

RPWG
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MEMORANDUM

16 APRIL 1992

TO: RPWG
FR: Stan Senner
RE: (1) Timeline for Restoration Plan
(2) Next RPWG Meeting

(1) With no advance warning the Restoration Team has asked for a timeline for completion of the Restoration Plan and Environmental Impact Statement. The enclosed is my best stab at a realistic timeline. Note that the target for release of the draft documents to the public is 02/15/92. I invite your comments on this proposed timeline by noon Friday (sorry!). The RT would like to integrate it with timelines for other documents

(2) John Strand and I have discussed the possibility of a RPWG meeting in Anchorage on 23-24 April. A major purpose of the meeting would be to develop a draft outline for the Restoration Plan. We started discussing this at our last meeting, but it is crucial that we make progress on this quickly. The target for submission of an annotated outline to the RT is 05/15/92 (see following timeline). Do the proposed meeting dates suit you?

enclosure (1)

cc: Karen Klinge
Chris Swensen
Susan MacMullin
Jim Slocomb

**Proposed Timeline for Major Milestones
in the Completion of the
Restoration Plan and
Environmental Impact Statement**

- 04/24/92 Establish categories for information to be compiled for restoration options
- 05/15/92 Provide draft annotated outline of Draft Restoration Plan (DRP) and Draft Environmental Impact Statement (DEIS) to RT
- 06/15/92 Modify outline of DRP and DEIS to reflect public comment on the Restoration Framework (RF); identify draft final list of NEPA issues to be addressed in DEIS
- 06/26/92 TC approves outline of DRP and DEIS; present list of NEPA issues to be addressed in the DEIS
- 06/30/92 Complete compilation of information needed to describe and evaluate restoration options
- 07/01/92 Begin drafting sections of DRP and DEIS as sufficient information becomes available
- 07/30/92 Complete evaluation of restoration options
- 08/15/92 Provide draft sets of restoration alternatives to the TC
- 11/15/92 Complete draft DRP and draft DEIS and present to RT
- 01/15/93 TC approves DRP and DEIS
- 02/15/93 DRP and DEIS released to public
- 03/31/93 Comments on DRP and DEIS due from public
- 05/31/93 Final Restoration Plan and Environmental Impact Statement completed and sent to printer

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MEMORANDUM

5 MAY 1992

TO: Restoration Team

FR: *Stan Senner*
Stan Senner for Restoration Planning Work Group

RE: Information Needed to Evaluate Restoration Options

Please find enclosed a description and list of the information that must be compiled prior to the evaluation of restoration options for the draft Restoration Plan. In the coming weeks the Restoration Planning Work Group will be working through all of the options (and suboptions) outlined in the Restoration Framework, compiling basic information in standardized categories. Our goal is to complete this task by 30 June.

If you have comments or questions about these categories, please let me know.

enclosure (1)

cc: RPWG members
RPWG files
Karen Klinge
Chris Swensen
Ken Chalk
Tim Steele
Mark Fraker
Joe Sullivan

Categories of Information Needed to
Describe and Evaluate Restoration Options

The Restoration Framework contains brief descriptions of 35 potential restoration options; additional options are likely to be identified through public comments and meetings. The Restoration Planning Work Group is now compiling information to permit further analyses of these options for possible inclusion in the draft Restoration Plan.

For each option, the idea is to compile information in standardized categories so that comparisons among options are based on roughly comparable data. Once the compilations are completed, options can again be screened against the criteria proposed in the Restoration Framework and be accepted, rejected, or grouped in various alternatives for presentation in the draft Restoration Plan.

Many of the 35 options described in the Restoration Framework can be implemented in different ways (e.g., option 11, "Improve of Supplement Stream and Lake Habitats for Spawning and Rearing of Wild Salmonids"). In these cases, the "suboptions" will be described briefly and the information will be compiled at the suboption level. The information to be compiled, however, is to be generic, not site specific. Throughout the data base, sources of information (e.g., individuals, publications) will be cited for future reference.

The basic information categories follow.

attachment (1)

Information Categories

OPTION __ [number and title]

APPROACH CATEGORY

INJURED RESOURCES AND SERVICES

SUMMARY [abstract]

SUBOPTION __ [if applicable]

TARGET RESOURCES AND SERVICES
[only if suboptions are described]

DESCRIPTION

IMPLEMENTATION ACTIONS [the individual components]

TIME NEEDED TO IMPLEMENT
[planning or design to completion and start-up of
operations]

MEANS TO IMPROVE RECOVERY [mechanism]

PROTECTION AND MANAGEMENT UNDER EXISTING LAWS

RELATIONSHIPS WITH EXISTING/PLANNED USES OR MANAGEMENT

TECHNICAL FEASIBILITY
[include documentation of feasibility and Alaskan
experience, if any]

POTENTIAL TO IMPROVE RECOVERY OR ENHANCE THE RESOURCE/SERVICE
[include timing of implementation relative to the potential
for improvement or enhancement]

INDIRECT EFFECTS [both beneficial and adverse]

- environmental
- socio-economic
- human health and safety

RELATIONSHIP TO OTHER EVOS RESPONSE/RESTORATION ACTIONS

OTHER OPTIONS THAT COULD ACHIEVE THIS SAME OBJECTIVE

LEGAL CONSIDERATIONS

- consistency with settlement
- agencies with management/regulatory responsibilities
- permits required [state and federal]
- NEPA compliance
- additional/new legislative or regulatory actions

MEANS TO EVALUATE SUCCESS

REPRESENTATIVE COSTS

- [e.g., planning/legal, capital, real estate and development rights, operating/management, etc.]

ADDITIONAL INFORMATION NEEDED

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RESTORATION PLANNING WORK GROUP
EXXON VALDEZ OIL SPILL OFFICE
645 "G" STREET
ANCHORAGE, ALASKA 99501

MEMORANDUM

26 MAY 1992

TO: Bob Spies, Chief Scientist

FR: Stan Senner, Co-Chair, RPWG *Stan Senner*

RE: List of Injured Resources

This memorandum is to follow up our telephone conversation of last week.

The Restoration Planning Work Group is now compiling detailed information on the restoration options outlined in Appendix B of the Restoration Framework. Following this step the work group will formulate several alternative sets of options for presentation to the Trustee Council and, ultimately, the public in the draft Restoration Plan.

Before we can develop the alternative sets of restoration options, however, we need to have a common understanding of the resources and services that meet the injury criteria in the Restoration Framework (see enclosed excerpts). We assume that the Trustee Council will make the final decisions, but before RPWG prepares anything for the Restoration Team, we need your opinion about which species meet the criteria for injured resources. We would appreciate having a memorandum with your list of species/resources, and perhaps a brief comment of justification for each species/resource (e.g., how it satisfies the criteria).

Thank you for your consideration and assistance.

enclosure (1 of 3 pp)

cc: RPWG members
RPWG files
Dave Gibbons

CHAPTER V

INJURY CRITERIA

Settlement Guidance

The settlement documents specify that the use of the restoration trust funds must be linked to injuries resulting from the *Exxon Valdez* oil spill. Specifically, the settlement requires that funds recovered for natural resource damages be spent to restore, replace, enhance, rehabilitate or acquire the equivalent "of natural resources injured as a result of the oil spill and the reduced or lost services provided by such resources."

"Natural resources" are defined as the land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to or managed by Federal and State governments. "Other such resources" includes archaeological resources. The services provided by natural resources include such activities as subsistence hunting and fishing and recreation.

Proposed Criteria

How do we determine which natural resources and natural resource services warrant further restoration activities? The following criteria are proposed to assist the Trustees in these determinations:

- evidence of consequential injury, and
- adequacy and rate of natural recovery.

The concepts underlying these criteria are described below.

Injury to Natural Resources

The following definition of injury is proposed to be applied to natural resources in the spill area:

A natural resource has experienced "consequential injury" if it has sustained a loss (a) due to exposure to spilled *Exxon Valdez* oil, or (b) which otherwise can be attributed to the oil spill and clean up. "Loss" includes:

- significant direct mortality;
- significant declines in populations or productivity;

- significant sublethal and chronic effects to adults or any other life history stages; or
- degradation of habitat, due to alteration or contamination of flora, fauna and physical components of the habitat.

This definition covers a wide range of potential natural resources injuries. Consequential loss is most certain where there was significant direct mortality (e.g., bald eagles and sea otters) or if studies revealed a population decline linked to the oil spill (e.g., harbor seal). Where only eggs or juvenile life history stages are known to have been harmed (e.g., Pacific herring), it is more difficult to establish consequential injury. In such cases, however, if the injury is manifested or inferred at the population level, the injury can be considered consequential. This definition also includes injury to the underlying habitats which were oiled (e.g., intertidal zone), some of which were in specially designated areas, such as parks, forests, and refuges.

Important archaeological sites and artifacts, protected by both Federal and State laws, were oiled. Inherent values could be irretrievably lost as oil continues to contaminate additional artifacts at some sites. Archaeological sites and artifacts are not living, renewable resources and have no capacity to heal themselves. Increased public knowledge of exact archaeological site locations, also continues to foster looting and vandalism.

In some cases our knowledge of the degree of injury and linkage to the oil spill are imperfect, due to the difficulty of obtaining the desired documentation or the restricted scope or duration of the damage assessment studies. The killer whale is one example. In these cases, judgments concerning injuries to natural resources as a result of the oil spill will have to be determined by the weight of the evidence or best professional judgment.

Injury to Natural Resource Services

A natural resource service has experienced "consequential injury" if the *Exxon Valdez* oil spill or clean up:

- has resulted in the continued presence of oil on or adjacent to special purpose lands¹;
- has significantly reduced the physical or biological functions performed by injured natural resources, including loss of human uses;
or

¹ "Special-purpose" lands have been designated by the State of Alaska or the United States for the protection and conservation of natural resources and services.

- has significantly reduced aesthetic, intrinsic or other indirect uses provided by injured natural resources.

This definition covers a wide range of potentially injured natural resources services. Examples are commercial fishing, subsistence hunting, fishing, and gathering; wildlife viewing; sport fishing; and recreation, which includes a variety of activities, such as kayaking and backcountry camping.

Indirect uses, such as aesthetics or appreciation of wilderness qualities, were also affected by the spill. This is a particular concern for those areas which formally have been designated as wilderness areas by the United States or the State of Alaska.

Recovery Concepts

To maximize the benefits of restoration expenditures, the Trustees will consider the effects of natural recovery before investing restoration dollars. In a scientific sense, full ecological recovery has been achieved when the pre-spill flora and fauna are again present, healthy and productive, and there is a full complement of age classes. A fully recovered ecosystem will be one which provides the same functions and services as were provided by the pre-spill, uninjured system.

Our ability to determine scientifically if recovery has occurred or when it will occur may be limited, due to such problems as the quality and quantity of information on pre-spill, "baseline" conditions. For each injured resource and service, however, an estimation of the rate of natural recovery will be considered based on the best information available from the damage assessment and restoration studies, the scientific literature and other sources. If it appears that recovery will be nearly complete before the benefits of a restoration study or project can be realized, then the Trustees may suggest that spending restoration dollars is not justified. On the other hand, if it appears that the time to recovery is prolonged, it is worth considering technically feasible, cost-effective restoration options.


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RESTORATION PLANNING WORK GROUP
EXXON VALDEZ OIL SPILL OFFICE
645 "G" STREET
ANCHORAGE, ALASKA 99501

MEMORANDUM

1 JUNE 1992

TO: John Strand and Bob Spies

FR: Stan Senner, Co-Chairman 
Restoration Planning Work Group

RE: Summary of Injury for the draft Restoration Plan

As you know, our current thinking is that the draft Restoration Plan should contain some sort of a summary of injury, but we do not want a repeat of the lengthy text version that appeared in the Restoration Framework. The best approach seems to be the use of tables to present the highlights.

I have enclosed two drafts that Karen Klinge prepared. John, you and I were going to follow through on this, in consultation with Bob. As one of my final acts in RPWG, I now forward them to the two of you.

In regard to the basic injury summary, one question I would raise is whether the final column, "injury to eggs/young," is sufficient to handle the early life history stages for fish, birds, mammals, etc?

In regard to the geographic summary, are the four categories, A-D, adequate to characterize the state of information?

For both tables, we only want to include information for those resources/services that meet the injury definitions and criteria as presented in the Restoration Framework. These summary tables deal only with resources (i.e., species in this case). John, these will need to be adapted for services and nonbiological resources, such as archaeological sites and artifacts.

At this point, I leave it to you to bring to a resolution.

enclosures (2)

cc: Karen Klinge

Summary of injury¹ by resource or service versus EVOS geographic region. Key: A = studies were conducted in the region and demonstrated injury; B = studies were conducted in the region, but no injury was documented; C = no studies were conducted in the region but there is a basis²for/evidence of injury; D = no studies were conducted in the region and there is no basis for/evidence of injury.

	Prince William Sound	outer Kenai Peninsula Coast	Cook Inlet/ Inner Kenai Peninsula	Kodiak Archipelago	Alaska Peninsula	Other - needed?
Sea otter						
River otter						
Harbor seal						
Brown bear						
Killer whale						
Common murre						
Marbled murrelet						
Black oystercatcher						
Bald eagle						
Pigeon guillemot						

¹Injury to resources or services that satisfies criteria and definitions in the Restoration Framework.

²For example, based on the known fate of the oil, the geographic distribution of the species within the EVOS area, and the habitat types, there is reason to conclude that injury occurred, regardless of whether there is supporting physical evidence.

	Prince William Sound	outer Kenai Peninsula Coast	Cook Inlet/ Inner Kenai Peninsula	Kodiak Archipelago	Alaska Peninsula	Other - needed?
Harlequin duck						
Pink salmon						
Sockeye salmon						
Pacific herring						
Rockfish						
Dolly varden						
Cutthroat trout						
Spot Shrimp						

Summary of injury³ to resources and services in the EVOS area.

	Injury to adults	Injury to subadults	Injury to eggs/young
Sea otter	Heavy direct mortality, continuing high mortality of prime aged adults.	Heavy post-weaning mortality.	No significant injury documented while pups are with the females.
River otter			
Harbor seal			
Brown bear			
Killer whale			
Common murre			
Marbled murrelet			
Black oystercatcher			
Bald eagle			
Pigeon guillemot			
Harlequin duck			
Pink salmon			
Sockeye salmon			

³Injury to resources or services that satisfies criteria and definitions in the Restoration Framework.

Pacific herring			
Rockfish			
Dolly varden			
Cutthroat trout			
Spot shrimp			



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

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DATE: June 19, 1992
 MEMORANDUM FOR: Lew Queirolo
 FROM: *John Strand*
 SUBJECT: Restoration Economics

In the event that you are not on the Trustee Councils' mailing list, I am forwarding copies of two recently completed documents. The Restoration Framework was prepared by the Restoration Planning Work Group and is essentially a proposal for a process to guide the Trustees and the public in restoring species and services injured by the oil spill. The Restoration Framework also serves as a "scoping" document to identify issues that will be analyzed in a programmatic environmental impact statement. The second document, the 1992 Draft Work Plan, was prepared by the Restoration Team and proposes field activities that are important to undertake in 1992 prior to final development of a restoration plan.

The RPWG still has a need to determine what economics analyses are required as part of our evaluation of alternative restoration approaches and options. This determination will need to be made as soon as practical. Economic and other analyses must be completed over the next six months in order to meet the Trustees' schedule of publishing the Draft Restoration Plan in March 1993.

As I have said before, in order to take the next step we should meet again and continue discussions started in November 1991. Would you be available in the next 30 days for a possible 1- or 2-day meeting in Anchorage?

We could talk more about the proposed meeting, an agenda and logistics after you have had opportunity to look at your calendar and read at least the Restoration Framework. I will plan to give you a call in few days. Thanks.

Enclosures

- cc: Mark Brodersen (w/o enclosures)
- Mark Fraker (w/o enclosures)
- Carol Gorbics (w/o enclosures)
- Barbara Iseah (w/o enclosures)
- Karen Klinge (w/o enclosures)
- Byron Morris (w/o enclosures)
- Sandy Rabinowitch (w/o enclosures)
- Chris Swensen (w/o enclosures)
- Art Weiner (w/o enclosures)



REVIEW DRAFT
2/3/92

Siven to Restoration Team
@CACI mtg on 02/04/92

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RESTORATION FRAMEWORK: OUTLINE

- i. Invitation for Public Review and Comment
- ii. Executive Summary
- I. Introduction
 - A. Background
 - 1. Summary of spill
 - 2. Cleanup efforts. Brief discussion on the various cleaning methods used.
 - 3. Injury assessment in 1989, 1990, and 1991.
 - 4. Restoration planning began in 1990.
 - B. Legal Context
 - 1. Introduction
 - 2. Specific Payment Terms and Conditions
 - 3. Spending Guidelines
 - 4. Definitions
 - 5. NRDA regulations
- II. Review of Restoration Planning Before Settlement
 - A. Goals of restoration
 - B. Restoration Planning Activities
 - 1. Public Participation
 - 2. Scientific /Technical Consultations
 - 3. Monitoring
 - 4. Restoration Science Studies
 - 5. Restoration matrices/ development of restoration options
- III. Summary of Injury
 - A. Introductory paragraph
 - B. Marine Mammals
 - 1. Humpback whale
 - 2. Steller Sea Lions
 - 3. Sea Otters
 - 4. Harbor Seals
 - 5. Killer Whales

- C. Terrestrial Mammals
 - 1. Brown Bear
 - 2. Mink
 - 3. Black Bear
 - 4. Sitka Black-tailed Deer
 - 5. River Otters

- D. Birds
 - 1. Introductory paragraph
 - 2. Common and Thick-billed Murres
 - 3. Bald eagles
 - 4. Sea Ducks
 - 5. Other Birds

- E. Fish and Shellfish
 - 1. Introductory paragraph
 - 2. Pink Salmon
 - 3. Sockeye Salmon
 - 4. Dolly Varden and Cutthroat Trout
 - 5. Pacific Herring

- F. Coastal Habitat
 - 1. Introductory Paragraph
 - 2. Supratidal
 - 3. Intertidal
 - 4. Subtidal

- G. Archaeological and Subsistence Resources
 - 1. Archaeological Resources
 - 2. Subsistence Resources

- IV. Scientific Criteria for Determining a Link Between the Oil Spill and Injury
 - A. Settlement Guidance
 - 1. Expenditure of Funds
 - 2. Definition of natural resources and services (MOA)

 - B. Proposed Criteria
 - 1. Sources of injury: NRDA, public, shoreline assessments
 - 2. Standard of what constitutes injury

3. Questions which frame restoration criteria
 - C. Injury to Natural Resources: Discussion on "demonstrable loss"
 - D. Recovery: scientific determination
 - E. Restoration of Services and Intrinsic Values
 1. Natural resource restoration
 2. Restoration of services provide by natural resources
 3. Intrinsic values of wilderness and pristine areas
 4. Avoid double recovery
- V. Background
- A. Life Histories
 1. Sea otter
 2. Harbor Seal
 3. Common murre
 4. Marbled murrelet
 5. Harlequin duck
 6. Dolly varden
 7. Cutthroat trout
 8. Pink salmon
 9. River otter
 10. Killer whale
 11. Brown bear
 12. Pigeon guillemot
 13. Bald eagle
 14. Black oystercatcher
 15. Sockeye salmon
 16. Pacific herring
 17. Rockfish
 18. Spot shrimp
 - B. Discussion of Other Resources/Services
 1. Archaeology
 2. Subsistence
 3. Recreation
 4. Wilderness

(Format for each section is 1) a summary of injury, 2) users, use patterns, and use statistics, 3) resource values, and 4) various laws which recognize the special values and guide and direct protection and restoration)

VI. Proposed Criteria for Selecting Restoration Options

- A. Settlement Guidance
- B. Types of restoration
- B. Proposed Criteria
 - 1. Public input
 - 2. Use of criteria to date

VII. Approaches and Options

- A. Further Evaluation
 - 1. Overview
 - 2. Definitions
 - 3. Approaches
 - 4. Options (about 50)
 - Management of Human Uses (restore, rehabilitate)
 - Manipulation of Resources, including Species and Habitats (restore, rehabilitate, replace, enhance)
 - Habitat Protection and Acquisition (restore, rehabilitate, enhance, acquire the equivalent)
 - Other Resources/Services
 - 4. Further evaluation
- B. Recommended Approaches
 - 1. Decision process/criteria
 - 2. Approaches
- C. Rejected Options

VIII. Implementation of Settlement

- A. Post Settlement Administration
 - 1. Introduction
 - 2. Explanation of funds
 - 3. Organization
- B. Technical evaluation of options through science studies, economic analysis, matrices, etc.
 - 1. Use of the restoration science to date
 - 2. Restoration Science Database

REVIEW DRAFT
2/3/92

3. Recovery monitoring
4. Evaluation of options for identifying and protecting marine and upland habitats

C. Public Participation

1. Settlement guidance
2. Goals and objectives
3. History of Public Participation
(refer to Section II -- Restoration Planning)
4. Information Availability (the NRDA issue)
5. Community Planning Meetings
6. Product Review and Comment Process
7. Public Advisory Group
8. Other Public Outreach

D. Compliance with NEPA

E. Restoration Plan: schedule for OY4

APPENDICES: MOA and Consent Decree
Tear Sheets for Public Comment

2/3/92

Restoration Framework

RESTORATION FRAMEWORK:
Restoration Options

Note: The options listed below reflect suggestions received from the public, technical experts, and agencies. Most of these were presented in the matrices in the August 1990 Restoration Progress Report. A brief description of each approach and each option will be included in the Restoration Framework to enable the public to comment on broad approaches as well as specific options. Inclusion in the Restoration Framework does not constitute a recommendation by the Trustees, but the options listed minimally meet the draft implementation criteria.

MANAGEMENT OF HUMAN USES (restore, rehabilitate)

1. patrol archaeological sites and educate public
2. change management emphases and harvest practices for commercially-harvested fish and shellfish
3. improve stock identification and assessments in support of more intensive management of fish and shellfish
4. develop plans for fish and shellfish that previously did not require intensive management
5. reduce disturbance at marine bird colonies and marine mammal haul-out sites and rubbing beaches and educate public about problems associated with disturbance, harrassment, and shooting
6. redirect or reduce sport-fishing harvests
7. redesignate Chugach National Forest as a National Recreation Area
8. increase management presence in State Marine Parks
9. restrict/eliminate/adjust legal harvest of sea ducks and marine/terrestrial mammals
10. minimize incidental take of marine birds by commercial fisheries

MANIPULATION OF RESOURCES, INCLUDING SPECIES AND HABITATS
(restore, rehabilitate, replace, enhance)

11. excavate archaeological sites and artifacts
12. improve or supplement stream and lake habitats for spawning and rearing of wild salmonids
13. create new recreation public-use facilities
14. remove oiled mussel beds and provide clean substrates for recolonization
15. eliminate sources of persistent contamination of prey and spawning substrates
16. accelerate recovery of high intertidal Fucus zone
17. enhance intertidal habitats to supplement substrates for

2/3/92

Restoration Framework

- spawning herring
- 18. test feasibility of enhancing murre productivity through social facilitation and modifications of nest sites
- 19. eliminate introduced predators from islands that are or were important for ground-nesting marine birds
- 20. expand fisheries harvest opportunities by establishing alternative salmon runs

HABITAT PROTECTION AND ACQUISITION (restore, rehabilitate, enhance, acquire the equivalent)

- 21. update and expand the State's Anadromous Fish Stream Catalog
- 22. establish EVOS "special management area" on State lands
- 23. acquire privately-owned tidelands
- 24. designate protected marine habitats
- 25. establish Nellie Juan and College Fjord Wilderness Areas within the Chugach National Forest
- 26. acquire additional marine bird/sea duck habitats for Alaska Maritime National Wildlife Refuge
- 27. acquire inholdings within Kenai Fjords National Park
- 28. protect/acquire upland forests, watersheds, and streams
- 29. acquire additional sites to expand Alaska Marine Park system
- 30. acquire extended buffer strips on anadromous fish streams
- 31. designate and protect "benchmark" ecological monitoring sites
- 32. acquire access to sport-fishing streams
- 33. protect/manage habitats important for nesting birds by establishing or extending buffer strips or zones

OTHER RESOURCES/SERVICES

- 34. test subsistence foods for hydrocarbon contamination
- 35. develop comprehensive, ecologically designed, post-EVOS monitoring program
- 36. endow science fund to support long-term ecological and applied research
- 37. develop integrated education and public information program to foster the wise use, enjoyment and protection of marine resources

CHAPTER IV

INJURY CRITERIA

Settlement Guidance

The use of State/Federal restoration trust funds must be linked to injuries resulting from the Exxon Valdez oil spill. Specifically, the settlement requires that funds recovered for natural resources damages must be spent to restore, replace, enhance, rehabilitate or acquire the equivalent "of natural resources injured as a result of the oil spill and the reduced or lost services provided by such resources " (citation)

"Natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to or managed by Federal and State governments (citation). Services provided by natural resources include such activities as subsistence hunting and fishing and recreation. Restoration funds also may be spent on archaeological resources--"sites and artifacts"--that were injured, lost, or destroyed as a result of the oil spill (citation).

Proposed Criteria

How do we determine which natural resources, natural resources services, and archaeological resources are in need of restoration? Section III presents the results of the studies carried out in the State/Federal Natural Resources Damage Assessment, which is the primary source of information about EVOS injuries. There also is information available from other sources, such as the public or from the "shoreline assessments" conducted by State and Federal response agencies.

Although information on injuries is available from these various sources, there is need to agree on what constitutes "injury" in order to determine which resources and services need restoration funds. The following factors are proposed:

- evidence of consequential injury; and
- adequacy and rate of natural recovery.

The concepts underlying these factors are described below.

Injury to Natural Resources

The following definition of injury could be applied to natural resources in the spill area:

A natural resource has experienced "consequential injury" if it has sustained a loss (a) due to exposure to spilled Exxon Valdez oil, or (b) which otherwise can be attributed to the oil spill and clean up. "Loss" includes:

- significant direct mortality;
- significant declines in populations or productivity;
- significant sublethal and chronic effects to adults or other life history stages; and
- degradation of habitat due to alteration or contamination of flora, fauna, and physical components of the habitat.

This definition covers a wide range of natural resources injuries. Consequential loss is most certain where there was significant direct mortality (e.g., bald eagle and sea otters) or if studies revealed a population decline linked to the oil spill (e.g., harbor seal). Where only eggs or juvenile life history stages are known to have been harmed (e.g. Pacific herring), it is more difficult to establish consequential injury. In such cases, however, if the injury is manifested or inferred at the population level, the injury can be considered consequential. Lastly, this definition includes injury to the underlying habitats which were oiled (e.g., intertidal zone).

Recovery Concept

To maximize the benefits of restoration expenditures, we need to consider whether natural recovery has occurred or is occurring, as well as the quality of the recovery, before investing restoration dollars. These involve both scientific and practical considerations. In a scientific sense, full recovery has been achieved when the pre-spill floral and faunal constituents of natural communities are again present, healthy, and productive, and there is a full complement of age classes. In a broader sense, a fully recovered ecosystem will be one which provides the same functions and services as undamaged systems.

Our ability to scientifically determine if recovery has occurred or when it will occur is limited, due to such problems as the quality and quantity of information on pre-spill, "baseline" conditions. For each injured resource, however, the rate and quality of natural recovery should be estimated, based on the best information available from NRDA studies and the scientific literature. If it appears that recovery will be nearly complete before the benefits of a restoration study or project can be realized, then common sense suggests that spending restoration

dollars is not justified. On the other hand, if it appears that the time to recovery is long, it is worth considering technically feasible, cost effective restoration options.

Archaeological sites and artifacts are not living, renewable resources and have no capacity to heal themselves. Thus, the concept of recovery only has limited application to these resources.

Injury to Natural Resources Services

A variety of natural resources services potentially were injured and should be considered for restoration. Examples are subsistence hunting, fishing, and gathering; wildlife viewing, a service provided by marine birds and mammals; sport fishing, a service provided by Dolly Varden and cutthroat trout; and recreation, including such activities as kayaking and backcountry camping.

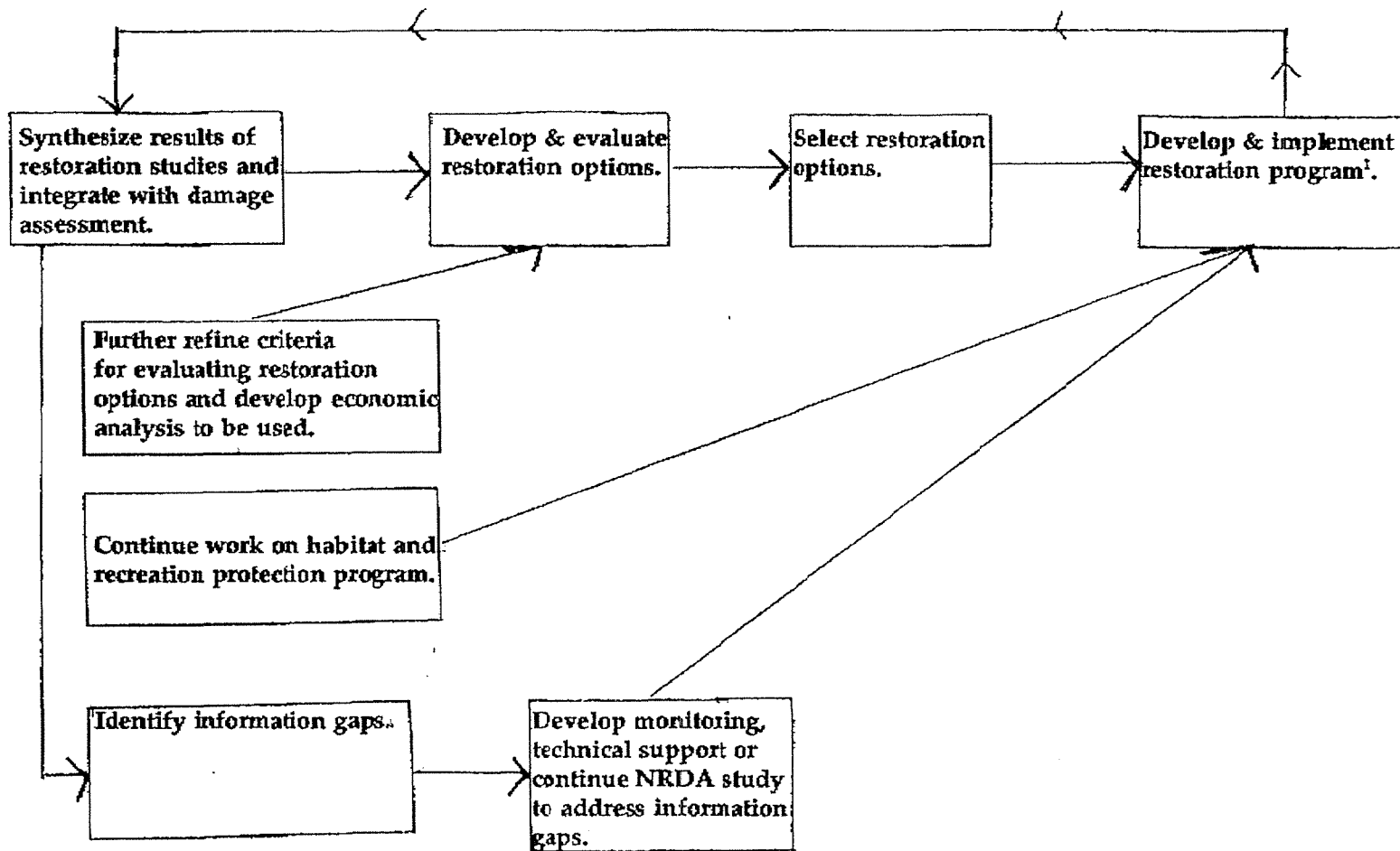
Intrinsic values are also natural resources services potentially injured by the oil spill. Intrinsic values, for example, may include the sense of many Americans that the oil spill violated their perception of the spill area as a pristine wilderness. Formally designated Wilderness Areas (e.g., within Katmai National Park and Preserve) are a special case of a natural resources service, because there is not only a perception of wilderness, but Congress has legislated that each Wilderness Area shall maintain certain pristine physical qualities.

For each natural resources service, we first must consider whether there is evidence of consequential injury to the service. Secondly, we must consider whether that service is being provided again due to the recovery of the natural resource that provides the service.

- o **RESTORATION FRAMEWORK:** Description of the process of restoration. For example, the framework discusses broad categories of restoration (e.g., direct, replacement, acquisition) but not specific projects. The framework is comparable to a strategic plan.
- o **RESTORATION PLAN:** The restoration plan is a multi-year working document that articulates the restoration program in concrete terms. The plan will capture general project areas for restoration, e.g., for example, habitat and recreation protection and seabird breeding enhancement. The plan is likely to include an estimate of resources.
- o **RESTORATION WORK PLAN:** The work plan covers one or perhaps two years of specific restoration work. The work plan identifies specific restoration projects and includes a detailed budget.
- o **RESTORATION SCIENCE:** Collective term used for feasibility studies, technical support, monitoring, implementation (especially the evaluation portion), and injury assessment work.

1992 SCIENCE PROGRAM

DRAFT

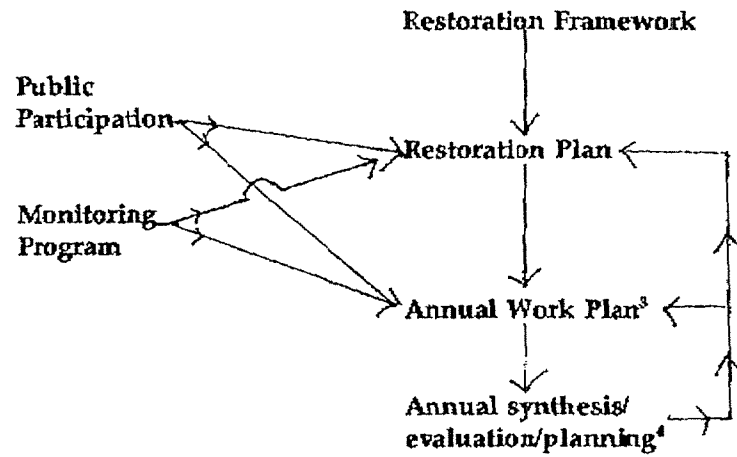


¹INCLUDES MONITORING, TECHNICAL SUPPORT, FEASIBILITY STUDIES, IMPLEMENTATION, AND CONTINUED NRDA STUDIES.

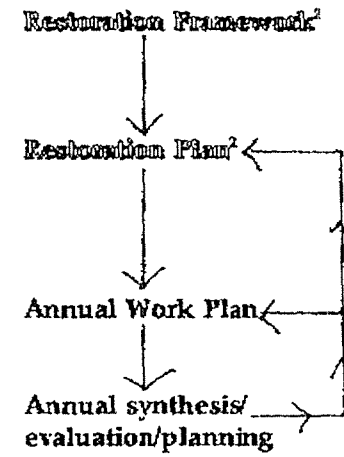
Draft
MacMullin 11/25/91

SIDE-BY-SIDE: RESTORATION PLANNING IN THE ABSTRACT AND HOW IT WORKS AT PRESENT

RESTORATION PLANNING: ABSTRACT



RESTORATION PLANNING: PRESENT



² PIECES EXIST BUT HAVEN'T BEEN FORMALLY ASSEMBLED.

³ ALSO KNOWN AS ANNUAL SCIENCE PROGRAM.

⁴ ALSO PART OF THE ANNUAL SCIENCE PROGRAM

P.04

89072767178

TO

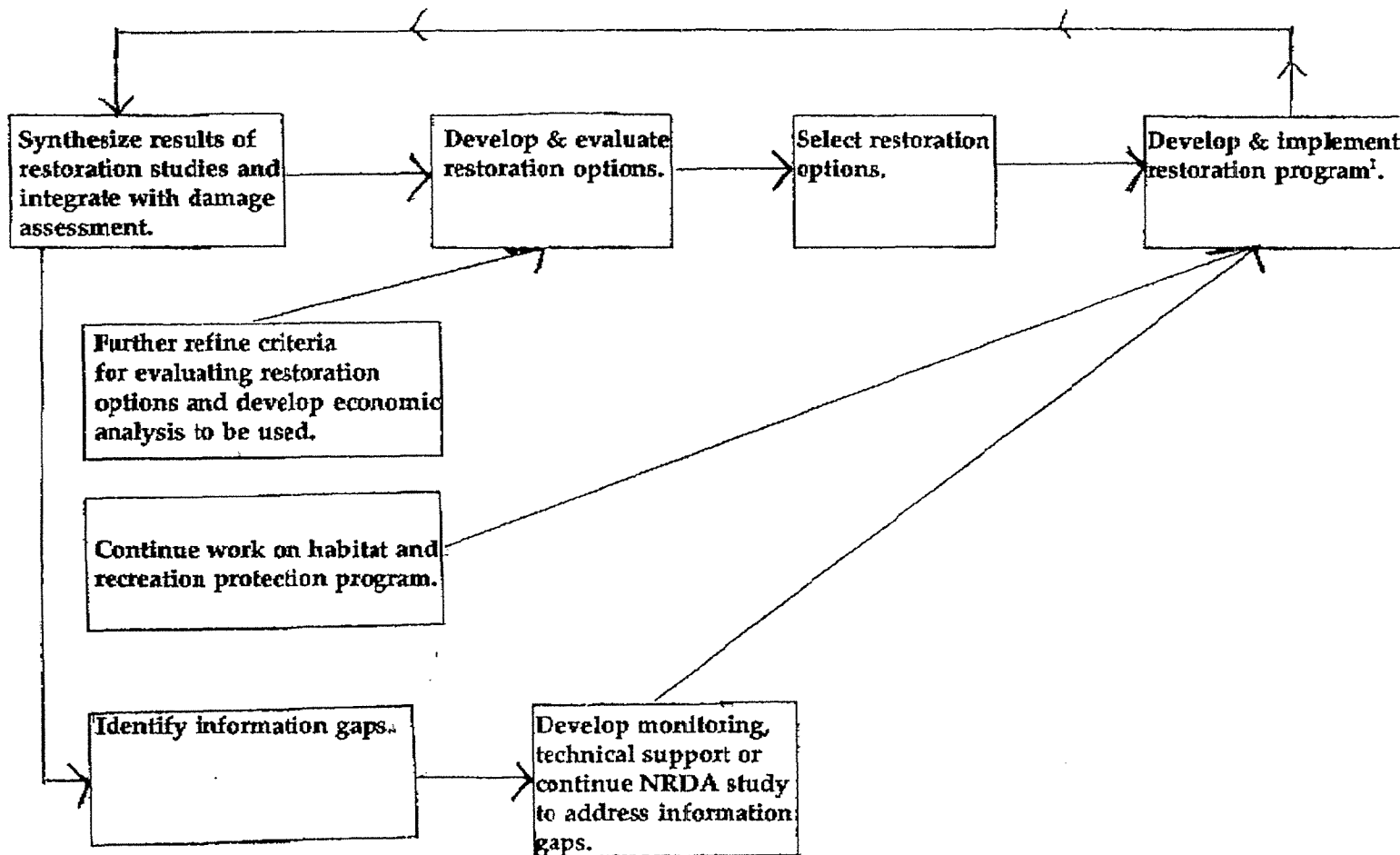
FROM

05:09

NOV-26-1991

RAW
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- o **RESTORATION SCIENCE:** Collective term used for feasibility studies, technical support, monitoring, implementation (especially the evaluation portion), and injury assessment work.



¹INCLUDES MONITORING, TECHNICAL SUPPORT, FEASIBILITY STUDIES, IMPLEMENTATION, AND CONTINUED NRDA STUDIES.

Draft
MacMullan 11/25/91

P. 03

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TO

FROM

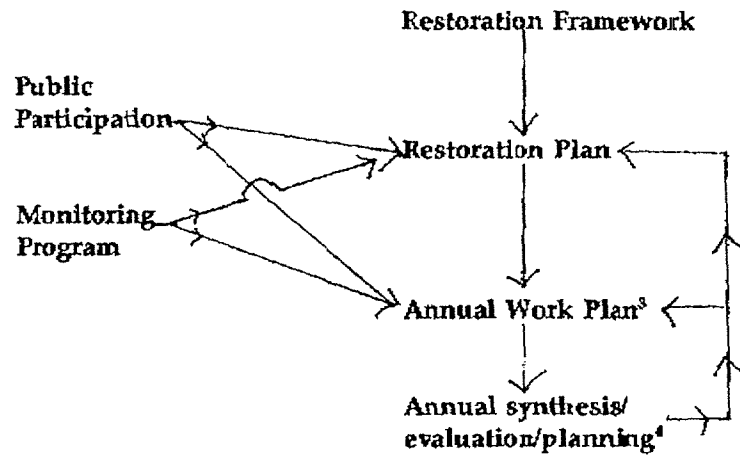
05:09

NOV-26-1991

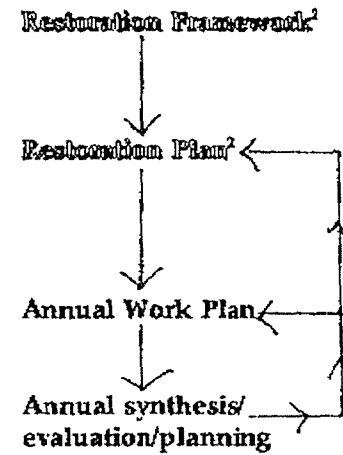
DRAFT

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RESTORATION PLANNING: ABSTRACT



RESTORATION PLANNING: PRESENT



² PIECES EXIST BUT HAVEN'T BEEN FORMALLY ASSEMBLED.

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⁴ ALSO PART OF THE ANNUAL SCIENCE PROGRAM

P.04

89072767178

TO

FROM

05:09

NOV-26-1991

RAWG
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FAX COVER SHEET

TO: Pam Bergman
FAX NUMBER: 271-4102
LOCATION: U.S. Department of the Interior, Anchorage
DATE: 31 October 1991
NUMBER OF COPIES (INCLUDING COVER SHEET): 3

CACI, INC. - COMMERCIAL
645 G. STREET
ANCHORAGE, ALASKA
(907) 278-8012
FAX NUMBER (907) 276-7178

FROM: Sten Senner

COMMENTS: At the last meeting of the Management Team, Jerome asked me to
consult with you in regard to integrating the NRDA and restoration planning
schedules for the next several months. This is with reference to production
of "son of pink book" and a possible "restoration framework" document. I have
been away recently and have not had a chance to initiate a discussion with you.
Unfortunately, I am heading home this afternoon to be with one of my children,
who
who is sick.

The following outline and schedule represents some tentative thinking by Ken Rice and me. This is just now being circulated to the Restoration Planning Work Group, but I wanted you to see a copy in advance of the Management Team meeting on Friday.

cc: Sandy Rabinowitch

10/31/81 12:18 1807 270 717
Privileged and Confidential
Attorney Work Product
Attorney-Client Communication

DRAFT
Restoration Framework

A. Progress Report and Program Outline

<u>subject</u>	<u>timing</u>	<u>assignment</u>
I. Introduction		
A. Background	Nov	RPWG/Manag
B. Legal context	Dec-Jan	Legal/RPWG
II. Restoration Planning to Date	Nov-Dec	RPWG
III. Summary of Injury	Jan-Feb	Spies/Manag
IV. Criteria for Selecting Injured Resources/Services for further consideration	Nov-Dec	Spies/RPWG/ Manag/Legal
V. Background on Resources/Services selected for further consideration		
A. Life histories	Dec	RPWG/Spies/PIs
B. Other resources/ services	Dec-Jan	Manag/agencies
VI. Criteria for selecting restoration options for detailed evaluation	Nov	RPWG/Legal
VII. Endpoints and Options		
A. Further evaluation	Jan-Feb	RPWG/Legal
B. Previously rejected	Dec-Jan	RPWG/Legal

VIII. Implementation of Settlement

A. Post settlement administration	Jan-Feb	Manag
B. Technical evaluation (science, econ, matrices, etc)	Jan-Feb	RPWG/Manag/ Spies
C. Public participation	Jan-Feb	Manag/RPWG/ Legal
D. Restoration Plan (timing, content, etc.)	Feb	RPWG/Manag

B. 1992 Work Plan

Includes science studies (damage assessment, restoration, etc.), technical services, and other projects, as in Pink Book. This is essentially son of pink book.

RPH
H

MEMORANDUM

December 4, 1989

SUBJECT: Restoration Framework Document

FROM: Trustee Council

TO: Restoration Framework Committee

As discussed in our October 23-24, 1989 meeting, we have prepared an expanded framework to implement timely restoration measures for the Exxon Valdez oil spill. This document reflects the Trustee Council's consensus and distills agency comments on previous drafts. We are arranging a meeting of the Framework Committee on January 4, 1990 at the Travel Lodge in Juneau, Alaska.

The Trustee Council believes that the restoration scoping task described in the framework document can be completed by June 1990. At the meeting, the Trustee Council will present an expected sequence of events and initiation dates to carry out the remainder of the Council's restoration responsibilities.

Enclosure

12/01/89

RESTORATION FRAMEWORK

This document provides a framework for planning and timely implementation of restoration measures; these are to be coordinated with the overall damage assessment process described in the "State/Federal Natural Resource Damage Assessment Plan and Restoration Strategy for the Exxon Valdez Oil Spill." The elements of this framework are dynamic in nature and will be modified as new information becomes available. Restoration scoping and planning will be coordinated with injury assessment studies; legal, scientific, and economic review will be integrated as appropriate. At any time during this process, the Trustees may implement restoration measures demonstrated to be ecologically sound and cost effective, subject to the availability of funding.

I. Determination and Quantification of Injured Resources

- A. Identify ecosystems and resources (including habitats, species, populations, and cultural resources) at risk in the different geographic areas affected by the spill.
- B. Identify biological, economic, physical, and social effects of injury to resources, and their relationships within ecosystems (e.g., develop matrices)
- C. Identify probable extent of injury in terms of the quality and quantity of the ecosystems and resources impacted and the services they provided:
 1. estimate pre-spill baseline conditions
 2. estimate post-spill conditions, including expected recovery rates without restoration replacement, or acquisition of equivalent resources

II. Conduct Restoration Methodology Scoping

- A. Assemble information base (literature search, assemble library, conduct symposia, public scoping meetings, etc.) including:
 1. restoration, replacement, and acquisition of equivalent resource approaches used elsewhere
 2. application to ecosystems and resources identified as at risk

- B. Develop and evaluate initial list of alternatives to restore, replace, or acquire equivalent resources for injured ecosystems and resources (including habitats, species, and populations) or services lost
 - 1. include no action recovery alternative
 - 2. consider all techniques available in biological, physical, engineering, archeological, and social sciences
 - 3. identify and evaluate opportunities for replacement of resources or acquisition of equivalent resources
 - 4. consider potential pilot projects
 - a. identify and screen possible pilot projects for usefulness in restoration planning
 - b. initiate pilot projects as appropriate
 - 5. consider short-term, long-term, direct, and indirect economic, social, physical, and biological impacts of each alternative on other resources
 - 6. evaluate cost-effectiveness of alternatives being considered, including time and cost to implement
- C. Prepare Restoration Methodology Scoping Summary

III. Develop Restoration Methodology Plan

- A. Prepare Draft Restoration Methodology Plan, including tentative recommended restoration alternatives for each injured ecosystems or resource (including habitat, species, and populations).
- B. Conduct review of Draft Restoration methodology Plan, by circulating the plan to potentially responsible parties, natural resource trustees, affected federal and state agencies, Alaska Natives Organizations, peer reviewers, and the public.
- C. Analyze comments and revise Restoration Methodology Plan as appropriate; include final recommendations on methods.

IV. Prepare Report of Assessment

- A. Compile injury determination documentation
- B. Compile injury quantification documentation

- C. Prepare overall damage determination, including restoration and lost use components
 - D. Include restoration methodology plan
 - E. Include all comments and responses to both the damage assessment plan and restoration methodology plan
- V. Present Natural Resource Damage Claim to Responsible Parties; Collect Funds Via Settlement or Litigation or Combination
- VI. Prepare Restoration Plan
- A. Prepare Draft Plan and detail elements for restoration and acquisition of equivalent resources
 - B. Conduct review of Restoration Plan, by circulating the plan to potentially responsible parties, natural resource trustees, affected federal and state agencies, Alaska Native Organizations, peer reviewers, and the public
 - C. Prepare final Restoration Plan
- VII. Implement Restoration Plan
- A. Establish implementation schedule for each plan element
 - B. Fund and manage restoration contracts
 - C. Monitor progress of restoration
 - D. Evaluate results
 - 1. review monitoring reports
 - 2. determine success, failure, or uncertainty of project results
 - 3. decide on continuation, modification, termination or projects
 - 4. repeat evaluations as needed until termination



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

FILE

RPWG
H

November 7, 1989

REPLY TO
ATTN OF: A00/A

MEMORANDUM

SUBJECT: Working Draft, Restoration Framework for The Exxon Valdez Oil Spill

FROM: Alvin L. Ewing
Assistant Regional Administrator

TO: Lajuana Wilcher
Assistant Administrator, Office of Water

Subject document is for your review and comment. It has been provided to all members of the Restoration Framework Committee (RFC) for review and comment by November 16, 1989. The Trustee Council (T.C.) will be meeting on November 17, 1989 to incorporate comments and produce a final draft "Restoration Framework" for RFC approval. If possible, it would greatly facilitate the efforts of the T.C. to have one coordinated set of comments from the RFC. Thank you!

Please call me if you have questions.

Attachment

DRAFT

RESTORATION FRAMEWORK FOR THE EXXON VALDEZ OIL SPILL

I. Restoration Methodology Plan

A. Identify injured resources

1. Identify resources (habitats and ecosystems) at risk, including geographical differences
2. Identify biological, economic, and social effects of injury to resources and relationship between resources (e. g., develop matrix)
3. Identify extent of injury (pre- and post- spill) in terms of quantity of and services provided by resource

B. Initiate restoration methodology

1. Identify potential opportunities for restoration in terms of both resource quantity as well as services provided.
 - a. assemble information base (literature search, assemble library, conferences, etc.)
 - b. identify initial list of potential restoration alternatives for resources at risk
2. Identify and conduct selected pilot projects to determine feasibility of potential restoration methods
3. Develop and evaluate alternatives for replacement, modification, or restoration of injured resources/habitats or services.
 - a. include No Action-Natural Recovery alternative
 - b. consider all restoration techniques available in biological and physical sciences, engineering, economics and other management sciences
 - c. determine consistency with state/federal law
 - d. consider short-term, long-term and indirect impacts (economic, social, biological) of each alternative on other resources
 - e. consider constraints to federal land acquisition

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- f. identify opportunities for substituting resources if other ~~restoration~~ techniques are not feasible.
 - g. describe alternatives in sufficient detail to evaluate cost-effectiveness
4. Determine cost and time necessary to implement each alternative
 - a. develop cost and the schedule for expenditures
 - b. utilize discount rates in accordance with 43 CFR 11.84 (e)
 - c. calculate diminution of use values in accordance with 43 CFR 11.84 (g)
 5. Recommend restoration alternatives for injured resources
 6. Prepare Restoration Methodology Plan
 7. Conduct internal peer and legal review of Restoration Methodology Plan
 8. Conduct review of Restoration Methodology Plan to include potentially responsible parties, natural resource trustees, other affected federal or state agencies or Indian tribes and any other interested members of the public

II. Alternative Selection

- A. Catalog, consider and take appropriate action on comments
- B. Select methods to be used for replacing, restoring or acquiring equivalent lost resources/services
- C. Prepare Report of Assessment
 1. Compile injury determination documentation
 2. Compile injury quantification documentation
 3. Prepare damage determination
 4. Include restoration methodology plan
 5. Include all comments and responses to both the damage assessment plan and restoration methodology plan

III. Present Natural Resource Damage Claim

DRAFT

IV. Develop Final Restoration Plan

- A. Develop detailed restoration/replacement elements
- B. Conduct peer review
- C. Finalize Plan

V. Implement Plans

- A. Establish implementation schedule for each plan element
- B. Fund and manage restoration contracts
- C. Monitor progress of restoration

VI. Evaluate Results

- A. Review monitoring reports
- B. Determine success, failure, or uncertainty of project results
- C. Decide on continuation, modification, termination of projects
- D. Repeat evaluations annually until termination

PRELIMINARY RESTORATION TIMELINE

- I. A.
 - 1. April, 89
 - 2. October, 89 - March, 90
 - 3. March, 89 - December, 91
- B.
 - 1. December, 89 - February, 91
 - 2. February, 90 - February, 91
 - 3. December, 89 - February, 91
 - 4. December, 89 - February, 91
 - 5. February, 91
 - 6. March, 91 - July, 91
 - 7. July, 91
 - 8. August, 91
- II. A. November, 91
- B. December, 91
- C. January, 92 - March, 92
- III.
- IV. Contingent on funding.
- V. " " "
- VI. " " "



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

PRWG
H

[Handwritten signature]

OFFICE OF
WATER

January 26, 1990

MEMORANDUM

SUBJECT: Draft Restoration Framework Plan

FROM: LaJuana S. Wilcher, EPA
Restoration Framework Committee

LaJuana S. Wilcher

TO: The Trustee Council

The Federal policy level members of the restoration framework committee have reviewed your December 1, 1989, draft framework and schedule for restoration planning. In accordance with the Natural Resource Damage Assessment (NRDA) regulations, your draft outlines the following sequence of tasks:

- 1) assessing damage to natural resources;
- 2) developing a restoration methodology plan;
- 3) presenting a claim for damages to the responsible parties, and
- 4) developing a restoration plan.

We believe that it is both appropriate and practical to develop a draft restoration plan at the same time as the restoration methodology plan (step 2, above). This concurrent development would help shorten preparation time and enable the actual restoration work to begin as soon as is technically possible.

The attached redraft suggests a revised sequence of tasks based on comments and recommendations of the Federal policy level members. We recommend June 1990 as the tentative due date for a draft restoration methodology plan and draft restoration plan. We understand, however, that the draft restoration methodology plan and the draft restoration plan may change as we receive new information.

We recommend that the Trustee Council's Restoration Planning Work Group work with the technical staff of the Restoration Framework Committee to prepare detailed schedules for completing the tasks outlined in the restoration framework. We also recommend that the Work Group identify those components of the restoration framework that will be appropriate for public review and comment, consistent with the Work Group proposal of January 25, 1990.

Unless we hear from you, we will assume that concurrent development of the draft restoration methodology plan and the draft restoration plan is acceptable. Should you have any questions or wish to discuss our recommendations further, please call Louise Wise, (202) 382-7166, of EPA's Office of Marine and Estuarine Protection.

cc: Thomas A. Campbell,
U.S. National Oceanic and Atmospheric Association

Alan Charles Raul,
U.S. Department of Agriculture

John E. Schrote,
U.S. Department of Interior

Richard B. Stewart,
U.S. Department of Justice

Douglas B. Baily,
Alaska Office of the Attorney General

Dennis D. Kelso,
Alaska Department of Environmental Conservation

Lennie Gorsuch,
Alaska Department of Natural Resources

NOTE: Brackets indicate additions, underlines indicate deletions

Restoration Framework

This document provides a framework for planning and timely implementation of restoration measures; these are to be coordinated with the overall damage assessment process described in the "State/Federal Natural Resource Damage Assessment Plan and Restoration Strategy for the Exxon Valdez Oil Spill." The elements of this framework are dynamic in nature and will be modified as new information becomes available. Restoration scoping and planning will be coordinated with injury assessment studies; legal, scientific, and economic review will be integrated as appropriate. At any time during this process, the Trustees may implement restoration measures demonstrated to be ecologically sound and cost effective, subject to the availability of funding.

I. Determination and Quantification of Injured Resources

- A. Identify [Review] ecosystems and resources (including habitats, species, populations, and cultural resources) at risk [by the spill] in the different geographic areas affected by the spill.
- B. Identify [Review] biological, economic, physical, and social effects of injury to resources, and their relationships within ecosystems (e.g., develop matrices)
- C. Identify [Review] probable extent of injury in terms of the quality and quantity of the ecosystems and resources impacted and the services they provided:
 1. estimate pre-spill baseline conditions
 2. estimate post-spill conditions, including expected recovery rates without restoration replacement, or acquisition of equivalent resources

II. Conducte Restoration Methodology Scoping [-Consensus Structure]

- A. Assemble information base [on alternative restoration methods/experiences] (literature search, assemble library, conduct symposia, public scoping meetings, etc.) including:
 1. restoration, replacement, and acquisition of equivalent resource approaches used elsewhere
 2. [experience with] application to ecosystems and resources identified as at risk

- B. Develop and evaluate initial list of alternatives to restore, replace, or acquire equivalent resources for injured ecosystems and resources (including habitats, species, and populations) or services lost
 - 1. include no action recovery alternative
 - 2. consider all techniques available in biological, physical, engineering, archeological, and social sciences
 - 3. identify and evaluate opportunities for replacement of resources or acquisition of equivalent resources
 - 4. consider potential pilot [or demonstration] projects
 - a. identify and screen possible pilot projects for usefulness in restoration planning
 - b. [plan and] initiate pilot projects as appropriate
 - 5. consider [both] long-term and short-term, direct, and indirect economic, social, physical, and biological impacts of each alternative on other resources
 - 6. evaluate cost-effectiveness of alternatives being considered, including time and cost to implement
- C. Prepare Restoration Methodology Scoping Summary

III. Develop Restoration Methodology [/Restoration] Plan[-Bilateral Structure]

- A. Prepare draft Restoration Methodology [/Restoration] Plan, including tentative recommended restoration alternatives for each injured ecosystem or resource (including habitat, species, and populations).
- B. Conduct review of draft Restoration Methodology [/Restoration] Plan by circulating the plan to potentially responsible parties, natural resource trustees, affected federal and state agencies, Alaska Natives organizations, peer reviewers, and the public
- C. Analyze comments and revise Restoration Methodology [/Restoration] Plan as appropriate; include final recommendations on [of] methods [for inclusion in the Report of the Assessment]

- IV. Prepare [Review final] Report of Assessment [As Prepared by the Trustee Council-Consensus Structure]
 - A. Compile [Compilation of] injury determination documentation
 - B. Compile [Compilation of] injury quantification documentation
 - C. Prepare overall Damage determination, including restoration and lost use components
 - D. Include restoration methodology plan
 - E. Include all comments and responses to both the damage assessment plan and the restoration methodology plan
- V. Present Natural Resource Damage Claim [Is Presented] to Responsible Parties; Collect Funds [Are Collected] Via Settlement or Litigation or Combination [-Consensus Structure]
- VI. Prepare [Revise] Restoration Plan [Based Upon Damage Settlement-Consensus Structure]
 - A. Prepare draft plan and detail elements for restoration and acquisition of equivalent resources [revised restoration plan]
 - B. Conduct [public] review of restoration plan by circulating the plan to potentially responsible parties, natural resource trustees, affected federal and state agencies, Alaska Native organizations, peer reviewers, and the public
 - C. Prepare final restoration plan
- VII. Implement Restoratio Plan [-Bilateral Structure]
 - A. Establish implementation schedule for each plan element
 - B. Fund and manage restoration contracts
 - C. Monitor progress of restoration
 - D. Evaluate results
 - 1. review monitoring reports
 - 2. determine success, failure, or uncertainty of project results
 - 3. decide on continuation, modification, termination of projects
 - 4. repeat evaluations as needed until termination



FACSIMILE REQUEST AND COVER SHEET

PLEASE PRINT IN BLACK INK ONLY

TO

AL EWING

OFFICE/PHONE

EPA

REGION/LAB

FROM

LAJUANA WILCHER

PHONE

FTS 382-5700

MAIL CODE

WH-556

OFFICE

U.S. EPA, OFFICE OF WATER

DATE

1/26/90

NUMBER OF PAGES TO INCLUDE THIS COVER SHEET

6

Please number all pages

INFORMATION FOR SENDING FACSIMILE
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EQUIPMENT	FACSIMILE NUMBER NUMBER	VERIFICATION NUMBER
RAPICOM	(202) 382-7883 (auto)	(202) 382-2078
PANAFAX	(202) 382-7884 (auto)	(202) 382-2078
PANAFAX	(202) 382-7886 (auto)	(202) 382-2078
MANUAL	(202) 382-2078	

The EPA Communications Center has the capability for sending and receiving facsimile messages to CCITT Group I, II, and III Equipment.

RWG
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RESTORATION OF PRINCE WILLIAM SOUND AND THE GULF OF ALASKA:

A Report of the Restoration Framework Committee

This report describes the agreements reached by members of the Restoration Framework Committee ("the Committee"), who met in Juneau, Alaska on October 23 and 24, 1989. The Committee was convened to attempt to develop a process and a framework for developing a long-term restoration plan for Prince William Sound and the Gulf of Alaska that will guide, structure, and make accountable the subsequent development of a full Restoration Plan.

The Committee consists of a designated representative of each of the three Federal Trustee agencies, the Trustee from the State of Alaska, the Trustee Council members, and a representative of the U.S. Environmental Protection Agency.

The Committee has agreed by consensus that the "Restoration Framework" shown on the next page describes the basic steps that need to be taken toward restoration.

Framework
Committee

RESTORATION FRAMEWORK

1. IDENTIFY RESOURCES (HABITATS AND ECOSYSTEMS) AT RISK, INCLUDING GEOGRAPHICAL DIFFERENCES
2. BACKGROUND LITERATURE SEARCH AND BRAINSTORMING
 - a. Restoration techniques used elsewhere
 - b. Applicability to species or groups identified under (1)
3. IDENTIFICATION OF INJURED RESOURCE COMPONENTS: DAMAGE ASSESSMENT PROJECT RESULTS AND GEOMAPPING
 - a. What resources are damaged
 - b. To what extent are resources damaged (by location and pre-spill conditions including causal nexus)
 - c. What are the biological, economic and social effects of the damage to the resource
 - d. Evaluation of effects of no action
 - e. Evaluation of restoration techniques (includes cost effectiveness)
 - f. Relationship between resources (timing)
 - g. Opportunities for substituting resources if other restoration techniques are not feasible
 - h. Need for monitoring
4. CHOOSE SPECIFIC TECHNIQUES FOR SPECIFIC SITES (SPECIES) OR APPROPRIATE ALTERNATIVES SUCH AS EQUIVALENT RESOURCES (MIGHT BE PILOT PROJECTS)
5. IDENTIFICATION AND EVALUATION OF PROJECTS BASED ON EXTENT OF DAMAGE, FEASIBILITY, PROJECTED COST, AND ENVIRONMENTAL AND SOCIAL BENEFIT
6. DEVELOPMENT OF DETAILED PROJECT PLANS
7. IMPLEMENTATION

Don - may do this
before #3a-h

The Committee has agreed by consensus to assign the following tasks for the Trustee Council, the Restoration Framework Committee, and the Legal Committee in the immediate future:

Trustee Council

1. Develop more fully the various components of the "Restoration Framework" and recommend time frames for completion.
2. While the Restoration Framework outline is being developed more fully by the Trustee Council, the Trustee Council members and EPA will consult with experts in their respective agencies.
3. Start identifying specific resources or complexes of resources for possible bi-lateral pairing of Federal-State Trustee responsibilities.

Legal Committee

- Develop more fully the bi-lateral Trustee agreement component outlined in the "Concepts for Resolution of Legal Issues," including review of initial allocation of Trust resources.

Restoration Framework Committee

- Review drafts of the Restoration Framework, make appropriate revisions, and reach consensus. The continued existence of this committee shall be determined at the pleasure of the Trustees.

PRP and Public Participation

The Committee has agreed by consensus that within 30 days after the close of the damage assessment public comment period, the Trustee Council will notify groups/individuals who have provided written comments that they can have the opportunity to provide oral comments elaborating on their written comments. This oral comment, however, shall be technical in nature and for clarification only.

At the same time, the public will be notified that there will be opportunities in the State of Alaska for public participation in the restoration plan process and future damage assessment plans at an appropriate time.

Restoration Framework Committee Members

Michael Barton, DOA
 Thomas Campbell, NOAA
 Don Collinworth, ADF&G
 Lennie Gorsuch, ADNR
 Dennis Kelso, ADEC
 Steven Pennoyer, NOAA
 Alan Raul, DOA
 John Schrote, DOI
 Walter Stieglitz, DOI
 LaJuana Wilcher, EPA

KRWG
H

THIS IS A CORRECTED VERSION INCORPORATING THE COMMENTS INTO ONE TEXT.

THE FIRST VERSION HAD SOME OMISSIONS IN SECTION I.

2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

January 26, 1990

MEMORANDUM

SUBJECT: Draft Restoration Framework Plan

FROM: LaJuana S. Wilcher, EPA
Restoration Framework Committee

LaJuana S. Wilcher

TO: The Trustee Council

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The attached redraft suggests a revised sequence of tasks based on comments and recommendations of the Federal policy level members. We recommend June 1990 as the tentative due date for a draft restoration methodology plan and draft restoration plan. We understand, however, that the draft restoration methodology plan and the draft restoration plan may change as we receive new information.

We recommend that the Trustee Council's Restoration Planning Work Group work with the technical staff of the Restoration Framework Committee to prepare detailed schedules for completing the tasks outlined in the restoration framework. We also recommend that the Work Group identify those components of the restoration framework that will be appropriate for public review and comment, consistent with the Work Group proposal of January 25, 1990.

Unless we hear from you, we will assume that concurrent development of the draft restoration methodology plan and the draft restoration plan is acceptable. Should you have any questions or wish to discuss our recommendations further, please call Louise Wise, (202) 382-7166, of EPA's Office of Marine and Estuarine Protection.

cc: Thomas A. Campbell,
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Alan Charles Raul,
U.S. Department of Agriculture

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Richard B. Stewart,
U.S. Department of Justice

Douglas B. Baily,
Alaska Office of the Attorney General

Dennis D. Kelso,
Alaska Department of Environmental Conservation

Lennie Gorsuch,
Alaska Department of Natural Resources

DRAFT

12/01/89
(Revised Draft 1/24/90)

Restoration Framework

This document provides a framework for planning and timely implementation of restoration measures; these are to be coordinated with the overall damage assessment process described in the "State/Federal Natural Resource Damage Assessment Plan and Restoration Strategy for the Exxon Valdez Oil Spill." The elements of this framework are dynamic and will be modified as new information becomes available. Restoration scoping and planning will be coordinated with injury assessment studies; legal, scientific, and economic review will be integrated as appropriate. As any time during this process, the Trustees may implement restoration measures demonstrated to be ecologically sound and cost effective, subject to the availability of funding.

- I. Review Determination and Quantification of Injured Resources as made available from Results of the Damage Assessment Process.- Bilateral Structure
 - A. Review ecosystems and resources (including habitats, species, populations, and cultural resources) at risk by the spill, in the different geographic areas.
 - B. Review biological, economic, physical, and social effects of injury to resources, and their relationships within ecosystems (e.g., develop matrices)
 - C. Review probable extent of injury in terms of the quality and quantity of the ecosystems and resources impacted and their services they provided:
 1. pre-spill baseline conditions
 2. post-spill conditions, including expected recovery rates without restoration replacement, or acquisition of equivalent resources.
- II. Conduct Restoration Methodology Scoping.- Consensus Structure
 - A. Assemble information base on alternative restoration methods/experiences (literature search, assemble library, conduct symposia, public scoping meetings, etc.) including:
 1. restoration, replacement, and acquisition of equivalent resource approaches used elsewhere
 2. experience with application to ecosystems and resources identified as at risk

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- B. Develop and evaluate initial list of alternatives to restore, replace, or acquire equivalent resource for injured ecosystems and resources (including habitats, species, and populations) or services lost.
1. include no action recovery alternative
 2. consider all techniques available in biological, physical, engineering, archeological, and social sciences.
 3. identify and evaluate opportunities for replacement of resources or acquisition of equivalent resources.
 4. consider potential pilot or demonstration projects
 - a. identify and screen possible projects for usefulness in restoration planning
 - b. plan and initiate projects as appropriate
 5. consider both long-term and short-term, direct, and indirect economic, social, physical, and biological impacts of each alternative on other resources
 6. evaluate cost-effectiveness of alternatives being considered, including time and cost to implement
- C. Prepare Restoration Methodology Scoping Summary

III Develop Restoration Methodology/Restoration Plan.- Bilateral Structure

- A. Prepare Draft Restoration Methodology/Restoration Plan, including tentative recommended restoration alternatives for each injured ecosystem or resource (including habitat, species, and populations)
- B. Conduct review of Draft Restoration Methodology/Restoration Plan, by circulating the plan to potentially responsible parties, natural resource trustees, affected federal and state agencies, Alaska Natives Organizations, peer reviewers, and the public.
- C. Analyze comments and revise Restoration Methodology /Restoration Plan as appropriate;

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include final recommendation of methods for inclusion in the Report of Assessment.

IV. Review Final Report of Assessment as prepared by the Trustee Council.- Consensus Structure

- A. Compilation of injury determination documentation
- B. Compilation of injury quantification documentation
- C. Damage determination, including restoration and lost use components

V. Natural Resource Damage Claim is presented to Responsible Parties; Funds are collected Via Settlement or Litigation or Combination.- Consensus Structure

VI. Revise Restoration Plan Based Upon Damage Settlement.- Consensus Structure

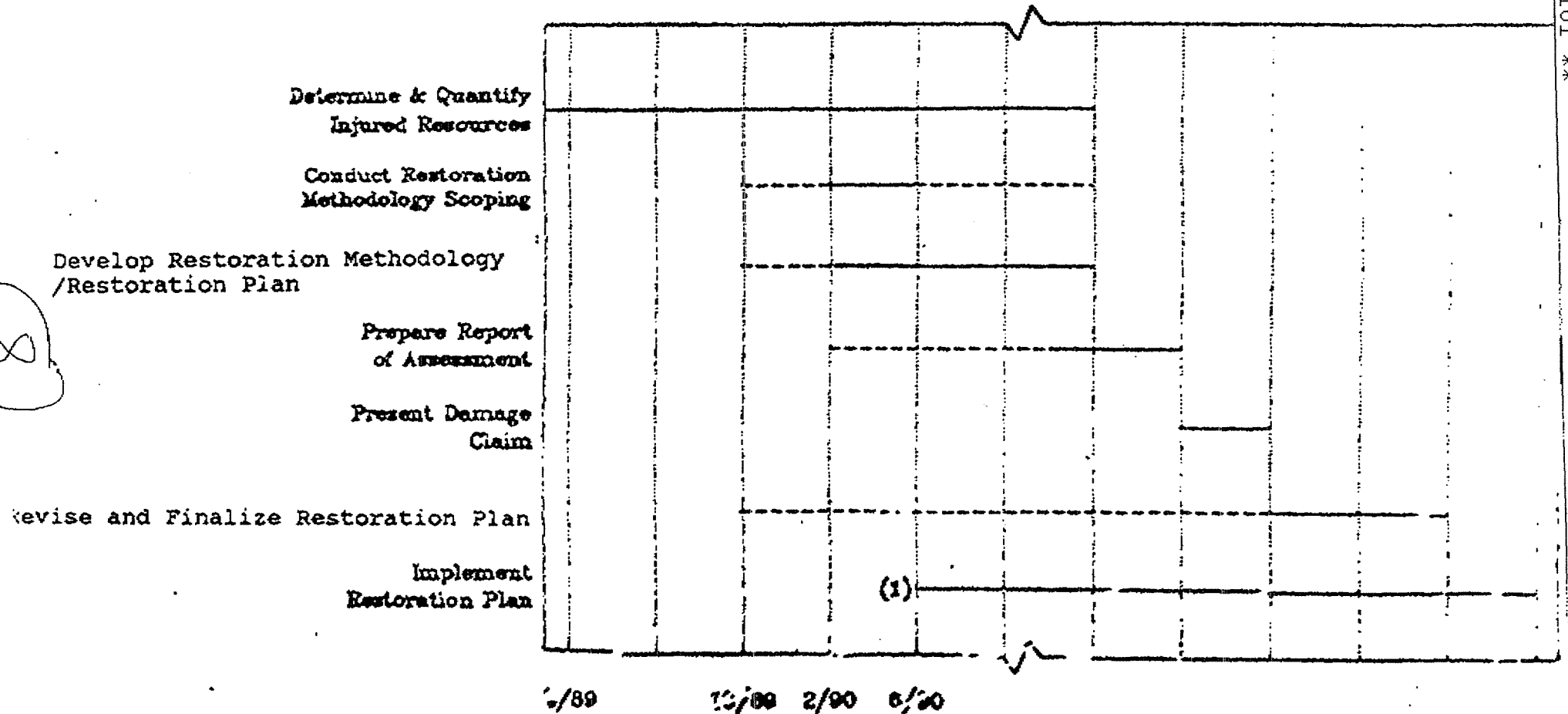
- A. Prepare revised Restoration Plan
- B. Conduct public review
- C. Prepare final Restoration Plan

VII. Implement Restoration Plan.- Bilateral Structure

- A. Establish implementation schedule for each plan element
- B. Fund and manage restoration projects
- C. Monitor progress of restoration
- D. Evaluate results
 1. review monitoring reports
 2. determine success, failure, or uncertainty of project results
 3. decide on continuation, modification, termination of projects
 4. repeat evaluations as needed until termination

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Preliminary Schedule for Implementing Restoration Planning Framework



(1) Restoration measures may be implemented anytime they are determined to be ecologically sound and cost effective, subject to availability of funding.