recovery of critical fauma, and study 4 on the protection of upland habitats.

REFERENCES

Juday, Clean Patrick, and Nora Foster. 1990. A Preliminary Look at Errous of the <u>praver</u> values of Spill on Green Island Research Natural Area. Agronomically 22(1): 10-17.

Agroborealis 23(1): 26-28.

sincerely,

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Glenn Patrick Juday, Assistant Professor of Forest Ecology and Alaska Ecological Recorrect Constituted
ADLER, JAMESON & CLARAVAL

Attorneys at Law 2525 Blueberry Road, Suite 206

Anchorage, Alaska 99503 Telephone (907) 272-5200

Facsimile (907) 279-2321 April 17, 1991

125, 128-130 Locust Street P.O. Box 11933 Harrisburg, Pennsylvania 17108-1933

> Telephone (717) 236-7999 Fascimile (717) 232-6606

> > Mr. Stan Senner Ms. Linda Comerci Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, Alaska 99501

Re: 1991 Restoration Plan

Dear Stan and Linda:

These comments on the 1991 Restoration Plan are submitted on behalf of our clients in the civil litigation arising from the including the Alaska Sportfishing Exxon Valdez oil spill, Association, named individuals who are recreational Plaintiffs, the area business class, and approximately 500 other clients involved in commercial, recreational, subsistence and other pursuits affected by the spill. The Association is the largest fishery conservation organization in Alaska and has been involved in a broad array of efforts to protect fish and wildlife habitat. Because all of our clients depend on the wise management of fish and wildlife and their habitats, they are generally concerned about the 1991 Restoration Plan.

A. <u>Support for RPWG's approach to acquisitions that</u> <u>benefit ecosystems and a broad array of species, resources and</u> <u>services, as opposed to species specific acquisitions</u>.

We support the approach in the plan that restoration activities should benefit "multiple rather than single species or resources," 56 Fed. Reg. 8899 (March 1, 1991), but suggest that this be reworded as "multiple species, resources, and services, rather than single species, resources, or services." Our point, and I believe yours is, that the greatest public benefits will accrue from the broadest approaches to restoration. We concur that any approach that is driven towards criteria that are species specific or service specific risk wasting money or inviting expenditures that are too expensive in relation to the benefits they provide.

B. <u>The Restoration Plan sometimes includes and</u> <u>sometimes erroneously excludes the value of services provided by</u> <u>natural resources</u>.

In Section IIA.1.a., (<u>Id</u>. at 8899) the plan states that the "need for restoration depends on the nature and extent of

APR 1 9 1991

520 Second Street P.O. Box 1829 Cordova, Alaska 99575

Telephone (907) 424-7410 Facsimile (907) 424-7454 Mr. Stan Senner Ms. Linda Comerci April 17, 1991 Page 2

area".

natural resources injured, lost or destroyed "This should be rewritten as "the nature and extent of natural resources and services injured, lost or destroyed"

The same omission occurs at 8903 in two places with respect to Restoration Project No. 4. The objective of this project is to identify and protect strategic wildlife and fisheries habitats and recreation sites and "to prevent further potential environmental damages to resources injured by" the spill. This should read "to prevent further potential environmental injuries to resources and services injured by" the spill. Similarly, "services" should be incorporated into the second step used to identify areas to be protected. The step should read: "Characterization and evaluation of potential impacts from the changed land use in relation to their effects on recovery of the ecosystem, <u>services</u> and its components...."

C. Acquisitions should not be limited to the "oil spill

Restoration Project No. 4 says that the geographic scope of the project will be the "oil spill area." We object very strongly to the use of locational constraints, even for initial acquisitions, because the area affected by the spill is in an amorphous and undefinable area. This is demonstrated by the simple facts that (1) much of the wildlife that was injured is migratory in nature and (2) many of the people who use the area, as well as the American public that values the area and accounts for the greatest contingent valuation measure of damages, are not residents of the area.

We do not oppose acquisitions within lands adjacent to where floating oil went, but any constraint that limits acquisitions to such lands invites acquisitions that are overly expensive in relation to public benefits derived. We urge that a much better criterion would be "to acquire or conserve lands that are important for a multiple set of habitat, use or nonuse value services where those habitats or values face a clearly identifiable near or long term risk."

D. <u>The criteria for evaluating potential restoration</u> alternatives need to be amended.

We generally support the criteria for evaluating restoration alternatives, <u>id</u>. at 8899. However, we urge that those criteria be amended to provide that when acquisitions are an alternative they be subjected to an additional criterion such as, "the degree to which the acquisition addresses conservation of lands that are important for a multiple set of habitat and use and nonuse values, where those habitats or values face a clearly identifiable near or long term risk." Mr. Stan Senner Ms. Linda Comerci April 17, 1991 Page 3

E. <u>Restoration Project No. 4 should focus on fish and</u> <u>wildlife habitats and recreation areas, rather than on fish and</u> <u>wildlife habitats and recreation sites</u>.

By focusing on recreation "sites," Restoration Project No. 4 weakens the ability of the trustees to pursue the benefits of acquisition that go to multiple species, resources and services. The recreation affected by the spill can only partly be described as site specific recreation. Much of it occurs throughout broad areas. The language of this restoration project should reflect that by striking the words "sites" and should focus instead on "areas," which certainly includes the narrower concept of recreation sites.

F. <u>Suggested additional project</u>.

Since the Notice invited public to suggest other restoration projects, id. at 8898, we suggest that RPWG initiate a project to commence inquiries with the owners of lands that have been specifically or generally identified by the public in the prior round of public meetings conducted by RPWG that lead to the August 1990 Progress Report, in order to ascertain the owners interested in receiving financial benefits in return for conservation of their lands. That report identified acquisitions that were both adjacent and not adjacent to lands where floating oil went. That the public supported such a cost effective , broad approach to requisitions is obvious. The recommendations for acquisitions not adjacent to where floating oil went out numbered those adjacent to where floating oil went by 14 to 9. RPWG should not neglect the broad view taken by the public as to how restoration monies should be spent.

Sincerely yours,

ADLER, JAMESON & CLARAVAL

Geoffrey Y. Parker

GYP/vap/1266 #7

- cc: Michael A. Barton, USFS
 - Steve Pennoyer, NMFS
 - John R. Sandor, ADEC
 - Attorney General Charles E. Cole
 - Carl L. Rosier, ADF&G
 - Walter O. Stieglitz, USFWS

MICHAEL S. O'MEARA P.O. BOX 1125 HOMER, ALASKA 99603

APRIL 4, 1991



SECRETARY, RESTORATION PLANNING WORK GROUP OIL SPILL RESTORATION PLANNING OFFICE 437 "E" STREET, SUITE 301 ANCHORAGE, ALASKA 99501

DEAR PEOPLE:

I would like to comment briefly on the March 7th notice announcing the draft 1991 Restoration Work Plan. Thank you for the opportunity to do so, and for your efforts to make some constructive progress with respect our legacy from Exxon.

In general, I can say that I support all of the implementation actions under consideration. To be honest, it seems to some degree to be "too little, too late", but certainly better than nothing at all. A few things strike me as major priorities.

Recovery Monitoring Studies

As curator of the Pratt Museum's spill exhibits for the last two years, I have attempted to gather as much information as possible regarding both the <u>Exxon Valdez</u> spill and the general affects of oil and "cleanup" efforts on ecosystems. Extensive examination of the available scientific literature, and interviews with scientists active in relevant disciplines has revealed an astonishing lack of knowledge regarding actual circumstances in the field.

Given this sorry state of affairs, I strongly encourage immediate implementation of as broad a range of monitoring studies as possible. These should ultimately mesh with, support, and expand all available prespill baseline studies and damage assessment studies which followed. As soon as possible, all pertinent data must be shared throughout the scientific community if it is to have any real value or continuity. There is not time to wait while political interests are served.

Public Participation

By all means continue to involve the public. I realize that this can be a discouraging effort as people begin to forget and lose interest, but I hope that you will persist. This is especially important for the communities in areas where restoration action is planned. If these projects are to receive support, indeed, if they are to achieve their greatest potential in the field, you will need the involvement of as many informed local people as possible.

-- page 2, O'Meara, 4/4/91 --

Public Information/Education

If anything is to change for the better, people must become informed about the continuing disaster of this spill and others throughout the world. They need to come to understand the relationship between such things and their own lifestyles and basic needs.

So far the general public has been deprived of reasonable access to the information growing out of the damage assessment studies. This of course reflects the typical human reaction to embarrassing events -- a lot of people in government and industry have a lot of arse covering to do. This is an intolerable situation, however, and the longer it persists the more damaging it will be to our society.

As I see it, one of your prime responsibilities is to get the maximum information out to the largest possible number of people -- as quickly as you are able. To be honest, I want you to push for immediate release of all assessment study data. In the interim, get whatever you can out there. People are being asked to make important economic and political decisions regarding matters related to the spill (the proposed settlement for example), absent concrete information. It is obscene.

Land Acquisition

Start with Kachemak Bay State Park. Get the money to buy the timber rights and make the Park whole. There are of course many other worthy "equivalent resources" for "replacement", but this is among the most obvious. The "outside coast" of the Kenai Peninsula was heavily impacted by the spill, and protecting nearby uplands is fair and logical. There is a time factor here as well. The State Legislature may well drop the ball again on this final opportunity to preserve this habitat. Should that occur, logging is virtually assured to begin this summer.

Fucus/Beach Wildrye/Salmonid Stock & Habitat Restoration

In truth, I lack the knowledge to comment on these. Your proposals sound reasonable and as long as any actions taken reflect the best input from the scientific community and local people I support them.

In closing let me say that while I remain rather discouraged and upset by the events of the last two years, I consider your efforts to be a potential bright spot. I wish you -- all of us -- success. Please keep me informed.

Sincerely,

MICHAEL S. O'MEARA

CHAEL S. O'MEARA O. BOX 1125 MER, ALASKA 99603





SECRETARY, RESTORATION PLANNING WORK GROUP OIL SPILL RESTORATION PLANNING OFFICE 437 "E" STREET, SUITE 301 ANCHORAGE, ALASKA 99501



Anchorage, Alaska 99501

437 "E" Street, Suite 301

Madam/Mister Secretary:

Your office has solicited comments from the public concerning the process of enhancement and the <u>1991 restoration plan</u> for damages incurred from the *Exxon Valdez* oil spill.

It is a difficult task to comment on a plan that is based entirely on scientific data, and the analysis and review of that data, that is being withheld from public inspection and scrutiny. It is embarrassing for me to try and make <u>informed</u> and <u>pertinent</u> comments when they are, through no fault of my own, neither.

There are, however, several areas of the published plan that I can comment on:

1) Overall the plan seems to be very heavy of office activities. We are now two years after the spill, and the bulk of the 1991 plan is in the Planning Process (II A), Restoration Feasibility Studies (II B), Technical Support Projects (II C), and Restoration Planning Activities (III A) which are all similar in the exclusive inclusion of state and federal personnel and their assessment and analysis of information that has not been made public.

2) In section III A there is a reference to "applying knowledge or toxicological effects derived from the oil spill literature." Is that the published literature, unpublished literature, or both?

Restoration planning Work Group

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3) Also in section III A, there is reference to studies being considered for "*a variety of resources, including pink salmon,...*". I would urge you to include a longer cycling salmon, such as the chum salmon, into the studies and restoration plans.

4) Section III B (3.) has cost estimates of \$1,580,000 for the first three projects, and an unspecified amount for the fourth. Am I to conclude that the trustees think that <u>replacement</u> and <u>acquisition</u> of planning and financial resources allotted to recovery?

5) Section III B (5.) describes projects that are incompatible with the existing management schemes of the Kenai Fjord National Park and the Kachemak Bay State Wilderness Park. Am I correct in assuming that these areas will then be precluded from these recovery remedies?

6) Section III B (5.) has a funding level that is grossly insufficient to effect recovery for the valuable subsistence, commercial, and recreational fisheries that were damaged by the oil spill. The loss of resource is different from the loss of income derived from the resource.

I hope you find these points to be of some merit and consider them in your continuing restoration planning activities.

Yours sincerely,

Ken Castner





Re: Public Comment on Plans for Use of Settlement Funds through the Oil Spill Restoration Process

Dear Work Group:

I applaud your efforts to date and plans for the future as presented in the Federal Register 56(41)8898-8903:1991 and hope that the settlement now underway with Exxon will provide some badly needed funds for the recovery, restoration, and replacement costs of the damage caused by the oil spill. This letter urges the group when making its plans in relation to the wishes of the governor, not to be swayed into placing all resources into Prince William Sound. Although that area was hard hit, much if not most of the wildlife damage occurred beyond Prince William Sound.

Project No. 4 for 1991, Protection of Strategic Fish and Wildlife Habitats and Recreation Sites can include a wide variety of items, but I would encourage you to consider purchase of critical wildlife property from the private sector and place it protective status in the public domain. That is the only way many of the wildlife resources damaged or lost in the oil spill can be protected from future destruction or loss. Examples follow:

1. Purchase Gull Island in Kachemak Bay from the Seldovia Native Association and place it in the Alaska Maritime National Wildlife Refuge system. Gull Island is a nesting colony of from 10,000 to 15,000 individuals of eight species of seabirds (Common Murre, Black-legged Kittiwake, Pigeon Guillemot, Horned Puffin, Tufted Puffin, Pelagic Cormorant, Red-faced Cormorant, Glaucous-winged Gull). These islands have been censused off and on by the Refuge, but will not be surveyed in 1991 (or in the future according to Refuge personnel). The islands would provide a measure of nesting response by seabirds to close encounters with tourists, and thus would provide useful information for the Refuge in managing other accessible nesting colonies.

2. Purchase the Seldovia Native Association inholdings and timber rights in Kachemak Bay State Park and return the lands to the State Park system. From recent studies it appears likely that Marbled Murrelets nest in old growth forests in the land above Neptune Bay. Bald Eagles not only nest all along the coast line and river valleys in that area, but roost there in large numbers during winter when they congregate to feed on the Homer Spit. Recent archaeological investigations reveal many potential sites of historic and prehistoric occupation that could be lost if timber was harvested on this land. It seems that it may be tempting for each agency to pass the buck on the buy-back of this land (Bradley Power Project/Railbelt Fund - General Fund/Legislature - Oil Spill Restoration Funds), but missing this opportunity will be devastating to wildlife and recreation values in Kachemak Bay. 3. Purchase or cause to be set aside the intertidal and supratidal lands at the base of the Homer Spit, including Mud Bay from Miller's Landing to Green Timbers on the northwest side of the Spit and from Mariner Park to the junction of the storm berm with the bluff on the southwest side of the base of the Spit. This area of intertidal mud flats and supratidal salt water vegetation is critical feeding and resting habitat for migrating shorebirds. Each spring from 50,000 to 90,000 shorebirds stop here, and many return in late summer on their way south. About one-third of the known population of Surfbirds stops in Mud Bay and on the Spit. Presently the tidal areas are either privately owned or owned by the City of Homer. From recent actions of the City Council, there is a continuous threat for filling and development of the supratidal and intertidal lands on the Spit. The land could be designated a critical area by the Alaska Department of Fish and Game, or better, the land purchased and made part of Kachemak Bay State Park or the Alaska Maritime Refuge system.

More detailed information can be provided on each of the above three suggestions. I look forward to receiving additional information and notification of the plans and progress of the Restoration Planning Work Group.

Sincerely

George C. West





Secretary Restoration Planning Work Group Restoration Planning Office 437"E" St., Suite 301 Anchorage, Alaska 99501

K.,

Dear Madam or Sir:

This responds to your draft 1991 Restoration Work Plan as described in the Federal Register of March 1, 1991.

March 18, 1991

The restoration work plan does not identify where restoration would occur. While Prince William Sound has received most of the attention, you should recognize that most of the seabirds were killed along the Kenai Peninsula and Kodiak Island. I suggest that restoration efforts for seabirds be focused on areas outside Prince William Sound.

In addition to potential restoration measures described in your work plan, I suggest that you consider measures that would restrict visitation around certain seabird colonies where reproductive rates have not returned to normal by 1990. This would be similar to the approach used on efforts to protect the threatened northern sealion populations in Alaska. Reproductive rates would directly determine the rate of restoration of affected seabird populations. I would further suggest that the work plan describe measures to restore murre populations. I am particularly interested in your decision to fund feasibility studies for restoration on murrelets and harlequins, but not on murres. Your work plan should clearly identify the process you used to fund certain feasibility studies, but not others.

Now that an out of court agreement has been reached with EXXON on civil and criminal charges on the spill, the work plan should indicate what the agreement says about the release of damage assessment and restoration study data. If data can be released, the work plan should include a list of those studies and how they could be obtained. Finally, I would like to know what is the breakdown of funds available to restoration projects as a result of the out-of-court settlement.

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Sincerely,

Mike Mishimoto

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407Rangeview Ave. Homer, Alaska 99603

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Secretary Restoration Planning Work Group Restoration Planning Office 437 "E" St., Suite 301 Anchorage, AK 99501

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COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCI ON RESTORATION PLANNING PROCESS AND DRAFT 1991 RESTORATION WORK PLAN FOR THE <u>EXXON VALDEZ</u> OIL SPILL

APRIL 12, 1991

Prepared by Sarah Chasis and Robert Adler, Senior Attorneys

The Natural Resources Defense Council (NRDC) appreciates this opportunity to submit comments on the proposed restoration planning process and draft 1991 Restoration Work Plan in response to the March 1 Federal Register Notice (56 FR 8898).

Relationship to Pending Settlement

One overriding question is how the restoration process is affected by the proposed settlement reached between the federal and state governments and Exxon. This needs to be explained. For example, will the potential availability of money under the settlement for restoration this summer significantly alter current plans?¹

The relationship between the process described in this notice and the organizational structure and process to be employed under the Memorandum of Agreement governing the use of the settlement money needs to be explained. Do the Trustees intend to follow the process outlined in this Notice for restoration planning? How will the settlement affect EPA's role in the restoration planning process in any way? Future public notices should address these questions.

^{1.} The Notice indicates serious uncertainty about the availability of federal and state funds independent of payments from the responsible parties. 56 FR at 8903.

Adequacy of Public Participation

We appreciate the Work Plan's stated commitment to ongoing public participation in the restoration planning process, as reflected in this and proposed future opportunities for public input into the process. However, questions of timing, limited access to information, and closed meetings at which key decisions are made seriously limit the value of this public input.

The most serious flaw with Section II (Restoration Planning) is that no commitment is made to making data gathered on natural resource damages publicly available. Public participation in the injury assessment or restoration planning process cannot be meaningful unless the data on natural resource damages and the results of pilot restoration projects are made public. The public cannot have a meaningful role in advising the Trustees regarding future studies or appropriate restoration projects without knowing the nature and extent of harm suffered by different species and habitats, the predicted extent of future harm and the success or lack thereof of pilot restoration projects.

The Notice indicates that these data cannot be released due to pending litigation. 56 FR at 8899. NRDC and other environmental groups have consistently rejected this excuse for withholding damage assessment and restoration data. These data will be made available eventually under litigation discovery procedures; but waiting for the litigation process to proceed critically impairs the public's ability to understand and to

affect important decisions that are being made now.²

Another key component of meaningful public participation is ensuring that requests for public comment on damage assessment studies and proposed restoration projects are made early enough in the process that the comments received can meaningfully affect the design and conduct of the studies and projects; and that sufficient detail about the proposed studies and projects is provided to enable meaningful comment. The damage assessment process conducted to date has been severely deficient in both respects.

The 1991 Restoration Work Plan raises the same concern about the timeliness of the opportunity for public comment. In III.A. there is reference to EPA's consideration of feasibility, technical support and monitoring projects, but these are not described in detail in this notice. Apparently, EPA intends to describe them in the 1991 Work Plan to be published in a later Spring 1991 Federal Register. Given that actual 1991 restoration projects must begin within several months, this will be too late to allow comments to influence how those projects are conducted this summer.

Finally, the Notice refers to the closed meetings of technical workshops in 1990, and proposed future meetings of these groups. 56 FR at 8900. It is apparent that the most important decisions about proposed restoration activities are

^{2.} Moreover, if the pending settlement is approved, the governments no longer can assert that pending litigation against Exxon precludes release of the data.

made at (or based on) these meetings. NRDC has commented repeatedly that these meetings should be open to the public, or that scientists who represent nongovernment public organizations be allowed to attend. The Notice also refers to the fact that funds were spent in 1990 to assure scientific participation in the closed peer review process. 56 FR at 8901. At a minimum, these critical meetings should be open to scientists and other public representatives who may have useful input into the damage assessment process. Moreover, we request that the Work Group consider using a modest amount of funding in the future to allow scientists who represent environmental and other nonprofit groups to participate in this process.

Comments on Restoration Activities

We have the following comments on specific restoration activities:

1. We support the fourth activity (Protection of Strategic Fish and Wildlife Habitats and Recreation Sites), in particular. This appears to be an important and pressing project which should be implemented aggressively. A number of steps should be taken as soon as possible to implement this activity:

a. Studies 4 and 5 from 1990 should be expanded to expedite the identification of critical habitats as targets for acquisition and land use management changes. These studies should be expanded to include all species that were damaged by the spill, with priority given to those species identified as being most severely impaired.

b. Proposed changes in land use status should include changes in designations of existing federal and state lands, for example, proposals for inclusion in the National Wilderness Preservation System, and deletion of areas designated for resource extraction or logging in existing management plans.

c. Where important lands have already been identified for acquisition, such acquisition should begin this summer, especially where imminent activities might impair resource values. Any funds available from the settlement with Exxon should be devoted to these uses on a priority basis. But even if such funds are not available, federal and state funds should be used for such acquisition, subject to later reimbursement. Acquisition of logging rights should be given high priority.

d. We do not understand why acquisition should be limited to a "willing seller" basis. Eminent domain, where consistent with applicable federal and state law, should be used to acquire critical resources in private lands where the existing owner is not willing to sell.

2. We are concerned about use of the sixth criterion for evaluating restoration projects, <u>i.e.</u>, the "reasonableness of cost of the restoration project in light of the value of ecological significance of the resource." 56 FR at 8899. Comparing restoration costs with benefits is difficult, and not authorized under the recent <u>State of Ohio</u> decision, which required restoration costs to be recovered unless they were "grossly disproportionate" to the value of the resource lost.

3. We are also concerned about reference to the "no action" option where it is most appropriate to allow "natural" recovery to proceed. We agree that intrusive restoration options are not appropriate in all cases. But wherever resources were lost, even temporarily, some restoration is appropriate. If direct restoration or replacement is not feasible or appropriate, then acquisition becomes the preferred option.

4. Use of fertilizer to promote beach grass restoration should be done with caution, so that excess nutrients are not a problem on a localized water quality basis. This is true particularly on beaches with steep slopes or other high runoff characteristics, particularly given the frequent precipitation in the region. Consideration should be given to the use of organic fertilizers, where nutrients are less soluble, thus less likely to run off into receiving waters, and more likely to be retained for long-term benefit to the plants being restored. Runoff can also be reduced by monitoring carefully the rate and timing of fertilizer application.

We appreciate this opportunity to comment at this phase of the restoration planning process. However, as noted at the outset, adequate public participation in this process can be achieved only through the expeditious release of all damage assessment and restoration data, and through a completely open restoration planning process.

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Jational Parks

and Conservation Association



PO Box 202045 Anchorage, AK 99520 April 15, 1991

Secretary Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street, Suite 301 Anchorage, AK 99501

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Re: Prince William Sound and Gulf of Alaska Draft 1991 Restoration Work Plan

Dear Secretary,

I am writing on behalf of the National Parks and Conservation Association, the only national non-profit citizens organization that focuses on national park concerns. Our 280,000 members nationally, including over 1,800 in Alaska, promote the protection, preservation and public understanding of our nation's National Park System through diverse activities. We appreciate this opportunity to comment on the Draft Restoration Plan.

Our comments presented for the draft Natural Resource Damage Assessment Plan and Restoration Strategy (October, 1989) remain our major focus. Specifically, we are concerned with assessing and restoring of cultural resources and the extent of public participation.

CULTURAL RESOURCES

In the SUMMARY OF EFFECTS OF THE <u>EXXON VALDEZ</u> OIL SPILL ON NATURAL RESOURCES AND ARCHAEOLOGICAL RESOURCES, March 1991, pages 13-14 state that a minimum of 26 sites were injured by oil. "A comprehensive survey of injuries to archaelogical resources on public lands throughout the spill zone will be conducted during 1991". Yet, the project is not listed in this draft plan. In fact, no activities for the restoration of archaeological resources have been funded thus far. The Alaska State Historic Preservation Office and the National Park Service have been unable to perform needed assessment and survey work. Budget requests for these projects are disregarded by the Trustee Council.



1015 Thirty-First Street, N.W., Washington, D.C. 20007-4406 Telephone (202) 944-8530 • Fax (202) 944-8535 Draft 1991 Restoration Plan page 2

We again ask that the costs of complying with and enforcing the Archeological Resources Protection Act and Section 106 of the National Historic Preservation Act be included and necessary projects be undertaken immediately.

The second proposed project for 1991 (B.2.) could be expanded to include cultural/archeological resources. We ask that the Needs and Objectives be amended to read "The <u>Exxon Valdez</u> oil spill caused direct and indirect injury to the marine birds, mammals and archeological sites of southcentral Alaska. The purpose of this project is to make users of the area aware of the changes to the ecosystem resulting from the oil spill and to lessen the potential for additional harmful human disturbances". The Methods section should then be expanded to include cultural/archeological resouces.

PUBLIC PARTICIPATION

While we appreciate the release of the above summary, it is still quite difficult for us to offer meaningful comments with such little information. The State of Alaska continues to withhold studies; the federal government did not release any economic information. It is fundamentally wrong to suppress information about the damages. Whether the State or federal government is liable to pay any of the damages is a separate matter from the scientific data and information that quantifies damages. The scientific data and information does not address which party was at fault.

Since discussions of the Restoration Planning Work Group, composed of public agencies, are closed to the public "due to the necessary discussion of litigation-sensitive damage assessment information", it is most difficult for us to offer any meaningful comments. It seems that decisions are being made by the US Department of Justice and Alaska State Department of Law about our natural resources. We would argue that these agencies do not have the scientific and technical resources expertise to make such decisions.

Draft 1991 Restoration Plan page 3

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SUMMARY

We remain most concerned about the lack of assessment and restoration of cultural/archeological resources and compliance with Federal Historic Preservation Laws. We urge the funding of planning and projects to include these natural resources. We urge the release of scientific and economic information so the public can make informed decisions about our resources.

Thank you for your consideration of our comments.

Si/ncerely, Mary Grisco

Alaska Regional Director



National Trust for Historic Preservation

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<u>BY</u> FAX

April 15, 1991

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Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, AL 99501

> Re: Draft 1991 Restoration Work Plan - Exxon Valdez Oil Spill, 56 Fed. Reg. 8898 (March 1, 1991)

Dear Restoration Planning Work Group:

The following comments are submitted by the National Trust for Historic Preservation in the United States (the National Trust) in response to the Draft 1991 Restoration Work Plan for the Exxon Valdez Oil Spill, prepared by the Environmental Protection Agency on behalf of the Trustee Council for public review. In particular, the National Trust seeks to respond to the request for input on future restoration studies, in order to urge the Trustees to undertake restoration planning for archaeological and cultural resources injured by the oil spill and related clean-up efforts.

The National Trust, a congressionally chartered private nonprofit organization with over 225,000 members nationwide, is charged with facilitating public participation in the preservation of the nation's historic and cultural resources. The National Trust has a strong commitment to the preservation of our nation's irreplaceable archaeological sites and resources, the protection of which is critical to our ability to understand and learn about In October, 1989, the National Trust submitted our past. detailed comments to the Trustee Council on the draft State/Federal Natural Resource Damage Assessment Plan for the Exxon Valdez Oil Spill, urging the Council to strengthen the draft Damage Assessment Plan to assess more comprehensively and accurately the extent of injury to and loss of archaeological resources, and the damages associated with restoring these resources or compensating the public for their loss.

The National Trust is particularly concerned about the effects of the Exxon Valdez oil spill on the archaeological resources of the Gulf of Alaska region, which is an area that is extraordinarily rich in cultural resources. Past archaeological studies have

> 1785 Massachusetts Avenue, N.W. Washington, D.C. 20036 (202) 673-4000

revealed evidence of Alaska native occupation that may date back 11,000 years. While the area has not been thoroughly inventoried, it is estimated that over ten thousand cultural archaeological sites may exist in this area. These sites provide a wealth of unrecorded information about our heritage that may be irrevocably damaged or destroyed by the oil spill and related clean-up activities unless appropriate ameliorative measures are undertaken.

Of course, restoration planning must be based on a thorough assessment of the damage to cultural and archaeological sites, which must, necessarily, include an inventory of sites. Thus, while this public notice relates to restoration planning rather than damage assessment, it is important to recognize that appropriate damage assessment studies must be funded and implemented in order for restoration planning to be meaningfully carried out. Despite our comments, these studies have not yet been conducted. These studies should fully assess the effect of oiling on artifacts and sites, including changes to the soil chemistry of archaeological sites, the masking of the stratigraphy of sites by oil penetration, vegetational changes resulting in erosion of sites, and the harm to these sites that has and will continue to be caused by their exposure to clean-up efforts, including the unauthorized removal of artifacts by oil spill workers. Moreover, the results of these studies must be made available to the public to provide a meaningful context for comments on restoration plans.

It is already clear that substantial damage to archaeological resources has occurred as a result of the oil spill, and has been documented by preliminary damage assessment studies. For example, the recently released report on the results of preliminary government studies revealed injury to at least 26 archaeological sites along the shoreline caused by the oil spill. This report also indicates that significant injury may have occurred to the ability to use radiocarbon dating techniques to contextually date organic materials at a site. Moreover, it is clear from these studies that the oil spill clean-up activities themselves have harmed, and may continue to harm, these fragile resources, notwithstanding the mitigation efforts currently being undertaken, by their increased vulnerability to disturbance and It is likely that the damage assessment studies for looting. cultural resources contemplated by the 1991 State/Federal Natural Resource Damage Assessment and Restoration Plan will reveal further damage requiring appropriate restoration planning efforts.

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The certainty that Alaska's cultural and archaeological resources have sustained substantial oil spill-related damage makes it imperative for restoration planning activities to encompass the restoration of cultural and archaeological resources. Because historic and archaeological sites and artifacts are non-renewable resources, natural recovery (i.e. no action) is not a viable approach to the restoration of damaged or exposed sites. The need for studies focusing on cultural resources has been consistently identified during the public symposia and scoping meetings conducted as part of restoration planning efforts. It is therefore critical that restoration planning efforts include efforts to identify potential restoration activities and evaluate potential restoration alternatives for cultural and archaeological resources that were damaged by the oil spill and related clean-up.

Despite this identified need, the draft 1991 Restoration Plan indicates that no restoration feasibility studies were conducted during 1990. 'Nor does the draft plan identify cultural resources as part of the restoration study plans contemplated for 1991. In the National Trust's view, it is important that future restoration plans include appropriate restoration planning activities for cultural resources. Moreover, future draft restoration plans should describe these restoration planning activities with far greater specificity than is provided in the 1991 draft restoration plan, to enable the public to comment meaningfully on project design and scope.

A number of restoration planning activities have already been identified during public scoping meetings and symposia. These include studies focusing on the feasibility of techniques for removing oil from contaminated organic materials to permit radiocarbon dating, stabilization of sites damaged from erosion or pedestrian traffic, enhanced public education or law enforcement to prevent unauthorized removal of artifacts from sites exposed by the clean-up, and continued inventory of the area for cultural sites. Removal or relocation, along with appropriate documentation, data recovery, and interpretation of severely disturbed sites for which mitigation is not possible may also be necessary. It is important that these efforts be coordinated closely with the Alaska State Historic Preservation Officer and Alaska Native corporations, and with the appropriate land managers.

In conclusion, the National Trust strongly urges the Restoration Planning Work Group to develop appropriate restoration planning activities for cultural and historic resources that have been injured by the oil spill and the clean-up activities. Not only will such plans aid the work of the Trustee Council and its

constituent agencies in carrying out restoration activities, they will also provide guidance to private groups who may render valuable assistance in the restoration effort. In addition, we urge the Trustee Council to fund, implement and publicize the results of appropriate damage assessment studies which are essential to a meaningful restoration effort.

The National Trust intends to continue monitoring this project, in light of the strong level of public interest in preserving and protecting archaeological resources. We would appreciate being notified of any further restoration planning documents that are issued for public comment or review. In the meantime, if the National Trust can be of any further assistance, please do not hesitate to contact Andrea Ferster, at (202) 673-4035.

Respectfully submitted,

DAVID A. DOHENY VICE PRESIDENT AND GENERAL COUNSEL

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by Andrea C. Ferster Assistant General Counsel

cc: The Hon. Gerry E. Studds The Hon. George Miller The Hon. Chester G. Atkins The Hon. Ted Stevens The Hon. Frank Murkowski The Hon. Don Young The Hon. Manuel Lujan James Ridenour, Director, National Park Service Richard B. Stewart, Assistant Attorney General, Environment and Natural Resources Division Judith Bittner, Alaska SHPO John F. W. Rogers, Chairman, Advisory Council on Historic Preservation J. Jackson Walter, President, NTHP Kathryn Burns, Director, Western Regional Office, NTHP





Andrea Ferster, Esq. National Trust for Historic Preservation 1785 Massachusetts Avenue, N.W. Washington, D.C. 20036



Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, AL 99501

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National Trust for Historic Preservation

BY FAX

April 15, 1991

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Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, AL 99501

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Respectfully submitted,

DAVID A. DOHENY VICE PRESIDENT AND GENERAL COUNSEL

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by Andrea C. Ferster Assistant General Counsel

cc: The Hon. Gerry E. Studds The Hon. George Miller The Hon. Chester G. Atkins The Hon. Ted Stevens The Hon. Frank Murkowski The Hon. Don Young The Hon. Manuel Lujan James Ridenour, Director, National Park Service Richard B. Stewart, Assistant Attorney General, Environment and Natural Resources Division Judith Bittner, Alaska SHPO John F. W. Rogers, Chairman, Advisory Council on Historic Preservation J. Jackson Walter, President, NTHP Kathryn Burns, Director, Western Regional Office, NTHP


DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

February 17, 1990

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

Dear Sir,

The Pacific Seabird Group is a scientific organization with over 400 members. Our primary interest is in the scientific study and conservation of seabirds of the Pacific Ocean. Many of our members have had considerable experience in seabird research related to the Exxon Valdez oil spill area, before, during, and after the spill. We also have had considerable experience with research on seabird species in other areas and other spills.

We understand your office is in the process of planning restoration of the environmental and recreational areas impacted by the Exxon Valdez oil spill. The restoration process for the Exxon Valdez oil spill is extremely important and does offer some real possibilities to help recovery. Our comments relate to measures that can be of the most significant value to the restoration of marine birds, for that is our expertize.

We recommend that four of the most effective marine bird restoration measures could be taken are:

1) Purchase old growth forest habitat in Prince William Sound and the Gulf of Alaska oil spill area. These areas are important nesting habitat for the Marbled Murrelets. This unique species nests almost exclusively in old growth trees and has been reduced in numbers over much of it's range. The oil spill area is perhaps the world's major concentration area for this species. Logging in the spill area would further reduce their numbers and make complete recovery from the spill very unlikely.

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Most private timbered land tracts in Prince William Sound, the outer coast of the Kenai Peninsula, Kackemack Bay, Afognak Island, and Kodiak Island have, are or soon will be scheduled for clear cut. These areas include inholding in the Chugach National Forest, Kenai Fjords National Park, and Kachemak Bay State Park as well as areas adjacent to them. Also there is private ownership of the timber rights on Delpin and Discoverer Islands of the Alaska Maritime National Wildlife Refuge. All of these areas should be protected from logging.

Protections of old growth areas would also reduce disturbance to birds, as well as protect important nearshore habitats from disturbance and degradation in water quality caused by logging activities and bark deposits onto the near shore bottom. Bald eagles would also benefit since they use these same forest stands for nesting.

2) Purchase privately owned seabird colonies for inclusion into conservation designations and protection. Several significant seabird colonies in the oil spill area, or very close to it, are in private ownership. Most of these have been conveyed to native corporations through the Alaska Native Claims Settlement Act. These colonies need to be protected. Any further disturbance or destruction to these colonies will reduce population even further and impede reproduction at these sites needed for recovery of populations. Table 1 lists colonies which should be purchased for restoration of seabirds.

**3)** Remove introduced predators (foxes, rats, etc.) from islands where they have severely reduced or destroyed seabird colonies would be a good form of mitigation. Millions of dollars have been spent on cleanup and wildlife monitoring following the Exxon spill, but ironically few understand that alien predators have eradicated far more birds than the spill and that there is no chance of recovery for these sites, until introduced predators are removed.

The U.S. Fish and Wildlife Service has recognized the problem for many years, but has spent only very limited funds to remove introduced predators and have been removed to clear only one island per year on average. Dramatic recoveries of bird life have been noted for these islands from which predators have been removed. Table 2 identifies islands the the Fish and Wildlife Service has identified as priority for fox removal. In addition to fox removal, work must be initiated to remove introduced rats, ground squirrels, and rabbits.

4) Buy back oil leases sold for Bristol Bay and close the area to oil development. Bristol Bay has tremendous wildlife values which include important seabird colonies, feeding and wintering areas. Oil transport from the area would add risk to other areas including Unimak Pass, a very important migration corridor. Preventing oil development in this area would be the best way to minimize threats to this critical area.

Please consider these suggestions in any settlement agreement for the restoration of the Exxon Valdez oil spill or funds made available from the lawsuits or other sources.

Sincerely,

Malcolm C. Coulter Chairman Pacific Seabird Group

c.c. - Bill Rielly, Director, U.S. Environmental Protection Agency Charles Cole, Attorney General, State of Alaska

#### TABLE 1. SEABIRD COLONIES TO PURCHASE.

*i -*

NAME	LONGITUDE	LATITUDE	TOTAL SEABIRDS
THE TRIPLETS	152.4733	57.9861	109115
GULL ISLAND	151.3264	59.5844	17173
HIGH ISLAND	162.3228	54.8117	135316
MIDDLETON ISLAND	146.3244	59.4361	154146
POA ISLAND	165.4983	54.1283	41299
TANGIK ISLAND	165.4853	54.1444	25810
PUFFIN ISLAND	165.5222	54.1397	36535
ANANI ULIAK ISLAND	168.9028	53.0078	23633
TUGIDAK ISLAND**	154.5	56.5	3740
CHINIAK ISLAND & ROCKS	152.145	57.6342	17895
CHERNI GROUP	162.3647	54.6367	9390
BROTHERS ISLANDS (EASTERN)	158.8233	55.9231	15300
PUFFIN ISLAND	153.3567	57.0058	10515
KEKUR ISLAND	152.3003	57.6508	2248
SVITLAK ISLAND	152.3528	57.6333	1366
CATHEDRAL ISLAND	153.1328	57.2003	6008
AMEE ISLAND	153.1878	57.2022	2004
UTESISTOI ISLAND	152.3664	57.6258	2372
SHEEP ISLAND	153.2392	57.2172	1791
ADUGAK ISLAND	169.1622	52.9097	877
MIDDLE ISLAND	152.3481	57.645	482
JOHN ISLAND	153.4578	57.1083	2054
NUT ISLAND	153.1558	57.205	864
CUB ISLAND	153.2025	57.2119	424
SUNSTROM ISLAND	154.14	56.68 <b>9</b> 2	1275
BROTHERS ISLANDS (WESTERN)	158.8528	55. <b>92</b> 94	1446
CAPE DARBY	162.7881	64.3306	<b>′ 1365</b>
CAPE DENBIGH SOUTH	161.5258	64.3828	8976
CAPE DENBIGH NORTH	161.5264	64.4128	7279
KING ISLAND	168.0547	64.9764	245910
UNNAMED ISLAND	163.8186	66.3006	100
FOX ISLAND	162.4261	54.9553	Present
TILLIMOOK ROCK, OREGON	124.0186	45.9375	6072

** TUGIDAK ISLAND IS ALASKA STATE OWNED. MINERAL LEASES NEED TO PURCHASED. TUGIDAK IS YERY IMPORTANT TO WATERFOWL AND IS THE WORLD'S LARGEST HARBOR SEAL ROOKERY.

TABLE 2. Islands from which introduced foxes should be removed as part of the Exxon Valdez oil spill restoration process.

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ISLAND	ACREAGE	FOX SPECIES
Kasatochi	717	arctic
Bobrof	1,980	11
Gareloi	16,964	
Herbert	13,790	11
Igitkin	4,710	n
Segula	8,192	11
Outer Iliasik	2,240	red
Semisopochnoi	56,013	arctic
Ugamak	3,200	11
Chugul	4,301	11
Umak	9,796	11
Kagamil	10,342	11
Amatignak	8,533	11
West Ulak	7,646	. "
Little Koniuji	14,055	11
Inikla	80	U
Elma	716	· •
Little Tanaga	. 17,852	11
Little Sitkin	15,701	, <b>1</b> 1
Seguam	53,292	11
Yunaska	43,520	11
Great Sitkin	39,219	11
Kagalaska	29,355	11
Cherabura	7,440	H .
Chuginadak	42,257	red
Kanaga	91,716	arctic
Tanaga	128,000	11
Ukolnoi	11,520	red
Simeonof	10,000	arctic

() - ) - **X** 





## Pacific Seabird Group

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Malcolm C. Coulter Savannah River Ecology Lab Drawer E, Aiken, SC 29802

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

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April 12, 1991

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, AK 99501

attn: Linda Comerci

Dear Ms. Comerci:

The North Pacific Rim (TNPR) is the Native tribal organization for five villages and two Native community associations in the Chugach region. TNPR serves the villages of Port Graham, English Bay, Chenega Bay, Tatitlek, Eyak/Cordova and Seward and Valdez.

On behalf of TNPR, I would like to support the Chugach Regional Resources Commission's (CRRC) comments that they have submitted to you on the Draft 1991 Restoration Work Plan.

TNPR provides a variety of services to the Native people of the Chugach region. We have witnessed firsthand the devastation caused by the oil spill and view these restoration efforts as a positive sign that an attempt is being made to restore those resources lost in the spill.

Sincerely,

Richard Rolland, Executive Director



3300 "C" Street / Anchorage, Alaska 99503-3920 / Ph. (907) 562-4155 / Fax (907) 563-2891 The Non-Profit Corporation Serving The People Of The Chugach Native Region





# the chugach regional resources commissior

··· * Gulf of Alaska

April 12, 1991

Seward

English Bay Port Graham Chenega

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 "E" Street, Suite 301 Anchorage, AK 99501

Valdez

Tatitlek

Prince

William Sound

P

attn: Linda Comerci

Dear Ms. Comerci:

Thank you for the opportunity to comment on the draft 1991 Restoration Work Plan. The Chugach Regional Resources Commission (CRRC) is a Native tribal consortium incorporated within the state of Alaska concerned with natural resource issues in the Chugach region in southcentral Alaska. Its seven member board has one representative appointed by the governing body of each of the seven Native communities in the region. These include the villages of Port Graham, English Bay, Chenega Bay, Tatitlek and Eyak and the Native Associations from the cities of Seward and Valdez.

As a subsistence based culture, our survival as a Native people is tied inextricably to the land and water. The Exxon Valdez oil spill occurred in our neighborhood - in our waters and on our lands. We, the Chugach people, were some of the most heavily impacted by the spill - economically, socially, psychologically and physically. While we understand that the natural resources can never be returned to their original, natural state we do support restoration efforts that make an attempt to if not directly restore the resources then to at minimum replace them or acquire equivalent resources.

Sincerely,

Jasen Climeliusle for

Arnold Melsheimer, Chairman

Attachment



3300 "C" Street / Anchorage, Alaska 99503-2775 / Ph. (907) 562-4155 / Fax (907) 563-2891 The Non-Profit Corporation Serving The People Of The Chugach Native Region

## Comments on the 5 Draft 1991 Restoration Work Plan for Prince William Sound and the Gulf of Alaska

## submitted by The Chugach Regional Resources Commission April 14, 1991

The Chugach Regional Resources Commission (CRRC) is a Native tribal consortium concerned with natural resource issues in the Chugach Region in southcentral Alaska. Its seven member board has one representative from each of the seven Native communities in the region. These include the villages of Port Graham, English Bay, Chenega, Tatitlek and Eyak and the Native Associations from the cities of Seward and Valdez.

#### SCIENTIFIC DATA

As the Summary of Effects of the EXXON Valdez Oil Spill on Natural Resources and Archaeological Resources shows (March 1991) shows, natural resources were impacted to an even greater extent than previously expected. Full data should be made available to the public so that they may make informed decisions and participate more knowledgeably in the planning process.

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#### PUBLIC PARTICIPATION

Although the planning process has involved hearings in various communities in the state, there has been little or no involvement by residents of small communities and villages due to their distance from larger towns in which hearings were held. Since the smaller villages are highly dependent on affected resources for subsistence and commercial uses, the agencies should schedule meetings and hearings in some of the affected villages and make greater efforts to involve them in the process.

#### SUBSISTENCE USE

At the present time, there is no emphasis being placed on the dependence of communities on damaged subsistence resources. When determining priorities for project sites to be funded, consideration should be given to the proximity of such projects to communities where there are subsistence uses.

The use of subsistence resources involves many economic and social activities and is directly related to effective functioning of families and the community. Continuing fears about the safety of subsistence food resources have resulted in considerable avoidance and disruption of harvest activity.

## ADDITIONAL PROJECTS OF BENEFIT TO THE CHUGACH REGION

In 1990 the CRRC initiated a fisheries development program. Its goal is to enhance Native economic well-being by providing local employment and business opportunities to Native village residents and Native association members in the Chugach Native region through the development of the local fisheries resource. There is an even more urgent need for these projects as the full extent of the damage to the natural resources from the spill becomes known. The great advantage of funding these projects is that they build upon pre-existing project activity, utilize local labor, are designed to become self supporting and address the restoration of lost subsistence opportunities.

#### Shellfish Mariculture

Test culture sites have been selected in Tatitlek, Chenega Bay and Eyak. A training program has been initiated for prospective shellfish growers.

### English Bay Sockeye Salmon Enhancement

In cooperation with the Alaska Department of Fish and Game, an effective approach to increasing the sockeye run is being developed. The potential for a sockeye hatchery at English Bay is also being investigated.

## Port Graham Pink Salmon Hatchery

A self supporting pink salmon hatchery is being developed and local villagers are being trained as hatchery technicians.

#### Seward Fisheries Development

The feasibility of a small fish hatchery, processing plant and tourist attraction located at the Seward Lagoon, and a salmon smolt production facility utilizing waste heat from the Chugach Alaska lumber mill are all being investigated.

### LONG TERM ENVIRONMENTAL HEALTH RISK ASSESSMENT

Two years after the spill, fears over both the short and long term safety of subsistence foods is high in the villages and communities of the Chugach region. A severe reduction in consumption of traditional foods has occurred in all villages, as documented by the Division of Subsistence. There is a need for continuing testing of subsistence foods and an information program to disseminate the information. Data on the toxicity of subsistence foods as well as the long term health risks associated with consumption of contaminated foods is necessary.

#### ACQUISITION OF EQUIVALENT RESOURCES

Some villages have expressed an interest in the purchase of equivalent resources to replace those damaged by the spill. Ideas include the purchase of development rights on timber land. Villages would need to be approached individually and dealt with on a case by case basis.

#### ADDITIONAL NEEDS

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The restoration of natural resources appears to be the sole focus of the planning process. However, there were other aspects of life that were affected by the spill and these must be addressed if true restoration is to occur. CERCLA legislation specifically refers to restoration of "services" as well as natural resources. Equal opportunities should be available for restoration of such services, including subsistence activities, the safety of subsistence foods and fishery enhancement and development.

In addition to biological and direct restoration of the natural environment, there is much need for social and community services, as identified in the final report prepared for the Oiled Mayors Conference entitled "Economic, Social and Psychological Assessment of the Exxon Valdez Oil Spill".

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402 Center Avenue Kodiak, Alaska 99615 Phone (907) 486-5725

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Title:

KODIAK ISLAND INVERTEBRATE ENHANCEMENT AND CULTURE

Lead Agency: Kodiak Area Native Association

Exxon Valdez Oil Spill (EVOS) damage to local intertidal and benthic invertebrate communities exists. In the villages of Kodiak Island and the Alaskan Peninsula, there is knowledge of impacted shellfish habitat and concern over the long range impact of the oil on subsistence use and ecological health in the region. The concentration of hydrocarbons by filtering organisms and their subsequent rise in the food web of fish, marine birds and mammals presents restoration scientists with unparalleled challenges.

The complexity of the problem is not underestimated by village residents. Anecdotes describing above average deer winter mortalities in Karluk, tainted razor clams (a bear food) on the peninsula, increased whale mortalities on the south end of the island, decreased scallop catches in the Shelikof Strait, and many other examples have been locally described as linked to the spill. However we have not been included in the "loop" of verifiable damage information accessible to state and local officials which makes research and the credible proposal of restoration related projects difficult. We hope the brief description of the following two projects will not limit our ability to undertake to propose and implement other necessary projects we are capable of.

1. Kodiak Island Invertebrate Hatchery

In the preliminary stages of design and cost projection, this project would be a cooperative effort between KANA and the University of Alaska. The culture of algae and bivalve organisms would be undertaken on a prototype scale initially. The facility will be capable of culturing, for the purposes of invertebrate juvenile enhancement, a variety of bivalve invertebrates and crustacea.

2. Village Mariculture

Business plans and production costs are being compiled for mariculture ventures in several villages. A scallop project in the village of Akhiok is currently marketing 15,000 scallops in one of five certified shellfish culture facilities in the state. These plans will be complete by May 30, 1991 and submitted to the Oil Spill Restoration Planning Committee as a method to promote village economic stability.

Serving the communities of: Akhlok • Karluk • Kodiak • Larsen Bay • Old Harbor • Ouzinkle • Port Lions

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Kodiak Area Native Association



April 15, 1991



402 Center Avenue

Kodiak, Alaska 99615

Stan Senner Alaska Department of Fish & Game 437 "E" Street, Suite 301 Anchorage, Alaska 99501

Κ,

Dear Mr. Senner;

This letter is in response to the Federal Register public comment solicitation on oil spill restoration plans and projects. The Kodiak Area Native Association represents seven (7) villages on and surrounding Kodiak Island. All of the villages in our area were affected in one way or another by the exxon valdez oil spill whether it may be stress induced, fiscal related or resource related. Because of the distance from Kodiak and Anchorage the villages do not hear about opportunities to respond for request for proposals. At this time we would like to submit what I feel would be restoration projects the villages would submit. All of the villages practice subsistence as well as a majority of the people in the town of Kodiak. I feel these are the people who were most affected.

First, I would like to suggest that there are many villages who had projects started during the year 1989 and because of the spill were not able to either continue these projects or apply for continued funding. People who were in administrative positions did not have the manpower available to function effectively. I would like to see those projects completed and funding made available to apply for and finish incomplete projects such as community halls, youth shelters, etc. Each of the villages need to be approached individually and/or have hearings at the village level.

Second, the Tribal Governments were completely inoperational as members worked on clean-up activities, staff turnover was great, and tribal offices closed their doors. Confusion was at its highest. The villages would benefit greatly if fiscal, operations and maintenance of routine management was taught either by in-house trainings or some other methods. Third, subsistence harvesting of subsistence users was being questioned as to the safety of the foods. People were uncertain as to whether the foods normally harvested were safe to eat. There remain some questions as to whether or not the fish will return normal in years to come, as well as other animals. There also remain questions as to whether shellfish bioaccumulate toxins from oil that remains in the sand. It would be beneficial to see continued subsistence foods testing and monitoring, restoration of natural resources like fish, clams, mussels, sea urchins, herring roe, and/or enhancement of these and other natural resources. This is important not only to the subsistence users but also to the restoration of natural resources that was damaged by the spill. In conjunction with this the studies that were done and not released to the public need to be released in order to better assess the situation. The beach segment study needs to be integrated to determine mariculture projects.

Please enter these comments into the record. Thank you and if you have any questions please call me at 486–5725.

Sincerely,

KODIAK AREA NATIVE ASSOCIATION KELLY SIMEONOFF, PRESIDENT

anda

Brenda L. Schwantes ( Tribal Operations Coordinator

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402 Center Avenue Kodiak, Alaska 99615 Phone (907) 486-5725

April 8, 1991

#### Enhancement Feasibility of the Pacific Herring in Uyak Bay

Lead Agencies: Kodiak Area Native Association (KANA) and the Larsen Bay Tribal Council

Principal Investigator: Mark R. Donohue, KANA Mariculturist

#### Introduction:

The Exxon Valdez Oil Spill impacted large areas of coastline containing spawning habitat for the Pacific Herring, <u>Clupea</u> <u>harengus pallasi</u>. In Uyak Bay, large amounts of oil mousse were present at the same time herring traditionally aggregate, spawn and during the three weeks the eggs develop and hatch. VECO workers removed approximately 70,000 bags of oiled marine macroalgae.

The goal of this project is to examine the feasibility of enhancing herring populations by providing additional substrate and tended in vivo incubation of the eggs. A comparison of spawning density, embryonic development and egg mortality with nearby impacted spawning habitat will examine the costs and potential effectiveness of enhancement efforts.

If oil in Uyak Bay influenced herring selection of spawning substrate, egg mortality or larval survival is either unknown or the information is withheld pending possible litigation. ADF&G stock assessment is limited by manpower and funding to aerial surveys of schooling stocks. Morphologic, scale, parasite and genetic tags could delineate the stocks and their spawning habitat. Baseline data describing herring populations is not spawning site specific and the impact of lost or impacted habitat in Uyak Bay unknown. If spawning herring move from impacted habitat the survival of the population could be decreased due to higher densities of spawn or the use of lower quality spawning substrate (1).

(1) Benko, Y.K. et al. SOV J MAR BIOL. 13(1):53-57. 1987. Biological basis for the use of artificial spawning grounds for the reproduction of Okhotsk herring.

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Researchers report that quality spawning habitat and egg survival is an important, and often determining, factor in year class size. Herring eggs spawned in poor quality habitat, lacking in macroalgal substrate, suffer from mortalities due to mechanical abrasion of the egg, and poor water flow. Transport of oxygen and metabolites to and from eggs of the inner layers of the egg clutch is critical. There is a sharp decrease in survival of eggs as the density (the number of egg layers) increases. More than 90% of eggs in clutches from eight to ten layers thick may die. Though herring may select new, untainted, spawning habitat the condensation of herring spawn may adversely affect egg density and survival as much as if the eggs were deposited in oiled habitat.

Exposure to temperature extremes, desiccation or storm action may further exasperate mortalities in displaced spawning habitats. Prelarvae hatched also vary in survival. Abnormal individuals who hatch adjacent to normal individuals may account for an additional 16-22% mortality. These environmental and genetic variations in egg and post embryonic survival have led to documented 100 fold variations of individual herring generations.

There exists local knowledge of extinct herring populations not due to oil spill impact but due to overharvesting in combination with the natural variation of herring stocks. Oil spill related habitat disruption threatens these fragile stocks that have survived and are now slowly recovering.

In the USSR, spawning habitat enhancement has increased the biomass of one generation of herring 60,000 tons at age five. Their efforts include constructing artificial spawning grounds, the incubation of eggs deposited on trap nets, the collection of storm scattered eggs and the placement of macroalgae substrate in spawning areas.

Alaskan efforts are, thus far, limited to requiring that herring pound sites be left intact until the eggs have hatched. In Washington state some success has been described by the Klallam-Port Gamble tribe in a bay denuded of vegetation by sawmill operations. Longlines of <u>Macrocystis integrifolia</u> are cultured for use in the roe on kelp fishery. Additional longlines of the roe laden kelp are held until they hatch. In 1990, the Washington Department of Fish and Game increased the harvest allotment from five to 100 tons of herring for the tribe.

-2-

#### April 8, 1991

March Construction

Enhancement feasibility effort will consist of setting three 10 meter longlines two to three meters below MLW. Attached to these lines will be both natural and artificial substrates. The natural substrate, a variety of macroalgae collected from nonoiled beaches, will be collected by two teams of village workers from Larsen Bay, sorted and held in bags until they are attached to the longlines. Easily cultured species such as laminaria and those macroalgae textured enough to ensure adequate adhesion will be preferred. Collection will be limited to fresh beach deposited macroalgae. No harvest of live kelp beds is planned.

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A variety of artificial substrates of fine mesh (~ 10-25mm stretch mesh) net bags, each separately floated, will also be tested.

Herring spawn will be protected from benthic predation by moving the longlines away from the shore. Only passive methods of predator control will be employed.

The activity will not interfere with commercial fishing operations. The area has an estimated 100 ton biomass and 10 ton harvest guideline compared to the inner Uyak Bay harvest area whose spawning biomass is 1600 tons. The area was oiled, is near oiled and nonoiled herring spawning habitat and presents the opportunity to increase the biomass of a relatively small unexploited stock.

Samples will be collected by workers at five day intervals throughout the incubation period from the various substrates on the longline. Divers will sample transects through oiled habitat and transects through spawning areas adjacent to oiled habitat.

The stock composition will be estimated by the measurement of the different year class fish present in nearby commercial efforts. The success of the enhancement effort will be measured in the number of eggs hatching compared to those spawned in natural substrate.

The samples will be preserved and analyzed after the field work is complete. Spawn density, the timing of embryological development and egg mortality will be quantified and statistically significant differences between groups reported.

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#### April 8, 1991

#### Duration and Scope

The enhancement activities will begin April 29, 1991 and conclude approximately three weeks after the herring spawn. Gear should be removed by June 5,1991 and sample analysis complete by July 5, 1991. A draft report will be submitted at that time and a final report by July 25, 1991.

The project will be administered by the Kodiak Native Association in cooperation with the village residents of Larsen Bay and other native and non-native local residents.

## Expected Results

This project is designed to measure the feasibility of larger scale enhancement efforts by describing the cost and effectiveness of such efforts. Given the multiple age class composition of spawning stocks, and the difficulty in measuring damage to a year class with aerial stock assessment, this study will provide data on the stocks present in one oiled spawning habitat and the applicability of enhancement techniques. Only sustained larger scale efforts will significantly increase the biomass of oiled habitats but this feasibility study may provide the groundwork for future enhancement.

#### Cost

Longlines, floats, anchors and artificial substrate will be provided by KANA. The total cost of the project employing village workers, skiff operators, divers, lead biologist, transportation costs, fuel, insurance and KANA administrative costs will be approximately \$35,000.

LABOR	17204.92
WORKMANS COMP	7449.73
SUBTOTAL	24654.65
INDIRECT	6286.94
FUEL	1147.50
EOU PORMU	\$00.00
DED DIEN	560.00
TOTAL	\$ 34.649.09



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## Kodiak Area Native Association



402 Center Avenue Kodiak, Alaska 99615 Phone (907) 486-5725

Enhancement of the Pacific Herring in Uyak Bay

Lead Agencies: Kodiak Area Native Association (KANA) and the Larsen Bay Tribal Council

Principal Investigator: Mark R. Donohue, KANA Mariculturist

#### Introduction:

The following preproposal describes an oil spill restoration feasibility study. A full proposal detailing research evidence, evidence of herring reproductive enhancement feasibility and costs will be submitted on April 8, 1991.

The Exxon Valdez Oil Spill impacted large areas of coastline containing spawning habitat for the Pacific Herring, <u>Clupea</u> <u>harengus pallsi</u>. In Uyak Bay, large amounts of oil mousse were present at the same time herring traditionally aggregate, spawn and during the three weeks the eggs develop and hatch. VECO workers removed approximately 70,000 bags of oiled marine macroalgae.

If oil in Uyak Bay influenced herring selection of spawning substrate, egg mortality or larval survival is either unknown or the information is withheld pending possible litigation. Baseline data describing herring populations is not spawning site specific and the impact of lost habitat in Uyak Bay unknown. If spawning herring move from impacted to nonimpacted habitat the survival of the population could be decreased due to higher densities of spawn or the use of lower quality spawning substrate (1).

The goal of this project is to enhance herring populations by providing additional substrate for spawning herring and to compare the spawning density, embryonic development and egg mortality with nearby impacted spawning habitat.

Researchers have reported that quality spawning habitat and egg survival is an important, and often determining, factor in year class size. Spawning habitat enhancement efforts in US and abroad on both artificial (fine netting) and cultured macroalgal substrate (kelps) have increased herring eggs survival and populations measurably. In the USSR, spawning habitat enhancement in the biomass of one generation of herring 60,000 tons at age five.

#### Methods

Enhancement efforts will consist of setting three 10 meter longlines in two- three meters of water at low tide. Attached to these lines will be both natural and artificial substrate. The natural substrate, a variety of macroalgae collected from nonoiled beaches, and artificial substrates of fine mesh netting will be attached to the longlines. Samples of spawn on the longlines will be compared with natural spawn samples taken from transects by divers. Spawn density, embryological development time and egg mortality will be measured.

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#### Duration and Scope

The project site at Chief Point, Uyak Bay, is in the center of the area of past cleanup activities and adjacent to commercial fishery sites. There will no conflict with cleanup or commercial fishing activities.

The enhancement activities will begin April 29, 1991 and conclude approximately three weeks after the herring spawn. Gear should be removed by June 5,1991 and sample analysis complete by July 5, 1991. A draft report will be submitted at that time and a final report by July 25, 1991.

The project will be administered by the Kodiak Native Association in cooperation with the village residents of Larsen Bay and other native and non-native local residents.

#### Expected Results

If the project demonstrates increased or comparable herring egg survival, the techniques developed could be scaled up to provide increased herring spawning habitat and biomass of herring populations in oil spill impacted and nonimpacted habitats.

#### Cost of Study

Longlines, floats, anchors and artificial substrate will be provided by KANA. The total cost of the project employing village workers, skiff operators, divers, lead biologist, transportation costs, fuel, insurance and KANA administrative costs will be approximately \$10,000.

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COLOR DASES OF THE USE OF ARTIFICIAL SPAWNING NDS FOR THE REPRODUCTION OF OKHOTSK HERRING

. K. Benko, Yu. N. Bogatkin, and R. K. Farkhutdinov

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UDC 597.533.1

During the development of Okhotsk herring eggs in multilayered clutches on algae in the littoral and upper horizons of the sublittoral zones, where natural spawning grounds of herring are located, the death of embryos in different stages of development was observed. In clutches (8-10 layers) the number of dead was not less than 90% and at artificial spawning grounds it was about 20%. The prelarvae had a relatively low viability and virtually all died at the age of 8-10 days. In clutches of the same density at artificial spawning grounds, which lay in the surface horizons of regions further out to sea during the development of the eggs, the proportion of dead embryos did not exceed 3% and larval survival at the age of 10 days was more than 80%.

Up to the beginning of the 70's, herring fishing in the northwestern part of the Sea of tak was large-scale and highly profitable. In recent years the stocks of herring populas have sharply decreased because of the sparsity of new generations and over-exploitation / omestic and foreign fishery. In 1976, catches came to 53,000 tons which was less than average long-term norm by more than 20 times and nearly 10 times lower than the critical 1 at which reproduction of numerous generations is possible (Tyurnin, 1980).

However, the presence of two numerous generations in 1973 and 1974 caused an increase in ks, and in 1983 after lifting of the ban (1976-1982), fishing was renewed and the biomass he spawning part of the population reached 800,000 tons.

Investigations of the ecology of Okhotsk harring spawning revealed that the negative of a complex of factors during embryonic development was responsible for the formation se generations (Tyurnin, 1980). Other causes included the formation of multilayered thas of eggs on algae and the frequent discharge of eggs on substrates of silt, sand, lea, and stones which are not characteristic for herring. In some years mass deaths of were observed. Thus, in 1972, all the eggs present in an area of 5.35 million m²
87 of the area of all spawning grounds) died, in 1973, 8.66 million m² (52.0%), and in 3, 3.65 million m² (37.7%).

The spawning grounds of herring which cover an area of approximately 34.5 million m³ located along the northwestern coast of the Sea of Okhotsk between Tauiskays Bay and Cape , encompassing the littoral and upper horizons of the sublittoral zones at depths of <u>B-10</u> m. trates for the development of eggs are the shallow water algae: Laminaria, Lessonia, 'a, Cystosira, and red algae. Moreover, herring usually form multilayered clutches and one years density of spawns reaches enormous proportions. Thus, in 1982, in the region amkar Cape and Cape L'gotnyi (Aldoma, Fedora, and Feodota bays) at spawning grounds toing an area of 6.4 million m², about 80% of the total number of herring in the spawning of the population spawned, the average density of spawns was 10.9 million eggs/m² and ifferent sections reaches 117.3 million eggs/m² (or about 200 kg/m²). In 1983 and 1984 average density of spawns in the same region was 11.8 and 12.2 million eggs/m², respecly, with the maximum of 111.6 and 35.7 million eggs/m². In the other regions average ity on natural substrates voried from 3.2 to 7.4 million eggs/m³, with the maximum not than 18.8 million eggs/m³.

Eggs in the dense clutches developed better in the surface layers just touched by water "zhanovskii, 1956; Tyurnin, 1967). Those in the deeper layers found themselves in poor

Okhotak Laboratory, Magadan Division of Pacific Research Institute of Fisheries and mography, Okhotsk 682480. Translated from Biologiya Morya, No. 1, pp. 56-61, Januaryuary, 1987. Original article submitted March 5, 1985.

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conditions due to the oxygen deficiency. Embryos in these layers lagged in development and hatching of prelarvae in the entire clutch of eggs stretched for 6-10 days.

The formation of multilayered clutches of eggs at natural spawning grounds and the subsequent development of eggs in the littoral and upper horizons of the sublittoral zones result in negative consequences: muddy clutches, intervals between the aggs filled with detritus and small fractions of sand, appearance of periphytons on the egg membranes in the upper layers, mechanical damage to the egg by particles of the substrate during tidal currence and storms, and erosion of the clusters by drifting ice. Additionally, mass deaths are observed in the littoral zone at low tide from excess dryness and excess heat. In some years there is a redistribution of herring at spawning grounds because of temperature peculiarities and ice conditions and their spawning occurs in regions characterized by the lack of algel substrates. Hence the eggs are deposited on mud, sand, pebbles, and stores. In this case the eggs are thickly ancased in mud and the movable substrate causes the clutches to break up and storms scatter the eggs along the shore.

These factors determine the differences in the rate of embryogenesis, hatching of embryos at different stages of development, appearance of abnormal embryos and prelarvae, and high mortality of eggs in the internal layers of clutches. The original source of different quality prelarvae and embryos is the disruption of water exchange within the clutches and subsequent exacerbation of respiratory conditions for embryos because of oxygen deficiency and excration of metabolitas. Herring eggs in multilayered clutches develop irregularly on algae and already in the second surface layer one may see a sharp lag in embryonic development; dead embryos are encountered in the third and fourth layers, and in the fifth and deeper <u>virtually all eggs die (Galkina, 1960; our data)</u>. At the onset of hatching of prelarvae from eggs of the surface layer, a small number of dead embryos is already observed in the second layer, and in the third and next layers all embryos die. Evidently as the series of clutches increases the number of dead embryos grows. According to our data, in clutches of 8-10 layer; on Laminaria, Lessonia, and Alaria, their share is more than 90%.

Prelarvae hatched from live aggs are not qualitatively homogeneous — alongside normally developed individuals, sbnormal and undeveloped individuals occur, of which 16-22% do not survive.

These ecological peculiarities of herring spawning combined with conditions of their postembryonic development determine the abundance of both individual generations and the entire population. The abundance of individual generations frequently differs by 100 or more times (Tyurnin, 1980).

The large-scale changes in abundance of Okhotsk herring negatively affects the efficiency and planning of work of fishery organizations. It is very difficult to predict reliably the expected state of herring stocks in the next 5-7 years and prospects beyond that.

In this context, the Okhotsk laboratory of the Magadan division of TINRO face the task of elaborating methods of improving conditions and raising the production efficiency of <u>Okhotsk herring through the organization of more vigorous management of fisheries in the</u> northwestern part of the Sea of Okhotsk.

Indicator	1976	1977	1978	1979	1981	1982	1983	1984	1985
Area of spawning		· • • • • • • •	·						
1000/m ²	7,0	14,G	17,8	20,0	54,5	27,7	53,9	74,0	50,0
Area of spawns of artifi-									
1000 m	0,01	5,0	8,3	13,6	42,0	7,7	44,8	27,0	42,0
Eggs deposited, billiona of eggs	0,006	17,2	10,9	53,1	179,1	18,5	157,1	73,5	168,0
Density of spawns, million eggs/ m ²	0,60	3,44	1,31	3,90	4,26	2,40	3,51	2,72	4,00
Mortallry of eggs, %		7,2	8,5	1,5	2.3	3,8	3.4.4	3,0	3,0

TABLE 1. Experimental Results of Spawning Grounds for Herring in Different Years

Length of			Ts	ak aumber			
axpertment." days	l. n -= 5789	2, n = 1178	3. n→1808	4. n = 3053	5, n == 2629	6, n == 449	
1	99.5	87 9	77.4	14.0	99.3	98.4	
2	97.8	79.4	43.4	11.1	96.1	93.1	
ā	69.0	77.0	19.1	9.1	88.6	89,3	
4	68.0	67.6	17.8	7.4	87.2	89,1	
Š	67.1	64.6	16.1	5,9	86,5	88,2	
õ	86,4	\$7,6	16,4	5,9	85,6	87.7	
7	65.2	51.8	12,2	3,8	85,1	86,4	
8	63.7	37.7	7.4	1.9	84,4	35,7	
ğ	52.2	20.7	3.8	0	83.7	84.6	
iõ	29 A	6.8	0.2		80.0	82.6	
11	8.6	08	0		75.8	78.6	
12	0.2	ñ,			72.0		
13	õ,			~~	61.3		

TABLE 2. Survival (in %) of Prelarvae and Larvae of Okhotsk Herring (Aldoma Bay) in Experimental Tanks in Starvation Conditions

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Investigations in this direction were started in 1976 under the guidance of B. V. Tyurnin Currently, there are several ways noted of increasing the afficiency of herring reproduction:

the setting up of artificial spawning grounds in regions characterized by a deficit in algal substrates and in regions where conditions for the survival of herring in the early stages of ontogenesis are unfavorable, in the latter case shifting of artificial spawning grounds after spawning to regions where conditions for embryonic development are optimal and the effect of negative factors, characteristic for the reproductive zone of Okhotsk herring, is ruled out;

the organization of incubation of eggs deposited by herring in huge quantity on the ting of trap nets in the period of test fishing;

the collection of viable eggs scattered by storms and their incubation in metted incubators;

the installation of artificial underwater stone beds for the purpose of increasing the area of natural algal substrates for spawning.

The greatest attention is focused on the elaboration of a method of using artificial spawning grounds of the "net wing" type made of capron metting with mesh [18-20 mm] in the form of metted webbing 50 m long and 3-8 m high (Table 1).

The netted webbings are placed in inlets and bays in the upper horizons of the sublittoral zone, in sections at depths of 2-3 m during low tide. This is to prevent herring from "Pawning in shallow water or in the low and high tide zones and to force them to deposit their "82s on the capron netting. After spawns the spawning grounds are towed away to parts of the inlets and bays further out to sea, where the eggs develop in layer of water under conditions free of the effect of the above-noted negative factors.

This scheme of placing netted webbing on a large-scale experimental basis is applied only in Aldoma Bay where the area of natural spawning grounds in the littoral and in the sublittoral zones at a depth of 0.5 m consists of about 4 million m³. As a rule, in the years of huge numbers of herring (up to 150,000 tons) coming to spawn in Aldoma Bay, their aggs in this area practically all dis.

In other regions where spawning grounds can be established (Feodota Bay, Kekra and Shilki inleta, Capa Odzhan, Cape Marekan near the village of Okhotsk) the deep coastal zone makes it possible to set up netted webbing on the spot up to the end of hatching of prelarvae.

In all these regions, the steady tides and coastal currents and substrates that are looser than those of natural spawning grounds, as well as the structure of clutches on netted Webbing, provide for good water exchange within the multilayered clutches, increase the flow Orman

oxygen, and accelerate the excretion of metabolites with water flows.

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Under these conditions, the number of living embryos in 6-12-layered clutches (spawn density 4-6 million eggs/m²) at the end of embryogenesis is not less than 97%, and viable

4	Spawning ground				
Indicator	natural	artificial			
Area. 1000/m ²	10 250	44,8			
legs deposited, billions of eggs	78 120	157,1			
of eggs/m ²	7,62	3,51			
tion at age 5, 1000/ tom	984,3	19.8			
Productivity, kg/m	96,0	441,3			

TABLE 3. Productivity at Natural and Artificial Spawning _ Grounds of Okhotsk Herring in 1983

prelarvae in the stage of hatching number not less than 95%. This is more than 10 times higher than the number of larvae hatched from eggs of clutches of the same density on natural spawning grounds.

Alongside normally developed prelarvae hatched from eggs of multilayered clutches, there are anomalous individuals thatdie in the first 10-14 h outside the egg membrane. Such individuals often have no visible defects, but evidently there is a disruption of their physiological statedue to the mortality of the young in the stages of postembryonic development. The deeper the position of the eggs in the clutches, the less the visbility of both embryos and hatched prelarvae.

Prelarvae hatched from eggs of multilayered clutches withstood a regime of starvation in the experimental tanks. To obtain prelarvae 12-18 h prior to their hatching, the multilayered clutches of eggs on artificial substrate were placed in a Weiss apparatus with a capacity of 0.5 liters. In the first experiment (tanks 1-4), eggs were taken from the multilayered clutches on netted webbing with a density of spawns of 2.2 million eggs/m³ which were present in the period of development in the upper horizons of the sublittoral zone of Aldoma Bay, and at low tide were periodically in contact with the substrate (Table 2). In the degree of muddiness of clutches, the density of periphyton on egg membranes in the surface layers, and the character and size of intervals between spawns filled with detritus and small fractions of sand, the conditions in which the eggs developed were analogous to the conditions in which eggs in multilayered clutches developed on natural spawning grounds. At the end of embryonic development, the number of dead embryos was 28.7%. Hatching of prelarvae continued for 4 days; prelarvae hatched in preceding days were placed in a separate tank every day.

In the second experiment (tanks 5 and 6), we used prelarvae hatched from eggs of multilayered clutches on artificial spawning grounds (density of spawns: 4.95 million  $\operatorname{eggs}/\operatorname{m}^2$ ) which after spawns in the sublittoral zone were towed away and placed in a thickness of water in the open regions of Aldoma Bay. The batching continued for 11 days but about 90% of the individuals appeared in the first 6 days. Prelarvae hatching on the third day ware placed in tank 5 and those on the fifth day to tank 6. Within 24 hours the number of hatched prelarvae was 15.6 and 75.7%, respectively (Table 2).

During embryonic development in the conditions of the upper horizons of the sublittoral zone the prelarvae were generally of low viability. Thus, at the age of 5 days individual surviva in tanks 1 and 2 was 67.1 and 64.6%, respectively, in tank 3, 16.1%, and in tank 4, 6.9%. At the age of 8 days, there were less than 2% of prelarvae in tank 4, and in tanks 1-3, 63.7, 37.7, and 7.4%, respectively. Less than 1% was observed in tank 1 at age 12 days, but in tank 2, 11 days and tank 3, 10 days.

A much higher viability was observed in prelarvae hatched from eggs whose development passed in the water thickness of parts of the Bay further out to sea, although for experimental purposes the more dense clutches were used: 4.95 million eggs/m² (8-12 layers). Larval survival at age 10 days was 80.0-82.6%, and their mass death started at age 12 days when daily mortality reached 5%, and at age 13 days, 14.8%.

The increase in mortality at this age was due to starvation of the larvae, since after using up material of the yolk sac in the first 4-5 days, the larvae cannot live without food for more than 7 days (Kryzhanovskii, 1956).

The material presented is evidence that it is precisely the conditions of embryonic davelopment that determine mortality, the qualitative state of prelarvae in the stage of hatching, and the degree of morphofunctional perfection of the young and their survival.

An evaluation based on the 1983 material was made of the efficiency of using artificial ""'ng grounds to improve conditions and increase the reproduction of herring in the north-

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n part of the See of Okhotek (Table 3). For calculations results of investigations by v. Tyurnin were used according to which the coefficient of survival to half grown indijuals (Syears growth) of Okhotsk herring from eggs deposited on a natural substrates was average 0.0007 (0.000140,00028). According to productivity calculations, this coefficient creased 10 times on artificial spawning grounds. The number of vigorous prelarvae hatching om eggs from many layered clutches on artificial spawning grounds was more than 10 times e number of prelarvae from eggs of clutches of the same density on natural spawning grounds, lculated production of artificial spawning grounds in 1983 was 4.6 times higher than that natural spawning grounds (Tabla 3).

The above material is evidence of the high efficiency in using artificial spawning bunds to improve conditions and increase the scale of herring reproduction in the northstern part of the Sea of Okhotsk. The arrangement of only 100,000 m² of ertificial spawning bunde in regions where there is virtually no survival of herring eggs makes it possible, at iensity of spawns of about 5 million  $eggs/\pi^2$ , to increase biomass of the generation of the ven year by more than 60,000 tons at age 5.

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

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Thank you for the copy of the EPA Part VII Report. We are very interested in the Valdez cleanup project.

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ENC. Before and after example of tar sand cleanup.

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

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Secretary R	estoration Planning Wo	rk Group		

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street Suite 301 Anchorage, AK 99501

Dear Oil Spill Restoration Work Group,

I have sent the enclosed materials to you at the suggestion of Elizabeth Stolpe in Senator Murkowski's office. She felt that the information would be best directed to your office. In addition I have enclosed some supporting documentation including a support letter from Walter Stieglitz the Regional Director of the Fish and Wildlife Service. I have also sent along a copy of our thirteen minute informational video to explain our programs. We are having an impact on the children of our state and also on the wild bird population. We feel a responsibility to teach as many as possible about the wonders of their world. Our educational programs are working, we are hearing back from these children and their parents. It is very exciting to have a chance to make a difference. We hope that some of the funds from the settlement will help us to make this a better world for us all.

Thank you,

Lindy D. Simmons

Linda D. Simmons Bird TLC, Executive Director

## **BIRD TREATMENT AND LEARNING CENTER**

P.O. BOX 230496 ANCHORAGE, ALASKA 99523

April 15, 1991

Secretary, Restoration Planning Work Group Oil Spill Restoration Planning Office 437 E Street Suite 301 Anchorage, AK 99501

K,

#### Dear Sir,

The Bird Treatment and Learning Center (Bird TLC), has recently established a trust fund and is eligible and well gualified to receive funds to accomplish, as appropriate, objectives of the Exxon Oil Spill settlement. Our non-profit Alaskan organization was formed in 1988 to provide primary medical care for wild birds and learning opportunities for people. We care for all species of sick and injured wild birds. Following the Valdez oil spill, Bird TLC was selected by the U.S. Fish and Wildlife Service to provide medical treatment for the bald eagles affected by the spill. Following medical treatment, birds are rehabilitated with the goal of returning them back to the wild. We have a high rate of success; however, some birds cannot be released due to the severity of their injuries. These non-releasable birds are placed in sanctuaries all over the country or are added to the educational cadre at Bird TLC. These education birds are taken into the classroom to teach the children about the wonders of nature and the responsibility we all have to protect it. We also present programs for scout and adult groups. We have teams of well-trained presenters who travel to Alaska communities for these special programs. We also give programs for the visitors to our state at the Alaska Public Lands Information Center each summer.

Bird TLC has recently purchased land in Anchorage for our permanent home overlooking Potters Marsh Wildlife Refuge. Our service to the Alaska community and the Lower48 will increase with the building of our permanent facility. We have recently initiated a major fund raising drive to raise the necessary revenue to build the permanent facility and to fund Bird TLC programs. Our trust fund will facilitate this process. Bird TLC needs five million dollars to fully meet the building fund goal and a three million dollar program specific endowment. The interest earned from this endowment would fund and expand our programs. We feel that this is the best approach to funding and operating The Bird Treatment and Learning Center. It is our plan to secure these funds once and then be able to concentrate on providing innovative, instructional programs. Our medical director would then be able to develop ideas providing the medical community with new instrumentation, and techniques. Our educational cadre would then be able to take our wild bird programs traveling to citizens young and old who would never see a bald eagle or an owl up close. All birds from song birds to our national symbol would benefit.

In closing, it is our hope that funds from the settlement of the Exxon Valdez Oil Spill will be directed to The Bird Treatment and Learning Center. Information is enclosed that fully describes our goals, objectives, programs, and budget. I am also including a copy of our thirteen minute informational video. I would like the opportunity to speak with you if there are questions about our program.

Thank you,

Inits D. Simmons

Linda D. Simmons Executive Director Bird TLC


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# **BIRD TREATMENT AND LEARNING CENTER 1991 EXPENSES**

EDUCATION		
MEDICAL DIRECTOR	\$	45,000.00
EDUCATION PROGRAM COORDINATOR		15,840.00
PRINTED MATERIALS		1,000.00
BOOKS AND REFERENCE MATERIALS		2,500.00
MISC. AND EDUCATION BIRD CARE		2,500.00
,	\$	66,840.00
BIRD MEDICAL TREATMENT AND REHABILITATI	ON	
MEDICAL DIRECTOR	\$	45,000.00
REHABILITATION ASSISTANT		7,200.00
FOOD FOR REHABILITATING BIRDS		6,000.00
MEDICAL SUPPLIES		35,000.00
MISC. (LAB TESTS, CRATES, SHIPPING, ETC.)		<u>10,000.00</u>
	\$	103,200.00
FUNDRAISING/PUBLIC RELATIONS		
EXECUTIVE DIRECTOR	\$	18,000.00
VIDEO REPRODUCTION	•	500.00
PRESS PACKAGES, ETC.		250.00
TRAVEL		1,000.00
MISC. (PRINTING, SPECIAL MAILINGS, ETC.)		<u>250.00</u>
	\$	20,000.00
OFFICE-		
OFFICE ADMINISTRATOR/		
VOLUNTEER COORDINATOR	\$	15,840.00
RENT		3,000.00
UTILITIES		1,320.00
POSTAGE		750.00
MISC. (STATIONARY, ENVELOPES, OFFICE SUPPLIES)		<u>1,750.00</u>

TOTAL ANNUAL EXPENSES

\$ 212,700.00

\$

22,660.00



# United States Department of the Interior

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N REPLY REFER TO:

RS/0092.BG

FISH AND WILDLIFE SERVICE 1011 E. TUDOR RD. ANCHORAGE, ALASKA 99503

NOV 0 9 1990

Dr. James R. Scott Bird Treatment and Learning Center P.O. Box 230496 Anchorage, AK 99523

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Dear Dr. Scott:

I recently attended a presentation on the Bird Treatment and Learning Center given by Bev Grafel. She gave a brief report on the status of the organization and showed the video you will be using for fund raising. The progress your organization has made in such a short time is most commendable. The environmental education program on birds will certainly be filling a void in science education here in Alaska.

Bev also discussed the possibility of the Fish and Wildlife Service assisting with the development of a wetlands interpretive site at the center's proposed headquarters. We may be interested in this opportunity and will be willing to discuss the project after you have purchased property and are further along in the planning process.

We endorse the Bird Treatment and Learning Center goals and objectives. The proposed facility will be a fine addition to the community. 'Good luck with your plans.

Sincerely,

Well Stieglitz

Regional Director

# WINT IS BIRD TLC?

The Bird Treatment and Learning Center was founded in 1988 by Dr. James R. Scott, a Ionatime Alaskan veterinarian experienced in the treatment of wild bird injuries and diseases. The Center provides a we equipped facility in which to care for injure or diseased wild birds. In addition to medical care Bird TLC provides a variety of educational programs to increase people's awareness of the wild birds around them and to encourage preservation of their habitat. Bird TLC is a private non-profit organization supported by contributions from individuals, private foundations and corporations. Bird TLC is staffed by an executive director, education director, volunteer coordinator and a large cadre of trained volunteers.



Alaska is home for over 405 species of resident and migratory birds.

While most of Alaska is still pristine wilderness, man's activities continue to adversely impact critical habitat, such as the devastating March 1989 oil spill in Prince William Sound. Besides destruction of their habitat, wild birds in Alaska receive numerous injuries related to accidental or intentional human interference. Birds are hit by vehicles, fly into transmission lines, are intentionally shot, accidentally trapped, or taken illegally from their nests. Compounding these problems are extreme Alaskan environmental conditions. Combined they inflict a measurable toll on the wild birds of Alaska.



Photo by John Warden

# **MEDICAL TREATMENT**

Bird TLC provides expert emergency medical treatment needed to stabilize and rehabilitate diseased and injured birds, returning them back into their natural environment. Treatment of frequent head and wing injuries has resulted in the development of special techniques and surgical equipment helping to advance wild avian medicine. Bird TLC provided care for Bald Eagles injured by the Exxon Valdez oil spill in 1989-1990.

# EDUCATION

Bird TLC's education programs focus on Alaska's native birds and their habitat. Education staff and trained volunteers take nonreleasable education birds, such as Sawwhet and Great Horned Owls, Bald Eagle, Steller Jays and others into the classroom. Programs on avian ecology, behavior, anatomy, natural history, bird rehabilitation and conservation are presented to school and community groups. Bird TLC's education program is ever expanding and soon will include a Children Teaching Children Program.

# REBILITATION/RELEASES

More than 400 birds of over 100 species are treated annually at Bird TLC. Puffins, Bald Eagles, Loons, Owls and numerous song birds have been successfully treated and released back into the wild. Annually the Baby Bird Program results in the release of hundreds birds. Non-releasable birds become members of Bird TLC's avian educational entourage.



Photo by Danny Simmons

# NETWORKING/DATA BASE

An important activity of Bird TLC is establishing a centralized network of cooperative agencies, avian experts and other rehabilitation centers throughout the world. Networking agencies share advances in education, treatment, rehabilitation and successful release techniques. Bird TLC is developing a resource library and computerized data base on the treatment of wild bird injuries and diseases. In conjunction with Dr. Pat Redig at the internationally recognized University of Minnesota Raptor Center, Bird TLC is researching the effects of oil on eagles and other raptors.

<u>Bird IC</u>	u.,
YEARLY MEMBERSHIPS	
\$20 INDIVIDUAL MEMBERSHIP	
\$35 FAMILY MEMBERSHIP	
\$10 STUDENT/SENIOR MEMBERSHIP	
\$100 SMALL BUSINESS MEMBERSHIP	>
\$500 CORPORATE MEMBERSHIP	
\$1.25 PER STUDENT CLASSROOM MEMBERSHIP	•

Name			
Address		State	Zip
Phone	(Area Code)		
PLEASE I	MAIL YOUR CHE	CK TO:	
BIRD TRE LEAI P.O. BO ANCHO (907) 56	atment and RNING center X 230496 RAGE, Alaska 2-4852	99523	
TLC ported o deducti	is a private non organization. All ble.	-profit men contributio	nber sup- ns are tax
VOLUI	NTEERS:		•

Volunteers are an integral part of Bird TLC.

- Present educational programs
- Raise orphaned baby birds
- Assist with rehabilitation
- Receive a monthly volunteer letter
- Please send me information on becoming a volunteer.



# PERMANENT FACILITY

Long Term plans for Bird TLC include a Nature Center where people of all ages and walks of life can come to observe and learn to appreciate the beauty of nature in Alaska. The center will include an avian medical atment and rehabilitation facility. Nonreleasable education birds along with recuperating birds in outdoor flight pens, will allow year round bird watching opportunities. Viewing of avian surgery will be provided for interns and veterinary professionals. Included in the plans are a resource library and an auditorium for classes and public lectures.



Photo by John Warden

# AGENCIES AND ORGANIZATIONS SUPPORTING BIRD TLC.

- Alaska Veterinary Medicine Assoc.
- Anchorage Audubon Society
- Alaska Falconers Association
- Army National Guard

**BANIZATION** 

MEMBER SUPPORTED NON-PRO

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- United States Fish and Wildlife Service
- Alaska Department of Fish and Game



Photo by Danny Simmons

# HOW CAN YOU HELP?

Imagine for a moment what your world would be like without the beauty and song of wild birds. Sad isn't it. If you care about the preservation of Alaska's wild birds and their habitat, please show your support by contributing your time, financial assistance or both to Bird TLC. The annual operating expenses of the Center are kept to a minimum through the generous services of well-trained, energetic volunteers. However, the continued operation of the Center can only happen through the donations of corporations and individuals like yourself. Bird TLC is a private non-profit member sup-

Bird TLC is a private non-profit member supported organization. All contributions are tax deductible.

## **MEMBERSHIP BENEFITS**

- * Quarterly newsletter
- * Bird TLC patient updates
- Special "members only" programs
- Invitations to bird releases
- * Discounts on Bird TLC merchandise such as shirts, totes, hats, and cards
- Free Bird TLC pin
- * Knowing that you are helping to preserve wild birds and their habitat

# Bird Treatment and Learning Center



for wild birds and learning opportunities for people

[•] Bird Treatment and Learning Center

P.O. Box 230496 Anchorage, AK 99523 562-4852





# **Reflections on the Release**

On June 2, 1990 at Hartney Bay near Cordova, Alaska, I watched as nine American Bald Eagles were released back into the wild by volunteers of the Bird Treatment and Learning Center. The release brought to an end a year of feeding, care, love and commitment to these birds injured in the Prince William Sound Oil Spill. Helping to rehabilitate the eagles was the most rewarding experience of my life — everything from building the flight pens at Camp Carroll, to the moment when the last bird flew free at Hartney Bay.

As the first eagle stepped through the cage door and took flight I couldn't breathe; I didn't dare. As she flew free over our heads she carried with her the hearts of everyone watching. It seemed as though she couldn't believe it was real either! So used to seeing us below her as she flew her exercise laps, she did not immediately fly away to the distant tree tops; for three long beautiful circles she flew over our heads. She seemed to be flying in slow motion. Her grace and power brought tears to my eyes, and to those on the faces around me.

Because I so cherish my freedom, I empathized with the eagles' year-long loss of liberty, and tried to imagine how truly wonderful it must have felt to have that freedom given back. I only wish that all twelve birds could have been released on that day. One-Wing still stares at the sky from his flight pen and sees other wild eagles flying high overhead. Many times I've watched him stretch out his wing on windy days and let the breeze blow over his feathers. At those times when he lowers his head and leans forward into the wind, I can't help but think he is remembering what it was like to fly. One-Wing and the other two eagles will always have people to care for and look after them, but it will always be in a cage. No matter how pretty or fancy we make it, I am sure that they would much rather be flying free over the Sound.

I know that all of us who were lucky enough to help in the rehabilitation of the eagles felt that seeing those nine birds fly back to the wild was thanks enough for our efforts.

For everyone who didn't have the luxury of time or the advantage of living close to Camp Carroll as I did, but who sent their prayers, lent support and donations in all forms - I thank you with all my heart.

Man changed those eagles' lives forever, and the eagles forever changed mine. If they only knew how much love went with them on that day!

-Debbi Johnson

# WHERE WE'VE BEEN AND WHERE WE GO FROM HERE - C by Linda Simmons

# **EXECUTIVE DIRECTOR'S REPORT**

Dr. Scott has given us all a special gift and we are privileged to share in his dream - the Bird Treatment and Learning Center. It is said that nothing happens without a dream, and boy are they right! What has happened to Bird TLC since it was organized is remarkable. Dr. Scott developed the concept of Bird TLC after years of dedication to the wildlife of Alaska. In 1988 the idea began to come together and a board of interested hard working folks was gathered. This original board worked diligently to set the organizational wheels in motion.

Life changed in March of 1989 with the Prince William Sound Oil Spill - Bird TLC we became a M.A.S.H. operation for eagles and the Camp Carroll facility was soon built. Dedicated volunteers tackled tasks from feeding, to hammering nails, to cleaning cages, to helping with the medical treatment of the birds, to raising money, to training others. Baby birds came in just as they had every year before, but this time there were a few more able hands to receive them. Bird TLC was up and running; it became clear that the **dream** was on its way to becoming a reality.

The eagles threw us into the public eye. Film crews from all over the world seemed to find Dr. Scott's office and documented work done under his direction by many, many volunteers. The wonder of it all is that each of us was growing as this process was unfolding. The people that have become involved in Bird TLC are very special indeed. No organization can rival the dedication and caring of those at Bird TLC. What makes this organization so special? What makes these volunteers work so hard? What is the ingredient that makes folks not only from Alaska, but from Florida, Texas, Connecticut and Colorado want to help? I don't know if it can be put into words, but we all have part of the answer our part of the answer. Maybe the major part of the "what" is that Bird TLC is so multifaceted that it is tailored to the needs of everyone, each in his or her own special way.

Winter of 1989 came and the eagles were doing well at the facility; we started looking forward to that time when they would be released. We also started looking at the needs of our members, and a team of two instructors from the Colorado- based Hawkquest were asked to give a workshop on bird handling. A new wave of excitement began to run through Bird TLC. We learned about handling and we learned a lot more. Kin Quituqua, Terry Vogel and CeCe. (the Harris' Hawk) shared the growing days of their organization with us. We learned about what to do and what not to do. CeCe opened new areas for some of us. She flew across the room to a waiting fist and brought with her all sorts of possibilities. It was magic!

We learned from each other also. Our members involved in Fish and Wildlife activities taught us of transmitters and radio devices. Volunteers trained other volunteers to take care of baby birds. Many hours were put into preparing the information for the 1990 Baby Bird Seminar. Volunteers were made ready for the time when a phone call would, for a while, put them in charge of helping a baby bird survive. This is a job that is both heartwarming and heartbreaking. All don't survive, but as Dr. Scott says, we are all better for having tried.

As summer approached there was a growing excitement that the eagles were ready to be set free. A year of hard work and high hopes was about to come to an end. On June 2, 1990 nine eagles were released into a glen outside of Cordova. It is hard not to put human emotions on this event, but it would be hard for me to believe that these birds didn't feel an enormous sense of freedom when they flew free of walls and wire for the first time in months. It was a day that no one who was there will ever forget. These birds are being tracked and we have maps of their wanderings. Now they are represented by dots on a map, but for those who worked to care for them, for those who learned to care about them, they will always be more, much more.

It is proper to mention at this point that we have a few birds that will not be able to be released. One Wing is such a bird. He is an eagle who will never fly, but who soars in spirit. Now it seems he has a mate, or at least a significant other. It is our hope that the permanent facility will house all of Bird TLC and at least these two birds. They have become the spiritual symbols of Bird TLC. The work did not stop with the eagle release. Volunteers are being trained to go into the classroom to give programs. Lynn, Linda, and Kerry, gave programs at the Public Lands Information Center every Tuesday throughout the summer. Scout groups, Rotary and Lions clubs and classrooms of children all saw our educational birds. There is nothing like the feeling of seeing a child's eyes light up during a classroom presentation. We are making a difference. And still we look to the future.

Ahead for Bird TLC is a move to a permanent facility. The first step in this process is to purchase a piece of land where it can be built. We have found this piece of land and are in the complicated process of a real estate transaction. As part of our fund raising effort we are contacting corporations nationally and locally seeking their support. We also look to the volunteers of Bird TLC to help in this endeavor. I would like to hear from anyone who has an idea, or time to help with this effort. It might be as simple as making contact with someone you feel could help us out.

In closing let me say that I would like to thank Dr. Scott, the Board and the volunteers of Bird TLC for the chance to work for this organization. It is a privilege to work on the team. I know how lucky I am to love what I am doing, and wish everyone could experience what I experience as I get ready to come to work each day. My life has been blessed with the organization of Bird TLC. Thank you!



# Friends Fly Free -by Jim Scott

After a long year of recuperation some of our friends flew free June 2, 1990 at Harkney Bay outside of Cordova. All of the Bird TLC people that were present had lumps in their throats and more than a few had happy tears. Everyone of the nine eagles was a different story. The first looked at the crowd of people, took off right at them, then flew over their heads making a 360 degree circle around all of us as if to say goodbye. The birds were in great shape and one of the youngsters flew around us for ten minutes before landing.

I know that there are many things that we all saw that day, and that all had private feelings that will long be remembered. For me the most lasting impression was when the final bird was released; she gave a cry that triggered a cry from all the rest of the eagles as they sat in the trees around us. That, to me, was a thanks for our help and a farewell to all who had helped in their rehabilitation. It was a time to listen to the eagles with our ears and our hearts and I thank them for their gift to me.

And the All Station Bede \$ 190



# **BIRD PEOPLE...B. Doak**

Bird TLC is made up of a large and diverse group of volunteers - each one bringing to the organization his or her own particular talents and vision for the future. Beginning with this issue the Bird TLC Newsletter would like to introduce its readers to some of these volunteers, and let them tell of their involvement in their own words. For this issue we interviewed Barbara Doak.

Occupation: Psychologist for Alaska Area Native Health Service, USPH

Alaska Residency: 22 years

Hobbies: Gardening, Wildlife Watching, Camping, Ivory Carving

Q: How did you come to be involved with **Bird TLC?** 

years in Alaska. I have been a birder for about releasing a rehabilitated bird. Learning to do 60 years. I seem to have reached a stage in my things right - so that I feel competent and useful. life where I have time and energy to devote to -I've enjoyed showing the clinic birds to kids I something beyond family and work. Respect for find around the waiting room - it is a really good Jim and interest in his bird activities - combined educational opportunity that I think is with my own longstanding interests - made it a sometimes overlooked.

Q: What previous experience have you had with birds or rehabilitation groups prior to joining Bird TLC?

BD: I've had experience with cage birds at home ranging from a 13 year relationship with a blue and gold Macaw - technically my son's, by right of emotional bonding and purchase price, but very much my companion and responsibility as Dan made his way through college and

graduate school - to a period when we were overwhelmed with 100+ cage birds Dan had ordered for the pet store where he worked and which arrived well before their addition was ready for habitation. There was also a smaller parrot, many small Button Quail in the basement and finches in the kitchen! I've had no previous experience with rehab groups or clinics - except in the care of all the other creatures (non-bird) that my three building biologists had in residence at one time or another.

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Q: What skill or knowledge have you brought to your volunteer work that has proven particularly useful?

BD: Respect for, but not fear of the birds confidence when approaching and handling the birds seems essential. They sense attitudes and react accordingly. Also some skill in remembering bits and pieces of information and putting them together to answer a different question - such as 'what will make this food appealing to this bird?"

Q: What do you most enjoy about your work with Bird TLC?

BD: So many things...handling the birds learning what they feel like - what they look like up close - how they react to us as we work with them. Holding a Trumpeter Swan in my arms has got to be the ultimate joy, but Aristotle, the Snowy Owl and Grumpy, the Great Horned Owl are not far behind. Seeing a bird respond to

BD: I have known Jim Scott for all of our 22, what we are doing and recover. The thrill of

seem the best thing to get involved with. Q: Are there other aspects of the organization that you are interested in getting involved with? in the second

BD: I am really looking forward to retiring from my full-time job a year from now, more or less, so I can spend more time with the birds. I'd like to be able to be around during surgeries and some of the other procedures to learn more. I'd also like to begin doing some of the educational work when I have more time.

States - Stranger - Brand - Barlandar - Stranger

Q: Is there a particular bird that has become a favorite?

BD: Owls in general. I was particularly attracted to Aristotle when I first started at the clinic. Now I have Grumpy in the dining room and am learning to know him, and that too is a wonderful experience.

Q: You've given so much of your time and energy to Bird TLC, what is it that you get in return?

BD: The joy of working with the birds - of learning new skills, the pleasure of working with the clinic staff - knowing them better and learning from them, being involved with something totally different from my regular protessional pursuits. It truly is the high point of my week; exhausting but very intellectually and emotionally stimulating and rewarding.

EDITOR'S NOTE:. Since the time of this interview, Barbara has retired from her full time job and is thoroughly enjoying her free time. Bird TLC has benefitted from her retirement as now Barbara spends even more time at the Clinic and is a very dedicated volunteer.



The Camp Carroll Facility's main purpose for the past year has been to house and rehabilitate the oil spill injured eagles for release. Nine of those beautiful birds were released on June 2nd at Cordova, Alaska. Three eagles remain as semi-permanent residents at the center. Not long after the release, One-Wing and BE-14 were observed engaging in pairing rituals in the flight pen. Because eagle countship is elaborate and acrobatic we were anxious to learn how courtship would proceed without flight capabilities. One attempt at mating was observed, but it was not completed. Sticks were brought into the flight pens for nest building, but in the end no offspring were produced. They remain pair bonded birds who are frequently visited by free eagles who sit in the spruce trees edging the center.

In July and August Bird TLC received four more eagles, one of which - a small male from Adak- had a portion of his right wing removed by Dr. Scott, and is now doing fine at the center.

An extremely unique case arrived on the 10th of September from the North Carolina Raptor Center. An eagle which was hatched in an effort to reintroduce eagles into the Lower 48 states was returned to its native Alaska. On three separate occasions the bird was found exhausted and dehydrated on the ground in North Carolina - the last time in someone's front yard! This bird has become a resident of the center after undergoing a check-up at Arctic Animal Hospital.

Recent visitors to Camp Carroll include artist Jon Van Zyle, Mrs. Ann Stone - wife of the Secretary of the Army, B.G. Meade the Fort Richardson Commander. The Center wishes to thank the following people for their services and dedication: the feed and recovery crews - without you we couldn't do it!, The Alaska National Guard for letting us use their camp and building over the winter for storage and warming - SFC Calvers was our contact with the Guard and we want to especially thank him, The U.S. Army and its M.P.s, officers and veterinary clinic who have all been very helpful A special thank you to Ann Lombardi who was the post veterinarian prior to leaving the service, and lastly many thanks to all the people in Anchorage and the surrounding areas who donated fish for our eagle food bank when our supplies ran low.

# **Special Events Comittee -**

many manks to all oil our special Bird TLC. volunteers who have taken time to participate in numerous Special Events over the last several months.

Our public excosure really began to blossom at the Faith Day Fair on April 22nd at the Egan Center. Kerry Selfert and Hal, the Bald Eagle, stole the show. Ours was a very popular booth, affording the public a close-up look at a live Bald Eagle and some interesting facts about his species. We are still trying to figure out how Kerry managed to coerce Hal into being such a good sport for that 7 hour event! Thanks to all of the folks who helped us set up and dismantle our display in addition to handing out Bird TLC brochures and answering a myriad of questions about us and our birds.

As a follow up to the Earth Day Fair, Bird TLC and the Audubon Society set up displays at the Dimond Center and the University Center on the following two weekendsto further promote our organizations. Again, it was evident that the live birds were the main attraction - especially [] the Stellar's Jay, who seemed to chatter incessantly. It was agreed by all that these two weekends were great for public relations. Thanks to all of the volunteers who manned the sales and information tables and handled the birds - you made these events a success!,

Among our May activities was the Baby Bird Seminar held on May 19th. Thanks to Rustye Spencer and Barbara Hedges for compiling the information in the manual and to Rustye for presenting the program.



A very special event took place on June 2nd in Cordova, Alaska, as Bird TLC Volunteers, Exxon Glenda Hernandez employees and U.S. Fish and Wildlife Service employees released 7 eagles injured in the 1989 Prince William Sound Oil Spill, and 2 other rehabilitated eagles. This special event was captured on film and video by Bird TLC photographer Danny Simmons. We certainly owe a debt of gratitude to our faithful volumeers who fed and cared for these birds from April 1989 to june 1990.

> Kenai Fjords Seabird Safari -On June 9th, 56 Bird TLC members and friends travelled to Seward where they boarded the MV Spirit to cruise Resurrection Bay. What a hey-day for our birdwatchers. Viewing included Tufted Puffins, Horned Puffins, Black-legged Kittiwakes, Marbled and Kittslit's Murrelets, Rhinocerous and Parakeet Auklets, Guillermots and Sooty Shearwaters. The Bald Eagle also put in an appearance. Also included as a bonus for our adventurers was an abundance of marine mammals including Dall Porpoise and Sea Otters.

Anchorage's REI (Recreational Equipment Incorporated) store has made Bird TLC the beneficiary for their annual REI/Nike Fun Walk. This year's event took place on June 5th. The run got underway at 7pm at the Alaska Club on Tudor Road. The weather was great but participation was limited, probably due to a lack of publicity. There was a \$4.00 registration fee and participants received their choice of several gift items including T-shirts, water bottles and fitness books. Next year we hope to have lots more folks to join Glenda Hernandez and Linda Simmons in what we hope will become a good fund raiser. REI announced that in the future June will be Bird TLC month at their store. We will have a display set up during the month and will have a live bird show on an evening prior to the actual - Fun Walk. On May 31st this year's program was presented to a captivated audience of 75, with a host of demonstrators and live birds.

The August volunteer meeting was held during our first annual Bird TLC Volunteer Picnic. Approximately 50 volunteers and their families turned out for fun and food on a beautiful summer evening at Sitka Park. We were able to wish Rustye

Spencer farewell as she prepared to move back. home to Texas. Rustye shared her considerable expertise and valuable time with us this past year 1 and will be missed by everyone at Bird TLC! We also wished an early farewell to Karen Chaviano, AAH technician and Bird TLC volunteer who will be leaving Alaska in October. Good Luck to both of these excellent volunteers, and keep in touch!

The Fall months, saw us settled into our new offices, and we had our First Volunteer/Membership meeting at the McKay St .office. At the September meeting, several of our educational birds were presented and as always it was a very worthwhile evening.

A special Volunteer Recognition Evening was held on October 15, 1990 at the Sourdough Mining Company. Dr. Scott individually recognized each volunteer for their contribution to our organization. We are truly fortunate to have so many dedicated people with Bird TLC. This was truly an enjoyable evening for all.

November and the "bewitching season" found Bird TLC along with the Alaska Zoo presenting a "Haloween Happening" on the zoo grounds. This by Lynn Catlin and Sherrie Hind of the Alaska Zoo. Everyone tells us that it was really a great fun-filled evening! We had lots of help from the Bird TLC volunteers and we thank each of you!

The December Volunteer/Membership meeting featured educational presentations by several Bird TLC volunteers who are completing their training in preparation for classroom presentations. A special touch was added with a "bird" ornament exchange.

A BIG, HEART-FELT thank you to all of the volunteers who have helped Bird TLC have an outstanding year.

# **Education Committe Report**

The following educational activities were arranged by our former Education Director, Lynn Catlin. Lynn did a great job for BIrd TLC and her efforts and expertise will be missed. Steeling and the state

Bird TLC's Education Program has been humming along smoothly. Volunteers and Education Program Director, Lynn Catlin were busy presenting programs to school, scout, adminimetandiccommunity groups. From March through June, Bird TLC staff and volunteers taught 1,922 school children about owls, eagles, Alaska's avian migrants and the effects of oil spills on birds. On Earth Day our booth at the Earth Fair stole the show thanks in our educational birds. Overto COO people were introduced to Bird TLC and the wonders of birds in just one day! Many more folks were reached by Bird TLC's booth in the malls on the following two weekends.

The Family Programs were a big success Old and new Bird TLC members discovered bird banding, sought after snipe and were serenaded by Song Sparrows at Bird TLC spring events. The Kenal Fjords Seabird Safari was wet but wonderful. Rain didn't dampen spirits as 56 passengers watched puffins and porpoises, raising \$255 for Bird TLC's Nature Center fund.

Bird TLC presented summer programs for Alaska visitors every Tuesday at the Alaska Public Lands Information Center. These "Alaska Wild Wings" presentations alternated between Owl and Eagle was an educational and fund-raising event arranged Programs. Over 700 people learned about Bird TLC and met our educational birds. Alaska Aquarium generously donated a beautiful plexiglass bird feeder donation box, which they designed and built for us. Donations have doubled since we began using the feeder box. Bird TLC reached children this summer through library and camp programs, as well as the whole family at the Alaska State Fair.

> Training for Bird TLC education volunteers is progressing as we prepare for fall school groups. Twenty-five volunteers participated in an all day "mini- ornithology" and bird handling class in early April. Volunteer training is ongoing including additional seminars, observing sessions, and assisting at presentations. Many volunteers got some experience handling the birds and the public at the Earth Fair and the mall booths.

> Anyone interested in birds and willing to share that interest with school kids is welcome to join Bird TLC's education volunteer entourage. Call Bird TLC at 562-4852 if you want to get involved!

THANK YOU'S Bird TLC cannot function without its dedicated volunteers. The following people have been very generous in many ways. This list has been compiled from a variety of sources so there is no special order. Jerry Johnson P.J. Warniers Sarah Cronk Jensen Seifert Cathy Novoteny Rose Williams Margo Haertel Debbi Johnson Barbara Hedges Alex Carter Karen Chaviano Vem Selfert Dr. William Mills Alaska Aquarium Linda Simmons Allison Butler Mike Weldmer win Cane Chaia Ross Booke Danny Simmons Anita Pritchard Sheri Whitethorn Gallery Alaska Emily Ross-Booker John Ross-Booker Geneva Ross-Booker Rebecca Knight Angela Wan Colin Matthews. Pam Ulsager Kathy Matthews Joe Blazek Cheir Condon Shirley Jacobson Torie Heart Dr. Brian Dowling Dan Shelden **Christy Smith** U.S. Army National Guard Wayne Rush Steve Hattie Larry Weise Ioanna Walch Geri Harington Woutrina Smith Mac Alaska Ken Rowedder Dianna Rowedder George Kasparek Crystal Hartman Mike Luke Barbara Allen Barbara Harrell Susan Richards.

Mike Luke Karolann Lohgo Martin Longo Rustye Spencer Jocelyn Barker Jeanne Nederbrock Pal Illias Linda Hattie Colleen Hart Scott Martinez Barbara Doak Valesa Linnean Doug Swalim Keny Selfert Nick Selfert Dee Fox Tom Choate Małcolm Ford Caroline Kline Phillip Kline Janna Foreman Jean Shadrach Judy Mood John Warden

Ingeborg Rathke Loretta Riley Meg Kurtagh Carol Scott Shelley Hoover Cindy Bonker Loretta Fitzgerald Kelly Johnson Beverly Chmielarczyk Merideane Kennison Glenda Hernandez Mike at Bobs' Services Inc. Dr. Riley Wilson Andrew Felsh Judi O'Neale Ardy Schiller Jerome Schiller **Gretchen Schiller** Dr. James Scott Emie Whitney Tenth and M Seafoods Kentucky Fried Chicken The Staff of Arctic Animal Hospital Tina Richardson

Margo Haertel Chaia Ross-Booker Gallery Alaska Emily Ross-Booker John Ross-Booker Geneva Ross-Booker Christy Smith Larry Weise Geri Harington Barbara Allen Barbara Allen Barbara Allen Barbara Harrell Sara Pullen Sheri Hind Darrin Masters Rick Good Pat Lampi Dr. Craig Harms U.S. Department of the Army Rob Scott Randy Steen Cathy Scott Pam Barnes Nancy Lee Evans Dolly Hansen Christine Maack Mary Arm Nastro Partick Ventgen Tim Sells Scott Banke Suzame Carpenter Marie Dochnahl Tom Gallagher Lynn Seifert Jr. William Mills Alaska Aquarium Bev Cratel Angela Ware Pam Ulsager Cher Cordon Dr. Brian Dowling U.S. Army National Guar Wayne Rush Woutrina Smith Mac Alaska Sandra Looman-Talbot Sheny Dugan Jon Van Zyle Voyageur Press Dr. Celia Valverde Judy Rush Greg McClellan Mike Earl U.S. Fish and Wildlife Service Alaska Department of Fish and Game Russ Galdes Cheryl Costigan Dwayne Bonker Jim Sheridan Graig McClure Dean Rickerson Mark Moderow Bruce Batten Caroline Thompson Jay Hammond Norma Goodman Walter Stiegletz Dave Purington

#### Public Relations Committee Report Linda Simmons

To date Bird TLC has found itself in two publications. The Phillip Morris Magazine, distributed mainly on the East Coast, printed a very nice article about us in their March/April 1990 issue. As a result of this piece we received \$2,007.00 in donations and membership fees from individuals impressed with our organization and its goals.

In August we were featured in that month's issue of Alaska Magazine. One-Wing, the Bald Eagle, a resident of our Camp Carroll facility, was pictured on the cover. This was a wonderful article accompanied by beautiful photos taken by John Warden. We have, thus far, received over \$3,000.00 in donations from this story. Special thanks to John Warden and to the folks at Alaska Magazine.

### Fund Raising Committee Report Linda Simmons

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Fund Raising is currently working on several exciting projects. Jon Van Zyle has agreed to do a second print for Bird TLC. No details are set, but we hope to see the print released in 1991 near the anniversary of the June 2nd Eagle release.

The Bird TLC video was completed in early September. It has been sent with an information packet to various corporations and foundations to help raise funds for Bird TLC's permanent facility.

We have an abundant supply of Bird TLC merchandise now available. John Warden's beautiful photographs grace a set of oversized postcards. They are 5.5 x 8 inches, sell for \$0.75 and include photos of Owliver the Saw Whet Owl, three Hawk Owl babies, two Puffins and a family of Canada Geese. We also have a set of 12 notecards(with assorted pictures), blue Bird TLC tote bags, pins, patches, painter caps and sweatshirts.

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# Meet the Bird TLC Board!

Bird TLC is truly fortunate to have such a dedicated and enthusiastic Board of Directors. The Board members are: Dr. James Scott D.V.M., Bev Grafel, Alex Carter, John Warden. Chet Gordon. Tom Gallager and Dr. William Mills. These jolks have spent untold hours shaping the Bird Treatment and Learning Center's goals and building its organizational framework - in addition to a lot of hands on work with birds and numerous projects. We have managed to track down most of the Board members and put a few questions to them so that those of us who have not had a chance to meet and talk with them can learn a little more about this diverse group.

### TELL US SOMETHING ABOUT YOUR BACKGROUND, OCCUPATION AND INTERESTS:

# Fledging Newsletter Needs Name

Now that Bird TLC's newsletter is up off the ground let's give it a name! If you have a clever, catchy, cute or comical name for our publication please share it! Suggestions can be submitted in writing to P.O. Box 230496 Anchorage, Ak 99523. All ideas will be considered at upcoming Board and Volunteer meetings.

Bird TLC Newsletter is the newsletter of the Bird Treatment and Learning Center, P.O. Box 230496, Anchorage, AK 99523 (907)562-4TLC. Editor: Merideane Kennison

### **Photographer: Danny Simmons**

Writers: Alex Carter, Lynn Catlin, Glenda Hernandez, Debbi Johnson, Jerry Johnson, Merideane Kennison, Jim Scott, Linda Simmons

Any articles or visual material will be gladly reviewed for publication. Letters to the editor are welcomed! Deadline for the Spring issue will be March 1, 1991. J. Scott: 1 am a Doctor of Veterinary Medicine. My interests include taking care of birds, carving sculptures of birds, and silver work - usually of birds!

**B. Grafel:** What occupies most of my time is my full time work as writer/editor for the Fish and Wildlife Service. I work on sundry products including videos and leaflets. The wonderful part of my job is that most often the subjects I deal with are about the natural wonders of this state - usually its wildlife. My hobbies are black powder, muzzle-loading target shooting, playing the accordian, fishing and hunting and bird watching. I hope to add wildlife rehabilitation to this list, if at all possible!

A. Carter: I work as an Environmental Specialist and Resource Manager for the National Park Service. My special interests are working with raptors, birdwatching, enjoying Alaska's natural world and collecting old radios.

J. Warden: I moved to Alaska in 1977, having lived previously in Ohio, Oregon, Iowa and Virginia. My occupation and special interest is photography. I would be happy to share my photographic knowledge with anyone in the organization - just give me a call!

T. Gallagher: My wife Allyson and I have lived in Alaska for over 25 years, and have a son, Ryan and a daughter, Megan. We have lived in Anchorage for 20 years and have been active in the community. We enjoy making Anchorage a better place to live and raise our family. I am the Assistant Director of Local Government and Community Affairs at B.P. Exploration. I enjoy building, gardening and fishing.

### WHAT SPARKED YOUR INITIAL INTEREST IN BIRDS?

J. Scott: My interest started many years ago, when as a boy I helped care for an injured baby bird.

B. Grafel: It would be difficult to live in Alaska without becoming attached to the magical sense of personal friendship with Dr. Scott and past the bird migration here. Taking care of them is Important too. Once when I was at the clinic Dr. Scott was caring for a Sandhill Crane that had migrated here from the south with just one leg. Someone had found him at Kincaid Park. I remember thinking what a marvel it is to be able to fly such distances - let alone making the journey with only one leg!

A. Carter: My interest stems from being raised near the Blue Ridge Mountains of Virginia and having the frequent opportunity to see different species in their natural setting. My interest increased when I lived in Colorado and now here in Alaska.

J. Warden: My interest developed early. As a child I was able to observe birds at our home bird feeder and also in nearby forests that I regularly explored.

T. Gallagher: I've worked for many years with Anchorage Audubon on the Annual Wildlife Art Show. I also live in the Rabbit Creek area, above Potter Marsh which affords great birdwatching opportunities!

> HOW DID YOU GET INVOLVED WITH BIRD TLC?

J. Scott: I know this guy that likes birds.(!)

B. Grafel: When I was first introduced to Dr. Scott and his work I became intrigued with his idea of a nonprofit organization working with and for wild birds. I suppose I was one of the persons egging him on - "You can do it!", I said. Soon there was a chorus of others chanting to him - "We'll help!". What else would you say to someone who has that faraway look and a twinkle in his everwhen he talks of his love of birds, or describes the medical feats he performs?!

A. Carter: My involvement really began before Bird TLC existed. Discussions with Dr. Scott while he was treating my cars and bollow up directlings with Bev Gratel, Dr. Scott and John Warden all eventually led to the establishment of Bird TLC. Our friendships and working relationships were further strengthened as we cared for the oil-spill injured birds.

J. Warden: I became involved through my association with the Audubon Society.

T. Gallagher: Linda Simmons twisted my arml I've been supportive of an Anchorage Nature Center for 5-6 years now, and know the need exists for both education on, and treatment of birds.

### WHAT ARE YOUR GOALS FOR BIRD TLC?

J. Scott: My goals are (1) establishing a permanent home in our own building (2) expanding the educational programs statewide (3) Researching medical methods in all sizes of birds, and (4) to make it to 70 as a wild bird D.V.M.!

B. Grafel: Let's think big. Eventually, I would like to see a worldwide focus (educationally and otherwise) on birds. There are, of course, conservation organizations who focus on birds, but could it become a national pastime (instead of NFL)? Perhaps saving habitat could be a worldwide priority, we could start by saving wetlands here in Anchorage.

A. Carter: My long term goals for Bird TLC are to (1) achieve Dr. Scott's lifelong dream of providing medical care for all injured birds and opportunities for people to learn about birds and their importance in our natural and man made worlds. (2) To develop an active volunteer program for the many interested and energetic people in the Anchorage area to become involved in. (3) To develop a comprehensive educational program that reaches all people in all walks of life ... and provide people with the opportunity to observe birds up close.

J. Warden: To start with, my goal is to secure and stabilize a solid funding base, and to provide medical care for wounded birds and learning opportunities for people. Eventually I would like to see a new facility built that can serve as a focal point for widespread community involvement and treatment of wild birds.

**T. Gallagher:** My goals are threefold: (1) to raise funds to build a center (2) to build it! (3) to start to educate the general public and school- age children.

# **Bird TLC Staff**

- by Alex Carter and Merideane Kennison

1990 has been a year of tremendous growth and change for the Bird Treatment and Learning Center. As dreams and ideas coalesced, the basic function and form of the organization became clearer, and the need for paid staff positions grew apparent. By the fall of the year, three special individuals had been found to fill the jobs of Volunteer Coordinator, Executive Director and Rehabilitation Assistant.

**Glenda Hernandez** became the Bird TLC Volunteer Coordinator and Office Administrator in March 1990. Glenda brings with her over 15 years of experience with non-profit organizations and volunteers. She was integral to the success of two youth hockey associations, as well as providing administrative support to the associations' Board of Directors and serving as Office Manager.

Glenda brings incredible energy and enthusiasm to this pivotal Bird TLC position. Her friendly, outgoing personality and office efficiency have enlarged and focused our volunteer group. Glenda's efforts and diligence ensured Bird TLC volunteer rehabilitators travel to and from the release site in Cordova. <u>Somehow</u> she managed to coordinate the event, which meant dealing with a large corporation -Exxon, an established Alaska air carrier, and a major federal agency - the U.S. Fish and Wildlife Service. An amazing feat in itself!

Linda Simmons was selected as Bird TLC's Executive Director in June 1990, providing program coordination and leadership for the organization. She supervises the staff and is responsible for fund raising,

publicity and the annual budget. She works directly with Dr. Scott, the Board of Directors and the volunteers to ensure that all activities run smoothly. Linda is well qualified for the position as she comes from the Advertising Federation of Alaska, where she served as the Executive Secretary. In addition, Linda served for many years as the committee chair for the annual Anchorage Audubon National Art Exhibition of Alaska Wildlife.

According to Linda, in the past, her relationship with birds amounted to "superficial attraction", she found them appealing but didn't want to get personally involved. Today this woman who was leery of holding a canary has all but converted her home into a Bird TLC educational bird residence, a sort of avian halfway house! She and her husband Danny (also an active volunteer) have cared for a Northern Hawk Owl, several pigeons, two magpies and are even willing to take on an additional Short-eared Owl! Regarding her changed attitude towards birds, Linda only grins and says,"It's hard to explain!"

**Debbi Johnson** became the Bird TLC Rehabilitation Assistant in September, 1990. Before coming to Alaska, she worked as a veterinary assistant and also as a volunteer for the SPCA. Debbi has played a key role in the establishment and operation of the Camp Carroll Eagle Rehabilitation Center. In her new position Debbi (along with her husband Jerry) will continue to oversee the Center's operations. In addition, she will assist Dr. Scott at the Arctic Animal Hospital in providing medical and rehabilitation treatments for orphaned, injured or sick birds. Debbi will also be responsible for training volunteers in basic rehabilitation and injured bird handling techniques.

Debbi typifies Bird TLC volunteers and staff — she has a sincere commitment to wild bird care, and a willingness to devote the time and energy necessary to get the job done.



### BOARD OF DIRECTORS

Alex Carter Tom Gallagher Chet Gordon Bev Grafel Dr. William Mills Dr. James Scott John Warren

STAFF Executive Director: Linda Simmons Volunteer Coordinator: Glenda Hernandez Rehabilitation Assistant: Debbi Johnson

# OFFICES

Bird TLC Offices [ Suites 101 & 102 6108 MacKay St. Anchorage, AK 99518 (907) 562-4852 (4TLC)

### **MEETINGS:**

Board Meetings: 1st Monday of each month Volunteer/Membership Meetings: 2nd Monday of each month Call 562-4TLC for times and locations

# Become a gember of BIRD TLC!



Please Mail to: BIrd Treatment and learning Center P.O. Box 230496 Anchorage, AK 99523

Name	
Address	
City	State

Zip _____Phone _____

Please Check area(s) of interest:

- □ I Want to become a Bird TLC Volunteer
- □ Individual Membership \$20
- Tax Deductible Donation

All Donations are deductible Thank you for supporting the **Bird Treatment and Learning Center** 

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Working for the Nature of Tomorrow, NATIONAL WILDLIFE FEDERATION

1400 Sixteenth Street, N.W., Washington, D.C. 20036-2266 (202) 797-6800

ECED APR | 6 1991

April 15, 1991

Rosanna Ciupek Office of Water WH-556 U.S. EPA 401 M St. SW Washington, D.C. 20460

Dear Ms. Ciupek:

This is to confirm that you have allowed the National Wildlife Federation an extension of the comment period for its comments on the 1991 Restoration Workplan, 56 Fed. Reg. 8898 (March 1, 1991).

When these comments have been completed, per your request, we will submit them directly to you by hand at the above address. We will also send a FAX copy to the Oil Spill Restoration Planning Office in Anchorage.

Thank you for your help in this matter. I look forward to discussing restoration issues with you in the future.

sincerely, Doug Wolf Counsel, Alaska Issues

Working for the Nature of Tomorrow,



NATIONAL WILDLIFE FEDERATION

1400 Sixteenth Street, N.W., Washington, D.C. 20036-2266 (202) 797-6800

April 19, 1991

Rosanna Ciupek Office of Water WH-556 U.S. EPA 401 M St. SW Washington, D.C. 20460

Dear Ms. Ciupek:

Pursuant to the agreement outlined in the attached letter and 56 Federal Register 8898 (March 1, 1991), I enclose the Comments of the National Wildlife Federation on the Draft 1991 Restoration Work Plan.

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Thank you for your help in this matter.

Walter Land Broken Berthan Bar

Sincerely, Doug Wolf

Counsel, Alaska Issues



NATIONAL WILDLIFE FEDERATION

1400 Sixteenth Street, N.W., Washington, D.C. 20036-2266 (202) 797-6800

#### COMMENTS OF THE NATIONAL WILDLIFE FEDERATION

ON THE DRAFT 1991 RESTORATION WORK PLAN

#### REGARDING

#### THE EXXON VALDES OIL SPILL

[56 Federal Register 8898, March 1, 1991]

Prepared By:

~~~~ \*\*\*\*

Douglas Wolf Erik Olson

April 15, 1991

Printed on Recycled Paper

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#### INTRODUCTION

The National Wildlife Federation ("NWF" or "the Federation") is very concerned about the failure of the <u>Exxon Valdez</u> oil spill 1991 Restoration Work Plan to provide urgently needed protection to wildlife habitat in and around Prince William Sound which is threatened by clear-cut logging (and other threats). The natural resources Trustees must take immediate steps to ensure habitat protection as part of the 1991-92 restoration program for the catastrophic <u>Exxon Valdez</u> spill<sup>1</sup>. In order to satisfy this critical need, the Trustees should defer recovery of past costs from the payments pursuant the proposed settlement and/or use their own money and seek compensation from the tail end of the settlement payments. <u>The Trustees should act quickly and ensure</u> that there are adequate funds to restore the stressed environment in the Sound or face a collapse in critical elements of these fragile ecosystems.

....

NWF is the nation's largest private conservation education organization. Founded in 1936, the Federation, its 5.5 million members and supporters, and 51 affiliated organizations, educate, empower, and inspire individuals and organizations to conserve fish, wildlife and other natural resources, to protect the environment, and to build a globally sustainable future.

For several years, NWF has been involved in oil spill and natural resource damage issues. The Federation is actively working on oil spill issues and is on the forefront in urging safeguards to prevent damages such as those associated with the <u>Exxon Valdez</u> oil spill. NWF, the Wildlife Federation of Alaska and the Natural Resources Defense Council, represented by the Trial Lawyers for Public Justice, have filed suit against Exxon and Alyeska Pipeline requesting the court create a trust fund which would aid in restoring the natural resources damaged by this catastrophe. In addition, the Federation continues to participate in the <u>Valdez</u> spill natural resource damage assessment process via comments submitted in the public record.

<sup>&</sup>lt;sup>1</sup> Under the scheme set out in the Clean Water Act and the Superfund statute, trustees must be appointed to represent injured natural resources. In the case of the Exxon <u>Valdez</u> oil spill, there are both federal and state trustees (collectively, the "Trustees"). The federal trustees are: Department of the Interior, Department of Commerce (through the National Oceanic and Atmospheric Administration, NOAA), and the Department of Agriculture (the "Federal Trustees"). The Alaska state trustees are: Department of Fish and Game, Department of Environmental Conservation, and Department of Law (the "State Trustees").

The Federation walcomes this opportunity to provide input on the 1991 Restoration Work Plan for the <u>Exxon Valdez</u> oil spill. This Work Plan is important to NWF, its members and supporters. As one of the principal plaintiffs in the State of Ohio et al. v. Department of the Interior, 880 F.2d 432 (D.C. Cir. 1989) and State of Colorado et al. v. Department of Interior, 880 F.2d 481 (D.C. Cir. 1989) (collectively, "Ohio case"), NWF confirmed that restoration, replacement, and acquisition of the equivalent (hereinafter sometimes referred to simply as "restoration") of damaged natural resources in the paramount goal of governmental Trustees representing those resources. Similarly, in In Re Acushnet River and New Bedford Harbor: Proceedings Re: Alleged PCB Pollution, 712 F.Supp. 1019 (D. Mass 1989), NWF intervened and successfully established the important precedent that natural resource damage settlements must include measures to assure restoration and must include a "reopener" for certain long-term damages.

IMPLEMENTATION PROJECT 4, ACQUISITION OF HABITAT, WARRANTS HIGHEST PRIORITY AND IMMEDIATE ACTION

The Exxon Valdez oil spill was a colossal assault on the Prince William Sound ecosystem<sup>2</sup>. As the eleven million gallons of oil spread through the Sound and into the Gulf of Alaska and other areas, a parallel assault began on the same ecosystem. In various locations across the Sound, logging activities were planned or initiated. Due to the steep slope of the forests surrounding Prince William Sound and the clear-cutting practices employed by loggers, this logging compounds the serious threat posed to the entire ecosystem. Critical components of the area's ecosystem brought to the brink of devastation by the spill could be overcome by the added environmental insults engendered by clearcutting.

Clear-cut logging causes erosion which threatens water quality and thus threatens fish that depend on the streams and

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<sup>&</sup>lt;sup>2</sup> This assault is more tragic because it was completely avoidable. Investigations concluded that Exxon's negligence in pushing its small crews to high-speed transit and exhaustion in dangerous conditions combined with disregard of Captain Hazelwood's severe alcohol problem contributed to the grounding. Further, documents recently released by California's Representative to Congress, George Miller, conclusively demonstrate that Alyeska Pipeline Service Corporation unilaterally abandoned it legally-binding obligation to fully protect Prince William Sound from spilled oil.

coastal areas in the Sound. Logging also eliminates or degrades habitat for much of the wildlife hardest hit by the spill, including eagles, seabirds, anadramous fish, and other marine and terrestrial fauna. Summaries of natural resource damage assessment studies conducted by the Trustees and recently released by the Federal Trustees, while conclusory and not accompanied by actual data or studies, suggest the magnitude of impact from the spill and reveal the extent to which these effects are likely to last. These ecosystems are reeling from the effects of an eleven million gallon oil spill compounded by environmental degradation associated with extensive clear-cut logging.

Fortunately, the degradation caused by the logging is completely avoidable. As "Project 4" in the Federal Register notice makes clear, one of the principal restoration options available to the Trustees is acquisition of equivalent resources. 56 Fed. Reg. 8899 (March 1, 1991). As in the case of the Exxon Valdez spill, where damage to the natural resources is so extensive that direct restoration and replacement activities cannot fully put the ecosystem back on its feet, equivalent resources "that provide[] the same or substantially similar services as the injured resources" must be acquired. Id.; see also, Ohio case. And where the cost of direct restoration and replacement activities and acquisition of equivalent resources does not equal the total amount of direct, use and non-use damages caused by the spill<sup>3</sup>, the damages recovered for lost use and non-use value must be used to compensate the public and the injured ecosystem through additional restoration and acquisition.

One of the Trustee agencies, the Alaska Department of Fish and Game, recognized logging as a threat to the Prince William Sound and persuaded the Governor to request a \$40 million appropriation from the Alaska Legislature to acquire timber rights to the trees most likely to be felled. The Department's goal is to commence acquisition of equivalent resources in order to avoid the deleterious effects of planned logging. As the 1991 Work Plan Federal Register notice correctly explains:

Failure to undertake timely restoration may allow damages initiated by the spill to continue or

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<sup>&</sup>lt;sup>3</sup> Recent press reports indicate that the economic use and non-use damages caused by the spill are in the range of \$3-8 billion. See Attachment A. "Non-use" damages, which are recognized by statute and by federal courts, are damages suffered by individuals through interference with their option to visit the injured resources or through destruction of those resources.

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accelerate, as in the case of the loss of stabilizing vegetation on beaches. In other cases, protection of strategic habitats, subject to land-use changes, can reduce cumulative stresses on injured resources and maintain, in the near term, a full range of restoration options. Finally, the importance of a resource for subsistence, commercial, or recreational purposes may justify prompt restoration action.

#### Id. at 8902.

The Governor's first proposal of this project to the Alaska Legislature, and a December 21, 1990 draft of the <u>Federal</u> <u>Register</u> notice on the 1991 Work Plan obtained by NWF, provided \$40 million for such initial acquisition. There are few differences between the December 21 draft and the final March 1, 1991 <u>Federal Register</u> notice; one critical difference, however, is that this \$40 million price tag for implementation project four, "Protection of Strategic Fish and Wildlife Habitats and Recreation Sites," <u>has been deleted</u>. NWF is deeply concerned that this deletion may signal a retreat from the Trustees' commitment to swift acquisition of critical habitat.

Experts who have analyzed restoration options recognize its importance and conclude that \$40 million could pay for no more than a pilot project. This sum would likely be able to protect only a small fraction of the most threatened habitats; <u>at least</u> <u>\$300 million</u> is needed in the short term just to protect certain Prince William Sound and upper forests from logging<sup>4</sup>.

Thus, the \$40 million price tag could have been deleted from the <u>Federal Register</u> notice because the Trustees recognized that the figure is too low. Unfortunately, it is probable that the number was deleted pending receipt of information regarding the amount of money which will be available from the proposed settlement.

Thus, it appears that the Trustees failed to analyze what measure of restoration is necessary; instead they are tailoring the restoration program to the small amount of funds projected to become available in the short term from the settlement.

<sup>•</sup> A single study regarding the cost of purchasing timber rights for Prince William Sound and the Upper Kenai Peninsula concludes that \$200-300 million is needed. See Attachment B. N.B. this does not include timber rights for other areas and does not analyze threats to habitat other than logging.

NWF strongly objects to this backward thinking. Instead of attempting to decide the extent of restoration and acquisition that is possible with the funds recovered through settlement, the Trustees are under an obligation to determine the costs of restoration, replacement, and acquisition necessary to return the accesstem to full productivity and diversity, plus the lost value of the resources. Then, the next step is to ensure that funds are sought to fulfill these obligations. <u>See</u>, <u>Ohio</u> case.

The <u>Federal Register</u> notice states: "When the full amount of restoration funds that will be recovered has been resolved, final determinations will be made concerning the nature and scope of the remaining phases of restoration." <u>Id</u>. at 8899. Thus, due to the settlement's limitations, under the approach announced in the <u>Federal Register</u> notice, the Trustees may not be able to prevent extensive clear-cut logging from permanently crippling Prince William Sound's ecosystem and recreation values.

Contrary to the appropriate approach, the <u>Federal Register</u> notice also acknowledges that "[w]here the nature of the resource injury is reasonably clear, it may be desirable to begin restoration prior to receipt of funds from the parties responsible for the oil spill." <u>Id</u>. at 8902. NWF strongly urges the Trustees to proceed with a greatly expanded version of project four: the immediate threat of logging to Prince William Sound is clear<sup>5</sup>. This is, at a minimum, the fiduciary obligation of the Trustees.

THE SCIENTIFIC STUDIES OF THE SPILL'S IMPACTS MUST BE RELEASED TO ALLOW MEANINGFUL PUBLIC PARTICIPATION AND TO ENSURE PROPER RESTORATION.

One of the most important problems with the restoration plan is the complete failure of the Trustees to release the basic scientific data upon which any restoration plan must be based. Without the scientific analyses and data on the spill's impacts, the public and independent scientists who are not privy to the massive data banks accumulated by the Trustees and Exxon cannot provide meaningful comments on the plans for restoration, replacement, and acquisition. The data and analyses must be released now.

<sup>&</sup>lt;sup>5</sup> Logging is the most dramatic threat to the ecosystem. Similar protection should be applied in the context of existing and planned mining and development efforts. These additional threats underscore the insufficiency of the original.\$40 million price tag attributable to Project Four.

The federal government's recent decision to release a brief summary of these data as part of the settlement is a small step in the right direction. However, the information provided in this summary is oversimplified and conclusory, and is not accompanied by the actual basic data or scientific analysis necessary for the public and outside scientists to understand and comment upon the results. Without these data and analyses regarding the extent of the injuries to the important elements of the ecosystem at locations throughout the affected area, the public cannot assess likely past and future impacts of the spill. Therefore, in many cases it is impossible to advise the Trustees regarding the optimum restoration approaches. This is a violation of the legal requirements to provide opportunity for public participation in the restoration planning process pursuant to the Administrative Procedures Act, the National Environmental Policy Act, and the Clean Water Act.

THE PROPOSED SETTLEMENT SHOULD NOT DISRUPT THE DAMAGE ASSESSMENT AND RESTORATION PROCESS

On March 13, 1991, the United States and Alaskan governments announced a proposed settlement agreement reached with Exxon Shipping and Exxon Corporation<sup>6</sup>. The prospect that the settlement may provide money to finance restoration activities should not short-circuit or distort the essential program of scientific studies of the on-going damage to the Prince William Sound caused by the <u>Exxon Valdez</u>. In the absence of this scientific program, comprehensive restoration is impossible. Furthermore, surrendering this program also surrenders the already very limited value of the rigid reopener provision contained in the Consent Decree.

• The proposed settlement includes a criminal plea agreement and a settlement of civil claims memorialized in a Consent Decree , and a Memorandum of Agreement. The agreements would allow Exxon to extend its payments, and the governments' proposal for implementing the agreements creates perverse incentives to shortcircuit crucial elements of the damage assessment and restoration process.

See Attachment C -- NWF comments on the plea agreement.

<sup>&</sup>lt;sup>5</sup> Alyeska Pipeline achieves significant benefits from the settlement terms. The Company is relieved of criminal liability, despite recently disclosed evidence of criminal behavior in connection with developing its contingency plan. The Company is also absolved from paying damages pursuant to civil claims by the governments for natural resource damages.

#### The Settlement Terms

If approved, the criminal plea agreement requires a criminal restitution payment of \$50 million to the State of Alaska. The plea agreement restricts use of the monies to restoration activities. The civil Consent Decree also requires payments of monies which are limited to restoration expenditures. According to the Decree, Exxon must pay \$900 million over a ten and a half year period. Theoretically, an additional \$100 million could be available via a narrowly drawn reopener provision. The governments are authorized to deduct up to \$134 million in costs incurred and paid in the past and most of these deductions would be applied in the first few years of the payout schedule.

The Consent Decree provides that the agreement can be reopened to pay damages discovered after the settlement is lodged with the court (between September 1, 2002 and September 1, 2006).

<sup>8</sup> The agreement provides that the money is to be used:

exclusively for restoration projects relating to the "EXXON VALDEZ" oil spill. Restoration includes restoration, replacement and enhancement of affected resources, acquisition of equivalent resources and services, and long-term environmental monitoring and research programs directed to the prevention, containment, cleanup and amelioration of oil spills.

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to assess injury resulting from the Oil Spill and to plan, implement, and monitor the restoration, rehabilitation, or replacement of Natural Resources or natural resource services injured, lost, or destroyed as a result of the Oil Spill, or the acquisition of equivalent resources or resource services.

Agreement and Consent Decree at 10-11, <u>United States v. Exxon</u> <u>Corp., Exxon Shipping, Exxon Pipeline, and T/V Exxon Valdez</u>, No. A91082 Civil and <u>State of Alaska v. Exxon Corp., Exxon Shipping</u>, <u>Exxon Pipeline, and T/V Exxon Valdez</u>, No. A91083 Civil (D. AK March 13, 1991) ("Consent Decree").

If the reopener is exercised, an additional \$100 million is provided to restore "one or more populations, habitats, or species which, as a result of the Oil Spill, have suffered a substantial loss or substantial decline in the area affected by the Oil Spill." Consent Decree at 17. However, reopener cannot be invoked unless the governments show that the cost of the remediation is not grossly disproportionate to the benefits to be achieved and that the injury "could not reasonably have been known nor ... anticipated by any Trustee from any information in the possession of or reasonably available to any Trustee" at the time the Consent Decree is approved. Consent Decree at 18 (emphasis added).

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More Money Is Required For Needed Restoration

This proposed settlement may sound like it provides a lot of money for Prince William Sound, as much as \$1.1 billion, and the terms specifying uses for the money appear to limit the spending to needed restoration projects. However, after closer review a very different picture emerges.

In fact, pursuant to the agreement, only about \$55 million will be available for replacement and acquisition of natural resources from 1991 through most of 1992. Another \$15 million will be available for restoration planning and to initiate restoration projects.<sup>10</sup>

Thus, the Trustees have created a dilemma for themselves. The proposed settlement, with its small yearly payments, and the Trustees' apparent decision to recoup their past expenses from the settlement payments in the first few years<sup>11</sup>, combine to prevent the Trustees from addressing the most critical threat to

According to NOAA, the deductions from settlement payments to recoup past costs, totaling \$134 million, will be exacted under the following schedule: 1991, \$45 million; '92, \$40m; '93, \$40m; '94, \$5m; '95, \$5m. (These amounts are approximate.)

<sup>&</sup>lt;sup>10</sup>This amount includes the \$50 million criminal restitution payment, and the \$90 million first payment under the consent decree <u>minus approximately \$45 million in past costs</u>. Of this \$95 million, a NOAA fact sheet (Attachment D) indicates that \$25 million will be used to continue the science program and \$15 million will be used for restoration planning and to initiate restoration pilot projects. This leaves <u>only \$55 million for any</u> <u>replacement or for acquisition of threatened habitat in 1991</u> <u>through most of 1992</u> -- if the Trustees are willing to address these critical needs.

Prince William Sound since Exxon spilled eleven million gallons of oil: the clear-cut logging that threatens the ecosystem and recreation values of the Sound.

#### Alaska Trustees Want To Dismantle The Science Program

According to recent press reports (Attachment E), the Alaska Trustees are seeking to end the damage assessment and restoration studies so that more funds will be available to pay for restoration implementation. According to press reports, John Sandor, Commissioner of Alaska's Department of Environmental Conservation, and Carl Rosier, Commissioner of Alaska's Department of Fish and Game, argue that most of these studies are "litigation-driven" and must be cut. However, these studies are important. Completion of the studies will reveal information about the full impacts of the spill, enabling the Trustees to invoke the reopener in the settlement, if necessary, and to effectively carry out restoration.

#### The Science Program Is Essential

Ironically, the greatest threat to the restoration program has been the litigation process. Short-sighted lawyers have dominated the scientific program and prevented scientists from publishing results, prevented public review, and have cut or eliminated necessary studies. The lawyers, generally, have focused the program on counting dead bodies instead of looking at the whole ecosystem -- missing the forest for the trees. It would be <u>tragic</u> if a settlement should somehow create financial incentives to entirely eliminate an already narrowly drawn science program.

Abandoning the science program would be tantamount to abandoning any hope of making use of the narrow reopener provision in the proposed settlement<sup>12</sup>. Any proposal to reopen the settlement in 2001 or 2002 has to be based on scientific data that could not have been reasonably anticipated by any Trustee as of the date of the settlement. If the science program is terminated, the narrow conditions of the reopener provision become completely useless. Thus, impacts of the spill which are presently unknown could not be remedied with settlement funds.

The science program must guide restoration planning. It is impossible to restore the ecosystem unless there is knowledge

<sup>&</sup>lt;sup>12</sup> As is more fully discussed in our comments on the civil settlement, NWF is deeply concerned with the legality and appropriateness of the narrow reopener and the \$100 million cap on it.

about the nature and extent of injuries<sup>13</sup>. Otherwise, restoration will be inadequate because of the small yearly payments this proposed settlement would provide. The Trustees can ill afford this approach.

#### The Solution

NWF urges the Trustees to adhere to the science program, and use all other available funds for acquisition of threatened habitat. It is urgent that the Trustees <u>forego collecting</u> <u>previously incurred or paid costs until threatened habitat is</u> <u>protected</u> and <u>spend their own money NOW to protect habitat</u>. The Trustees should postpone reimbursement of these costs until prospective payments are made in later years. Any other approach could doom Prince William Sound's fragile ecosystem.

UNACCEPTABLE DELAY BY THE STATE CRIPPLES PUBLIC PARTICIPATION IN DEVELOPING THE WORK PLAN

On November 19, 1990 the Trustees published a <u>Federal</u> <u>Register</u> notice which announced that on December 28, 1991, there would be another <u>Federal Register</u> notice announcing the 1991 Restoration Work Plan. 55 <u>Fed. Reg.</u> 48160 (November 19, 1990). NWF applauded this November notice as an earnest effort by the Trustees to ensure meaningful public participation and comment on this important document. Unfortunately, this second <u>Federal</u> <u>Register</u> notice did not appear until March 1, 1991 -- <u>two months</u> <u>late</u>.

There is no substantial reason for delay which cripples public efforts to comment on the Work Plan and the Trustees' efforts to carry out critical restoration duties.

NWF has obtained a draft December 21, 1990 of the <u>Federal</u> <u>Register</u> which was planned to be published on December 28. There are few differences between this draft and the final version that appeared over two months later. Clearly, the December 21 draft could have been printed in the <u>Federal Register</u> on December 28 as planned.

<sup>&</sup>lt;sup>13</sup> In its state court lawsuit, NWF and its co-plaintiffs have asked the Court, by motion, to order all parties to submit their scientific data into a central, public repository. Attachment F is one of several affidavits which were filed in support of this motion. Paragraphs 3-10 are particularly informative regarding the value of open science and the need for broad, multi-disciplinary ecosystem studies.

The delay remains unexplained. The result: the public has lost any meaningful opportunity to comment on the Work Plan and the Trustees will lose some of the scarce good weather available for conducting restoration studies and implementation projects suggested by the public<sup>14</sup>.

The 1991 Work Plan was not announced in the <u>Federal Register</u> until March 1, and the comments will not reach the Trustees until April 15 -- <u>over a week after the 1991 NRDA Plan was released</u>. The 1991 NRDA Plan contains no new information about restoration planning. The Trustees are currently hoping to publish an additional <u>Federal Register</u> notice regarding restoration plans by May 3, with comments due one month later, the same day as comments for the 1991 NRDA Plan are due. This new schedule will require the Trustees to digest all public comment received on the 1991 Work Plan and prepare a <u>Federal Register</u> notice in less then two weeks.

This skewed schedule places the Trustee agencies in a very difficult position. If they value public comment and their obligation as public servants to listen to public concerns, they risk delaying critical restoration projects. Every day they delay commencing needed restoration studies and implementation projects, is a day of loss to the environment of Prince William Sound.

NWF urges the Trustees to accept public comment regarding a revised restoration plan on an accelerated timetable so that the 1991 field season will not be missed.

ADDITIONAL NWF CONCERNS

The Restoration Program Should Focus on

<sup>&</sup>lt;sup>14</sup> The first opportunity for public comment on the natural rescurce damage assessment and restoration planning process occurred in August, 1989. The public "opportunity" was a comment period pertaining to a set of studies that had already been conducted the previous summer. Although the Trustees argue that they had little alternative given their immediate need to commence studies once the spill took place, this argument fails when applied to the 1990 studies; although a draft version of the document describing the studies was completed in the spring of 1990, it was not released for public comment. Nothing exonerates excluding the public in 1989; the Trustees could have used alternative means to solicit public comment, including holding public meetings and circulating draft documents.

#### Species Most Affected By The Spill

The recently released damage assessment summaries suggest that the spill has had and will continue to cause dramatic impacts on several species. Because of the secrecy pervading the scientific damage assessment process, it is impossible for the public to assess the extent of damage and to comment upon the proposed program to restore the resources. However, from the limited summary information available, it appears that the most dramatic impacts are on the murre colonies. The summaries indicate that about 300,000 murres died and that at least 215,000 chicks were not born because of the spill's various effects. Prince William Sound eagles were also hit hard, and a very poor breeding season in 1989 will probably have long-term effects on the eagle population.

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The summaries also indicate that the oil continues to effect many species including sea and river otters and harbor seals. In addition, work is continuing in terms of analyzing the effects of the spill on the sea lion population, which was already in decline, probably due to multiple development and pollutionrelated factors. Finally, the summaries describe very significant impacts in the intertidal and, to a lesser degree, the subtidal habitats.

NWF urges the Trustees to devote their energies to developing restoration and acquisition programs to address these significant injuries.

Factors For Evaluating Restoration Alternatives

The <u>Federal Register</u> notice sets forth several factors proposed by the Trustees to evaluate potential restoration alternatives. 56 <u>Fed. Reg</u>. 8899 (March 1, 1991). These factors include "adequacy of natural recovery." <u>Id</u>. However, the exigency of the restoration work is not included as a factor for evaluation.

NWF believes there are substantial difficulties associated with predicting future natural recovery. Therefore, NWF urges the Trustees to limit consideration of natural recovery as one of the routine factors used to determine restoration options. Any use of natural recovery in analyzing restoration alternatives should place a heavy emphasis on the burden of proving, through strong scientific evidence, that natural recovery would occur subsequent to the spill. Uncertainties about future recovery of the ecosystem should be resolved in favor of active restoration programs, such as acquisition of equivalent resources.

NWF urges the Trustees to include an additional key factor: exigency of the restoration work. Some restoration projects are

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more urgent than others due to prospective effects of outside events, such as actual and planned logging in the impacted area. The potential adverse environmental impact of outside events highlights the importance of timing restoration work to enhance benefits to the affected area.

In addition, the <u>Federal Register</u> notice suggests that the Trustees would evaluate the "reasonableness of the cost of the restoration project in light of the value of and ecological significance of the resource" 56 <u>Fed. Reg.</u> at 8899. This criterion may only be applied in accordance with the mandate of the <u>Ohio</u> case, which states that restoration or replacement is required when its cost is "grossly disproportionate to lost values."

#### CONCLUSION

NWF urges the Trustees act immediately and to ensure the availability of sufficient funding to protect Prince William Sound from the immediate threat of clear-cut logging. The Trustees also must release the scientific studies. Added to the significant insult from the <u>Exxon Valdez</u> oil spill, this logging could be fatal to the Sound's damaged acosystem. The Trustees bear a special responsibility and have a unique opportunity to avert this additional tragedy. Furthermore, if the settlement is approved, the Trustees should first fulfill their obligation to protect the interests of the environment by deferring until later years recouping previously incurred or paid litigation and investigation costs.

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Working for the Nature of Tomorrow



NATIONAL WILDLIFE FEDERATION

1400 Sixteenth Street, N.W., Washington, D.C. 20036-2266 (202) 797-6800

April 19, 1991

Rosanna Ciupek Office of Water WH-556 U.S. EPA 401 M St. SW Washington, D.C. 20460

Dear Ms. Ciupek:

Pursuant to the agreement outlined in the attached letter and 56 Federal Register 8898 (March 1, 1991), I enclose the Comments of the National Wildlife Federation on the Draft 1991 Restoration Work Plan.

Thank you for your help in this matter.

Sincerely, Doug Wolf

Counsel, Alaska Issues

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Working for the Nature of Tomorrow



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# COMMENTS OF THE NATIONAL WILDLIFE FEDERATION

#### ON THE DRAFT 1991 RESTORATION WORK PLAN

#### REGARDING

### THE EXXON <u>VALDEZ</u> OIL SPILL

[56 Federal Register 8898, March 1, 1991]

Prepared By:

Douglas Wolf Erik Olson

April 15, 1991

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#### INTRODUCTION

The National Wildlife Federation ("NWF" or "the Federation") is very concerned about the failure of the Exxon Valdez oil spill 1991 Restoration Work Plan to provide urgently needed protection to wildlife habitat in and around Prince William Sound which is threatened by clear-cut logging (and other threats). The natural resources Trustees must take immediate steps to ensure habitat protection as part of the 1991-92 restoration program for the catastrophic Exxon Valdez spill<sup>1</sup>. In order to satisfy this critical need, the Trustees should defer recovery of past costs from the payments pursuant the proposed settlement and/or use their own money and seek compensation from the tail end of the settlement payments. The Trustees should act quickly and ensure that there are adequate funds to restore the stressed environment in the Sound or face a collapse in critical elements of these fragile ecosystems.

NWF is the nation's largest private conservation education organization. Founded in 1936, the Federation, its 5.5 million members and supporters, and 51 affiliated organizations, educate, empower, and inspire individuals and organizations to conserve fish, wildlife and other natural resources, to protect the environment, and to build a globally sustainable future.

For several years, NWF has been involved in oil spill and natural resource damage issues. The Federation is actively working on oil spill issues and is on the forefront in urging safeguards to prevent damages such as those associated with the <u>Exxon Valdez</u> oil spill. NWF, the Wildlife Federation of Alaska and the Natural Resources Defense Council, represented by the Trial Lawyers for Public Justice, have filed suit against Exxon and Alyeska Pipeline requesting the court create a trust fund which would aid in restoring the natural resources damaged by this catastrophe. In addition, the Federation continues to participate in the <u>Valdez</u> spill natural resource damage assessment process via comments submitted in the public record.

<sup>&</sup>lt;sup>1</sup> Under the scheme set out in the Clean Water Act and the Superfund statute, trustees must be appointed to represent injured natural resources. In the case of the Exxon <u>Valdez</u> oil spill, there are both federal and state trustees (collectively, the "Trustees"). The federal trustees are: Department of the Interior, Department of Commerce (through the National Oceanic and Atmospheric Administration, NOAA), and the Department of Agriculture (the "Federal Trustees"). The Alaska state trustees are: Department of Fish and Game, Department of Environmental Conservation, and Department of Law (the "State Trustees").
The Federation welcomes this opportunity to provide input on the 1991 Restoration Work Plan for the Exxon Valdez oil spill. This Work Plan is important to NWF, its members and supporters. As one of the principal plaintiffs in the State of Ohio et al. v. Department of the Interior, 880 F.2d 432 (D.C. Cir. 1989) and State of Colorado et al. v. Department of Interior, 880 F.2d 481 (D.C. Cir. 1989) (collectively, "Ohio case"), NWF confirmed that restoration, replacement, and acquisition of the equivalent (hereinafter sometimes referred to simply as "restoration") of damaged natural resources in the paramount goal of governmental Trustees representing those resources. Similarly, in In Re Acushnet River and New Bedford Harbor: Proceedings Re: Alleged PCB Pollution, 712 F.Supp. 1019 (D. Mass 1989), NWF intervened and successfully established the important precedent that natural resource damage settlements must include measures to assure restoration and must include a "reopener" for certain long-term damages.

IMPLEMENTATION PROJECT 4, ACQUISITION OF HABITAT, WARRANTS' HIGHEST PRIORITY AND IMMEDIATE ACTION

The Exxon Valdez oil spill was a colossal assault on the Prince William Sound ecosystem<sup>2</sup>. As the eleven million gallons of oil spread through the Sound and into the Gulf of Alaska and other areas, a parallel assault began on the same ecosystem. In various locations across the Sound, logging activities were planned or initiated. Due to the steep slope of the forests surrounding Prince William Sound and the clear-cutting practices employed by loggers, this logging compounds the serious threat posed to the entire ecosystem. Critical components of the area's ecosystem brought to the brink of devastation by the spill could be overcome by the added environmental insults engendered by clearcutting.

Clear-cut logging causes erosion which threatens water quality and thus threatens fish that depend on the streams and

<sup>&</sup>lt;sup>2</sup> This assault is more tragic because it was completely avoidable. Investigations concluded that Exxon's negligence in pushing its small crews to high-speed transit and exhaustion in dangerous conditions combined with disregard of Captain Hazelwood's severe alcohol problem contributed to the grounding. Further, documents recently released by California's Representative to Congress, George Miller, conclusively demonstrate that Alyeska Pipeline Service Corporation unilaterally abandoned it legally-binding obligation to fully protect Prince William Sound from spilled oil.

coastal areas in the Sound. Logging also eliminates or degrades habitat for much of the wildlife hardest hit by the spill, including eagles, seabirds, anadramous fish, and other marine and terrestrial fauna. Summaries of natural resource damage assessment studies conducted by the Trustees and recently released by the Federal Trustees, while conclusory and not accompanied by actual data or studies, suggest the magnitude of impact from the spill and reveal the extent to which these effects are likely to last. These ecosystems are reeling from the effects of an eleven million gallon oil spill compounded by environmental degradation associated with extensive clear-cut logging.

Fortunately, the degradation caused by the logging is completely avoidable. As "Project 4" in the Federal Register notice makes clear, one of the principal restoration options available to the Trustees is acquisition of equivalent resources. 56 Fed. Req. 8899 (March 1, 1991). As in the case of the Exxon <u>Valdez</u> spill, where damage to the natural resources is so extensive that direct restoration and replacement activities cannot fully put the ecosystem back on its feet, equivalent resources "that provide[] the same or substantially similar services as the injured resources" must be acquired. Id.; see also, Ohio case. And where the cost of direct restoration and replacement activities and acquisition of equivalent resources does not equal the total amount of direct, use and non-use damages caused by the spill<sup>3</sup>, the damages recovered for lost use and non-use value must be used to compensate the public and the injured ecosystem through additional restoration and acquisition.

One of the Trustee agencies, the Alaska Department of Fish and Game, recognized logging as a threat to the Prince William Sound and persuaded the Governor to request a \$40 million appropriation from the Alaska Legislature to acquire timber rights to the trees most likely to be felled. The Department's goal is to commence acquisition of equivalent resources in order to avoid the deleterious effects of planned logging. As the 1991 Work Plan Federal Register notice correctly explains:

Failure to undertake timely restoration may allow damages initiated by the spill to continue or

<sup>&</sup>lt;sup>3</sup> Recent press reports indicate that the economic use and non-use damages caused by the spill are in the range of \$3-8 billion. See Attachment A. "Non-use" damages, which are recognized by statute and by federal courts, are damages suffered by individuals through interference with their option to visit the injured resources or through destruction of those resources.

accelerate, as in the case of the loss of stabilizing vegetation on beaches. In other cases, protection of strategic habitats, subject to land-use changes, can reduce cumulative stresses on injured resources and maintain, in the near term, a full range of restoration options. Finally, the importance of a resource for subsistence, commercial, or recreational purposes may justify prompt restoration action.

#### Id. at 8902.

The Governor's first proposal of this project to the Alaska Legislature, and a December 21, 1990 draft of the <u>Federal</u> <u>Register</u> notice on the 1991 Work Plan obtained by NWF, provided \$40 million for such initial acquisition. There are few differences between the December 21 draft and the final March 1, 1991 <u>Federal Register</u> notice; one critical difference, however, is that this \$40 million price tag for implementation project four, "Protection of Strategic Fish and Wildlife Habitats and Recreation Sites," <u>has been deleted</u>. NWF is deeply concerned that this delétion may signal a retreat from the Trustees' commitment to swift acquisition of critical habitat.

Experts who have analyzed restoration options recognize its importance and conclude that \$40 million could pay for no more than a pilot project. This sum would likely be able to protect only a small fraction of the most threatened habitats; <u>at least</u> <u>\$300 million</u> is needed in the short term just to protect certain Prince William Sound and upper forests from logging<sup>4</sup>.

Thus, the \$40 million price tag could have been deleted from the <u>Federal Register</u> notice because the Trustees recognized that the figure is too low. Unfortunately, it is probable that the number was deleted pending receipt of information regarding the amount of money which will be available from the proposed settlement.

Thus, it appears that the Trustees failed to analyze what measure of restoration is necessary; instead they are tailoring the restoration program to the small amount of funds projected to become available in the short term from the settlement.

<sup>&</sup>lt;sup>4</sup> A single study regarding the cost of purchasing timber rights for Prince William Sound and the Upper Kenai Peninsula concludes that \$200-300 million is needed. See Attachment B. N.B. this does not include timber rights for other areas and does not analyze threats to habitat other than logging.

NWF strongly objects to this backward thinking. Instead of attempting to decide the extent of restoration and acquisition that is possible with the funds recovered through settlement, the Trustees are under an obligation to determine the costs of restoration, replacement, and acquisition necessary to return the ecosystem to full productivity and diversity, plus the lost value of the resources. Then, the next step is to ensure that funds are sought to fulfill these obligations. <u>See</u>, <u>Ohio</u> case.

The <u>Federal Register</u> notice states: "When the full amount of restoration funds that will be recovered has been resolved, final determinations will be made concerning the nature and scope of the remaining phases of restoration." <u>Id</u>. at 8899. Thus, due to the settlement's limitations, under the approach announced in the <u>Federal Register</u> notice, the Trustees may not be able to prevent extensive clear-cut logging from permanently crippling Prince William Sound's ecosystem and recreation values.

Contrary to the appropriate approach, the <u>Federal Register</u> notice also acknowledges that "[w]here the nature of the resource injury is reasonably clear, it may be desirable to begin restoration prior to receipt of funds from the parties responsible for the oil spill." <u>Id</u>. at 8902. NWF strongly urges the Trustees to proceed with a greatly expanded version of project four: the immediate threat of logging to Prince William Sound is clear<sup>5</sup>. This is, at a minimum, the fiduciary obligation of the Trustees.

THE SCIENTIFIC STUDIES OF THE SPILL'S IMPACTS MUST BE RELEASED TO ALLOW MEANINGFUL PUBLIC PARTICIPATION AND TO ENSURE PROPER RESTORATION.

One of the most important problems with the restoration plan is the complete failure of the Trustees to release the basic scientific data upon which any restoration plan must be based. Without the scientific analyses and data on the spill's impacts, the public and independent scientists who are not privy to the massive data banks accumulated by the Trustees and Exxon cannot provide meaningful comments on the plans for restoration, replacement, and acquisition. The data and analyses must be released now.

<sup>&</sup>lt;sup>5</sup> Logging is the most dramatic threat to the ecosystem. Similar protection should be applied in the context of existing and planned mining and development efforts. These additional threats underscore the insufficiency of the original \$40 million price tag attributable to Project Four.

The federal government's recent decision to release a brief summary of these data as part of the settlement is a small step in the right direction. However, the information provided in this summary is oversimplified and conclusory, and is not accompanied by the actual basic data or scientific analysis necessary for the public and outside scientists to understand and comment upon the results. Without these data and analyses regarding the extent of the injuries to the important elements of the ecosystem at locations throughout the affected area, the public cannot assess likely past and future impacts of the spill. Therefore, in many cases it is impossible to advise the Trustees regarding the optimum restoration approaches. This is a violation of the legal requirements to provide opportunity for public participation in the restoration planning process pursuant to the Administrative Procedures Act, the National Environmental Policy Act, and the Clean Water Act.

## THE PROPOSED SETTLEMENT SHOULD NOT DISRUPT THE DAMAGE ASSESSMENT AND RESTORATION PROCESS

On March 13, 1991, the United States and Alaskan governments announced a proposed settlement agreement reached with Exxon Shipping and Exxon Corporation<sup>6</sup>. The prospect that the settlement may provide money to finance restoration activities should not short-circuit or distort the essential program of scientific studies of the on-going damage to the Prince William Sound caused by the <u>Exxon Valdez</u>. In the absence of this scientific program, comprehensive restoration is impossible. Furthermore, surrendering this program also surrenders the already very limited value of the rigid reopener provision contained in the Consent Decree.

The proposed settlement includes a criminal plea agreement<sup>7</sup> and a settlement of civil claims memorialized in a Consent Decree and a Memorandum of Agreement. The agreements would allow Exxon to extend its payments, and the governments' proposal for implementing the agreements creates perverse incentives to shortcircuit crucial elements of the damage assessment and restoration process.

<sup>7</sup> See Attachment C -- NWF comments on the plea agreement.

<sup>&</sup>lt;sup>6</sup> Alyeska Pipeline achieves significant benefits from the settlement terms. The Company is relieved of criminal liability, despite recently disclosed evidence of criminal behavior in connection with developing its contingency plan. The Company is also absolved from paying damages pursuant to civil claims by the governments for natural resource damages.

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<sup>&</sup>lt;sup>10</sup>This amount includes the \$50 million criminal restitution payment, and the \$90 million first payment under the consent decree <u>minus approximately \$45 million in past costs</u>. Of this \$95 million, a NOAA fact sheet (Attachment D) indicates that \$25 million will be used to continue the science program and \$15 million will be used for restoration planning and to initiate restoration pilot projects. This leaves <u>only \$55 million for any replacement or for acquisition of threatened habitat in 1991</u> <u>through most of 1992</u> -- <u>if</u> the Trustees are willing to address these critical needs.

Prince William Sound since Exxon spilled eleven million gallons of oil: the clear-cut logging that threatens the ecosystem and recreation values of the Sound.

Alaska Trustees Want To Dismantle The Science Program According to recent press reports (Attachment E), the Alaska Trustees are seeking to end the damage assessment and restoration studies so that more funds will be available to pay for restoration implementation. According to press reports, John Sandor, Commissioner of Alaska's Department of Environmental Conservation, and Carl Rosier, Commissioner of Alaska's Department of Fish and Game, argue that most of these studies are "litigation-driven" and must be cut. However, these studies are important. Completion of the studies will reveal information about the full impacts of the spill, enabling the Trustees to invoke the reopener in the settlement, if necessary, and to effectively carry out restoration.

#### The Science Program Is Essential

Ironically, the greatest threat to the restoration program has been the litigation process. Short-sighted lawyers have dominated the scientific program and prevented scientists from publishing results, prevented public review, and have cut or eliminated necessary studies. The lawyers, generally, have focused the program on counting dead bodies instead of looking at the whole ecosystem -- missing the forest for the trees. It would be <u>tragic</u> if a settlement should somehow create financial incentives to entirely eliminate an already narrowly drawn science program.

Abandoning the science program would be tantamount to abandoning any hope of making use of the narrow reopener provision in the proposed settlement<sup>12</sup>. Any proposal to reopen the settlement in 2001 or 2002 has to be based on scientific data that could not have been reasonably anticipated by any Trustee as of the date of the settlement. If the science program is terminated, the narrow conditions of the reopener provision become completely useless. Thus, impacts of the spill which are presently unknown could not be remedied with settlement funds.

The science program must guide restoration planning. It is impossible to restore the ecosystem unless there is knowledge

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 $<sup>^{12}</sup>$  As is more fully discussed in our comments on the civil settlement, NWF is deeply concerned with the legality and appropriateness of the narrow reopener and the \$100 million cap on it.

about the nature and extent of injuries<sup>13</sup>. Otherwise, restoration will be inadequate because of the small yearly payments this proposed settlement would provide. The Trustees can ill afford this approach.

#### The Solution

NWF urges the Trustees to adhere to the science program, and use all other available funds for acquisition of threatened habitat. It is urgent that the Trustees <u>forego collecting</u> <u>previously incurred or paid costs until threatened habitat is</u> <u>protected</u> and <u>spend their own money NOW to protect habitat</u>. The Trustees should postpone reimbursement of these costs until prospective payments are made in later years. Any other approach could doom Prince William Sound's fragile ecosystem.

#### UNACCEPTABLE DELAY BY THE STATE CRIPPLES PUBLIC PARTICIPATION IN DEVELOPING THE WORK PLAN

On November 19, 1990 the Trustees published a <u>Federal</u> <u>Register</u> notice which announced that on December 28, 1991, there would be another <u>Federal Register</u> notice announcing the 1991 Restoration Work Plan. 55 <u>Fed. Reg.</u> 48160 (November 19, 1990). NWF applauded this November notice as an earnest effort by the Trustees to ensure meaningful public participation and comment on this important document. Unfortunately, this second <u>Federal</u> <u>Register</u> notice did not appear until March 1, 1991 -- <u>two months</u> <u>late</u>.

There is no substantial reason for delay which cripples public efforts to comment on the Work Plan and the Trustees' efforts to carry out critical restoration duties.

NWF has obtained a draft December 21, 1990 of the <u>Federal</u> <u>Register</u> which was planned to be published on December 28. There are few differences between this draft and the final version that appeared over two months later. Clearly, the December 21 draft could have been printed in the <u>Federal</u> <u>Register</u> on December 28 as planned.

<sup>&</sup>lt;sup>13</sup> In its state court lawsuit, NWF and its co-plaintiffs have asked the Court, by motion, to order all parties to submit their scientific data into a central, public repository. Attachment F is one of several affidavits which were filed in support of this motion. Paragraphs 3-10 are particularly informative regarding the value of open science and the need for broad, multi-disciplinary ecosystem studies.

The delay remains unexplained. The result: the public has lost any meaningful opportunity to comment on the Work Plan and the Trustees will lose some of the scarce good weather available for conducting restoration studies and implementation projects suggested by the public<sup>14</sup>.

The 1991 Work Plan was not announced in the <u>Federal Register</u> until March 1, and the comments will not reach the Trustees until April 15 -- <u>over a week after the 1991 NRDA Plan was released</u>. The 1991 NRDA Plan contains no new information about restoration planning. The Trustees are currently hoping to publish an additional <u>Federal Register</u> notice regarding restoration plans by May 3, with comments due one month later, the same day as comments for the 1991 NRDA Plan are due. This new schedule will require the Trustees to digest all public comment received on the 1991 Work Plan and prepare a <u>Federal Register</u> notice in less than two weeks.

This skewed schedule places the Trustee agencies in a very difficult position. If they value public comment and their obligation as public servants to listen to public concerns, they risk delaying critical restoration projects. Every day they delay commencing needed restoration studies and implementation projects, is a day of loss to the environment of Prince William Sound.

NWF urges the Trustees to accept public comment regarding a revised restoration plan on an accelerated timetable so that the 1991 field season will not be missed.

ADDITIONAL NWF CONCERNS

The Restoration Program Should Focus on

<sup>14</sup> The first opportunity for public comment on the natural resource damage assessment and restoration planning process occurred in August, 1989. The public "opportunity" was a comment period pertaining to a set of studies that had already been conducted the previous summer. Although the Trustees argue that they had little alternative given their immediate need to commence studies once the spill took place, this argument fails when applied to the 1990 studies; although a draft version of the document describing the studies was completed in the spring of 1990, it was not released for public comment. Nothing exonerates excluding the public in 1989; the Trustees could have used alternative means to solicit public comment, including holding public meetings and circulating draft documents.

#### Species Most Affected By The Spill

The recently released damage assessment summaries suggest that the spill has had and will continue to cause dramatic impacts on several species. Because of the secrecy pervading the scientific damage assessment process, it is impossible for the public to assess the extent of damage and to comment upon the proposed program to restore the resources. However, from the limited summary information available, it appears that the most dramatic impacts are on the murre colonies. The summaries indicate that about 300,000 murres died and that at least 215,000 chicks were not born because of the spill's various effects. Prince William Sound eagles were also hit hard, and a very poor breeding season in 1989 will probably have long-term effects on the eagle population.

The summaries also indicate that the oil continues to effect many species including sea and river otters and harbor seals. In addition, work is continuing in terms of analyzing the effects of the spill on the sea lion population, which was already in decline, probably due to multiple development and pollutionrelated factors. Finally, the summaries describe very significant impacts in the intertidal and, to a lesser degree, the subtidal habitats.

NWF urges the Trustees to devote their energies to developing restoration and acquisition programs to address these significant injuries.

#### Factors For Evaluating Restoration Alternatives

The <u>Federal Register</u> notice sets forth several factors proposed by the Trustees to evaluate potential restoration alternatives. 56 <u>Fed. Reg.</u> 8899 (March 1, 1991). These factors include "adequacy of natural recovery." <u>Id</u>. However, the exigency of the restoration work is not included as a factor for evaluation.

NWF believes there are substantial difficulties associated with predicting future natural recovery. Therefore, NWF urges the Trustees to limit consideration of natural recovery as one of the routine factors used to determine restoration options. Any use of natural recovery in analyzing restoration alternatives should place a heavy emphasis on the burden of proving, through strong scientific evidence, that natural recovery would occur subsequent to the spill. Uncertainties about future recovery of the ecosystem should be resolved in favor of active restoration programs, such as acquisition of equivalent resources.

NWF urges the Trustees to include an additional key factor: exigency of the restoration work. Some restoration projects are

more urgent than others due to prospective effects of outside events, such as actual and planned logging in the impacted area. The potential adverse environmental impact of outside events highlights the importance of timing restoration work to enhance benefits to the affected area.

In addition, the <u>Federal Register</u> notice suggests that the Trustees would evaluate the "reasonableness of the cost of the restoration project in light of the value of and ecological significance of the resource" 56 <u>Fed. Reg.</u> at 8899. This criterion may only be applied in accordance with the mandate of the <u>Ohio</u> case, which states that restoration or replacement is required when its cost is "grossly disproportionate to lost values."

#### CONCLUSION

NWF urges the Trustees act immediately and to ensure the availability of sufficient funding to protect Prince William Sound from the immediate threat of clear-cut logging. The Trustees also must release the scientific studies. Added to the significant insult from the <u>Exxon Valdez</u> oil spill, this logging could be fatal to the Sound's damaged ecosystem. The Trustees bear a special responsibility and have a unique opportunity to avert this additional tragedy. Furthermore, if the settlement is approved, the Trustees should first fulfill their obligation to protect the interests of the environment by deferring until later years recouping previously incurred or paid litigation and investigation costs.

### ATTACHMENT A

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Value of Intangible Losses From Exxo

# Valdez Spill Put at \$3 Billion

#### By John Lancaster Washington Post Staff Weiter

Confidential government studies have estimated the "social cost" of the Exxon Valdez oil spill at \$3 billion, nearly three times the \$1.1 billion that Exxon has agreed to pay to settle criminal and civil charges arising from the accident.

The controversial economic studies, conducted for the state of Alaska and the federal government, are an attempt to assign a dollar value to intangible losses said to have been suffered by the American public as a result of damage to wildlife and natural habitat. Economists polled households nationwide to arrive at the estimate, which would have figured prominently in Exxon's trial had the case not been settled out of court.

i There is no guarantee that a judge and jury would have accepted the \$3 billion estimate, which was provided to The Washington Post by one of the economists involved in the studies. Federal officials defended the sottlement as a landmark penalty that avoids a costly and uncertain trial while providing immediate cash for cleanup and restoration.

But critics noted that several recent court decisions have upheld the validity of social cost studies for valuing environmental catastrophes, suggesting that Excon may have gotten off too lightly. "The federal government has a fiduciary responsibility to the citizens to look au for these resources, to provide a market signal that if you do damige, this is what it's going to cost you," eaid an economist familiar with the studies.

In affirming the method two years ago, a three-judge federal appeals court panel ruled that although "the extent of damage to autural resources from releases of oil and hazardous substances varies greatly... it is in the mission of [federal law] to assess the public loss."

Exxon declined to comment on the studies.

William K. Reilly, administrator of the Environmental Protection Agency, said in an interview that while such studies "have their place ..., they're new, there's not a lot of litigation, and courts haven't awarded anything on the basis of how much somebody says they're willing to pay to save a river otter." State and federal officials, citing unresolved claims from third parties such as fishermen and Native Alaskans, have refused to make any information from damage studies available to the public. "We won't do so unless we get a commitment from the plaintiffs that they won't sue us with the information," said a spokesman for Alaska Gov. Walter J. Hickel (I).

If nothing else, the debate over " the economic studies illustrates the difficulty of assessing damage to natural resources from accidents"

such as the Exxon Valdez spill, the nation's worst. Some values, such as cleanup costs and measurable financial damage to tourism and commercial fishing, are relatively easy to calculate. But the question of intangible losses has proved harder to resolve.

What, for example, is the price of a dead sea otter or sea bird, both of which society presumably holds dear even though they have no commercial value? In the past, the federal government has assigned market values to dead wildlife, such as \$15 for a furscal or \$35.74 for a Canada goose.

But the appeals court decision <sup>3</sup>/<sub>2</sub> found that such methods did not adequately compensate the public, <sup>14</sup>/<sub>1</sub>

and ordered federal agencies to give more weight to intangible losses in figuring the bill for environmental catastrophes. Norman Meade, chief economist of the damage assessment branch for the National Oceanic and Atmospheric Administration, declined to " comment on the substance of the economic studies and said he feels "fine about the settlement." But he also defended the meth--odology of so-called contingent value studies, describing them as "the only way to get at these kinds of values." He added, "When these [re-] sources) are interfered with, there is a social cost, the public has lost ? some general welfare, and that's what we're trying to estimate."

In evaluating the losses, economista hired by the state of Alaska developed elaborate surveys aimed at calculating the public's "willing-ness to pay" for a clean Prince Wil-liam Sound, Beginning in 1989, the economists met with "focus groups" in Seattle, San Diego and Baltimore ) with the aim of exploring "how people think about the oil spill and its consequences," one of the surveyors said. "You'use these to find out . the language and assumptions people use so you can frame your questions accordingly." After pilot surveys in San Francisco, Toledo and rural Georgia-"They're sort of middle America," the economist explained-the contractors surveyed 1,000 households

- ationwide," Surveyors conducted face-to-face interviews in which they displayed photographs and other information about the spill, then
- asked respondents how much they, would be willing to pay to protect.? Prince William Sound from future.
- Preliminary results from the survey, conducted in January and February, showed a median amount of \$30 for each household, or —figuring there are 100 million households in the country—\$3 billion for the American public as a whole, according to one of the economists, Although the federal governmenthad not progressed as far with its studies, a federal official said the \$3 billion figure was "in the hallpark."

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# Information believed to be in spill studies

#### By CHARLES WOHLFORTH Daily News reporter

Studies commissioned by the state and federal government on the Exxon Valdez oil spill reportedly suggest serious, long-term damage to Alaska's coastal environment and an astronomical price tag for that damage.

The governments have spent more than \$70 million on the studies, but their results remain secret. But some information has leaked out, including these points:

• Seaweed beds in Prince William Sound that provide the basic fuel for the ecosystem of sheltered bays were badly damaged;

• Recovery is in doubt for colonies of murres on islands south of the Kenai Peninsula hit hard by the spill because the oil caused long-term disruption to their reproductive process;

• And economic surveys Doug Wolf.

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designed to show the cost of the spiil to society as a whole placed the price Exxon could be made to pay at S3 billion to \$8 billion.

The economic studies used a method called contingent valuation to survey a crosssection of Americans on the value they place on natural resources. A federal court validated the method

Workers on the studies anonymously told The Washington Post that one of the studies set a damage figure of \$3 billion, the newspaper reported March 20. That figure was partly confirmed when Tom Campbell, general counsel for the National Oceanic and Atmospheric Administration, told a U.S. House committee the study's \$3 billion to \$5 billion finding might be hard to prove in court, said National Wildlife Federation attorney

A source working on the case told the Daily News Friday those numbers were low. More recent data indicate damages of \$3 billion to \$8 billion would be defensible in court, the source said.

The information on murre colonies first was reported in a Post article Feb. 21. It cited leaked documents that said murre colonies had suffered a total reproductive failure and might not recover for 70 years. The cause of the failure was said to be a lack of adult birds to defend eggs.

David Nysewander, investigator of the colonies for the U.S. Fish and Wildlife Service, appeared inadvertently to confirm that conclusion when he explained murre reproduction to a reporter last week.

Nysewander said murres' reproductive success depends on synchronized egg laying, which allows them to band together to defend nesting birds. Laying usually takes place all in one month. But his group has had to change plans, extending its visits to the colonies across several months — and that suggests the egg laying is no longer well-synchronized.

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"If there were changes, you have to look at it different," he said. "But I can't tell you about that."

The information on seaweed in Prince William Sound comes from environ-mental attorneys.

"It's only just very vaguely being leaked out by the concerned scientists involved," said Bill Rossbach, an attorney representing environmental plaintiffs against Exxon. "There are a number of scientists who are concerned.

"They're finding what the inside people say is very substantial deterioration of that crucial part of the food webb," Rossbach said.

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### ATTACHMENT B

### The Coastal Coalition

Box 2424, Cordova, Alaska 99574 907-424-5509 FAX 907-424-5246

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Dear Friends,

July 4, 1990

Enclosed is a "Draft Proposal for a Comprehensive Settlement of Natural Resource Damages from the Exxon-Valdez' Oil Spill" and an attached discussion paper on the "Acquisition of Timber Harvesting Rights for Restoration".

This document was developed in response to requests from commercial fishermen, Alaska Natives, environmental groups, tour operators, recreationalists, and biologists that we now join together to formulate a constructive resolution to this disaster. It is intended to serve as a catalyst for settling natural resource damages in a fair and expeditious manner. As such, it is being circulated for review to the private and public plaintiffs and the defendants in the case.

It is hoped that a consensus will emerge among the parties involved to proceed in negotiating and finalizing such a settlement this year.

The Coastal Coalition is an informal network of concerned citizens that formed in response to the spill in order to provide a constructive focus for citizen input. Presently, our goal is to help formulate a comprehensive settlement for natural resource damages that is agreeable to all parties. Such a settlement would side-step years of costly litigation, provide for environmental restoration, and allow all of us to get on with life.

Our intent with this inquiry is to plant the seed and get some indication of your interest in having such settlement negotiations proceed. Please let us hear from you as soon as possible concerning any comments you might have on the enclosed document, and whether or not you agree to it in principle. Your thoughts are very important to this process. It is our intent that any final agreement should be molded to accomodate the most broadly based constituency possible.

We will be in touch with you regarding a meeting with other public and private plaintiff's representatives to discuss all of this, probably sometime in early August.

Let's join together to put this thing behind us.

Sincerely, Stenney

Rick Steiner, The Coastal Coalition

#### DRAFT PROPOSAL

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### COMPREHENSIVE SETTLEMENT OF NATURAL RESOURCE DAMAGES FROM THE "EXXON-VALDEZ" OIL SPILL

#### TO: State/Federal Trustees for Natural Resources Damages

#### FROM: THE COASTAL COALITION July 1990

It has become evident that all parties, both plaintiffs and defendants, involved in litigation for natural resource damages arising from the Exxon-Valdez oil spill would be best served by reaching a comprehensive settlement as soon as possible. This realization is predicated upon several considerations.

First, even after years of exhaustive impact assessment research, it would remain difficult to arrive at any consensus concerning how to quantify the extent of damage or how to value the damaged resources (i.e., how much to collect in damages).

Secondly, research should be driven by fundamental scientific interest in the behavior and response of this ecosystem to such a perturbation--not by the need to collect evidence for litigation.

Thirdly, restoration of the impacted environment can and should commence immediately. In addition to direct restoration efforts, there is an immediate opportunity to protect, through acquisition, threatened habitat within the region.

And, finally, expensive, drawn-out litigation would only prolong and exacerbate the degree of psychological, social, and political impact of the spill. A settlement will provide a sense of resolution and relief from an otherwise quite protracted and tense process.

In light of such considerations, it is proposed that the Natural Resource Trustees seek immediate settlement of all natural resource damages. Such settlement should extinguish all criminal liability (i.e., the Federal indictments) and all civil liability for natural resource damages. This settlement should be carefully structured so as not to influence the case for compensatory damages.

We respectfully suggest that a comprehensive disposition of this case should collect <u>\$2 billion</u> to endow an <u>Alaska Restoration Fund</u>.

The Alaska Restoration Fund should be managed by a non-profit corporation governed by a court-approved Board of Directors, so that people from the impacted region can be directly involved in the management of the Fund, and thus their own future.

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The Fund should support the following principle elements:

1. Direct Restoration

The Fund should be used to support direct, on-size efforts to restore or replace damaged resources to their pre-spill condition. This would include such things as supplementing injured salmon runs, reinnoculating areas with herring, breeding and release programs for damaged bird populations, reestablishing plants in injured salt marshes, and improving or protecting the habitat of other spill-impacted species.

#### 2. Acquisition of Equivalent Resources

The Fund should purchase or otherwise protect resources that are similar or related to the injured resource in terms of ecological value, functions, or services provided. Priority should be given to the acquisition of certain development rights (e.g., timber, minerals, oil, etc.) in order to protect threatened habitat. An example of such acquisitions is presented in more detail in the attached discussion paper.

3. Research

The Fund should support a broad array of scientific research projects that address critical resource issues and fundamental scientific pursuits within the region. A comprehensive program of baseline and monitoring studies should be initiated with which to more precisely understand the effects of future such events on this ecosystem.

#### 4. Education

A variety of natural resource education initiatives should be supported by the Fund. Particularly, a scholarship Fund should be established to support the education of residents from the region in natural resource science, management, economics, and conservation.

5. Sustainable Economic Development

The final goal of the Fund should be to design and implement economic development projects within the region that are compatible with the natural and cultural environment, and that are sustainable over the long-term. Inherent in this is a larger economic theme--that Restoration should, in some sense, assist the region in attaining long-term economic stability through sustainability. An important component of this should be the establishment of an Alaska Native Employment Fund.

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#### Valuing the Case

It will always be difficult to establish the value of natural resource damages with precision in cases such as this. We suggest that the amount of \$2 billion would represent a fair and equitable disposition of natural resource damages in this case for several reasons.

First, this amount represents a workable approximation of what damages would come to if calculated as the average of damages derived by three principle economic valuation methodologies—Contingent Valuation, value of charismatic species, and public use value.

Secondly, \$2 billion is approximately the amount of money that will be needed to accomplish the various objectives of the Fund. It is envisioned that of the total amount collected, a portion would be expended immediately for acquisitions. The remaining balance would be maintained as a permanent endowment whose inflation-proofed interest income would support the other elements of the Fund. Such an endowment, providing substantial annual interest dividends, would provide stable support in perpetuity for these other restoration, research, education, and sustainable economic development initiatives.

Thirdly, the severity of impact adds considerable support for a settlement of this magnitude. For instance, it is theoretically possible that this ecosystem will never return to its pre-spill condition. Even small perturbations in natural systems are known to produce large, unpredictable and long-lasting consequences. It is possible that the impacted system will stabilize at an entirely different equilibrium than that existing before the spill. Additionally, it is probable that the population structure of certain long-lived, less fecund species will take several decades to return to pre-spill conditions.

And lastly, this amount of money is entirely proportionate to the value that could be assigned to the permanent loss of the pristine quality of this ecosystem. That the area is an aesthetic resource of global significance is attested to by the extraordinary amount of public attention paid to this spill throughout the world. In the same way that a rape victim can not be "un-raped," the lost pristine character of this region is, unfortunately, irreplaceable.

Thus, this settlement will afford the impacted environment a sufficient amount of care and protection; it will give science a better understanding of ecosystem dynamics; and it will provide the impacted communities more economic and educational opportunity as well as a sense of certainty in looking toward the future. It is, quite simply, the right thing to do.

### ACQUISITION OF TIMBER HARVESTING RIGHTS FOR RESTORATION

- A Prerequisite for Recovery -

I. Introduction

II. Biological Characteristics of the Forest within the Region

III. Justifications for Acquisition

- A. Biological
- B. Economic
- C. Psychological
- D. Socio-Political
- IV. Timber Ownership

A. Prince William Sound B. Lower Kenai Peninsula

V. Additional Considerations

#### by Rick Steiner

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### THE COASTAL COALITION

#### P.O. Box 2424 Cordova, Alaska 99574

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#### I. INTRODUCTION

As the clean-up of the Exxon-Valdez oil spill progresses toward completion, we must now decide what more can be done to aid the recovery of the impacted environment.

In the context of the Clean Water Act and the more extensive damage provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly know as the Superfund, Federal law clearly directs that funds be collected from responsible parties to be used "to restore, replace, or acquire equivalent resources."

In the case of the Exxon-Valdez, in addition to what can be done in the way of direct restoration and replacement of damaged resources, the most practicable mechanism to compensate for natural resource damages is to offset this loss with a substantial "acquisition of equivalent resources." This entails purchasing or otherwise protecting resources that are similar or related to the injured resource in terms of ecological value, functions, or services provided.

The several hundred thousand acres of old growth forest along the coastline of the spillimpacted region, having been scheduled before the spill for logging, now represent an ideal opportunity to exercise this Restoration option. The following is an overview of the concept of acquisition and retirement of timber harvesting rights to protect the impacted ecosystem from any further deterioration. This discussion is meant to provide a basis for further development of the idea, and to serve as an example of how other such acquisitions might work.

Conceptually, before trying to treat anything that has been injured, we must first protect it from any further injury. In the spill-impacted zone, marine, freshwater, and terrestrial systems are tightly connected through biogeochemical cycles into a functionally interlocking ecosystem. Perturbations (i.e. injuries) in one component usually produce significant secondary effects in the others. What's more, compound injuries often operate synergistically--that is, their combined effect is much more than the sum of the two injuries occurring independently. And regardless of how carefully it is carried out, the planned removal of old-growth forests from several hundred thousand acres of the region's coastline cannot help but to have a profound effect on the ecosystem as a whole. The clearcutting proposed for the region would represent an ecological alteration unmatched since the glacial retreat at the end of the Pleistocene. It is widely felt that the scars from logging will be even more persistent than those of the oil spill. This sort of massive perturbation, superimposed upon the deleterious effects of the spill, is likely to produce significant biological, economic, psychological, and socio-political effects far beyond what either one might have caused alone. A consensus is now emerging among many fishermen, biologists, tour operators and other local residents that, while this ecosystem might have been able to recover from either one of these rather large impacts in isolation, their combination could so seriously weaken the health and integrity of the system that its ability to recover would be severely compromised.

CLEARLY, THE FIRST STEP TOWARD FULL RESTORATION AND RECOVERY IS TO PROTECT THE ENTIRE SYSTEM AS COMPLETELY AS POSSIBLE FROM ANY FURTHER SIGNIFICANT HUMAN-INDUCED DISTURBANCE. And, aside from the

P.8/21

threat of additional oil spills in the area, the most immediate threat to the integrity of this ecosystem appears to be the planned removal of over one billion board feet of old-growth timber throughout the coming decade. The acquisition of timber to protect undamaged but threatened wildlife habitat in the impacted region is considered by many to be the single highest priority for Restoration.

Biologically, timber acquisition would protect the terrestrial, freshwater, intertidal, and nearshore habitat of many populations impacted by the spill (e.g., sea otters, diving birds, salmon, herring, eagles, bear, deer, etc.). It would also prevent the diminution of the hydrocarbon metabolizing marine bacterial flora that depends upon natural hydrocarbons washing into nearshore waters from coastal forests. Economically, timber acquisition would maximize profits and minimize risk for timber owners, protect existing commercial and subsistence economies, protect the future of tourism and recreation in the region, and preserve other in-absentia values of the region. The acquisitions would also go a long way toward relieving an overwhelming sense of despair in the region's residents, and would clearly help mitigate other socio-political impacts of the spill.

It should be emphasized that before the spill, timber development represented a legitimate economic opportunity for the region. However, we must now reassess all prior development plans in terms of what is in the best interest of the impacted ecosystem.

Restoration without full protection would be as futile as applying band-aids on a victim with one hand while continuing to inflict serious wounds with the other. And, in a larger sense, Prince William Sound has come to symbolize a violated relationship between humanity and nature. The only way to regain this relationship is to protect the area as completely as possible. This is the least, and perhaps the most that we can now do. Without such protection, full recovery--biological, economic, psychological, and sociopolitical--will be impossible.

#### II. BIOLOGICAL CHARACTERISTICS OF THE FORESTS WITHIN THE REGION

These old-growth forests are stable biological communities that have developed over several centuries essentially free from catastrophic (including human) disturbance. They support a rich diversity of highly specialized and adapted organisms such as cavity nesting birds, canopy-dwelling animals, understory saprophytic plants, and epiphytic lichens. These undisturbed forests support two or three generations of dominant tree species, forming a highly partitioned, broken, multi-layered canopy. They are highly retentive of nutrients, both in living and dead organic matter, giving rise to significant detritus-based food webs. For example, small to medium sized streams depend almost entirely upon decaying forest litter as an energy base.

In addition to live spruce and hemlock, these forests are characterized by standing dead snags, and fallen logs on land and in streams. As such, they form a rather unique habitat for a large number of bird, mammal, fish and invertebrate species. With so much production high in their canopy, they provide ideal habitat for flying and climbing consumers, such as foliage-consuming insects, and insectivorous birds. Large snags are valuable as habitat for a variety of vertebrates (e.g. bald eagles) and invertebrates. Logs and bark slabs on the forest floor are important for small mammals that disperse seeds and fungi, for nitrogen-fixing bacteria, and as seed beds for trees and shrubs.

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Fallen logs are also critical to the maintenance of the physical and biological stability of headwater streams. Debris dams, for instance, create stepped stream profiles that effectively dissipate energy that would otherwise go into transporting sediment, downcutting of stream channels and washouts. The associated pools and gravel beds provide a range of habitat requirements-temperature, shade, cover, current velocity, and oxygen - for a wide array of aquatic organisms.

The forests in the spill-impacted region are generally confined by steep mountain slopes to a relatively narrow band along shorelines. Three primary forest plant associations are found in the region:

- 1. <u>The Sitka spruce series</u>--occupies beachfront terraces and alluvial bottomlands. Common understory plants are blueberry, devil's club, skunk cabbage, lady fern, oak fern, and shield fern. Alder are dominant along streams.
- 2. <u>The mountain hemlock series</u>-found on lowland rolling hills, raised knolls in muskeg, and steep side slopes. Principal understory species on lowland hills are blueberry and devil's club; on raised knolls are copperbush, crowberry, bog blueberry, and deer cabbage; and on steep sideslopes are marten's cassiope, luetkea, shield fern, lady fern.
- 3. <u>The western hemlock series</u>—occupies some beachfront terraces and lowland rolling hills. It's understory consists of blueberry, rusty menziesii, devil's club, bunchberry, five-leaf bramble, and twisted stalk.

It is important to remember that the coastal forests of south central Alaska are rich, complex systems that produce more than just wood. They are important habitat for about one hundred species of birds, over 30 species of mammals, and several hundred species of invertebrates and plants.

III. JUSTIFICATIONS FOR ACQUISITION

#### A. Biological

There are seven principle biological arguments for using Restoration funds to retire timber harvesting rights in the region:

1. Protection of forest habitat for several spill-impacted species

Several of the bird and mammal species that depend to some extent on the old-growth forests in the region are known to have been impacted by the oil spill; (e.g. eagles, loons, murrelets, deer, bear, etc.). Removal of large tracts of this habitat through logging will only make it more difficult for these species to recover. (See #3 below)

2. Hydrological characteristics of watersheds

Regardless of how well buffer requirements are adhered to, the clearcutting planned for many steep sideslopes in the area would seriously alter the erosion, runoff, and sedimentation characteristics of entire watersheds. Watersheds disturbed by logging have dramatically altered hydrological characteristics. The removal of such large amounts of plant biomass, and

compaction of soils causes a dramatic reduction in the water-holding capacity of the area. This can affect the size and even timing of peak flows in nearby streams. This is evident where recent logging in Two Moon Bay has increased the frequency and magnitude of flooding, mudslides, soil erosion, and sediment loading in nearshore waters. Again, regardless of adherence to buffer requirements, percolation can still increase storm flow in streams, and the loss of forest shading will accelerate both the magnitude and timing of spring meltwater runoff. High storm flow can have devastating effects on salmon eggs and fry in streambed gravel.

Increased sedimentation of the intertidal and nearshore environments can be expected if upland forests are clearcut. These nearshore areas are critical habitat for outnigrant salmon smolts, herring spawning, clam and mussel production, and sea otter and bird feeding—all of which were impacted by the spill. Increased sedimentation of this environment could seriously reduce its biological productivity and habitability. Herring eggs and larvae, for instance, are very susceptible to reduced oxygen availability caused by increased sedimentation. Likewise, salmon fry migration and feeding can be affected by increased turbidity of nearshore waters. Also, any reduction in clam, mussel, or other invertebrate populations due to increased sedimentation from logging could have significant negative consequences for the recovery of sea otters, especially weanlings, and diving birds from oil spill impacts.

#### 3. Habitat fragmentation

Logging causes a significant reduction in the most accessible, highest density timber stands, and as such, increases the fragmentation of oldgrowth habitat. Such habitat fragmentation is known to be a significant cause of reduced genetic variability within individual species. The theory of island biogeography substantiates the concern for reduced biodiversity caused by such habitat fragmentation. Because of their isolation from each other and resultant interruption in gene flow, habitat islands have been found to decline both in number of species present and genetic diversity. A reduction in genetic variability within certain populations of mammals, bird, and plant species would reduce the stability of that particular population, and the ecosystem as a whole. This means that the system would be much less capable of recovering from other perturbations such as insect pests, disease, earthquakes, etc.

It's important to realize that habitat fragmentation is a much more significant threat to the ecological stability of old-growth forests in this particular region because here, these forests constitute a smaller, patchier component of the entire ecosystem than do the forests in the Tongass, British Columbia, and the Pacific Northwest. Additionally, the high noise levels generated by logging operations expand the edge of habitat impacts far beyond the boundaries of the clearcut. Many mammals and birds will attempt to avoid such acoustic disturbance, and in so doing, be pushed further away from their preferred ranges and confined to progressively smaller refugia. Several forest species, such as deer, find it difficult to cross clearcuts, particularly during periods of heavy snow.

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#### 4. Regeneration

Because these forests are at the northernmost edge of their range, regeneration of critical habitat structure, composition, and functions in second growth forests is extremely slow. Such slow regeneration rates are due to short growing seasons, low solar irradiance, and soils with low fertility and poor structure due to comparatively recent glaciation. Soil fertility is further reduced by leaching of nutrients after logging. And, although there are a few isolated examples of clearcuts in the Sound that have regrown relatively densely within 50 years or so, these dense secondgrowth stands have been found to provide unsuitable habitat for many of the original bird, mammal, and plant species that inhabited the area before logging. With no snags, fallen logs, large live trees, or canopy heterogeneity for habitat, these second-growth areas are generally poor in species diversity.

#### 5. Global significance

The forests in this region are unique globally in that they constitute the highest latitude temperate rain forests anywhere in the world. Temperate rain forests worldwide are rare and severely threatened ecosystems. In their original extent, they were distributed in 10 regions in the world covering an area of approximately 70 million acres; only 2-3% of the area of tropical rain forests. Four of the original areas in which they existed historically—western Scotland, Ireland, a small area in the French Alps, and the southwest coast of Norway have been eliminated entirely.

In addition to the forest system extending from Kodiak to central Oregon, the only other significant stands left are found along the coasts of southern Chile, southern Australia, Tasmania, New Zealand, and Japan. It has been estimated that 60-80% of temperate rainforests worldwide have been logged in recent history.

For this reason alone, the forest in the spill zone should be conserved as a precious representative of disappearing temperate rainforest ecosystems worldwide.

#### 6. The forest/marine bacteria/oil-spill connection

Oceanographers now believe that the large populations of hydrocarbon metabolizing bacteria that have been so important in degrading oil from man-made sources in the region (e.g., the Exxon-Valdez spill and the effluent from the ballast water treatment facility at the Alyeska Terminal) flourish precisely because of the continuous input of biogenic hydrocarbons from the coastal forest. Measurements of the hydrocarbon terpene dissolved in the canopy drip from spruce trees and in nearshore waters suggests that this is the primary energy source for naturally occurring hydrocarbon-oxidizing marine bacteria in the region. In this sense, the coniferous forest actually "immunizes" or prepares this marine system for oil spills. Removal of large tracts of these forests would, theoretically, reduce terpene input and thus the bacterial populations depending upon this

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input, causing the waters in the region to become less capable of selfcleansing or bioremediation.

7. Cumulative impact

And finally, all these biological effects need to be understood in the broader long-term ecosystem context. Many local residents and biologists have observed a gradual but continuous reduction of certain wildlife populations associated with increased human use of the region over the past 30 years. Superimposed upon this gradual deterioration in the environment of PWS, the Exxon-Valdez oil spill in 1989 threw the system into a profound state of disequilibrium. Shocking the system with yet one more massive humaninduced perturbation—the destruction of vast areas of old-growth forest habitat--would likely produce such a destabilizing effect that the resiliency of the entire ecosystem will be depressed for many decades. Also, it must be remembered that despite how well we think we might understand a particular biological system, even small perturbations can have large and unpredictable consequences (i.e. Chaos Theory). Beyond any doubt, the health and vitality of this coastal ecosystem would be best served by preserving its existing flora and fauna intact, in full interaction.

B. Economic

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The economic advantages of the acquisition of timber for Restoration purposes are quite straightforward:

1. Profit Maximization

The timber owners would simply make more money by selling their trees for Restoration purposes than by harvesting them. By having money from such a sale up front, the corporations and shareholders could enjoy perhaps 50% more profit over 10 years from reinvestment income. To begin realizing significant dividends from logging, they would probably have to wait several years. Such a windfall of profits would open up many other personal and corporate economic development options. Also, the owners would not incur the expense and risk of operation, and Native Corporations would not have to begin paying taxes on these tracts as developed lands.

#### 2. Market risk minimization

Timber markets are extremely volatile. Though they are now relatively strong, they are subject to at least the same magnitude of reduction that they experienced in the mid 1980s. Purchasing this timber now will allow timber owners to avoid the substantial risk of softening markets in the future.

3. Protection of existing economy

Any potentially negative effect that logging might have on either commercial fisheries or on local subsistence economies would be avoided.

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#### 4. Recreation and tourism development

It is widely agreed that the development of recreational and tourism economic opportunities in this region would be seriously impeded by timber harvesting. The scenic/aesthetic value of the area would be reduced in proportion to the number of vistas containing at least one noticeable clearcut. And, because areas planned for logging are relatively steep, virtually all can be seen from afar. It is widely felt that, in addition to commercial fishing, the recreation and tourism industry offers the PWS/Kenai Peninsula area its best opportunity for <u>sustainable</u> economic development that is compatible with the local environment. What is already a multi-million dollar industry probably has, in the absence of timber development, the potential to triple in size over the next decade. Recreation and tourism would also provide more <u>local</u> jobs on a sustainable basis than would a short-lived timber industry.

#### 5. <u>Timber price support</u>

Because this acquisition would take a substantial amount of timber off the market, it is reasonable to expect timber prices elsewhere in the State to be enhanced somewhat.

#### 6. Noncommercial economic value

And lastly, in the context of current economic theory (i.e., "Contingent Valuation") the actual economic value of a resource like the old-growth forests in this region is much more extensive than just its immediate commercial value. In addition to the commercial value of on-site recreation and timber harvesting, these forests offer many off-site, or "in-absentia" user values, including option, existence, and bequest value. Option value is essentially what people would pay to insure the availability of the forest system for future recreational opportunities. Existence value is the benefit derived from simply knowing that the forest exists. And bequest value is the willingness to pay for the economic benefits of saving forest resources for future generations. Timber harvesting could conflict with all nontimber values of these forests -- subsistence, sport fishing and hunting, commercial fisheries, recreation, tourism, option, bequest, and existence value. And because the Restoration process should satisfy timber owners financially, it is clear that from a strict economic standpoint, it is in the highest public interest to preserve these forests. This acquisition would ensure a maximum flow of benefits to the greatest number of people.

#### C. Psychological

The psychological impact of the oil spill, has been, and will continue to be enormous. The pristine natural environment of the region comprises a powerful aspect of local residents' sense of identity, place, and purpose. Most of the people who make the region their home live here just because of its natural bounty, beauty, and wilderness quality. Native culture evolved within the fabric of forest and marine biological systems in the region. The area is, for many people, a sacred place.

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The oil spill caused this sense of identity in local residents to rapidly disintegrate. Initial studies have clearly documented widespread perceptions of uncertainty about the future, deteriorating family relations, and Post Traumatic Stress Disorders in impacted communities. Even now, residents still feel a great deal of anger, remorse, and loss for what the spill did to their home. We must now allow these wounds to heal.

The most we can probably do to restore the psychological sense of well-being among local residents is to afford the impacted area as much protection as possible from further human insult. The psychological impact of clearcutting, superimposed upon that of the oil spill, would be devastating.

Prince William Sound has, in a very real sense, come to epitomize the plight of the Global environment. The phenomenal worldwide media attention given the area during the spill attests to the high degree of sympathetic identification felt by people throughout the world for such a spectacular pristine natural area essentially "lost" through corporate and governmental ineptitude. Many people, locally and elsewhere, express a sense of disbelief, indignation and even outrage that now, after perhaps the single greatest environmental disaster in our nation's history, humanity seems poised to inflict yet more environmental damage to the very same area through timber extraction, almost as if nothing had ever happened.

It is important to acknowledge that these are very real emotions and as such they must be addressed by the Restoration process. It should be a priority of the Restoration program to minimize any activity that might detract from an already damaged sense of psychological well-being throughout the region and the world. Another compelling reason, then, to retire timber harvesting rights in the region is to help restore the sense of solace and well-being that is so essential to the quality of life.

This acquisition would allow people to look forward with certainty to the full recovery of the natural environment, rather than despair over its continued degradation. This acquisition is absolutely essential for psychological recovery—without it, full recovery will be impossible.

D. Socio-Political

The oil spill has caused an overwhelming loss of faith in the institutions that manage our society.

The socio-political fallout from the spill has been characterized by bitterness and divisiveness within and between communities, anger toward the oil industry in Alaska and elsewhere, lack of confidence in government, and skepticism regarding economic development in general.

The social challenge for Restoration then, is to restore the cohesiveness within and between communities. Peoples within the impacted region now need a sense of solidarity, of being on the same side of an issue and of belonging to a joint enterprise together. It is now imperative to protect residents in the region from other highly divisive issues, such as logging. The political impacts of this spill will undoubtedly reverberate through the halls of Juneau and Washington D.C., oil company board rooms, and the minds of voters for quite some time. If something powerful and persuasive isn't done to make amends for this environmental disaster, its dark shadow will continue to loom over such major public policy issues as ANWR, offshore oil leasing, and other important development proposals.

The public wants a clear sign that industry and government will make every effort to "right-their-wrongs." A positive outcome with the acquisitions set forth in this proposal would send a loud and clear message to people everywhere that corporate and political institutions can and do act responsiblythat they do indeed care about the natural environment. The public relations value of such an initiative would benefit the timber industry, Native corporations, government, and the oil industry.

It is increasingly evident that these acquisitions would be enormously popular throughout the nation, and would renew public confidence in our governmental and corporate institutions. Underlying such sentiment is the growing body of public opinion that old-growth rainforests worldwide are a precious, highlythreatened resource that deserve protection, and a greater sensitivity toward the environment in general, (e.g., "Earth Day, 1990").

In a very real sense then, this acquisition for Restoration has, for many, become the "canary in the mine shaft" concerning mankind's commitment to the environment. It's really quite simple--either we do care, or we don't. This will be the legacy we leave for future generations and should be pursued accordingly.

#### IV. TIMBER OWNERSHIP

The primary land owners in the region are the Federal government, Alaska Native Corporations, and, to a lesser extent, the State of Alaska. All own valuable tracts of oldgrowth forest. A decision to not allow timber harvesting on these public lands can be obtained simply through an administrative decision on the part of the U.S. Forest Service and the State of Alaska Department of Natural Resources. At this time, the Forest Service has no plans to sell or harvest any of the timber within the Chugach National Forest. The ADNR is considering classifying several of its isolated land parcels within the region for timber harvesting. The Trustees should seek a Memorandum of Understanding or other legally binding agreement from these two agencies that, in the interest of Restoration, they will not permit any timber harvest on their lands in and around the spill zone.

The more important challenge for Restoration will be to retire the timber harvesting rights on the several hundred thousand acres of lands owned by Alaska Native Corporations in the region. Timber on these private lands is considered to be a valuable financial asset and thus timber owners will have to be sufficiently compensated in exchange for an agreement to extinguish any and all harvesting rights. The approach here should be to make it <u>financially advantageous for the timber owners/land owners</u> to enter into such an agreement, by providing them as much money as they would have earned in profits by harvesting their timber. The two principle areas of concern for acquisition purposes are Prince William Sound and the lower Kenai Peninsula.

#### Prince William Sound

The Native Corporations with land holdings in Prince William Sound itself are as follows:

Eyak Corporation PO Box 340 Cordova AK 99574 Phone: 424-7161

Tatitlek Corporation PO Box 650 Cordova AK 99574 Phone: 424-3777

Chenega Corporation General Delivery Cordova AK 99574 Phone: 573-5118 64,000 acres (Note: acreages here are approximate)

65,000 acres

76,000 acres

Chugach Alaska Corporation 3000 A Street, Suite 400 Anchorage AK 99503 Phone: 563-8866 57,000 acres in S.W. PWS

Approximate total area proposed for timber acquisition in Prince William Sound = 262,000 acres

Most of the timber on these lands has been sold, in connection with Net Operating Loss Sale provisions of federal tax laws, and is now owned by the following companies:

Sherstone, Inc. PO Box 828 Cordova AK 99574 Phone: (907) 424-5524

Citifor, Inc. 7171 Columbia Center 701 Fifth Ave. Seattle WA 98104-7090 Phone: (206) 622-3770

Koncor Forest Products, Inc. 3501 Denali Anchorage AK 99503 Phone: (907) 562-3335 Owns some of the timber on Tatitlek lands between Fidalgo & Gravina

Owns timber on Eyak lands

(Timber Trading Company) owns timber on Chugach Corp. lands on Montague & Knight Islands and on Chenega lands

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Tatitlek Corporation still retains title to some of their timber, and Chugach Alaska Corporation has purchased timber on Tatitlek lands at Fish Bay in Pt. Fidalgo.

Beyond PWS itself, three village corporations on the Kenai Peninsula have considerable land holdings with timber that should be considered for acquisition:

English Bay Corp. PO Box 8058 English Bay via Homer Homer AK 99603 Phone: (907) 281-2220

Port Graham Corp. PO Box PGM Pt. Graham AK 99603 Phone: (907) 284-2227

Seldovia Native Ass'n. PO Box 185 Seldovia AK 99663 Phone: (907) 234-7625 45,000 acres at southern tip of Kenai Peninsula and 22,000 acres within the Kenai Fjords National Park

66,000 acres at southern tip of the Kenai and 55,000 acres also within the Kenai Fjords National Park

23,000 acres within Kachemak Bay State Park across from Homer and 423 acres on Island Peninsula

Approximate total area proposed for timber acquisition on Lower Kenai Peninsula = 221,000 acres

These corporations have sold much of their timber, as in Prince William Sound, to the following companies.

Koncor Forest Products, Inc. 3501 Denali Anchorage AK 99503 Phone: (907) 562-3335

Chugach Alaska Corporation 3000 A Street, Ste. 400 Anchorage AK 99503 Phone: (907) 563-8866 (Timber Trading Company) owns the timber on Seldovia Native Ass'n. land holdings within Kachemak Bay State Park

owns the timber at Windy Bay, on Pt. Graham lands

Kolon California, Inc. c/o Ceretech International 515-16th Ave., Ste. 155 Bellevue WA 98004 Phone: (206) 455-4850 owns the timber on English Bay lands

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This would also be the appropriate forum to consider purchasing timber and possibly certain other development rights from Native Corporations with lands along the coastline of the Kenai Fjords National Park. Together, the Port Graham and English Bay Village Corporations have selected approximately 77,000 acres of waterfront land surrounded by the Park. The Chugach Alaska Corporation will receive the subsurface rights. These selections are yet to be conveyed, pending negotiations with the U.S. Bureau of Land Management. The development of timber and minerals on these lands would seriously conflict with the quality of the area as a National Park. Thus, it should be a high priority for Restoration purposes to acquire at least the timber, and perhaps the mineral rights on these lands.

#### V. ADDITIONAL CONSIDERATIONS

#### 1. Cost of Acquisitions

While it is difficult to estimate, the timber acquisitions outlined above would probably cost on the order of \$200-\$300 million. An independent timber appraisal should be conducted to determine fair market value of timber assets in the region.

2. <u>Urgency</u>

Timber harvesting has already begun on three parcels within the region: one near Cordova, at Two Moon Bay near Tatitlek, and at Windy Bay on the lower Kenai. Several more areas are scheduled to begin cutting within a year.

Additionally, foreign timber buyers, who might be less sympathetic to selling timber assets for Restoration purposes, are reportedly very interested in purchases within the region.

If the Trustees decide to pursue timber acquisition, it should be done soon.

#### 3. Short Term Contracts

The timber owners generally have rights to the timber only over short-term (10-15 year) contracts. After these contracts expire, the timber rights revert to the land owners. Thus, in negotiating to retire timber harvesting rights in perpetuity, the land owners will also have to enter into any agreement between current timber owners and the Trustees.

#### 4. Lands selected but not conveyed

An additional aspect that has to be considered is Native Corporation lands in Prince William Sound that have been selected but not yet conveyed. Some of these contain timber that should be purchased in the context of Restoration.

#### 5 Individual Allouments

Funds should also be made available to Native shareholders with individual land allotments who might wish to sell their timber assets for Restoration purposes.

#### 6. Displaced jobs

A very legitimate concern exists over the jobs, particularly of Native shareholders, that would be displaced by this acquisition for Restoration. This concern is addressed by the Sustainable Economic Development section of the proposed comprehensive settlement. An "Alaska Native Employment Fund" should be established to provide on the order of \$5 million annually to be used to employ shareholders in jobs that, as determined by themselves, are sustainable and compatible with their cultural heritage and local environment.

#### 7. Seward Sawmill

Withdrawing these forests from timber production will reduce the flow of raw logs to the newly constructed Chugach sawmill in Seward. Clearly, the Chugach Corporation deserves compensation for this loss. Either a genuine offer should be made for an outright purchase of the mill, or some other subsidy/settlement must be offered.

#### 8. Protection of Native Sovereignty

One of the most important considerations for this initiative is to protect the right to self-determination of local Native people. As the principle private land owners in the region, they have the most at stake relative to this issue. It is essential that all the shareholders of each Native corporation in the region be fully informed concerning their options here, and that they come to some agreement among themselves as to what is in their own long-term interest. Presently, some shareholders support timber acquisition for Restoration, others oppose it.

It is incumbent upon the Restoration planning process to provide the corporations and their shareholders with an objective assessment of the implications of supporting or opposing such acquisitions.

IT IS ESSENTIAL THAT THE TRUSTEES REMAIN SENSITIVE TO THE DESIRES OF NATIVE SHARE-HOLDERS ON THIS ISSUE, AND PURSUE ACQUISITIONS ONLY WITH THOSE CORPORATIONS THAT SUPPORT THE CONCEPT.

It should be recognized that, before the spill, timber development plans represented sincere and genuine commitment on the part of corporation managers to provide economic opportunity for their shareholders. Acquisitions for Restoration should be presented as a unique opportunity to redirect such development plans in light of the spill.



- 2. CITIFOR
- 3. TATITLEK

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- 4. CHUGACH/KONCOR
- 5. CHENEGA/KONCOR
- 6. PORT GRAHAM/ENGLISH BAY SELECTIONS
- 7. ENGLISH BAY/KOLON CALIFORNIA
- 8. PORT GRAHAM/CHUGACH
- 9. SELDOVIA NATIVE ASSOCIATION/KONCOR

APPROXIMATE TOTAL AREA PROPOSED - 483,000 ACRES.


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## ATTACHMENT C

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#### IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF ALASKA

UNITED STATES OF AMERICA

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vs.

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No. A90-015 CR.

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EXXON SHIPPING COMPANY, AND EXXON CORP.

COMMENTS OF THE NATIONAL WILDLIFE FEDERATION ON THE PLEA AGREEMENT OF THE UNITED STATES, EXXON SHIPPING, AND EXXON CORP.

Erik Olson Douglas Wolf National Wildlife Federation 1400 16th Street, N.W. Washington, D.C. 20036 April 11, 1991

#### INTRODUCTION

The National Wildlife Federation ("NWF" or "the Federation"), the nation's largest private conservation education organization with 5.6 million members and supporters, welcomes this opportunity to comment on <u>United States of America v. Exxon</u> <u>Shipping Company and Exxon Corporation</u> (No. A90-015 CR.) (the plea bargain)<sup>1</sup>. Such public comment is particularly appropriate given the overwhelming public interest in and concern with this oil spill and the important legal and public policy issues this plea bargain raises.

NWF is very concerned that the proposed plea bargain would let Alyeska Pipeline Service Company (Alyeska) off the hook entirely. This deal in Alyeska's favor was struck despite recent evidence of what a Congressional investigation has suggested was <u>criminal</u> behavior by Alyeska. <u>NWF urges that the Court strike</u> all provisions in the plea agreement which shield Alyeska from <u>punishment</u>. In addition, <u>NWF urges the Court to require a</u> <u>magistrate investigation, or to name an independent counsel or</u> <u>special master to investigate the recent allegations of Alyeska's</u> <u>alleged criminal conduct, and recommend to the Court whether the</u> <u>plea agreement's immunization of Alyeska from criminal</u> <u>prosecution is justified and in the public interest.</u>

NWF also urges that this Court order the government and Exxon to release all scientific and economic data documenting the extent of damage caused by the crimes, in order to assure the public and this court that the fines and restitution are appropriate to the offenses committed. These comments will discuss these and other concerns.

ALYESKA SHOULD NOT BE MADE IMMUNE FROM FUTURE PROSECUTION

In a very unusual provision which may be without precedent, paragraph III A of the Plea Agreement specifically waives the United States' right to prosecute a third party, Alyeska, which is not a defendant in this or any related criminal action, for any criminal violation of federal law arising out of the <u>Valdez</u> spill, the cleanup, or its preparations for a cleanup. This unusual promise was made without any plea, fine, restitution, admission, or extraction of any other benefit to the public or to the government from Alyeska. Our research has been unable to

<sup>&</sup>lt;sup>1</sup> NWF, with the Wildlife Federation of Alaska and the Natural Resources Defense Council, and represented by the Trial Lawyers for Public Justice, has sued Exxon and Alyeska Pipeline in state court in Alaska to seek creation of a trust fund which would help restore the natural resources damaged by this catastrophe. NWF has actively commented on the natural resource damage assessment process in response to the <u>Valdez</u> spill.

document any previous case in which a corporate defendant has been provided a promise of no prosecution for environmental or other crimes as part of a plea bargain with some other legally separate company, particularly when that third party corporation has failed to provide any benefit to the government for such a promise.

This provision is particularly troubling in light of recent evidence of Alyeska's alleged criminal conduct. If Alyeska is not punished, the fundamental retributive, rehabilitative, and deterrent goals of criminal law with respect to Alyeska's alleged criminal behavior will not be served.

Documents recently submitted to this Court by the U.S. House Interior and Insular Affairs Committee Vice Chairman George Miller (collectively, "the Alyeska materials") establishes that eleven months before the Exxon <u>Valdez</u> spill, Alyeska <u>knew that it</u> <u>could not adequately respond to a major spill in Prince William</u> <u>Sound.</u><sup>2</sup> In fact, these documents show that Alyeska unilaterally decided that it would only respond to spills in the Valdez Arm and Valdez Narrows and that it would rely on dispersants and cleanup efforts by the spiller to attempt to take care of any other spills<sup>3</sup>. In other words, Alyeska unilaterally abdicated a large part of its responsibility to protect the environment<sup>4</sup>.

The outrageous nature of this conduct becomes even clearer when one compares these internal statements with those Alyeska made in many public forums<sup>5</sup> and makes in its Contingency Plan for Prince William Sound. In the Contingency Plan, Alyeska asserts that it can and will respond to all spills, no matter where they occur in the Sound and no matter what size<sup>6</sup>. The Congressional

<sup>2</sup> T.L. Polasek, [Alyeska] "Oil Spill Issues," (April 6-7, 1988) (filed with this Court with Alyeska materials).

<sup>3</sup> See Cable from Stanley Factor, ARCO Marine, to Roger Gale, Sohio (July 6, 1988) (in Alyeska materials). Further, this document indicates that the Alyeska owner companies were unable to agree to even this incredibly low level of commitment.

<sup>4</sup> In fact, Alyeska didn't even acquire and deploy the additional equipment that the documents indicate they were planning to purchase. Rep. Miller's April 8, 1991 letter to the Court, at 8-9.

<sup>5</sup> <u>Id</u>. at 2-3 The misstatements made before the pipeline was approved are particularly significant as the pipeline was ultimately approved by only one vote in the United States Senate, with then-Vice-President Spiro Agnew casting the deciding vote.

<sup>6</sup> <u>Id</u>. at 3-6.

investigators suggest that these were willful misstatements and probably were <u>criminal</u> violations of Alyeska's duty under the Clean Water Act and other laws.

The plea bargain, in section III A, specifically exempts Alyeska from any criminal liability for any acts associated with the grounding of the Exxon <u>Valdez</u> as well as any "conduct in connection with the preparation or submission of oil spill contingency plans or related documents, by Alyeska Pipeline Service Company to the federal or state government." The plea bargain exacts nothing from Alyeska in return for this beneficence. Plea bargains often are described as contracts; Alyeska has been given all of the benefits of such a contract without having provided any consideration.

NWF invites the Court to examine its law books to find a similar example of a third-party, legally separate from the accused, gaining the benefit of the plea bargain without suffering any detriment. The governments appear to have surrendered all criminal charges for Alyeska's incredible conduct because <u>Exxon insisted</u>. The record before this Court at a minimum suggests that Alyeska likely is an appropriate target of a criminal investigation. The record is completely devoid of any support for the promise not to prosecute Alyeska. This Court, therefore, has insufficient information for it to evaluate, pursuant to its obligations under Federal Rules of Criminal Procedure 11 and 32, whether the plea is in the public interest and whether the sentence fits the crime.<sup>9</sup> NWF urges the Court to

<sup>8</sup> In public testimony before several of the House Merchant Marine and Fisheries Committee's Subcommittees, which met in joint session on March 20, 1991 to examine the proposed settlement, United States Assistant Attorney General, Richard Stewart, asserted that the negotiators for the governments added Alyeska to the plea bargain and the consent decree between the United States and Alaska governments and Exxon Corp. and Exxon Shipping, simply because <u>Exxon insisted</u> they do so.

See generally, J.E. Bond, <u>Plea Bargaining and Guilty</u> <u>Pleas</u> § 6 (1983 & Supps.); W. R. LaFave & J.H. Israel, 2 <u>Criminal</u> <u>Procedure: Criminal Practice Series</u> § 20 (outlining rights and duties of court in reviewing plea bargain).

<sup>&</sup>lt;sup>7</sup> The Act makes "[a]ny person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this chapter," such as the Contingency Plan, liable for fines and/or prison. 33 U.S.C. §1319(c)(4). See also 18 U.S.C. §1001 (penalties for knowingly submitting false information to any agency of the United States).

strike these unjust provisions from the plea bargain. Alyeska's cavalier and criminal actions must not go unpunished.

THE COURT SHOULD APPOINT A MAGISTRATE, SPECIAL MASTER, OR INDEPENDENT COUNSEL, TO REVIEW ALYESKA'S ACTIONS

The Court should request that a magistrate, special master, or independent counsel<sup>10</sup> review the allegations of Alyeska misconduct. The results of such an investigation would inform the Court's determination regarding whether the plea's provision exempting Alyeska from criminal prosecution is in the public interest and should be approved.

OTHER CONCERNS

1. Important Scientific Data Must Be Released

The plea agreement requires Exxon Corp. and Exxon Shipping to pay a total of \$100 million in criminal fines and restitution payments. However, there is no way the public or this Court can meaningfully assess the amount of restitution needed or economic impacts of the spill, to measure against this figure. The federal government's scientific study summary released this week regarding the biological impacts of the spill fails to include any estimates of the economic impacts of the spill or of the restoration costs. None of the numerous economic studies conducted by the government have been released, no information on the findings of Exxon's studies has been made available, and the public, independent experts, and this court are in no position to judge the accuracy even of the summary of biological impacts filed by the government since the studies themselves and all underlying data remain secret.<sup>11</sup>

<sup>10</sup> <u>See</u>, Bond, <u>Plea Bargaining and Guilty Pleas</u> § 6.18(c)(court may name special prosecutor in rejecting plea bargain as contrary to public interest); <u>United States v. Cox</u>, 342 F.2d 167, 179 (5th Cir.)(<u>en banc</u>), <u>cert. denied</u>, 381 U.S. 936 (1965) (Judge Griffin Bell and dissenters in part suggesting that where government decision not to prosecute is in bad faith or "irrational," court may be authorized to appoint counsel to prosecute case); <u>United States v. Cowan</u>, 381 F.Supp. 214, 223 & n. 11 (N.D.Tex. 1974), <u>rev'd on other grounds</u>, 524 F.2d 504 (5th Cir. 1975), <u>cert. denied</u>, 425 U.S. 971 (1976)(to same effect).

<sup>11</sup> What we do know is that Exxon says it has spent "in excess of \$300 million to claimants allegedly injured by the oil spill," Plea Agreement paragraph III C(3)(c), suggesting that under the Alternative Fines Act, 18 U.S.C. section 3571(d), if Exxon were convicted it could be subject to over \$600 million in fines, in addition to providing restitution. Thus, there is already substantial evidence of widespread injury from Exxon's actions, and there is suggestive evidence that the adequacy of The Court should require that all these studies -- and not just the vague and conclusory summaries just released by the government -- be revealed by Exxon and the government so that the public can intelligently comment on this aspect of the plea bargain, and so that this Court can meaningfully exercise its duties to evaluate the grounds for and adequacy of this plea bargain, and the associated fines and restitution suggested in it.

3. Court Should Impose Prevention Measures

We hereby join in the comments of other conservation organizations before this court calling for the use of creative probation and other requirements requiring Exxon to take actions to prevent other environmental pollution and disasters.

4. Public Should Be Able to Challenge Use of Money

Paragraph IV B of the Plea Agreement purports to provide that Alaska can spend the restitution money it receives under the agreement "without objection, challenge, or judicial or administrative review." As much as the state and United States governments may want to insulate their actions from judicial or other review provided for under the Administrative Procedure Act and other laws, the governments simply cannot enter into a contract with Exxon that purports to eliminate the statutory and other legal rights of third parties to challenge government actions. Thus, this provision must be struck from the agreement as an <u>ultra vires</u> act that is contrary to law and public policy.

Respectfully Submitted,

Douglas Wolf, Esq.

Erik D. Olson, Esq.

the plea bargain can be questioned with respect to Exxon itself. This is particularly true in light of Exxon's widely reported statements in the wake of the settlement's announcements that the deal would have no effect on Exxon's financial position, suggesting the Company's management has no remorse for its actions and that there will be little or no deterrent effect from the fines imposed.

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ATTACHMENT D

# FACT SHEET EXXON-VALDEZ OILSPILL SETTLEMENT

AGREEMENT HAS BEEN REACHED between Federal and state trustees and Exxon Corporation, Exxon Shipping Company and Exxon Pipeline Company for settlement of damages rising from the Exxon Valdez oilspill in Prince William Sound March 24, 1989.

The settlement, totalling \$1 billion, represents the largest environmental damage settlement in history—50 times the size of any other.

### Highlights

- EXXON WILL PAY \$190 MILLION IMMEDIATELY, of which \$100 million is a criminal fine. Half of this fine will be remitted to the state of Alaska. Twenty-five million dollars of the first payment will be used to continue the science program, and \$15 million will go to restoration planning and to initiate restoration pilot projects. The balance will be used to begin to reimburse most of the trustees and the Coast Guard for past expenses.
- EXXON WILL PAY \$150 MILLION IN FISCAL YEAR 1992, but this amount and future amounts will be usable beginning in October 1991. The major part of these funds will be used in restoration efforts aimed at returning Prince William Sound to its pre-spill condition.

EXXON WILL PAY \$660 MILLION OVER A PERIOD OF YEARS beginning in FY 1993.

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If significant new injury arises after the 10-year restoration period, which is based on previously unknown information, the trustees may reopen the matter up to a cap of an additional \$100 million.

### **Interagency Administration**

The agreement will be administered by a group of trustees comprising the Administrator of the National Oceanic and Atmospheric Administration (NOAA), the Secretaries of the Departments of the Interior and Agriculture; the Commissioner of the Alaska Department of Fish and Game, and the Commissioner of the Alaska Department of Environmental Conservation, and the State Attorney-General. The U.S. Environmental Protection Agency has been designated by the President to coordinate restoration activities for the U.S.

The trustees will act jointly in the collection and joint use of all damage recoveries. Decisions on use of recovered funds will be made by unanimous agreement; the funds are to be held in a joint trust fund under the supervision of the U.S. District Court for Alaska.



# EXXON VALDEZ FA \_ I SHEET (cont.)

#### **Cooperative Restoration Efforts**

THE GOVERNMENTS WILL CONTINUE TO WORK COOPERATIVELY conducting scientific studies and restoration efforts approved by the trustees for the 1991 field season. Among those under consideration are:

- RESTORATION OF THE BEACH WILDRYE COMMUNITY, to stabilize sites where natural or cultural resources are at risk,
- A PUBLIC INFORMATION AND EDUCATION PROGRAM, to lessen the potential for further human disturbances,
- HABITAT RESTORATION FOR PINK AND CHUM SALMON, using proven fisheries enhancement techniques,
- PROTECTION OF STRATEGIC FISH AND WILDLIFE HABITATS AND RECREATION SITES.

#### Indian Tribes' Rights Protected

THE AGREEMENT WILL BE ENFORCED by the U.S. District Court for Alaska in conjunction with its supervisory powers over a consent decree entered in the litigation.

The agreement does not affect rights and obligations of third parties with interests in the situation, including those of Indian tribes to act as trustees for asserting claims, or those of any others who are or become successors to any federal or state interest, or holders of present or future rights in land or resources affected by the spill. Also unaffected are U.S. or state rights or obligations relating to Indian tribes.

The memorandum of agreement, and the settlement agreement, will be published in the Federal Register and public comment will be sought for a period of 30 days. Broadly based public participation will be an integral part of the program.

Each government has the right to withdraw its consent to the settlement agreement within 15 days after the close of the public comment period if the comments disclose facts indicating the agreement is not in the public interest.

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## ATTACHMENT E

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ANCHORAGE TIMES April 6, 1991 B1, B7

# Deal OK could halt studies

Cole: \$1-billion pact approval may cut spill damage probes

#### By DIRK MILLER

TIMES CAPITAL BUREAU

JUNEAU — Attorney General Charlie Cole said Friday state and federal governments could halt some economic-damage studies of the Exxon Valdez oil spill if a proposed settlement is approved.

Cole made the statement after questioning by a House panel reviewing the \$1-billion settlement of state and federal claims against Exxon from the March 24, 1989, oil spill. Lawmakers are considering whether to approve or reject the settlement by a May 3 deadline.

He also said there were concerns about naming Natural Resources Commissioner Harold Heinze to a panel of six federal and state trustees to oversee spending of a \$900 million trust fund created by the settlement.

Heinze is a former ARCO Alaska Inc. president and spent 20 years with the company, which is one of the major producers on Alaska's North Slope.

"That's one of the reasons he's not (on the panel) now," Cole said.

Cole also released confidential details of the \$72 million the state says it has spent on the spill in cleanup, legal and study costs. The state spent \$64.5 million on spill response, of which Exxon paid back \$30 million; \$23.2 million on damage studies, on which it was reimbursed \$5.7 million; and \$19.8 million on litigation.

The state is to be reimbursed the \$72 million over five years as part of the settlement.

The state's studies have been a controversial part of the debate over the agreement. Some lawmakers say Cole should release the state's economic and resource damage data for use by private parties against Exxon, the state and Alveska See Studies, page B7

# Studies

Continued from page B1

Pipeline Service Co. Cole has said the studies will be secret until the state is released from all claims.

Cole said Environmental Commissioner John Sandor had talked about eliminating some studies if the settlement is adopted.

"Of particular discussion were certain economic studies which had been initiated in furtherance of the state's claim for damages against Exxon," Cole said.

He said state and federal trustees planned to spend approximately \$35.8 million in federal and state funds to continue the studies. The trustee arrangement is set up under federal laws to assess and restore damage. Sandor, Cole and Fish and Game Commissioner Carl Rosier are the state's trustees.

"I'm talking about studies that are litigation driven," Sandor sald Friday. "Why should we continue those? That work is done."

The trustee council agreed with his suggestion, Sandor said, and may take action to reduce the studies in May or June. He said there could be potential savings of several million dollars.

"What we want to do is focus on restoration," he said.

Mayors of towns affected by the oil spill have said all along that the economic studies were important to show the cost of the spill and its cleanup on coastal communities.

"It concerns us. It's something that seems to wax and wane as this thing goes on," said Jerome Selby, mayor of the Kodiak Island Borough. "From our perspective the studies ought to be concluded."

Kodiak Island's fisheries were shut down almost completely by the drifting oil from the wrecked supertanker. Selby said the Kodiak borough estimates it lost about \$1 million in shared fish tax revenues because of the spill.

The economic studies included looks at commercial fisheries losses, recreation use damage, subsistence losses, intrinsic value losses and research program damages.

Sandor said the recreationuses study might be stopped, whereas a fish-tagging program should continue.

The Senate's settlement-review committee is taking public testimony on the agreement among federal, state and Exxon officials between 10 a.m. and 4 p.m. today.

The public can comment on the settlement at legislative information offices in Anchorage, Fairbanks, Juneau, Kodiak, Valdez, Soldotna, Homer, Cordova and Seward. Cole also will be at the meeting, which is being conducted in the Senate Finance Committee room in Juneau,

# Trustees consider further Exxon spill assessment studies

## By DANIEL R. SADDLER

TIMES WRITER

The proposed settlement of state claims for the Exxon Valdez oil spill has prompted state and federal trustees to reconsider spending any of \$35.6 million planned for 1991 spill assessment studies, Fish and Game Commissioner Cari Rosier said Saturday.

State and federal agencies last week unveiled their 1991 plan for studies to determine how much the spill damaged Alaska's environment and resources. The studies, funded by the governments and by Exxon, are aimed at setting a dollar value on the impact if Exxon were found liable for the damage.

But with the possibility of a negotiated settlement, the council of trustees responsible for overseeing the studies and restoration is wondering whether money for a third year of assessment could not be better spent on restoration, Rosier said.

At a Thursday meeting, the Trustees Council of state and federal land officials overseeing the studies decided to ask for a review of the planned studies.

"The mission in reviewing them is to see if there are projects or programs here that lean more toward damage assessment rather than restoration," Rosier said. "The basis for these studies in many cases was litigation, and now we're looking at the studies and work to be done (as) being more directed toward restoration."

Scientists and agency officials over-

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seeing their work must complete their review by May, and make their recommendations to the council for the final decision, Rosier said.

Attorney General Charlie Cole said Saturday that studies of the economic damage of the spill clearly driven by legal concerns might be stopped if the state wins approval of the \$1 billion settlement of its claims against Exxon.

But no decision has been made on the studies, or can be made, until the settlement is either approved or rejected by the May 3 deadline, he said.

Meanwhile, some of the studies have already begun, said Mike Dean, acting director of Fish and Game's division of oil spill impact, assessment and restoration. The department has begun to hire workers, buy equipment and set up field camps for continuing studies of the oil's impact on herring, trout and salmon, said Dean. Other studies on river otter and mink, and on sea birds are due to start soon.

The schedule lists studies focusing on several areas of biological and environmental concern, including marine and terrestrial mammals, birds, fish, coastal habitat, air and water conditions and archaeological resources.

The studies range from monitoring fish, birds and mammal populations to track recovery, to creating computer models showing the relationship between oil and injury, to measuring levels of oil on cleaned beaches.

About \$2.3 million in studies aimed at finding ways to restore or replace damaged resources already have received tentative approval from the Trustees Council, Dean said.

Dean questioned whether the wellplanned science program should be halted in face of a settlement.

"You have to know what was broke before you can fix it, and we're still doing that," he said.

Dean said no studies planned for this year would involve killing sea birds or mammals. The U.S. Fish and Wildlife Service has denied applications to do so after public outcry last year over studies in which researchers killed about 170 sea birds in a test of their ability to survive immersion in oil.

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ANCHORAGE DAILY NEWS April 7, 1991 C2

# Exxon deal may affect studies

#### By MATT KOHLMAN The Associated Press

JUNEAU — The state and federal governments may suspend some of their studies of oil-spill damage to Prince William Sound if the \$1 billion Exxon Valdez settlement is approved, state officials say.

Environmental Commissioner John Sandor made the suggestion at a recent meeting of a federal-state council established after the Exxon Valdez spill in March 1989.

The state and federal governments plan to spend \$35 million next summer for damage assessment and restoration. But some of those studies, particularly on eco-nomic effects, were started because of Exxon Corp. claims and may be unnecessary with a settlement, Sandor said Friday.

Sandor said he suggested the agencies identify those projects before the group



meets again in May or June. "We did not say, 'Hey the settlement has been made. thus we're cutting those out completely,''' he said. "We're keeping our bases covered.

About \$18 million of the summer expenses will go toward restoration, and several million more could be used if the settlement makes some studies unnecessary, he said.

"We want to concentrate on restoration," Sandor said.

Sandor also is one of three state representatives on the six-member trustee board that would be established to oversce spending the settlement money.

Fish and Game Commissioner Carl Rosier and Attorney General Charlie Cole also will be trustees, Cole told lawmakers Friday.

Representing the federal government will be John Knaus, administrator of the National Oceanic and Atmospheric Administration, Interior Secretary Manuel Lujan and Agricultural Secretary Edward Madigan.

Cole said that if the agreement becomes official, he may be replaced by Harold Heinze, natural resources commissioner and former head of Arco Alaska Inc.

"In the course of time, we would suggest DNR be appropriate because we're dealing primarily with natural resources," Cole said. Heinze has not been involved in the settlement so far because of a conflict of interest, Cole said.

Cole also gave lawmakers a breakdown on the \$72 million that will be used from the settlement to reimburse the state for unpaid costs.

About \$20 million would go toward litigation costs, \$34.5 million would cover oil-spill response costs through February, and \$17.5 million would be used for damage-assessment expenses.

Legislators have formed special committees to review the spill settlement. The agreement would require Exxon to pay a record \$100 million fine. Exxon also would pay \$900 million over 11 years to settle civil claims, with the money going into a trust to pay for cleanup and restoration of Prince William Sound.

The tanker Exxon Valdez spilled nearly 11 million gallons of crude oil into Prince William Sound when it ran aground.

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## ATTACHMENT F

#### IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

#### THIRD JUDICIAL DISTRICT AT ANCHORAGE

EXXON VALDEZ OIL SPILL LITIGATION

3AN-89-2533 Civil (Consolidated)

This Document Relates To: Case No. 3AN-89-6957 Civil National Wildlife Federation, et al. v. Exxon Corporation, et al.

#### AFFIDAVIT OF DR. JOHN M. TEAL

I, Dr. John M. Teal, after being first duly sworn, state as follows:

Introduction

1. My name is Dr. John M. Teal and I am over the age of twenty-one. I am a biological oceanographer with extensive professional experience in marine ecology, marine pollution and biogeochemistry. I am a senior scientist in the biology department at the Woods Hole Oceanographic Institution. My curriculum vitae is attached as Attachment 1.

2. I have read and endorse Attachment 2, "The Problem of Secrecy: Science Under Wraps In the Wake of the Nation's Largest Oil Spill." This statement represents many of my concerns about the current regime of secrecy imposed by the parties to this lawsuit.

Need For Open Exchange of Data

3. Many examples illustrate my concerns about the effects

Affidavit of Dr. John M. Teal Page 1 of secrecy on the quality of scientific research on oil spill impacts. One example comes from the investigations of the effects of the tanker "Tsesis" spill in the Baltic. In the affected area the hatching success of herring eggs was drastically reduced. But the oil did not seem to have a large effect on the ratio of normal to malformed herring larvae, indicating no very large direct effect of oil on the eggs, though such a direct effect was the expected result, the logical first hypothesis.

4. Research on other aspects of the affected ecosystem, when combined with the results on herring, suggested the complex pattern of interactions that led to the failure of the herring eggs. A certain type of adult amphipod normally keeps the growth of fungi on herrings eggs low through feeding on the fungi, and thus enhance the survival of the herring eggs. The oil spill virtually wiped out these amphipods which, in turn, allowed fungal growth on the eggs to proceed unchecked. The effects of oil on the adult populations of the amphipod, by preventing their normal interaction with herring eggs, dramatically reduced the survival of herring eggs.

5. Only free interchange of research results and hypotheses by scientists of various disciplines studying the impacts of this spill allowed these scientists to make the necessary logical connection required to understand the cause of the loss of the herring eggs.

6. Without similar opportunities for free interchange of
Affidavit of Dr. John M. Teal
Page 2

scientific results, hypotheses and assumptions from research regarding the impacts of the "Exxon Valdez" oil spill (see Attachment 2), many similar complex relationships may never be discerned and the full causal network and/or extent of damage and long-term impacts may never become clear.

#### Secrecy Hamstrings Other Government Bodies

7. From 1978 to 1990, I have been a member of the Scientific Advisory Board ("Board") to the federal Minerals Management Service ("MMS"). The Board's role is to advise MMS on its scientific studies program. The scientific studies program's purpose is to develop the scientific basis for MMS decisions regarding outer-continental shelf ("OCS") leasing for oil exploration and production.

8. Although the Exxon Valdez spill did not involve OCS oil and did not occur in OCS waters, the Board felt that the results of the spill are very relevant to the decisions MMS makes in regards to the costs and benefits of oil exploration and production.

9. Unfortunately, the secrecy surrounding the Valdez spill effectively prevented the Board, and thus the MMS, from gaining any useful information of this type -- even though it would have been directly relevant to the mission of the MMS.

10. For example, during a meeting of the Board in Juneau, the Board invited representatives of the trustees to attend and discuss the scientific studies being conducted on the "Exxon Valdez" spill. Though the invitees came they were accompanied by Affidavit of Dr. John M. Teal Page 3 a government lawyer who sat amongst them and frequently told them not to answer the questions we put to them.

Important Research Opportunities Will Be Lost

11. The Exxon Valdez Spill offers a rare and significant opportunity for marine scientists to answer important questions about marine environments. In essence, the significant deposition of oil, which has components that are relatively longlived and which will remain relatively toxic over time, in the Prince William Sound ecosystem acts as a marker or tracer which would allow scientists to follow the pattern of movement of various elements of the ecosystem just by following the movement of the oil over time.

12. This would also advance our current knowledge of longterm effects of oil spills. For example, this could allow scientists to expand upon the work that I have done with Dr. John Farrington and Bruce Tripp, also of Woods Hole, into the longterm effects of oil in the West Falmouth Harbor ecosystem. In that study, we have been able to trace the long-term movement of oil throughout an ecosystem which was disturbed by a 1969 oil spill.

13. In the wake of the "Exxon Valdez" spill, I am interested in studying the long-term ability of various sea plants and grasses to transmit oxygen to the sediment layers in which their roots are imbedded. The disturbances created by the oil spill and the way in which these disturbances affected and continue to affect this ecosystem would allow me to better Affidavit of Dg.::John M. Teal Page 4 understand the relationship between these plants and their immediate environment.

14. However, I have not been willing to do this work and many other scientists have been deterred from undertaking similar research which would add to our understanding of marine environments in general, as well as our understanding of the long-term effects of oil spills in particular, because most of the data that has been collected is being kept secret.

15. Because so much of the basic data regarding the oil spill is not currently available, it is much more difficult for outside scientists without access to this data to conduct competent scientific investigation. There are so many ways in which one's hypotheses could be significantly in error, just because basic data upon which these hypotheses need to be built are not available, that I and many scientists like me are not willing to risk wasting our time or damaging our reputations (and, thus, our ability to fund the work we want to do) by conducting this type of speculative research.

16. I am also not interested in doing research if I must be bound by a secrecy agreement. If I were to agree to do this type of work I would not be able to publish my results until after the lawsuit was resolved (though a settlement, by its terms, might prevent any data from ever being published). I depend upon being able to publish my work for many reasons: Not only is it the best means of communicating with my peers and benefiting from their ideas and experience, but publishing allows me to advance Affidavit of Dr. John M. Teal Page 5 my scientific reputation which allows me to obtain funding for the projects I am interested in and to help support Woods Hole and the other scientists I work with.

17. If I know that I will be publishing the results of my investigations, I always have a stronger incentive to carefully and clearly think through my program of research. This is because I know that my work will be subjected to careful scrutiny by the most qualified reviewers possible.

#### Secrecy Must End Now

18. The longer this secrecy lasts, the more difficult it will be for outside researchers to commence meaningful studies after the existing data is released for public review. Time is of the essence to research on an environmental impact like the "Exxon Valdez" oil spill. Knowledge of the conditions at the time of the spill, details of the initial effects, and of the areas affected are essential to planning and conducting such research.

19. Knowledge made available only months or years after the event may show how one should have planned and conducted the research into that event, but could be useless for actually doing it. If this data is to have maximum value to outside scientists it must be released as soon as possible.

#### Conclusions

20. The current secrecy of science in Prince William Sound will keep many interested and qualified scientists from studying the effects of the Exxon Valdez oil spill, despite the fact that Affidavit of Dr. John M. Teal Page 6 this spill offers an unique opportunity to expand our knowledge of the long-term effects of oil spills as well as the basic rules that govern such marine ecosystems.

21. It is very important that this secrecy end immediately so that outside scientists can review the work already done and take steps to correct errors, limitations, and/or gaps in this work and/or initiate their own research on the effects of the spill.

ANYTHING FURTHER THE AFFIANT SAYETH NOT.

John M.

STATE OF MASSACHUSETTS ) COUNTY OF <u>Barradable</u> )

On this  $\underline{//\underline{//}}_{\underline{//}}$  day of September, 1990, the Affiant Dr. John M. Teal personally appeared before me and signed the foregoing Affidavit after first having sworn that the information contained therein is true and correct to the best of his knowledge and belief. Witness my hand and official seal. My commission expires on  $\underline{\rightarrow}$   $\underline{//}_{\underline{//}}$ 

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Affidavit of Dr. John M. Teal Page 7

#### RESUME

JOHN M.TEAL1 January 1990Senior ScientistWoods Hole Oceanographic InstitutionWoods Hole, MA 02543

Birth date: November 9, 1929. Omaha, Nebraska Nationality: U.S.A. Social Security 507-32-0538

President: Teal, Ltd., environmental consultants associated with Aubrey Consulting Inc.

#### EDUCATION

| B.A.,  | Harvard University, | 1951 |
|--------|---------------------|------|
| M.A.,  | Harvard University, | 1952 |
| Ph.D., | Harvard University, | 1955 |

#### ACADEMIC POSITIONS

Assistant Professor, 1955-1959, University of Georgia Marine Institute.

Assistant Professor, 1959-1961, Department of Biology and Institute of Oceanography, Dalhousie University

Research Associate, 1961-1963; Assistant Scientist, 1963-1965; Associate Scientist, 1965-1971, Senior Scientist, 1971- present; Chair, Biology Dept., 1982-1985; Seward Johnson Chair in Biology, 1986-1989; Woods Hole Oceanographic Institution.

#### PROFESSIONAL SOCIETIES

Sigma Xi; Phi Beta Kappa

Ecological Society of America (Certified Senior Ecologist) American Society of Limnology and Oceanography American Association for the Advancement of Science Estuarine Research Federation Society of Wetland Scientists International Ecological Society

#### **BOARD & COMMITTEE MEMBERSHIPS**

Editorial Board: Ecology, 1960-1963, 1967-1969; Biological Bulletin 1983-1986 Marine Biological Laboratory: Instruction Committee 1968-1971; Instructor, Marine Ecology,

1976-1983; Corporation member 1983-present, Joint Library Committee 1988-present. Conservation Commission, Town of Falmouth, 1971-1977.

Study Committee, Ecol. Soc. Amer., 1971-1974.

Conservation Law Foundation of New England: Board of Directors, 1978-present; Vice-chairman of Board, 1980-present.

Scientific Advisory Committee, Outer Continental Shelf program of U.S. Mineral Management Service, 1979-1981, 1984-1989, Chairman 1987-1989.

Scientific Advisory Subcommittee of Massachusetts DEQE Wetlands/Wildlife Technical Adviso ry Committee 1987

Lloyd Center Scientific Advisory Committee Scholarly Studies Review Panel, Smithsonian Institution, 1988-1990

#### PUBLICATIONS

I am the author and/or co-author of c.125 scientific papers; 3 encyclopedia articles; 6 childrens articles on oceanography; 4 trade books: "Portrait of an Island", Atheneum and Univ. Ga. Press, "Life and Death of a Salt Marsh", Atlantic-Little Brown and Ballentine, "Pigeons and People", Atlantic-Little Brown, "The Sargasso Sea", Atlantic-Little Brown and narrative for the film "Salt Marshes"-Jeff Simon Harper Row.

#### CONSULTING

I have served as a consultant on salt and freshwater wetlands, hydrocarbons, pollution, sewage treatment and pollution, coastal ecology, and groundwater protection to:

Conservation commissions: Towns of Mashpee, Falmouth, Barnstable Massachusetts Towns: Cohasset, Duxbury, Falmouth, Harwich, Kingston,

Environmental organizations: Science Applications, Inc.; Energy Resources, Inc.; The Parks Council, New York; Hackensack Meadowlands Commission, New Jersey Natural Resources Defence Council;

U.S. Govt. Agencies: President's Council on Environmental Quality; Mineral Management Service; Bureau of Land Management; National Oceanic and Atmospheric Administration; Environmental Protection Agency; National Research Council; Smithsonian Institution;

Universities: Univ. of Texas, Louisiana State, Univ. North Carolina, Stanford;

Other companies: McAbee Real Estate; The Green Company; Boston Gas; De Matteo Construction Co.; Land Use Associates; Peters-Hartell Corp.; Malcolm Pirnie Inc.; LEA Group Inc.; Weston & Sampson Engineers Inc., Ecological Engineer-

ing Associates

#### EXPERT TESTIMONY

I have been an expert witness in wetlands and pollution cases in state and federal courts including

CLF vs. US-Dept.Interior (Park Service) re ORV permits on Nat. seashores; Mass. MacGibbon vs. Duxbury, re wetlands protection; New York vs. US-Dept.Interior re Mid-Atlantic oil leases; Corps of Engineers vs. Swan Pond Golf Club,NY, re wetland protection; U.S. vs. (barge company), U.S.District Court, VA, re oil pollution effects;

I have testified as an expert witness at numerous hearings before:

Mass. Dept. Environ. Qual. Engineering; Rhode Island Coastal Resource Management Council; Local conservation commissions, zoning boards, boards of public health, etc.

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Teal Resume p2

#### PROFESSIONAL EXPERTISE

I have scientific expertise in most aspects of coastal ecology and coastal pollution: including wetlands ecology, groundwater pollution, eutrophication, wastewater treatment with wetlands, hydrocarbon pollution, nutrient dynamics, ecology of shallow waters, birds, and coastal and dune vegetation.

I have been an invited participant and speaker at meetings on many aspects of marine science and management including:

Research for the '90's, Prince William Sound and Copper River Delta, Cordova, AK, 1990 West Falmouth Oil Spill, 20 years after, 1989; Effects of OCS oil and gas activities on submarine canyons, 1989; NAS panel on use of dispersants on oil spills, 1988; Third International Wetlands Conference, Renne, France 1988; NATO Ocean Dumping Options Conference, Portugal, 1985; SCOPE Toronto Conference on Nuclear Winter, 1984; CEQ Conference on Long-term Environmental Research and Development, 1984; SCOPE meeting on wetlands, Tallin, E.S.S.R., 1983; SCOPE Musselwatch II, Honolulu, 1983; NOAA Ocean Dumping, Napa, 1983; Crystal Mt., 1979, Estes Park, 1978; Conference on Coastal Productivity, Pollution and Protection, Rio Grande do Sol, Brazil, 1982; NAC Petroleum in the Marine Environment, 1982, 1975; International Wetlands Conference, New Dehli, India, 1980; NATO Benthic Boundary Layer, Les Arc, France, 1975; Global Ecology Problems: Man in the Living Environment, section on aquatic resources.; NAS report on National Minerals Policy, section on ecological impacts; California Coastal Zone Management Conference on Wetlands Protection; Salt Marsh Conference, Univ. Ga. 1954; Coastal Zone Workshop, steering committee member, "Critical Problems of the Coastal Zone" 1972: Hackensack Meadowlands Commission meetings on wetland management; Coastal Recreation in an Urbanizing Environment, U. Mass. Cooperative Extension;

#### **RESEARCH INTERESTS**

Wetland and coastal ecology: especially salt and brackish marsh ecosystem structure and function: fish nursery value, nutrient cycling, hydrology, productivity; groundwater influences on waterbodies, groundwater contamination with nutrients; wastewater treatment by wetlands; petroleum pollution and hydrocarbon biogeochemistry; marine birds and over-ocean migration of land birds; coastal marine ecology including dune and beach ecology; physiological ecology of fishes; aquaculture and fisheries.

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Teal Resume p3

The Problem of Secrecy: Science Under Wraps In the Wake of the Nation's Largest Oil Spill

#### Introduction

- 1. As scientists who have worked in the field of oceanography and have studied in particular the effects of hydrocarbon spills on marine and coastal ecosystems, we are gravely concerned about the secrecy and confidentiality that has surrounded the scientific study of the impact of the Exxon Valdez oil spill on the ecosystem of Prince William Sound.
- 2. Scientific analysis of the short and long-term impacts of an environmental disaster in a marine, near-shore and coastal environment such as Prince William Sound is exceedingly difficult, involving multiple ecological systems and complex interrelated ecosystem effects. As such, it necessarily requires both short and long-term multi-disciplinary study.
- Full data sharing, and open discussion of scientific data 3. regarding spill impacts with scientific experts from all relevant disciplines is fundamentally important and critical to assuring that scientific investigators and those analyzing the data get a full picture of the impacts and do not overlook important potential impacts or gaps in the data. Without open data sharing and discussion, subtle potential impacts may not be recognized and new investigations of key ecological perturbations may not be In addition, ongoing studies may be terminated commenced. before ecological injuries are documented due to a lack of a full understanding of the complexities of the ecological response to the catastrophic addition of oil to the ecosystem.

Need for Initial Data

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- 4. After a massive oil spill such as this, the greatest amount of gross ecosystem impact occurs during the initial period. In this spill, significant direct damage to flora and fauna was immediately caused by the massive introduction of foreign and toxic material into the ecosystem and food web.
- 5. Because of this, all data collected which records the initial damage to flora and fauna and the movement and evolution of the hydrocarbons into the ecosystem is crucially important to both short and long-term evaluation and analysis. The data collected during the acute phase of massive injury to flora and fauna is the starting point for all other analysis.

6. Without complete and detailed information about this initial acute phase, it is difficult to predict or analyze the future impact the spill may have.

Importance of Peer Review

- 7. If these data are not made public immediately, the ultimate assessment of damage will be hindered and the amount of damage inadequately assessed.
- 8. Science works well and most effectively when it is conducted in open dialogue, among scientists within a given discipline and among scientists of multiple disciplines. This is particularly so where questions require complicated ecosystem analysis and evaluation, such as is required by a massive spill like the Exxon Valdez oil spill.
- 9. The conclusions of science are deemed credible only when there is independent and open review through a peer review process. Scientific literature based upon data and research not subjected to peer review is suspect. A study or one person's analysis of data will not be widely accepted in science until the study and analysis have been exposed to criticism and the concerns raised by the critics have been addressed. The entire system of scientific research depends upon the checks and balances provided by discussion and criticism of important ongoing work.
- 10. Without early feedback, open discussion, and integration of results and ideas from different disciplines, individual scientists or scientists working in one or two disciplines may well miss key parts of the entire picture. Scientists studying some portion of an ecosystem have misunderstood entirely the significance of the data they were collecting until practitioners of another discipline had been brought in to consult.
- 11. When scientists are talking to each other about their research they can integrate the information, note the type of sampling that is being done and be able to work with comparable data. A shotgun, unintegrated approach which is detached from the findings of others studying a similar subject will ultimately lead to greater cost and less reliability. Unless complete information about all studies is shared and integrated, there may be a tendency for "mindless measurement" while the larger picture is missed. Studies may be redundant or there may be gaps. It would clearly be more cost effective to share from the outset.

Peer Review of Initial Data is Critical

12. It is important to have open and frank discussion among scientists about the data gathered from the earliest impacts of the spill. Given the fact that the initial stages of this type of disaster involved the greatest and most rapid change, it is clearly detrimental to the scientific investigation of the spill to wait until all the data are gathered before engaging in open dialogue and multiple disciplinary review. The situation is changing quickly in space and time while these studies are ongoing. Open dialogue and communication should be concurrent with the studies, not subsequent to them.

13. Science is enriched by constant feedback and refinement. Scientists never know what they may find when they first start looking. The first protocols used may be inadequate. The methodology or the detection limits may not be appropriate. It may well be that the questions need reframing, or methodologies need to be changed, based upon the initial results.

These Critical Data Should Be Public

- 14. Due to the passage of time since the spill, the important initial data regarding the Alaska spill are not available now except from those who actually collected data at the critical times. Thus, the data cannot be reproduced or gathered from any source other than those who actually collected it and who have the knowledge that has come from the data. We cannot state strongly enough that these data should be available for scientific and public review.
- 15. In addition, it is essential to know the following: What questions were the scientists asking when they did the studies? What procedures were they using to answer those questions? How did those procedures change or how did the questions change during the time that the initial data was coming in? Was there any feedback or modification in the study done during the course of the study?

#### Conclusion

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16. Humankind, and in particular scientists working on environmental and ecosystem problems, need to know the effects of the Exxon Valdez oil spill on the environment. The effects cannot be known adequately without making the data available to everyone with the interest and the expertise to evaluate what it means and what it portends for the future.