

PLAN/
SIX.B
5/7/93

DRAFT

5/7/93

CHAPTER VI. Implementation Process for the Life of the Settlement

I. ANNUAL WORK PLANS

Each year, the Restoration Plan is implemented through an annual work plan. An annual work plan consists of a listing of restoration projects to be funded for that year. The Trustee Council will issue requests for proposals for specific projects designed to meet the objectives of the Restoration Plan and related strategic plans. All projects must fit within the guidelines established in the Restoration Plan. Projects must also fit within an existing restoration option or one which has been added to the Restoration Plan through an amendment process. Project proposals will be solicited from individuals and public and private organizations, including resource agencies. Final decisions will be guided by priorities and directions established in the Restoration Plan and will take into account the most current information from monitoring programs.

A. Content: Each annual work plan will include an introduction, a project budget summary, a list of agencies and organizations involved in implementation, timing and priorities for project implementation, and project summary descriptions.

Project descriptions will focus on the who, what, when, why, and how of implementation. Project descriptions must also describe the link between the project and an injured resource or service, explain how the project fits within the scope of the Restoration Plan, describe how the project satisfies the criteria in the Trustee Council's request for proposals, and describe what National Environmental Policy Act compliance is necessary for implementation. *we still need to define how the link to injury will help us decide where we will implement the project*

B. Schedule: Proposed work plans will be issued annually, although certain projects may be funded for multiple years. Work plans will be reviewed and approved prior to October 1, in order to allow sufficient time for preparation for the upcoming field season.

C. Competitive Bidding: Projects will be subject to a competitive bidding process. Bids will be evaluated and scored by a committee which will judge on factors such as proven ability to conduct similar projects in a timely and professional manner, logistical capabilities, technical expertise, and cost.

D. Priorities and Timing of Restoration Activities: Guidelines for prioritization and timing of restoration activities will be incorporated into the annual request for project proposals for the Annual Work Plan. Criteria for prioritization have not been finalized, but may emphasize the following types of projects:

Projects for restoring injured resources and services recovering more slowly than expected

Time-critical projects that could not be effectively done in later years

Monitoring and research projects that would provide information necessary for identifying and implementing effective restoration options

Projects that benefit multiple resources and services

Projects that provide widespread, as opposed to site-specific, benefits

Projects that benefit injured resources and services highly important to the economy and well-being of spill-impacted human communities

Projects that benefit populations of organisms directly injured by the spill, as opposed to benefitting uninjured populations of the same or equivalent species

Projects that benefit injured resources and services not yet addressed by restoration

Projects that restore unrecovered resources and services, rather than enhance them above pre-spill levels

II. COMPLIANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The programmatic Environmental Impact Statement (EIS) accompanying the Restoration Plan describes the overall impact of restoration on the human environment, but does not deal with impacts of specific projects funded under annual work plans. These projects must also comply with National Environmental Policy Act (NEPA) requirements, although the Trustee Council may conditionally approve projects prior to completing the NEPA process. However, funding will be withheld until the required documentation has been completed. Many projects will qualify for categorical exclusions, some may require relatively simple Environmental Assessments, and the largest and most extensive projects could require an EIS.

III. AMENDMENTS TO THE FINAL RESTORATION PLAN

The Restoration Plan will provide guidance for the life of the settlement, but must also be sufficiently flexible to accommodate new information and changing conditions. For example, the monitoring program will provide new information on recovery rates and the effectiveness of restoration activities, which will influence how restoration is applied. Minor changes can be incorporated without changing the plan or the EIS. Major changes, however, will trigger more involved review and approval procedures.

A. MINOR AMENDMENTS

Minor amendments include all changes which fall within the policy

guidelines of whichever alternative is chosen for the final Restoration Plan. For example, new restoration options can be added as minor amendments as long as they meet the policies established in the plan for degree of effectiveness, geographic location, which resource or service can be addressed, etc. Minor amendments can be added without having to go through the entire public review process or redo the programmatic EIS. However, the public will be provided opportunity to comment on minor amendments. Also, the more technical amendments, such as adding new restoration options or modifying the list of injured resources and services, should be approved by expert peer reviewers.

B. MAJOR REVISIONS

Major revisions are changes which fall outside the policy guidelines established in the Restoration Plan. For example, if the plan specified that options must only apply to species injured at a population level, a proposal to include options addressing only sublethal injuries would constitute a major revision. If major changes are proposed, then a full public review may be necessary, as well as a supplemental programmatic EIS. Major changes may only be necessary in the case of an unforeseen significant event, such as another oil spill or an obvious lack of success with the restoration approach originally selected.

C. TECHNICAL REVIEW OF NEW RESTORATION OPTIONS

All proposals for new restoration options should be peer reviewed by recognized technical experts. Some new options may constitute minor amendments and some may be major revisions, as described above. It is assumed that all options submitted for technical review will conform to the basic requirements of the civil settlement. Evaluations of new options should be based on the answers the following questions:

Is the option technically feasible?

Does the option create human health hazards?

Could the option cause negative biological, economic or social impacts and, if so, can the impacts be mitigated?

Does the option improve the rate or degree of recovery?

IV. OPPORTUNITIES FOR FUTURE PUBLIC PARTICIPATION

Public participation in the restoration planning process is required and described by the Memorandum of Agreement and Consent Decree, the National Environmental Policy Act, and the Federal Advisory Committee Act. Public information programs have been set up to allow the public to participate in an informed manner and to provide general information on how settlement monies are being used.

Public participation is possible by attending Trustee Council and

Public Advisory Group (PAG) meetings. The Trustee Council meetings are advertised and open to the public. Any oil-spill affected community which requests to participate can be hooked in via teleconference. All PAG meetings are also open to the public and the public is allotted time to speak or give written testimony to the group at each meeting. The PAG reviews all restoration activities and provides advice to the Trustee Council. The public will also have a chance to submit project proposals for annual work plans and comment on project ideas and draft work plans through forums such as the PAG, Trustee Council meetings and the annual request for project proposals.

The Americans with Disabilities Act (ADA) of 1991 requires all government sponsored programs to provide equal access for the disabled to telecommunications, and written and non-written materials, as well as opportunities for participation in public meetings and teleconferences. Requests for changes to accommodate any disabled members of the public, and complaints about non-compliance with the ADA should be directed to:

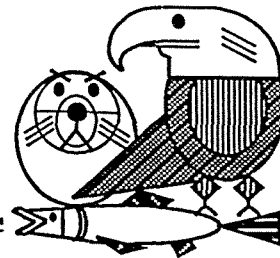
Executive Director
Exxon Valdez Oil Spill Restoration Program
645 G St.
Anchorage, AK 99501
Phone: (907) 278-8012
Inside Alaska: (800) 478-7795
Outside Alaska: (800) 283-7745
FAX: (907) 276-7178

Exxon Valdez Oil Spill Trustee Council

Restoration Office

645 G Street, Suite 402, Anchorage, Alaska 99501

Phone: (907) 278-8012 Fax: (907) 276-7178



FAX COVER SHEET

To: Ken Rice

Number: 271-3992

From: R. Thompson

Date: 9/30/93

Comments:

Total Pages: 2

Outline as we discussed

Ray

Policies as discussed by State:

Injury - address all, focus on problem species

Actions for recovered resources - stop when recovery is done, but don't close door on opportunities for enhancement

Effectiveness - not used as policy since restoration activities may be small portion of plan; use this idea in context of work planning process for specific projects.

Location - in spill area but outside where action makes significant change in resource which was injured in spill area. Migratory birds an example.

Human Use - maintain the character of the land

Trustee Agencies

State of Alaska: Departments of Fish & Game, Law, and Environmental Conservation

United States: National Oceanic and Atmospheric Administration, Departments of Agriculture and Interior

NATURAL RECOVERY

may expand
to a new op^{er}

introduction

for chapter IV ?
or option ?

Information and Education:

Information and education provide the link between restoration activities and knowledge about the effects of those activities. As restoration, or the lack of direct application of restoration techniques, proceeds and is monitored, the gathering, systematizing, documentation and distribution of information about restoration provides interested persons and communities, scientists, educators, public officials and agencies facts about the effectiveness of techniques and status of recovery for injured resources and services.

Reporting results provides support to education cirricula, scientific communities, media, and governmental or private brochures and displays. An Annual Report to the Public (the name only used as an example) would provide ~~in~~ word, graphics and picture information about how much and where money was spent, and what environmental progress, if any, was being made. The information medium would reflect the needs of the various interests. Radio and video shorts, newspaper inserts, books and brochures could all be used. More active methods of information dissemination are meetings and workshops. These media are most effective in rural areas when the information is carried to the people, i.e. town meetings and school workshops.

All methods of information exchange ~~have~~ ^{are} a means for receiving comment from any interested party. Generally these are clip-out sections of a newspaper, mailers in books and brochures, phone or FAX numbers, and return addresses. For some interested or affected groups such as the Native communities and other subsistence users, visits to their communities, schools and homes for one on one exchanges enhances the credibility of the information and the informer. These intimate interchanges provide both parties a better understanding of interests, needs and reactions to restoration activities.

Thompson

DRAFT FOR RPWG REVIEW - STILL SKETCHY

Chris

DRAFT

4/13/93

CHAPTER VI. Implementation Process for the Life of the Settlement

(INTRO PARAGRAPH HERE)

I. ANNUAL WORK PLANS

*on attachment
process for possible
of new options
(chap)*

*new
options?*

The annual work plan consists of a listing of restoration projects to be funded for that year. All projects must fit within an existing restoration option described in the Restoration Plan. Project proposals will be solicited from all qualified public and private organizations, including resource agencies. Final decisions will be guided by priorities and directions established in the Restoration Plan and will take into account the most current information from recovery and restoration monitoring programs.

A. Content

1. The Annual Work Plan Package will include: an introduction, a project budget summary, an affected area map, a list of agencies and organizations involved in implementation, timing and priorities for implementation, and project summary descriptions.

*The link to injury
provided for
assist planners
which provides
the status of
the compliance
process.*

Project Descriptions will: focus on the who, what, when, why, and how of implementation. These factors will be described for each project which is to be part of the Annual Work Plan Package. Within the package there will be a definitive statement on link to injury of a resource or service, ^{on how} a statement from the proposer that this project is within the scope of the Restoration Plan, and a description of what NEPA compliance is necessary for implementation and the status of the compliance process.

where

3. Relation of Projects to Restoration Plan: All proposed projects must fit within an existing option, as described in the Restoration Plan, in order to be considered for inclusion in an annual work plan.

*A recovery
can be done
we are planning
restoration
of the area*

- B. **Schedule:** Proposed work plans will be issued annually (**bi-annually has also been suggested). They will be reviewed and approved prior to _____, in order to allow sufficient time for preparation for the upcoming field season. *pending compliance*

- C. **Environmental Compliance:** Individual projects funded under annual work plans must comply with NEPA requirements. However, the Trustee Council may approve projects prior to completing the NEPA process. However, funding will be withheld until the required documentation has been completed. Many projects will qualify for categorical exclusions, some may require EA's, and the largest and most extensive could require a project-level EIS.

*This is probably
monitored
w/ NEPA
check federal
- Hornis.*

*replace with language from Chapter 1, page 9.
(ch) with do*

*not some thing is
to avoid on Fed's*

NO!

*This excludes all
federal agencies
on participation*

Amica hires?

SBA?

D. Public Review and Input: Public review will be an integral part of the process. The public will have a chance to submit and comment on project ideas through forums such as the PAG, Trustee Council meetings and the annual call for project ideas.

E. Competitive Bidding: Projects will be subject to a competitive bidding process. Bids will be evaluated and scored by a non-partisan committee which will judge on factors such as proven ability to conduct similar projects in a timely and professional manner, logistical capabilities, technical expertise, and cost.

Annual Work Plan Decision-Making Process: The entity which compiles and reviews proposals **NEEDS TO BE DESCRIBED HERE*****. However, The Trustee Council makes the ultimate decision on approving the plan.

G. Priorities and Timing of Activities within the Preferred Alternative: (TO BE COMPLETED AFTER RPWG DISCUSSION)

II. AMENDMENTS TO THE FINAL RESTORATION PLAN

The Restoration Plan is intended to provide guidance for the life of the settlement, but must also be sufficiently flexible to accommodate new information and changing conditions. For example, it is anticipated that the monitoring program will continually provide new information on recovery rates and the effectiveness of restoration activities, which will influence how restoration options are applied. Minor changes can be incorporated without changing the plan. Major changes, however, may trigger more involved review and approval procedures.

A. MINOR AMENDMENTS

Minor amendments include all changes which fall within the parameters of whichever alternative is chosen for the final restoration plan. Minor amendments can be added without having to go through the entire public review process or redo the programmatic EIS. However, the public will be provided opportunity to comment on minor amendments. Also, the more technical amendments, such as adding new restoration options, must be approved by scientific peer reviewers.

For example, new restoration options can be added as minor amendments as long as they meet the criteria established in the plan for effectiveness, geographic location, resource or service addressed, etc. However, the process for adding options must be tightly controlled and only those options rated as acceptable by a panel of peer reviewers can be added to the plan. In the same way that the options in the final restoration plan were required to go through a rating process, based on input from recognized experts in relevant fields, any new option must likewise be demonstrated to be valid and applicable to the prescribed restoration program. Criteria to be considered when rating new options include:

Does this need to be peer reviewers? what

within the private sector.

establish criteria

This will follow in detail after it is announced by the TC and recovery plan might be

dot

on.

Concise comments

EVALUATION OF NEW OPTIONS
The Trustees will evaluate new options as follows:

If the answer to the following questions is YES then proceed with the evaluation process outlined under the Implementation chapter for annual work plans.

Does the proposed project already fit into one of the existing restoration options?

Is the option identified ^{consistent with} appropriate for the restoration plan objectives?

Some entity - maybe listed as the Trustees needs to do this - not agencies or individuals by themselves

If the proposed project does not belong with an existing restoration option then proceed with the following evaluation.

1) Should the proposed project be combined with similar project ideas to create a new restoration option, or is it an option in itself?

~~[This should be a quick "brain-storming" for other projects that achieve the same objective. A phone call to a resource or service expert that might help.]~~ *Contact in*

JS
2) Does the option meet the initial criteria of technical feasibility, suitability with the civil settlement guidance, and prevention of significant additional injury? *Does it?* [Is it certain that the project would not cause additional injury?] *Additional injury to*

If no, reject the option. If yes, proceed with the following evaluation criteria. *At least 2 people should decide if these criteria are met - legal advice may be necessary. If so, get a preliminary opinion and proceed if favorable while an "official" decision is made.*

BACKGROUND INFORMATION NEEDED:

Which resources or services CAN this option be used for ^{benefit} (it may only have been proposed for one, but may work for others as well).

What ~~is~~ are the recovery status of the targeted resource. *service?*
This could either be the predicted natural recovery time or the predicted "aided" recovery time...which ever is available and appropriate.

Are there multiple species or ecosystem benefits expected from implementing this option?

Would implementing the option have a wide range effect, or always be site specific?

What are the potential negative effects from implementing the option and can they be mitigated?

How does this option relate to the injured resources' life history or to the injury?

WHAT EFFECT WOULD THE OPTION HAVE ON RECOVERY? (note: this section would have to be completed separately for each targeted resource.)

Relative to an expected recovery time (or range) does this option accelerate the recovery? Please quantify the answer by showing a new expected recovery date, or range, and the uncertainty.

OR does this option provide greater confidence that the resource will be able to recover in the estimated

time, preferably towards the earlier years in the range?

Please express the change in confidence.

Does this option provide necessary protection for the resource? *S*

"Necessary" needs to be defined... maybe. Without such protection it is less likely that the habitat could support the injured population at its ~~1986-89~~ (or maybe "at historic" is better) carrying capacity. *pre-spill lev.*

If the answers to any of the above questions produce a ~~25 percent or greater improvement~~ (substantial improvement) then the Option would be considered in Alternatives ~~3-5~~.

In the recovery rate or the confidence . . . , then the plan may be amended to include this new option in alt 3.

If neither answer is greater than 25% but at least one is thought to produce a 10-24% improvement then the option is categorized as providing some improvement and would be considered only in Alternative 5.

Process for gathering the above information: The person/organization proposing the project AND two experts (peer reviewers, research scientists etc...) should be asked to estimate the effects of implementing the option.

~~If significant discrepancies occur try and reach consensus between the experts (preferably in person), or broaden the query to other experts.~~

This information will be reviewed and evaluated by the Trustee Council.

(INSERT BRIEF DESCRIPTION OF CRITERIA FOR RATING NEW OPTIONS)

B. MAJOR REVISIONS

Major revisions are changes which fall outside the boundaries described in the final plan. For example, if the plan specified that options must only apply to species injured at a population level, a proposal to include an option treating sublethal injury would constitute a major revision. Likewise, decisions to greatly shorten or lengthen the proposed duration of the restoration program would count as a major change.

It is not clear what this means

If the plan is changed significantly from that described in the alternative approach described in final Restoration Plan, then a full public review may be necessary, possibly including a new restoration plan and an additional programmatic EIS. Changes such as this would most likely be necessary only in the case of an unforeseen significant event, such as another oil spill, an obvious lack of success with the restoration approach originally selected, or a radically different understanding of injury gained from the monitoring program.

III. PUBLIC INFORMATION PROGRAMS AND PUBLIC PARTICIPATION

Public participation in the restoration planning process is required and described by the Memorandum of Agreement and Consent Decree, the National Environmental Protection Act, and the Federal Advisory Committee Act. Public information programs have been set up to allow the public to participate in an informed manner and to provide general information on how settlement monies are being used. ~~The Americans with Disabilities Act mandates equal access for the disabled to all public information and to all forums for public participation.~~

Public information programs

Although this is true - do we need to state it?

A. PUBLIC INFORMATION PROGRAMS

1. Oil Spill Public Information Center (OSPIC)

The Trustees set up the Oil Spill Public Information Center (OSPIC) to provide a repository for all materials related to the oil spill, facilitate patron use of those materials, and support the public information needs of public participation. These services include:

- Collection and maintenance of background legal and scientific materials relating to the oil spill, such as natural resource damage assessment and restoration project reports, shoreline oiling reports, and newspaper and magazine clippings
- Walk-in and telephone reference services on the Exxon spill and subsequent restoration activities.
- Creation and maintenance of a certifiable administrative

Valdez

record of Trustee Council, Restoration Team, Public Advisory Group and other work group activities and published products.

The mailing address and contact numbers for OSPIC are:

The Oil Spill Public Information Center
645 G Street
Anchorage, Alaska 99501

(907) 278-8008 (PHONE)

(907) 276-7178 (FAX)

2. Other sources of information

Other sources of information ^{currently} available to the public include:

- Publicly available restoration documents, such as the Restoration Framework document and the brochure on Draft Restoration Plan Alternatives.

- Public symposia such as the EVOS ~~Feb. 1992~~ ^{February 1993} symposium which presented results of damage assessment studies.

- Educational efforts linked to particular restoration projects, such as public service announcements or instructional videos informing resource users how to reduce impact on a particular recovering resource.

- Agency publications, such as the recent issue of the Alaska Department of Fish and Game magazine devoted to restoration activities.

- *Final reports of damage assessment studies which have been completed.*

- Also, once the full-scale restoration monitoring program is underway, monitoring results will be reported regularly.

B. PUBLIC PARTICIPATION PROGRAMS

1. Formal Comment Periods on Restoration Planning Documents

The primary opportunity for the public to submit ideas for restoration and to review and comment on proposals made by others has been during public comment periods on the formal documents of the restoration planning process. Public comments will be solicited on the Final Restoration Plan and the accompanying Final EIS and subsequent Annual Work Plans.

are being solicited on this draft plan and

2. Public Meetings in Communities

During 1992 and 1993, three rounds of public meetings have been held in oil spill-affected communities, plus Anchorage, Fairbanks, and Juneau. The latest round of meetings, in April 1993, presented and took comments on the brochure outlining the alternatives in the draft restoration plan.

This section should address future public participation including Quarterly TC mtgs?, Quarterly PAG mtgs?, Monthly RT mtgs?

*BELONGS IN CHAPTER 1
THIS IS NOT IMPLEMENTATION*

I don't think this is covered anywhere else.

3. Public Participation at Trustee Council Meetings

The Trustee Council meetings are advertised and open to the public. Any oil-spill affected community which requests to participate can be hooked in via teleconference.

4. Public Comments on the Environmental Impact Statement (EIS)

The public can comment on the development of the EIS which accompanies the Restoration Plan ^{draft} at three different times:

- 1) The initial scoping process, which allows the public to identify early in the process issues, concerns, and predictions of impacts. This has already occurred.
- 2) Public review and comments on ^{the} a draft EIS.
- 3) Public review and comments on ^{the} a final EIS, and on Supplemental EIS's, should they be necessary.

5. Public Advisory Group - In chapter 1

The Trustee Council has established a Public Advisory Group (PAG). The PAG reviews all restoration activities and provides advice to the Trustee Council. The Trustee Council determined that the PAG should have 5 public-at-large seats and 12 "interest group" seats, representing aquaculture, commercial fishing, commercial tourism, conservation, environmental, forest products, local government, Native landowners, recreational users, science, academic, sport hunting and fishing, and subsistence. There are also "ex-officio" seats for representatives chosen by the Alaska State House of Representatives and the Alaska State Senate. All meetings are open to the public and the public is specifically allowed time to speak or give written testimony to the group at each meeting.

C. AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act of 1991 requires all government sponsored programs to provide equal for access for the disabled to telecommunications, and written and non-written materials, as well as opportunities for participation in public meetings and teleconferences. Requests for changes to accommodate any disabled members of the public, and complaints about non-compliance with the Act should be directed to:

Executive Director
Exxon Valdez Oil Spill Restoration Program
645 G St.
Anchorage, AK 99501
Phone: (907) 278-8012

Needs to be replaced w/ what the PAG will do.

Also - this section should mention the programmatic Education / Information Option.

DRAFT FOR RPWG REVIEW - STILL SKETCHY

Chris

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4/13/93

CHAPTER VI. Implementation Process for the Life of the Settlement

(INTRO PARAGRAPH HERE)

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The annual work plan consists of a listing of restoration projects to be funded for that year. All projects must fit within an existing restoration option described in the Restoration Plan. Project proposals will be solicited from all qualified public and private organizations, including resource agencies. Final decisions will be guided by priorities and directions established in the Restoration Plan and will take into account the most current information from recovery and restoration monitoring programs.

on address the process for consideration of new options (Chap. 7, F.)

new options?

A. Content

1. The Annual Work Plan Package will include: an introduction, a project budget summary, an affected area map, a list of agencies and organizations involved in implementation, timing and priorities for implementation, and project summary descriptions.

Project Descriptions will: focus on the who, what, when, why, and how of implementation. These factors will be described for each project which is to be part of the Annual Work Plan Package. Within the package there will be a definitive statement on link to injury of a resource or service, a statement from the proposer that this project is within the scope of the Restoration Plan, and a description of what NEPA compliance is necessary for implementation and the status of the compliance process.

The link to injury provides the location for implementation. This link will assist planners which provides the location for implementation.

where

3. Relation of Projects to Restoration Plan: All proposed projects must fit within an existing option, as described in the Restoration Plan, in order to be considered for inclusion in an annual work plan.

An new option can be defined along with its name. use in implementation and restoration NEPA procedures must be followed.

- B. **Schedule:** Proposed work plans will be issued annually (**bi-annually has also been suggested). They will be reviewed and approved prior to _____, in order to allow sufficient time for preparation for the upcoming field season.

pending compliance

- C. **Environmental Compliance:** Individual projects funded under annual work plans must comply with NEPA requirements. However, the Trustee Council may approve projects [prior to completing] the NEPA process. However, funding will be withheld until the required documentation has been completed. Many projects will qualify for categorical exclusions, some may require EA's, and the largest and most extensive could require a project-level EIS.

This is probably non-sensical w/ NEPA. check federal restoration.

replace with language from Chapter 1, page 9. ok should do

not sure this is covered on Fed's.
NO!
This excludes all federal agencies on participation.
Amica lines?
SBA?

D. Public Review and Input: Public review will be an integral part of the process. The public will have a chance to submit and comment on project ideas through forums such as the PAG, Trustee Council meetings and the annual call for project ideas.

E. Competitive Bidding: Projects will be subject to a competitive bidding process. Bids will be evaluated and scored by a non-partisan committee which will judge on factors such as proven ability to conduct similar projects in a timely and professional manner, logistical capabilities, technical expertise, and cost. *with the private sector.*

Annual Work Plan Decision-Making Process: The entity which compiles and reviews proposals **NEEDS TO BE DESCRIBED HERE*****. However, The Trustee Council makes the ultimate decision on approving the plan. *establish criteria*

G. Priorities and Timing of Activities within the Preferred Alternative: (TO BE COMPLETED AFTER RPWG DISCUSSION)

This will follow in detail after it is known what the TC choices of restoration activities might be.

II. AMENDMENTS TO THE FINAL RESTORATION PLAN

The Restoration Plan is intended to provide guidance for the life of the settlement, but must also be sufficiently flexible to accommodate new information and changing conditions. For example, it is anticipated that the monitoring program will continually provide new information on recovery rates and the effectiveness of restoration activities, which will influence how restoration options are applied. Minor changes can be incorporated without changing the plan. Major changes, however, may trigger more involved review and approval procedures.

describe this difference
 ↓

A. MINOR AMENDMENTS

Minor amendments include all changes which fall within the parameters of whichever alternative is chosen for the final restoration plan. Minor amendments can be added without having to go through the entire public review process or redo the programmatic EIS. However, the public will be provided opportunity to comment on minor amendments. Also, the more technical amendments, such as adding new restoration options, must be approved by scientific peer reviewers.

For example, new restoration options can be added as minor amendments as long as they meet the criteria established in the plan for effectiveness, geographic location, resource or service addressed, etc. However, the process for adding options must be tightly controlled and only those options rated as acceptable by a panel of peer reviewers can be added to the plan. In the same way that the options in the final restoration plan were required to go through a rating process, based on input from recognized experts in relevant fields, any new option must likewise be demonstrated to be valid and applicable to the prescribed restoration program. Criteria to be considered when rating new options include:

Does this need to be peer reviewers? what?

Consistent comments

The Trustees will evaluate new options as follows:

EVALUATION OF NEW OPTIONS

If the answer to the following questions is YES then proceed with the evaluation process outlined under the Implementation chapter for annual work plans.

Does the proposed project already fit into one of the existing restoration options?

Is the option identified ^{consistent with} appropriate for the restoration plan objectives?

Some entity - maybe listed as the Trustees needs to do this - not agencies or individuals

by themselves

If the proposed project does not belong with an existing restoration option then proceed with the following evaluation.

1) Should the proposed project be combined with similar project ideas to create a new restoration option, or is it an option in itself?

~~[This should be a quick "brain-storming" for other projects that achieve the same objective. A phone call to a resource or service expert that might help.]~~

Contacting

2) ^{Does it} Does the option meet the initial criteria of technical feasibility, suitability with the civil settlement guidance, and prevention of significant additional injury? ^{Does it fall} [Is it certain that the project would not cause additional injury to ~~the~~ injured resource or facility?]

Does it

to any question

[At least 2 people should decide if these criteria are met - legal advice may be necessary. If so, get a preliminary opinion and proceed if favorable while an official decision is made.]

BACKGROUND INFORMATION NEEDED:

Which resources or services ^{benefit} CAN this option be used for (it may only have been proposed for one, but may work for others as well).

What is ~~are~~ the recovery status of the targeted resource. ^{service?}
This could either be the predicted natural recovery time or the predicted "aided" recovery time...which ever is available and appropriate.

Are there multiple species or ecosystem benefits expected from implementing this option?

Would implementing the option have a wide range effect, or always be site specific?

What are the potential negative effects from implementing the option and can they be mitigated?

How does this option relate to the injured resources' life history or to the injury?

WHAT EFFECT WOULD THE OPTION HAVE ON RECOVERY? ~~(note: this section would have to be completed separately for each targetted resource.)~~

Relative to an expected recovery time (or range) Does this option accelerate the recovery? Please quantify the answer by showing a new expected recovery date, or range, and the uncertainty.

OR does this option provide greater confidence that the resource will be able to recover in the estimated

time, preferably towards the earlier years in the range?
Please express the change in confidence.

Does this option provide necessary protection for the resource? *S*

"Necessary" needs to be defined... maybe. Without such protection it is less likely that the habitat could support the Injured population at its ~~1986-89~~ (or maybe "at historic" is better) carrying capacity. *pre-spill level*

If the answers to any of the above questions produce a ~~25~~ percent or greater improvement (substantial improvement) ~~then the Option would be considered in Alternatives 3-5.~~

In the recovery rate or the confidence . . . , then the plan may be amended to include this new option in alt 3, 4

If neither answer is greater than 25% but at least one is thought to produce a 10-24% improvement then the option is categorized as providing some improvement and would be considered only in Alternative 5.

Process for gathering the above information: The person/organization proposing the project AND two experts (peer reviewers, research scientists etc...) should be asked to estimate the effects of implementing the option.

~~If significant discrepancies occur try and reach consensus between the experts (preferably in person), or broaden the query to other experts.~~

This information will be reviewed and evaluated by the Trustee Council.

(INSERT BRIEF DESCRIPTION OF CRITERIA FOR RATING NEW OPTIONS)

B. MAJOR REVISIONS

Major revisions are changes which fall outside the boundaries described in the final plan. For example, if the plan specified that options must only apply to species injured at a population level, a proposal to include an option treating sublethal injury would constitute a major revision. Likewise, decisions to greatly shorten or lengthen the proposed duration of the restoration program would count as a major change.

It is not clear what this means

If the plan is changed significantly from that described in the alternative approach described in final Restoration Plan, then a full public review may be necessary, possibly including a new restoration plan and an additional programmatic EIS. Changes such as this would most likely be necessary only in the case of an unforeseen significant event, such as another oil spill, an obvious lack of success with the restoration approach originally selected, or a radically different understanding of injury gained from the monitoring program.

III. PUBLIC INFORMATION PROGRAMS AND PUBLIC PARTICIPATION

Public participation in the restoration planning process is required and described by the Memorandum of Agreement and Consent Decree, the National Environmental Protection Act, and the Federal Advisory Committee Act. Public information programs have been set up to allow the public to participate in an informed manner and to provide general information on how settlement monies are being used. ~~The Americans with Disabilities Act mandates equal access for the disabled to all public information and to all forums for public participation.~~

up front in the 2 EIS need a CR statement

Although this is true - do we need to state it?

A. PUBLIC INFORMATION PROGRAMS

1. Oil Spill Public Information Center (OSPIC)

The Trustees set up the Oil Spill Public Information Center (OSPIC) to provide a repository for all materials related to the oil spill, facilitate patron use of those materials, and support the public information needs of public participation. These services include:

- Collection and maintenance of background legal and scientific scientific materials relating to the oil spill, such as natural resource damage assessment and restoration project reports, shoreline oiling reports, and newspaper and magazine clippings
- Walk-in and telephone reference services on the Exxon^A spill and subsequent restoration activities.
- Creation and maintenance of a certifiable administrative

Valdez

record of Trustee Council, Restoration Team, Public Advisory Group and other work group activities and published products.

The mailing address and contact numbers for OSPIC are:

The Oil Spill Public Information Center
645 G Street
Anchorage, Alaska 99501

(907) 278-8008 (PHONE)

(907) 276-7178 (FAX)

2. Other sources of information

Other sources of information ^{currently} available to the public include:

- Publicly available restoration documents, such as the Restoration Framework document and the brochure on Draft Restoration Plan Alternatives.

- Public symposia such as the EVOS Feb. ~~1992~~ ^{February 1993} symposium which presented results of damage assessment studies.

- Educational efforts linked to particular restoration projects, such as public service announcements or instructional videos informing resource users how to reduce impact on a particular recovering resource.

- Agency publications, such as the recent issue of the Alaska Department of Fish and Game magazine devoted to restoration activities.

- ~~Final reports of damage assessment studies which have been completed.~~

- Also, once the full-scale restoration monitoring program is underway, monitoring results will be reported regularly.

B. PUBLIC PARTICIPATION PROGRAMS

1. Formal Comment Periods on Restoration Planning Documents

The primary opportunity for the public to submit ideas for restoration and to review and comment on proposals made by others has been during public comment periods on the formal documents of the restoration planning process. Public comments will be solicited on the Final Restoration Plan and the accompanying Final EIS and subsequent Annual Work Plans.

are being solicited on this draft plan and

2. Public Meetings in Communities

During 1992 and 1993, three rounds of public meetings have been held in oil spill-affected communities, plus Anchorage, Fairbanks, and Juneau. The latest round of meetings, in April 1993, presented and took comments on the brochure outlining the alternatives in the draft restoration plan.

This section should address future public participation including Quarterly TC mtgs?, Quarterly PAG mtgs?, Monthly RT mtgs?

BELONGS IN CHAPTER 1 THIS IS NOT IMPLEMENTATION

NATURAL RECOVERY

may expand to a newsletter

introduction

See chapter IV

Information and Education:

Information and education provide the link between restoration activities and knowledge about the effects of those activities. As restoration, or the lack of direct application of restoration techniques, proceeds and is monitored, the gathering, systematizing, documentation and distribution of information about restoration provides interested persons and communities, scientists, educators, public officials and agencies facts about the effectiveness of techniques and status of recovery for injured resources and services.

Reporting results provides support to education circula, scientific communities, media, and governmental or private brochures and displays. An Annual Report to the Public (the name only used as an example) would provide ~~in~~ word, graphics and picture information about how much and where money was spent, and what environmental progress, if any, was being made. The information medium would reflect the needs of the various interests. Radio and video shorts, newspaper inserts, books and brochures could all be used. More active methods of information dissemination are meetings and workshops. These media are most effective in rural areas when the information is carried, to the people, i.e. town meetings and school workshops. *restoration*

All methods of information exchange ~~have~~ ^{and} a means for receiving comment from any interested party. Generally these are clip-out sections of a newspaper, mailers in books and brochures, phone or FAX numbers, and return addresses. For some interested or affected groups such as the Native communities and other subsistence users, visits to their communities, schools and homes for one on one exchanges enhances the credibility of the information and the informer. These intimate interchanges provide both parties a better understanding of interests, needs and reactions to restoration activities. *directly*

I don't think this is covered anywhere else.

3. Public Participation at Trustee Council Meetings

The Trustee Council meetings are advertised and open to the public. Any oil-spill affected community which requests to participate can be hooked in via teleconference.

4. Public Comments on the Environmental Impact Statement (EIS)

The public can comment on the ~~development of the~~ ^{draft} EIS which accompanies the Restoration Plan ~~at~~ ^{three different times:}

- 1) The initial scoping process, which allows the public to identify early in the process issues, concerns, and predictions of impacts. This has already occurred.
- 2) Public review and comments on ^{the} a draft EIS.
- 3) Public review and comments on ^{the} a final EIS, and on Supplemental EIS's, should they be necessary.

5. Public Advisory Group - In chapter 1

The Trustee Council has established a Public Advisory Group (PAG). The PAG reviews all restoration activities and provides advice to the Trustee Council. The Trustee Council determined that the PAG should have 5 public-at-large seats and 12 "interest group" seats, representing aquaculture, commercial fishing, commercial tourism, conservation, environmental, forest products, local government, Native landowners, recreational users, science, academic, sport hunting and fishing, and subsistence. There are also "ex-officio" seats for representatives chosen by the Alaska State House of Representatives and the Alaska State Senate. All meetings are open to the public and the public is specifically allowed time to speak or give written testimony to the group at each meeting.

C. AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act of 1991 requires all government sponsored programs to provide equal for access for the disabled to telecommunications, and written and non-written materials, as well as opportunities for participation in public meetings and teleconferences. Requests for changes to accommodate any disabled members of the public, and complaints about non-compliance with the Act should be directed to:

Executive Director
Exxon Valdez Oil Spill Restoration Program
645 G St.
Anchorage, AK 99501
Phone: (907) 278-8012

*Needs to be replaced w/ what the PAG will do.
Also - this section should mention the programmatic Education / Information Option.*

RESOURCE OR SERVICE: *Nondeveloped Recreation*

DATE: *9/3/92*

OPTIONS RATING

CRITERIA	20/22	37/38										
	6/30											
1A. Potential to improve the rate or degree of recovery	<i>N/A</i>	<i>N/A</i>										
1B. Potential to prevent further degradation or decline	<i>H</i>	<i>H</i>										
2. Technical feasibility	<i>H</i>	<i>H</i>										
3. Degree to which proposed action benefits more than one resource or service	<i>H</i>	<i>H</i>										
4. Degree to which proposed action enhances the resource or service	<i>L</i>	<i>H</i>										
5. Potential for NO additional injury to: a. other target or nontarget <u>resources</u> b. other target or nontarget <u>services</u>	<i>H</i> <i>L</i>	<i>H</i> <i>L</i>										
6. Potential effects of the action on human health and safety	<i>H</i>	<i>H</i>										
7. The relationship of the expected costs of the proposed action to the expected benefits	<i>M</i>	<i>M</i>										
8. Will the restoration opportunity be lost if implementation is delayed? (Y/N)	<i>N^o</i>	<i>N^o</i>										
9. Public Comments												

COMMENTS:

① only w/ imminent threat

VI. Implementation of the Restoration Plan

*Plan in use of
Plan over the
Settlement period*

The process of implementing the restoration plan is initiated by understanding guidance about the nature, timing and location of work described in the plan. Since the plan is programatic it does not give specific details about the restoration work necessary to bring about the recovery of injured resources and services. The direction the Trustee Council prefers will be emphasized when it provides restoration guidance through the selection of a preferred alternative. This alternative will encompass the restoration options thought most useful by the Council.

Since one or more projects may be described for each restoration option it will be necessary to define all the work represented within the options included in the preferred alternative. This disaggregation of work also includes information on timing, location, and possibly priority. The Trustee Council will decide on the work to be accomplished annually. Currently the result of this process is called the Annual Work Plan. Although in 1992 - 1994 this process was done without the benefit of a long-term restoration plan, the work in those annual plans has been generally useful in meeting long-term restoration goals.

injury addressed

Under any set of options selected as the preferred alternative, a process for annual work planning will be useful for the agencies which will do the work. That process should include the following ideas. Projects which can be included within the option description will comply with National Environmental Policy Act and be approved for implementation by the Trustee Council before funding is available. Agencies designated as the lead for the project will be responsible for the project work plan package which includes the environmental compliance decisions, schedules, ^{coordinate, contract or do} management, possibly the monitoring, and any reports due the Trustee Council.

Chris: I used the following outline to give me some direction. You can do with it as you like.

VI. Implementation process for the Life of the Settlement
A. Annual Work Plans

Describe the annual process that is likely to occur based upon the expected needs of meeting NEPA as well as public expectations.

Developed from an out year work planning process which has

disaggregated expected restoration work for the life of the settlement.

Based upon the expected schedule and priorities within the planning documents.

Call for projects from agencies and public which focus on work, schedule and priorities.

1. Content

a. Annual Work Plan Package

introduction, project budget summary, affected area map, agencies and organizations involved in implementation, timing and priorities, and project summary descriptions.

b. Project Descriptions

Individually as they focus on the who, what, when, why, and how of implementation these will be described for each project which is to be part of the Annual Work Plan Package. Within the package there will be a definitive statement on link to injury of a resource or service, a statement from the proposer that this project is within the scope of the Restoration Plan, and what NEPA compliance is necessary for implementation and the status of the compliance process.

2. Schedule

3. Environmental Compliance

4. Public Review

VI. Implementation process for the Life of the Settlement
A. Annual Work Plans

Describe the annual process that is likely to occur based upon the expected needs of meeting NEPA as well as public expectations.

Developed from an out year work planning process which has disaggregated expected restoration work for the life of the settlement.

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Call for projects from agencies and public which focus on work, schedule and priorities.

1. Content

a. Annual Work Plan Package

introduction, project budget summary, affected area map, agencies and organizations involved in implementation, timing and priorities, and project summary descriptions. *monitoring needs*

b. Project Descriptions

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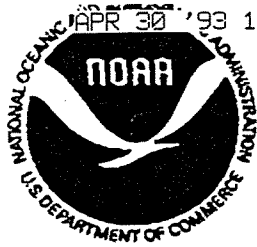
2. Schedule

3. Environmental Compliance

4. Public Review

work described within the restoration plan alternatives is done only after approval by the TC and compliance with NEPA and regulatory requirements. This work can be generally viewed as ~~projects~~ ^{several of} which constitute a restoration option. The singular and cumulative effects of ~~implementing projects~~ will be ~~controlled~~ ^{for implementation} by the timing, location and focus of various ~~options~~ projects as controlled by the effectiveness. The rest. plan provides the long-term planning perspective, ~~plans~~ ^{including general} individual projects ^{are initiated} ~~implementation~~ based upon schedules and priorities. These schedules and priorities as they might be modified by monitoring or other restoration direction.

How do we use options to make restoration happen?



National Marine Fisheries Service
Office of Oil Spill Damage Assessment and Restoration
P.O. Box 210029

OR
11305 Glacier Hwy
Auke Bay, Alaska 99821

Telephone: (907) 789-6600
Fax: (907) 789-6608

RAPIDFAX TRANSMISSION: 4 PAGES TO FOLLOW

DATE: 4/30/93

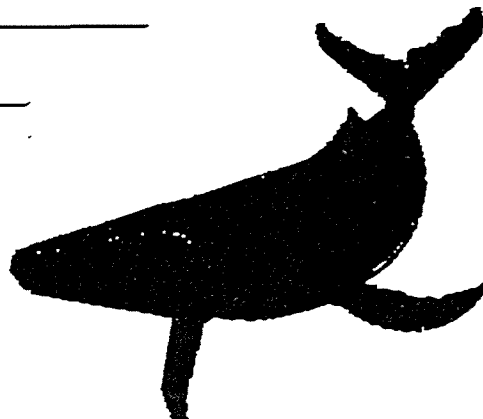
FROM: John Strand

TO: Barbara Isech

FAX NO: CACI

SUBJECT: Comments to Perametric re: Preliminary
Draft of Conceptual Monitoring Plan

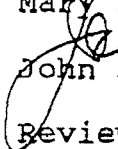
COMMENTS: Please distribute to RPWG. Thanks





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Oil Spill Damage
Assessment and Restoration
P.O. Box 210029
Auke Bay, Alaska 99821

April 30, 1993

MEMORANDUM FOR: Mary Sue Brancato
FROM:  John Strand
SUBJECT: Review of Preliminary Draft of Conceptual
Monitoring Plan (April 5th Version)

Thank you for the opportunity to review an early version of the subject report. The Conceptual Plan is beginning to take shape and I am pleased with your progress. I regret that I have not had time to collate and reconcile comments received by individual members of the Restoration Planning Work Group. As you know, we all have been consumed by the round of public meetings that began on April 12th; actually I will not complete my public meeting commitment until May 5th. Before I forget, I also wanted to thank you for the very productive workshop that you designed and implemented on April 13th and 14th. I believe it achieved its intended goal; it stimulated much needed discussion among many of the interested parties. I also have received positive feedback from many of the attendees.

My individual comments on the preliminary draft are necessarily organized by the nine issues listed in the RFP. I have added a 10th issue regarding Section 6 as it is presented in your preliminary draft. I hope my comments are of some help; they are:

1) **What process or mechanism would best assist the Trustee Council in determining monitoring priorities?**

What we are after here is use of conceptual models to prioritize what to monitor. You describe this approach on page 7 of your draft and illustrate this concept in Figure 3, but I think that perhaps you do not fully understand the concept. Your Figure 3 seems to further refine the conceptual methodology that is embodied in Figure 2, and does not, for example, describe the links among resources that are at risk, or the physical, chemical and biological components of the affected ecosystem, or the human and natural causes of change in the system to be studied (monitored).



The use of conceptual models also is introduced in the National Research Council's Managing Troubled Waters - The Role of Marine Environmental Monitoring (MTW) on page 62. Given the magnitude and complexity of impacts and the geographic scope of the Exxon Valdez oil spill, I envision many such models will be required to decide what to monitor and how. For example, a conceptual model of the fate of oil in mussel beds or other intertidal habitats, showing how vulnerable resources can be exposed to oil, and at what exposure levels, could permit important questions (hypotheses) regarding the magnitude of effects to be formulated and tested. The NRC's MTW gives another example on page 65 (San Onofre kelp bed) to illustrate what is meant by conceptual model. Let me know if I have not been clear; this is a very important point.

2) What are realistic goals and objectives of monitoring?

I really have no substantive criticism; I think that you have done a good job here.

3) What resources and services should be monitored and why, given the goals and objectives in (2);

Do we necessarily have to prioritize which resources and services to monitor? With the assumption that not every resource or service has to be monitored each year, and perhaps some resources and services would not have to be monitored for five years, do we still have to adopt and implement a process of prioritization? I am not saying that we do not have to prioritize, but I would like some further discussion on the subject. Let me know what you think.

I don't know if this will be of much help, but the Planning Group did create injury criteria to determine which natural resources and human uses (services) warrant restoration. Perhaps you could review our approach in the context of developing criteria to decide which resources and services should be monitored. You will find a description of this concept on page 39 in Volume 1 Restoration Framework (Exxon Valdez Oil Spill Trustees 1992).

4) Which clean-up, damage assessment and restoration science studies contain elements that would best serve the purpose of the intended monitoring program, and what are these elements?

I think that you have begun to address this issue in Section 6.2. Although I think that you have gone further (by including statistical approaches) than what was asked of you, was this your intent? If this assumption is correct, should you not make that connection on page 15 of your preliminary draft. Also, while you addressed avian, mammalian, intertidal and subtidal fauna, will you also address fish in this context in the next draft of

your report? You will also want to review my comments dealing with the whole of Section 6 as it is now presented (see Issue 10 below).

5) Which surveys of services provided by natural resources contain elements that would best serve the purposes of the intended monitoring program, and what are these elements?

Please see my comments to Issue 4 above. I believe they equally apply to human uses (services).

6) What consideration should be given to the relationships among different monitoring (ecosystem) components, and how should they be integrated?

While I agree that understanding the linkages among resources will be useful to us in our effort to better integrate our monitoring design, isn't this information also obtained through development and validation of conceptual models as described in Issue 1 above. Do you think the matrix approach as described in Section 5 is a superior way to go? Clearly, it may be superior for human uses (services), although even the linkages among resources and human uses can be identified and even quantified in a conceptual model. Again, let me know your response to this particular insight.

7) What relationships need to be established with other monitoring programs within the spill area and how should they be integrated?

I like your approach here. First, I would ask that you include in your listing of Alaskan Monitoring Programs a possible future program that will be designed and implemented by the Oil Spill Response Institute (OSRI) which was created by the Oil Spill Pollution Act of 1990. The OSRI is housed within the Prince William Sound Science Center located in Cordova, Alaska. It is chaired by Dr. Gary Thomas formerly of the University of Washington. Gary usually can be reached on (907) 424-5800. I don't know much about his intended program except that it will focus on long-term issues. I do know that he is asking for funds from the Trustee Council and will attend the Council's next meeting on May 13th. I obviously will know more in the next few days, but you also should make contact.

Second, you need to address what periodic surveys of human uses are conducted in the spill area. For example, I believe that the U.S. Forest Service routinely conducts recreational-use surveys of Forest Service lands throughout Alaska. I also seem to remember hearing about a recent Minerals Management Service or Bureau of Land Management survey of subsistence use in coastal Alaska.

8) What process (including infrastructure) should be considered to guide implementation and management of monitoring?

I generally like this section although I feel that perhaps you should include other options for how the intended monitoring should be managed. While I agree that the Trustee Council could ask a contractor to manage the monitoring program, management of the Trustee Council's monitoring program also could become the responsibility of a Monitoring Management Committee (MMC). This body, not to exceed 15-20 members, could include representation from the Trustee agencies, university scientists, peer reviewers, and other regional monitoring programs. As you know, this essentially is the model being used in Puget Sound.

Other than perhaps providing a choice of management models, I think that Section 7 (pages 75-80) makes some excellent recommendations for how the program should be implemented.

10) Section 6.0: Guidance on Sampling Design.

After a quick review of this Section, I believe most of this information is relevant to what we hope to address in Phase 2 of our planning efforts. For the most part, this information may be too technical for inclusion in the Conceptual Plan. It is not that I disagree with what was said (it is some excellent work), rather it goes beyond the intent of the Phase 1 planning effort. As I indicated above (see Issue 4), some of the information (Sections 6.2 and 6.3) is germane to Phase 1 and should stay. However, this information best addresses Issues 3 and 4 in the RFP and should be presented in that context. This suggests that editing also will be needed. What do you think?

MEMORANDUM

State of Alaska Department of Fish & Game Habitat and Restoration Division

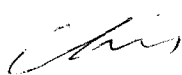
TO: RPWG

DATE: April 15, 1993

FILE NO.:

TELEPHONE NO.:

SUBJECT: Ideas on Monitoring


FROM: Chris Swenson

Here are some thoughts on monitoring:

1. Monitoring Categories: In terms of clarifying our categories of monitoring, we could arrange things as follows:

a. Project Level Monitoring: Each project will include monitoring to determine whether or not the project is working out as planned. For example, fish passes would be monitored to determine whether fish were actually using the pass and were utilizing upstream areas to successfully spawn.

b. Recovery Monitoring: Each injured species and service would be monitored, when feasible to do so, to ascertain the rate and degree of recovery. This would apply to those resources and services being actively restored as well as those being allowed to recover naturally (this subsumes the old categories of Natural Recovery Monitoring and Restoration Monitoring). For example, PWS wild pink salmon would be monitored as a whole for recovery.

c. Long-Term Ecological Monitoring: This category remains the same as originally stated, and would focus on monitoring long-term trends in ecological interactions. During our discussion with Parametrix on 4/12, it was decided that this type of monitoring would not apply to services and would focus exclusively on biological trends.

3. Causal Connections Between Projects and Recovery: Phil Mundy made the point during the workshop that it is generally not possible or necessary to establish direct causal links between restoration activities and species recovery. If we know that individual projects are working as planned (i.e. fish

passes are getting fish to new spawning areas) and that species recovery is occurring (i.e. PWS pink salmon are recovering), then it is often neither possible nor necessary to establish that the fish passes are the cause of the recovery. Phil's point was that natural processes are so complex that it was not realistic to try to establish links between our relatively small-scale restoration efforts and widespread populations of organisms, which are subject to numerous, poorly understood environmental influences. However, it may be possible to attempt this for some resources which are concentrated in time and location, such as colonial seabirds - but even so, is establishing this link really worth the time and money needed to do so?

3. Types of Monitoring not Exclusive: It was also pointed out at the workshop that the three types of monitoring wouldn't necessarily be conducted separately and that they may overlap.

4. Other Issues for RPWG: Other issues that came out of the workshop and subsequent discussions include;

a. Services did not fit as well into the conceptual plan as resources, and RPWG needs to give Parametrix some additional guidance on this (e.g., endpoints, what aspects of the services to monitor, etc.)

b. The contract for Phase 2 should specifically require planning a mechanism/process for integrating and interpreting monitoring data, especially for the ecosystem data. This integration would certainly be subject to peer review and agency input, but if this process is not undertaken by the group or committee charged with overseeing the program, the RT and TC will certainly not be able to do it by themselves.

3. The workshop exercise for choosing and prioritizing which resources and services to monitor was confusing for some participants and we still have work to do in this area.

5/4/93 Draft
Sam Johnson

DRAFT

VII. COMPREHENSIVE RESTORATION MONITORING PROGRAM

A. BACKGROUND

The *Exxon Valdez* Oil Spill Trustee Council has initiated a planning effort to develop a comprehensive and integrated monitoring strategy for resources and human uses (services) injured by the *Exxon Valdez* oil spill. A monitoring and research program will help the Trustees decide how resources and services are recovering, and whether restoration activities are effective. It also could be used to monitor the general health of the affected ecosystem, or provide basic and applied research about how to better protect, manage, or restore resources or services injured by the spill.

B. GOALS

Monitoring is essential to understand if the proposed restoration activities have been successful at restoring, rehabilitating, replacing, enhancing, or acquiring the equivalent of natural resources and human uses injured by the oil spill. The goal is to develop a comprehensive and integrated monitoring program to follow the progress of recovery, evaluate the effectiveness of proposed restoration activities, improve the information base from which future disturbances can be evaluated, and when necessary, conduct research to develop new restoration technologies and approaches.

C. OBJECTIVES

Monitoring is necessary to assess the rate and adequacy of recovery. Resources and associated services that are found to be recovering at an unacceptable rate may have to be considered as candidates for restoration action. Likewise, resources that are found to be recovering faster than anticipated may allow for earlier completion of a restoration action. Monitoring of important physical, chemical, biological, cultural and economic properties will establish an environmental baseline for the affected ecosystem and associated human uses. This baseline then can be used to assess the anticipated effects of human development and to improve our ability to manage affected resources and services over the long-term. Research would be employed to restore resources not recovering or recovering at lower than expected rates.

The Trustees monitoring and research program could include one or more of the following components, although the components vary among alternatives:

- 1) **Recovery Monitoring** would assess the rate of recovery of injured resources and services, and determine when recovery has occurred;

2) **Restoration Monitoring** would evaluate the effectiveness of individual restoration activities, identify where additional restoration activities may be appropriate, and determine when injury is delayed.

3) **Ecosystem Monitoring** would follow long-term trends in distribution and abundance of injured resources and the quality and quantity of human uses. Monitoring of this type could also detect residual oil spill effects and provide ecological, cultural, and economic baseline information useful in assessing the impacts of future disturbances.

4) **Restoration Research** would clarify the causes of poor or slowed recovery, and design, develop, and implement new technologies and approaches to restore resources and services not recovering or recovering at lower than expected rates.

D. RESOURCES AND SERVICES TO BE MONITORED

At minimum, monitoring will follow recovery for those injured resources and services listed in Table XX of Chapter III. For some of these resources, there is documentation of declines in abundance that will persist for more than one generation, decades in some cases. While mortality and other injuries occurred to other resources, population size abundance was not always affected. There also is evidence of diminished human uses in the spill area including commercial fishing, commercial tourism, recreation, passive use, and subsistence.

Although dependent upon the scope of the final monitoring strategy selected by the Trustees, monitoring could also follow the dynamics of other components of the injured ecosystem, for example, those species important in the food webs of injured species. To better manage injured marine birds, marine mammals, and some species of fish (salmon, halibut, rockfish) over the long-term, it may be instructive to follow the abundance and distribution of their prey species (herring, sandlance, candle fish, pollack) within in the spill area. Clearly, changes in the temporal patterns of prey abundance and distribution will be reflected in concomitant changes in abundance and distribution of predator species. This kind of information will assist the Trustees in better understanding the dynamics of recovery, or potentially the lack thereof, but also is intended to document long-term trends in the environmental health of the affected ecosystem.

E. PLANNING APPROACH

Because of the complexities of both institutional and technical issues associated with developing a meaningful monitoring and research program for the spill area, a phased approach is being undertaken. In **Phase 1** which will be completed in June 1993, a consultant is assisting the Trustees with development of a

"conceptual" design for a monitoring plan. This is intended to guide more detailed, technical planning in a subsequent **Phase 2**.

1. Phase 1 - Conceptual Design

In Phase 1, the objective is to develop a conceptual methodology that can be used by the Trustees as a tool for developing and refining effective monitoring elements, and as a guide for decisions on what to monitor, where, when and how. It also establishes the relationships among those who require and those who produce monitoring information, as well as establishing how monitoring is integrated and coordinated among the various activities. This approach borrows significantly from the National Research Council's conceptual model for developing more effective and useful monitoring programs (National Research Council 1990).

2. Phase 2 - Detailed Design

With an approved conceptual design, the Trustees will next develop detailed technical specifications for monitoring that will be implemented in April 1994, coincident with implementation of the Restoration Plan. This planning effort focuses on the technical requirements of an integrated monitoring plan and again assumes a close working relationship among the Trustee Agencies. It also is the intent of the Trustees that the Final Restoration Plan, to be published in November 1993, will include at least a summary of the technical design for each monitoring component, both resource and service. This final phase of planning will establish:

- a) the locations where monitoring should be conducted;
- b) a technical design for each monitoring element (e, g., sediments, invertebrates, fish, birds, mammals, and services [commercial fishing, tourism, recreation, subsistence] that specifies how, when data will be collected, analyzed, interpreted, and reported;
- c) a design for a data management system to support the needs of the Trustees and other decision makers, planners, researchers and the general public.
- d) a rigorous quality assurance program to ensure that monitoring data produces defensible answers to management questions and will be accepted by scientific researchers and the public;
- e) cost estimates for each monitoring component; and
- f) a strategy for review and update to ensure that the most appropriate and cost-effective monitoring methods are applied.



APR 28 '93 11:29 OOSDAR



P.1/10

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
OFFICE OF OIL SPILL DAMAGE ASSESSMENT AND RESTORATION

P.O. 210029
11305 GLACIER HWY
BUKE BAY, ALASKA 99821

TELEPHONE: (907) 789-6600
FAX: (907) 789-6608

RAPIDFAX TRANSMISSION: 9 PAGES TO FOLLOW

DATE: 4/28/93

FROM: John Strand

TO: RPN6

FAX NUMBER: CACI

SUBJECT: Section of Draft Restoration Plan on

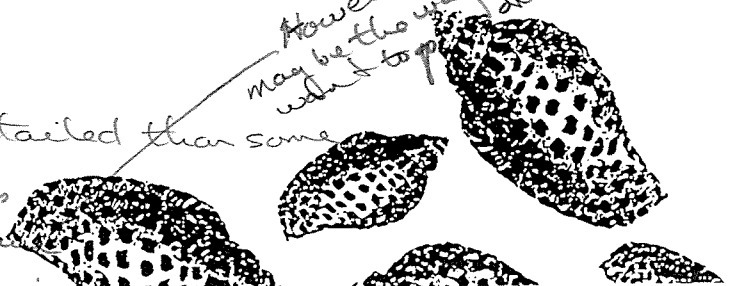
COMMENTS - Comprehensive Restoration Monitoring Program

*For review/comment, please find attached
first pass at preparing this section.*

*Barbara or Bob, please distribute to RPN6
thanks*

*may be a little more detailed than some
of plan. It covers contingencies
and likely questions one would have
when implementing a monitoring program.*

*However this
may be the way we
want to go or all of ch 6.*



DRAFT**VII. COMPREHENSIVE RESTORATION MONITORING PROGRAM****A. BACKGROUND**

The *Exxon Valdez* Oil Spill Trustee Council has developed initial (conceptual) design requirements for a comprehensive restoration monitoring program for resources and human uses (services) injured by the *Exxon Valdez* oil spill. With an approved conceptual design, the Trustees will next develop detailed technical specifications for monitoring that will be implemented in April 1994, coincident with implementation of the Restoration Plan.

B. CONCEPTUAL DESIGN

A conceptual design or plan is used as a tool for developing and refining monitoring systems, a means for identifying and prioritizing elements to be considered for an effective monitoring plan, and a guide for decisions on what to monitor, where, when and how (National Research Council 1990). It also establishes the relationships among those who require monitoring information and those who produce monitoring information, as well as establishing how monitoring is integrated and coordinated among the various activities.

As with any tool, it is both how well the tool is constructed and how well the tool is used that determines it's effectiveness. The Trustee's approach has been to construct a conceptual design with the contributions of as many interested parties as possible. Through telephone interviews, analysis of case histories, a technical workshop, and review of previously prepared materials, the Trustee's have obtained the participation of a large number of individuals representing the Trustee agencies, universities, consultants, and peer reviewers.

Key elements of the conceptual design for the Trustee's proposed Monitoring Program include:

1) Goals

Monitoring is essential to understand if the proposed restoration activities have been successful at restoring, rehabilitating, replacing, enhancing, or acquiring the equivalent of natural resources and human uses injured by the oil spill. The goal is to develop a comprehensive and integrated monitoring program to follow the progress of recovery, evaluate the effectiveness of proposed restoration activities, and improve the information base from which future disturbances can be evaluated.

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2) Objectives

Monitoring is necessary to assess the rate and adequacy of recovery. Resources and associated services that are found to be recovering at an unacceptable rate may have to be considered as candidates for restoration action. Likewise, resources that are found to be recovering faster than anticipated may allow for earlier completion of a restoration action. Monitoring of important physical, chemical, biological, cultural and economic properties will establish an environmental baseline for the affected ecosystem and associated human uses. This baseline then can be used to assess the anticipated effects of human development and to improve our ability to manage affected resources and services over the long-term.

Monitoring will be conducted to fulfill the following specific objectives:

- a) to assess the rate of recovery of injured resources and human uses, identifying where additional restoration activities may be appropriate, and determining when injury is delayed;
- b) to evaluate the effectiveness of individual restoration activities, particularly where the endpoint of "effectiveness" for an individual project is different than the endpoint (full recovery) of the injured resource or human use. It may not always be possible to detect the contribution of individual restoration projects if several or more restoration projects target the same resource or human use, or if uncontrolled factors such as climatic conditions mediate recovery, and;
- c) to follow the long-term trends in distribution and abundance of injured resources and the quality and quantity of human uses. Monitoring of this type also could detect residual oil spill effects and provide ecological, cultural, and economic baseline information useful in assessing the impacts of future disturbances.

3. Strategy/Conceptual Methodology

Figure 1 shows the main elements of a conceptual methodology presently under consideration for implementation by the Trustees. Figure 2 provides the detail of defining a monitoring strategy and developing specific questions to be addressed by monitoring. As indicated above, this conceptual approach borrows significantly from the National Research Council's model for developing more effective and useful marine monitoring programs.

Working from the bottom up in Figure 1 helps in understanding the relationships among the steps in the proposed methodology. Information is disseminated to decision makers (step 7) only after it has been produced (step 6). Information is developed when the results of carefully designed monitoring studies are implemented

and the results are analyzed and evaluated (step 5). For a monitoring study to be implemented, it must be designed (step 4) to effectively address important questions (step 2). The focused questions that serve as the basis for the monitoring studies, in turn, rely on clear management objectives (step 1). Finally preliminary studies may be required to better define the questions and technical aspects of the monitoring (step 3). There also are three feedback loops that allow the designers to reframe the program's underlying questions, review and modify monitoring objectives, and finally use the results of monitoring to refine sampling design.

Figure 2 shows how a monitoring program can begin with general monitoring objectives and develop specific questions to be answered that are the basis for developing detailed sampling protocols. This process includes: identifying the resources at risk, establishing the linkages (direct and indirect) among ecosystem components (particularly the resources at risk and the sources of change, both natural and human), establishing boundaries for spatial, temporal, biological, physical, chemical, cultural or economic aspects of the system (including defining scales for spatial and temporal changes), and projecting either quantitatively or qualitatively, changes in natural resources and human uses and the interactions among them.

This approach will help define the cause and effect relationships that determine potential responses of the resources and human uses affected by the oil spill. As in Figure 1, sufficient feedback is incorporated so that the questions being asked are refined to reflect the best information available including new information as it is produced.

A conceptual model is the central feature of this methodology. In application, a conceptual model will describe the links among the resources at risk; the physical, chemical and biological components of the affected ecosystem; and human and natural causes of change. Conceptual models begin as a qualitative description of the causal links in the system to be monitored. Then, based on technical knowledge, they can be expanded to include quantitative elements such as mathematical or numerical models to better understand the the dynamics of the system to be monitored.

For example, a conceptual model of the fate of spilled oil in Prince William Sound showing how vulnerable resources are exposed to oil in the environment, and at what exposure levels, will permit important questions (hypotheses) regarding the effects of oil to be formulated and tested. By providing a framework for organizing existing scientific understanding, a conceptual model also identifies important sources of uncertainty.

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4. Resources and Services to be Monitored

The Memorandum of Agreement and Consent Decree (Civil Action A91-081, United States v. State of Alaska approved August 28, 1991) requires that use of restoration funds be linked to injured resources and human uses (services) resulting from the Exxon Valdez oil spill. The injuries summarized in Volume 1 Restoration Framework (Exxon Valdez Oil Spill Trustees 1992) and in the more recent Draft Exxon Valdez Oil Spill Restoration Plan Summary of Alternatives for Public Comment (Exxon Valdez Oil Spill Trustees 1993) were used to prepare a list of injured resources and services shown in Table 1.

The list of injured resources is divided into those whose populations measurably declined, and those that were killed or otherwise injured, but where the injury did not result in a measurably lower population. By measurable decline, we mean a detectable decline in abundance that will persist for more than one generation. Some species such as common murre, marbled murrelets, pigeon guillemots, and harbor seals were declining before the spill. Their rate of decline was accelerated by the spill, but other factors such as variation in climatic conditions, habitat loss, or increased competition for food may also be influencing long-term trends in the health and populations of these and other species.

The spill also directly affected human uses of the spill area including commercial fishing, commercial tourism, recreation, passive use, and subsistence. The nature and extent of the injury varied by user group and by area.

5. Management Structure

Implementation of this multifaceted program requires central coordination and management. In order to successfully implement an ambitious and wide-ranging program as contemplated, a high degree of organization is needed to create the final design, to analyze, interpret and disseminate the data generated, and to ensure that all aspects of the program are carried out as designed.

Management of the Trustee's monitoring program could become the responsibility of a Monitoring Management Committee (MMC) consisting of representatives of the Trustee Agencies, university scientists, and the peer reviewers. Representation could also be invited from the Regional Citizens Advisory Councils (Prince William Sound and Cook Inlet), other monitoring programs in the region, and the public at large, however, membership should not exceed 15 to 20. Alternatively, a single contractor could manage implementation of the monitoring program.

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Management of the program consists of coordinating not only implementation but also evaluation of program results. The most certain way to ensure that the best monitoring approaches will be implemented is to employ a competitive bid process whenever possible. A panel of peer-reviewers could be selected to review and grade all proposals submitted in response to an open solicitation for monitoring services. Proposals submitted by the Trustee agencies would also be subjected to the same level of review. A similar peer-review process should be used for review of all project renewals and for review of draft and final reports.

Finally, peer-review will determine if plans and projects and related activities have been implemented as designed and in compliance with the Restoration Plan, Restoration Monitoring Plan and the National Environmental Policy Act.

It is expected that the Trustee Council will make a final decision on the type of management structure to implement once the public has opportunity to comment.

6. Data Dissemination

All of the monitoring results (interim and final reports) will be kept in a central repository or library where, at minimum, titles and abstracts will be accessible by a computerized system. Responsibility for archival of raw data will reside with the agency or contractor performing the monitoring. The final configuration of the data management system, and how and who can use the system will be decided by the Trustees. Oversight of the repository and computer system will be the responsibility of the MMC or a contractor. It is the intent that this information be accessible and in a format that can be readily utilized by scientists, resource managers and the public.

7. Avoiding Duplication of Effort

Integration and coordination with other monitoring programs in the spill area is essential to avoid duplication of effort, but also could result in a benefit to each program where there is potential overlap. As discussed above, both the Prince William Sound and Cook Inlet Regional Citizens Advisory Councils presently conduct monitoring in Prince William Sound and the Gulf of Alaska. A third major program with potential geographic as well as technical overlap will soon be implemented by the Oil Spill Recovery Institute. While often the specific goals and objectives of these programs (including the Trustee's proposed program) are different, each program could benefit from conducting monitoring at common stations, agreeing to follow standardized sampling protocols, and sharing logistics as well as data, etc.

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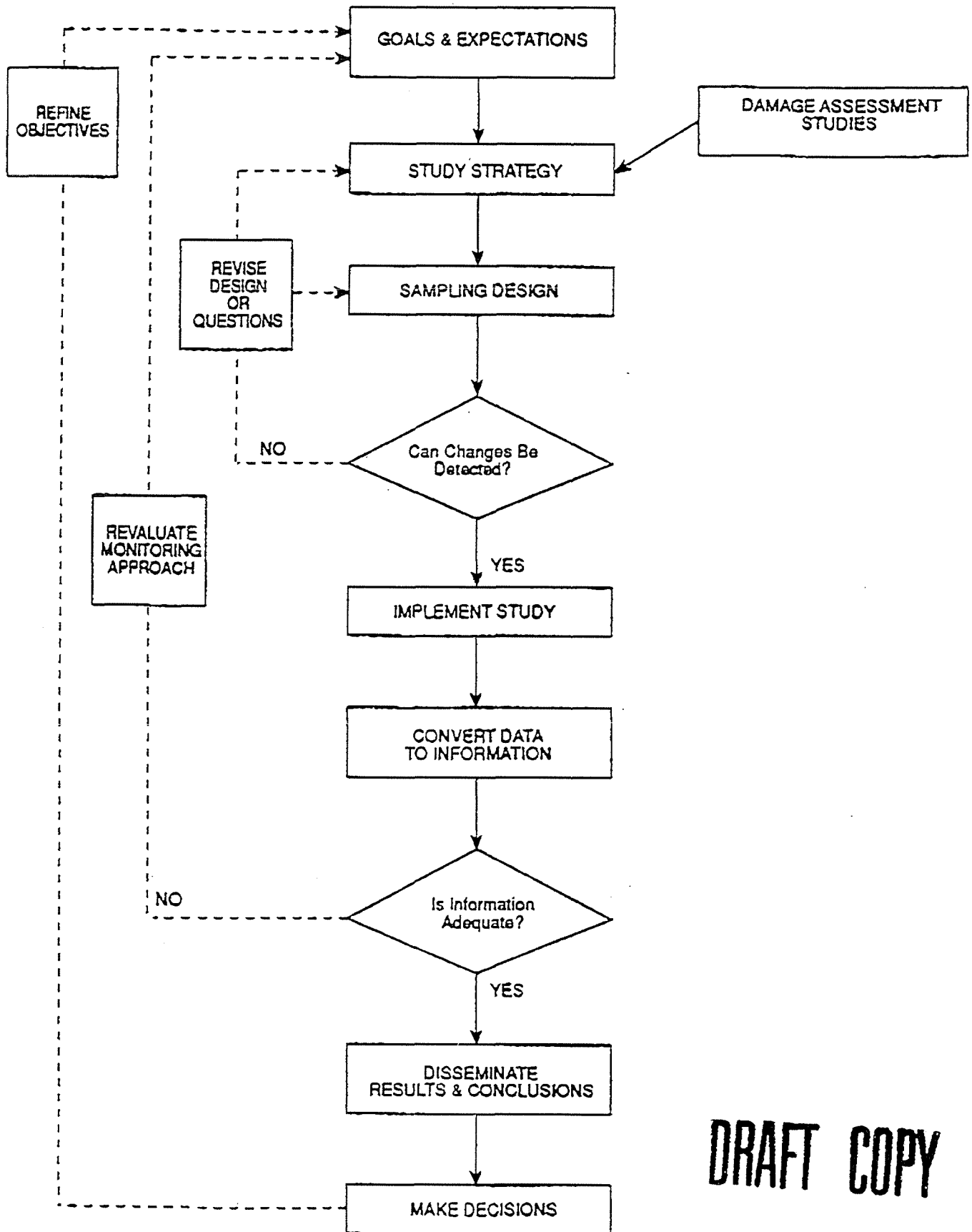
C. DETAILED DESIGN

With an approved conceptual design, the Trustees next will develop detailed design specifications. This planning effort focuses on the technical requirements of an integrated monitoring plan and again assumes a close working relationship among the Trustee Agencies. It also is the intent of the Trustees that the Final Restoration Plan, to be published in November 1993, will include at least a summary of the technical design for each monitoring component, both resource and human use.

The final phase of planning will establish:

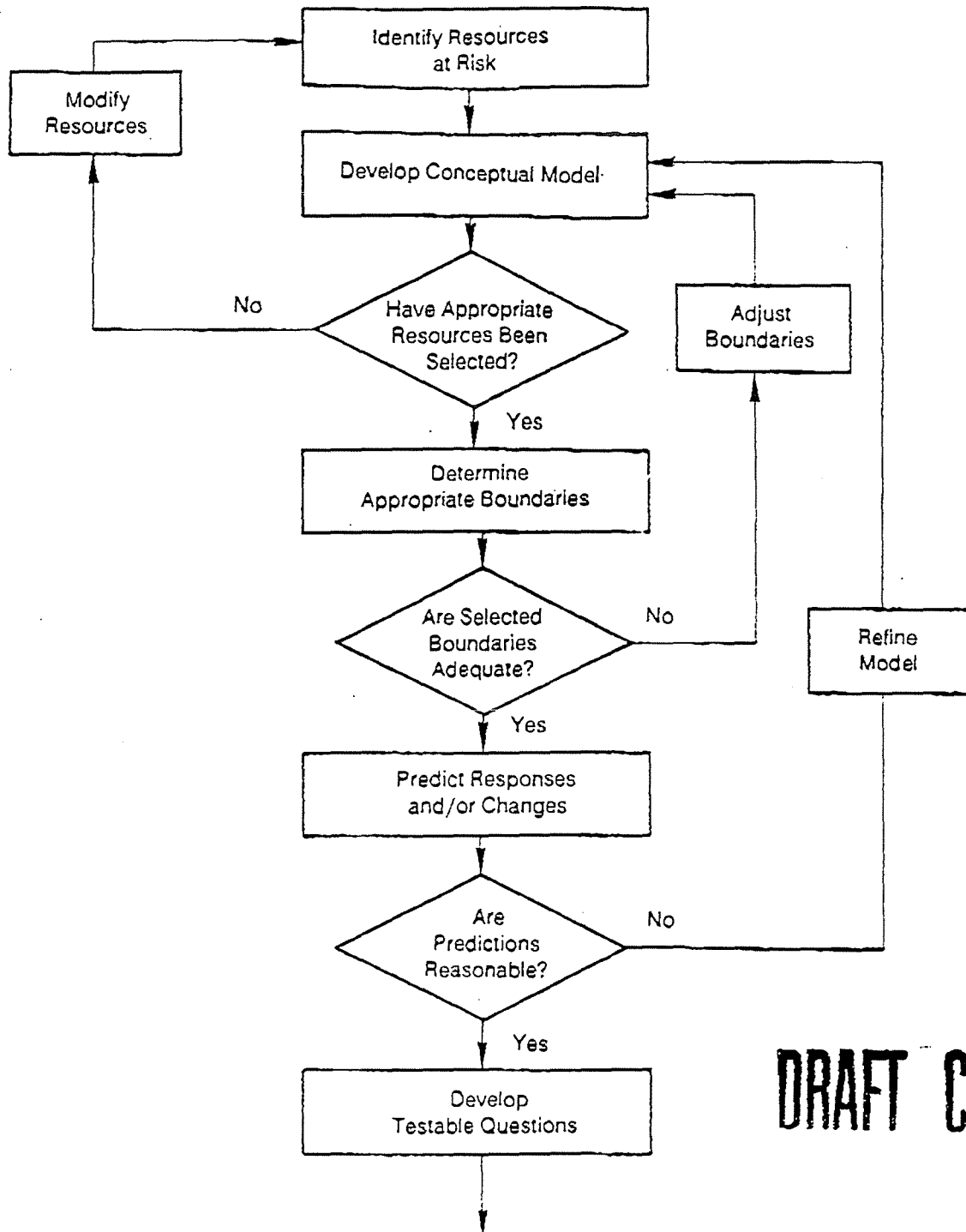
- 1) the locations where monitoring should be conducted;
- 2) a technical design for each monitoring component (e, g., sediments, invertebrates, fish, birds, mammals, and services [commercial fishing, tourism, recreation, subsistence] that specifies how, when data will be collected, analyzed, interpreted, and reported;
- 3) a design for a data management system to support the needs of the Trustees and other decision makers, planners, researchers and the general public.
- 4) a rigorous quality assurance program to ensure that monitoring data produces defensible answers to management questions and will be accepted by scientific researchers and the public;
- 5) cost estimates for each monitoring component; and
- 6) a strategy for review and update to ensure that the most appropriate and cost-effective monitoring methods are applied.

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Figure 1. Design and implementation elements of proposed restoration monitoring program (National Research Council 1990).



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Figure 2. Elements for defining a monitoring strategy and developing specific questions to answer (National Research Council 1990).

Table 1. Resources and Human Uses (Services) Injured by the Spill.

RESOURCES			SERVICES (Human Uses)
Population Decline	Injured, but No Population Decline	Other	
Black oystercatcher Common murre Harbor seal Harlequin duck Intertidal organisms Marbled murrelet Pigeon guillemot Sea otter Sockeye salmon Subtidal organisms	Bald eagle * Cutthroat trout * Dolly Varden * Killer whale Pacific herring * Pink salmon River otter Rockfish	Air, water, and sediments Archaeological resources Designated wilderness areas	Commercial fishing Commercial tourism Passive use Recreation including sport fishing, sport hunting, and other recreation use Subsistence

* For these species, the Trustees' scientists have considerable disagreement over the conclusions to be drawn from the results of the damage assessment studies.

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