

RESTORATION PLANNING WORK GROUP  
JUNE 24, 1993  
9:00 a.m.

**Attendees**

- Carol Gorbics
- Bob Loeffler
- John Strand
- Karen Klinge
- Ray Thompson
- Sandy Rabinowitch
- Chris Swenson
- Veronica Gilbert

**The following items were distributed:**

- Areas of Agreement and Disagreement
- Memo to RPWG from Veronica
- Agenda
- Outline of Final Restoration Plan
- Schedule for Receiving Comments on Alternatives Through Toll-Free Calls
- Summary of Alternatives: Analysis of Public Comments
- Models
- June 29th Meeting with RT

**OPTIONS EVALUATION**

Veronica provided a memo regarding options evaluations areas of agreement and disagreement. RPWG agreed there would always have to be project-level evaluation, but would new options evaluation be required? At issue is whether options are included in the Restoration Plan to serve as guidance, or whether options are better included in annual work plans. Karen stated RPWG needs to make a recommendation to the TC and send a prototype to them. John stated the TC thinks the options restrict them from accepting new projects. They want flexibility. John sees that not including options in the Restoration Plan is a danger because you need to guard against lame-brain and special interest projects. Veronica stated we are establishing policies and procedures. Ray asked if we are not establishing a strategic process, what are we doing. The TC stated they don't want a continuing planning process. Bob stated we would establish the universe of options. Ray stated we are establishing the program in which restoration is going to occur over the next few years. That is as specific as we can get and still allow the TC the latitude to not be confined. Karen asked if the guidance includes options or do you leave that for the annual work plan step. Carol stated we are providing them with the universe, and the TC can add to that. Bob stated there is no disagreement with respect to evaluation techniques. The disagreement is in the word "adoption". To what extent these options have

meaning or value is the area of disagreement. The question is once something has been evaluated, what importance does it take. Sandy stated we want to benefit from all the work that has been done and suggested writing into this plan how you benefit. RPWG's task is to propose how to do that. Carol stated since RPWG is relatively unmovable on this, it should be sent to the RT for resolution on treatment of options.

Veronica asked for suggestions on how to change the language for the areas of disagreement (reference Veronica, Karen, and Chris' June 23rd memo). Carol suggested the following language: In addition new options/projects may be added throughout the life of the plan after undergoing similar review as the other options. Karen stated the differences on importance are captured in alternative approaches 1 and 2. Three deals with the presentation. Bob stated there are three kinds of evaluation: scientific, legal and best interest. Best interest is not whether the public likes it but in the opinion of those responsible, if doing something would be in the best interest of the public. Veronica stated the options as they exist today have not gone through a complete legal and agency review. RPWG agreed the attorneys have failed the process. Sandy stated RPWG needs to make the point to the TC that this has to change. Ray stated we are placing too many caveats for other people's thoughts on this process. RPWG has to make a presentation on how a good plan should work. Veronica stated RPWG has internal disagreement on how this should work. Ray stated RPWG has to deal with what makes a good solid plan. RPWG disagrees about how the TC should treat certain options. Chris stated we need to start working from what RPWG agrees on. The information within the options is valid; the question is how that information should be preserved. RPWG has agreed to preserve the information for future use. Karen asked if it would help to go on to the next topic. Chris stated a way to make progress is to think in terms of what an intelligent plan for restoration is from basic objectives to projects. Carol stated we are doing two very different tasks and cannot jump ahead until one is resolved. We need to know what our endpoint is. Chris stated the endpoint is restoration of injuries. Karen stated we need to decide what is a valid Restoration Plan and not based on politics and second guessing. Carol stated you ask the TC how much specificity they want. Karen stated that is why you need to give them examples.

Carol suggested the following:

1. The RP will have only policies and evaluation procedures (including public interest) that guide the development of the work plan.
2. The RP will have the above and a description of some activities (options) that have been evaluated and determined to be consistent with the policies and evaluation (including public interest) procedures.

3. The RP has #1 and will specifically describe the activities (options) that are part of the RP. The RP will have provisions for adding additional activities (options) through the life of the plan.

Veronica stated this does not capture her position. Bob stated the TC will not delegate the best interest decisions. John asked what more do we have to do. Bob stated we have concentrated on the scientific process, but the effects on user groups and regional economies have not been explored. The TC has made it clear this is important before they will want to fund something. John stated this is an environmental impact issue. Ray stated the EIS will evaluate the plan and if the issues are in the plan, they will be evaluated.

Bob suggested the following:

4. The plan will have #1 plus a description of activities that have been scientifically evaluated, possibly but not legally evaluated, and are consistent with evaluation procedures.

Veronica suggested the following additional language:

In the agreement area add: RPWG agrees that existing options have undergone a technical and scientific review but not legal review and need additional public interest review.

Sandy diagramed the following issues for inclusion:

Restoration Plan

Work Plan

|                |                       |
|----------------|-----------------------|
| X              | policies              |
| X              | RP objective          |
| X              | procedure to evaluate |
| X              | -technical            |
| X              | -scientific           |
| X              | -public interest      |
| X              | -legal                |
| X              | options projects      |
| (not included) | activities (options)  |

The above exercise was put on hold.

John stated he would like to discuss defining the process for how to get from here to there. Carol stated we have to decide what "there" is (endpoint).

Veronica suggested that everyone give a statement of what they think, allowing time for friendly questions. The main area of disagreement is what to do with the options. John stated we have to resolve this issue. It may have to be elevated to the RT. The following statements were made:

**Veronica:** The RP would not acknowledge any restoration option is consistent with the plan; however, annual work plans would acknowledge that those options which have successfully passed a complete evaluation process (technical, scientific, public interest, and legal) are consistent with the plan and should be considered for funding.

**Question:** Would there be a separate evaluation for projects in the work plan? Veronica stated you can add: in addition specific projects would have to undergo the same evaluation.

**Carol:** The RP will have policies, restoration objectives and evaluation procedures for options and projects. It will list the options that have successfully undergone the evaluation procedures which will form the basis of the annual work plan. Additional options (on projects) can be added after they have successfully undergone the evaluation procedures. Annual work plans will include projects which have successfully undergone the evaluation procedures.

**Question:** When a new project comes in, would you have separate evaluation procedures? Carol stated it would be the same. The option evaluation and project evaluation procedures would have the same elements. The RP would provide a lot more detail and specificity. The DOI view would be to break out projects with schedules and funding.

**Bob:** DEC's view is that the RP should have policies, detailed restoration objectives and procedures (technical, scientific, public interest and legal). It should not have options or projects, except as examples in the plan. We would be able to accomplish the technical and scientific review. We preserve the information we have done and go for publication. In the work plan it is categories of projects. The past will quickly become out of date, and you won't have to continually evaluate them.

**Question:** Is that essentially #2? Bob stated we would just include technical and scientific for the examples. The procedures would include technical, scientific, public interest and legal.

**John:** The only guidance he has received from his TC member is that he wants greater specificity in the description of the options. We will get to that by more work on detailed endpoints and restoration of particular resources and services. His TC member is on board with the approach to evaluations already laid out. The RP will have policies and evaluation procedures, but it will also provide the restoration option descriptions that we have articulated to date and provide a process for amending or adding. John's view is pretty close to Carol's. The guidance of the RP and procedures will provide for development of annual work plans. There will be procedures for evaluating specific projects which are submitted in relation to the guidance of the Restoration Plan. There may be

some additional evaluation steps for projects.

**Question:** Does your TC member want specificity about projects or endpoints? John stated he (Steve Pennoyer) wants as much specificity as possible at the options and suboptions level. Ideally, he would like projects listed in the Restoration Plan, but he also knows that this is not possible for most injured resources and services.

**Karen:** She agrees with Carol in the context of policies and restoration objectives. They all would be in the RP. The RP must contain options. The suboptions get pulled out. The draft RP should contain the widest possible suite of those options. The EIS would be doing some of the other consequences of the actions. The final Restoration Plan will contain a smaller set of options that meet the whole list of criteria. It says that the TC agrees that it meets the criteria and does not create negative effects. It has nothing to do with funding. When new ideas come in, you evaluate them on an option level. You look at it as a brainstorming thing. If it is project by itself, you do a single evaluation. The option evaluation does not add a whole lot of time and buys the flexibility that you don't have to redo those steps.

**Question:** Would new options be added to the plan? Karen stated if it deals outside the spill area, then we don't need to go any further. If it meets the policies, it should be included in the plan. If it is a project under a rejected option, you can look at it again. Our evaluation is not the last word.

**Question:** Couldn't the evaluation process take longer than a couple of hours? Karen stated one or two people could determine if it passes the red-face test. You could brainstorm to determine if it is an option or a project. You evaluate it from the standpoint of a peer reviewer or principal investigator and talk about the potential to improve recovery. You don't need to go through the same level of evaluation as before.

**Sandy:** He agrees with Carol and Karen 99%. The other 1% is he suggested the work plan annually review the options chapter of the RP and as needed, update that chapter. The work plan then could be organized along two tracks: 1) a review process that is consistent with the current version and 2) options that are inconsistent with the plan as it currently was; projects that were previously rejected; or projects that don't have any options.

**Question:** Are you describing more of the give and take? Sandy stated the Restoration Plan doesn't lock you in, and you can annually review that chapter. Carol and Karen accepted this as a friendly amendment.

**Chris:** He agrees that, at a minimum, the Restoration Plan should include policies, restoration objectives, and guidelines for

prioritizing restoration actions. What we are calling options now are going into strategic plans for each resource and service. The question is where do strategic plans go. At this point from a political standpoint, it looks like it would go easier in the work plan. The conditions are: 1) if that's the only avenue left to get specificity and 2) that RPWG would be the one to prepare it. What exists as options would go into a recovery plan.

**Question:** Why does RPWG have to do it? Chris stated the Work Plan Group is not capable of doing it.

**Question:** Would you include options only after legal review? Chris stated yes and he sees the review of the draft plan as doing that.

**Ray:** He agreed with Carol. The USDA's direction is that the plan is necessarily a programmatic document. The portions of the plan have to give guidance and direction. The individual projects will be decided in an annual work plan. The options will provide the direction. It has to be amendable, because you don't want to be trapped into something.

Based on what Chris had talked about, Veronica prepared a list of areas of agreement and disagreement. Copies were distributed. Carol stated this is the best iteration of what has been discussed so far. Bob stated it doesn't make any sense to evaluate similar projects separately. Also, you should keep a record of what you do and evaluate it annually.

Veronica stated there seems to be some agreement that an EIS will be done on the RP, but could an EIS be done on the recovery plan? It seems there was an urge to have project-type specificity to come up with a more defensible EIS. Sandy stated the downside of doing two is that an EIS takes a long time and costs a lot of money. John stated you do an EIS on a programmatic Restoration Plan. You have to do NEPA review at the project level too when you specify where restoration will be done, etc. You could get by with a categorical exclusion or an EA. Veronica stated what we are discussing are the pros and cons of each position.

Veronica stated if this comes close to articulating the areas of agreement or disagreement, the next stage is to take the areas of agreement and mark out the advantages and disadvantages. A subgroup could prepare the pros and cons for each group. Bob stated the pros and cons should be very short. Chris will prepare a list of pros and cons. Comments are due by Wednesday, June 30. The pros and cons should be completed by July 9th for presentation to the RT.

#### **RECOVERY PLAN MODELS**

Carol, Chris and Karen worked on recovery models. Karen stated the

models were done independently.

Carol stated she went back to the Endangered Species Act and took their guidance; however, it has some baggage attached to it.

Karen stated her model is not complete and will be less detailed than Carol's. It gives a general outline that describes what is in each section. It merges the description of injury and restoration so that there is a logical link. The other key thing is restoration endpoints.

Karen stated she was uncomfortable with the level of certainty associated with the tasks. Carol stated the Endangered Species Act model includes the uncertainty. Karen stated it might be useful to include those things which have been evaluated and rejected. Carol stated an ecosystem-wide approach could not be included.

For Chris' model, the outline of the Restoration Plan is the first part. The bottom half is the types of things which would go into a strategic plan. He then flushed out the outline. Enough background information was added. The restoration endpoints are non-quantitative. The implications of endpoints were included. Priorities are organized in terms of type of restoration activity. It was also broken down by areas. Karen stated that you might do it in terms of how to achieve your endpoint. Carol stated she talked about strategies for restoration.

Veronica stated looking through the three versions, much of what was described as endpoints strikes her as restoration objectives. The plan itself will include restoration objectives. It will be at least as specific as what is in the models. Karen stated she essentially agrees. By stating these objectives, it gives a place to say we have done what we set out to do. Veronica stated there should even be an objective for enhancement. Karen stated sometimes with an objective, it may not provide you with an endpoint. Veronica stated distilling those objectives is probably the next step in the process before getting the TC to buy into the recovery plan.

Karen stated she has explored trying to come up with endpoints for five of the species. Endpoints and objectives can be interchanged. John stated Karen's endpoints are based on scientific, achievable objectives. Sandy stated at some point the money will run out, and what we are really trying to do is stop spending money on something before it runs out.

Veronica asked what is a reasonable way to proceed from here. Bob stated we need to have a system so that it is comparable across species. A subgroup could come up with a couple of prototype species objectives. Karen stated they are essentially here. Karen and Chris will spend some time figuring out which points work. Veronica suggested an objectives task force which works with the

recovery task force. Sandy stated all the settlement documents say the money is for restoration to pre-spill. Karen stated you can't always use pre-spill numbers as your objectives. Sandy stated it is a target. Karen stated we need to work on this as a recovery plan. A subgroup could develop endpoints and objectives and bring it back to the group to review. Veronica stated on July 1st Chris will give RPWG the pros and cons. She is willing to serve on the objective subgroup which will work closely with the recovery subgroup. Karen stated you must have the objectives. Veronica, Bob, and John will work on the objectives. John will do pink salmon and Veronica will do commercial fishing. Karen stated she would like to be involved. The aim is to get a prototype by July 1st.

#### **UPDATE ON PUBLICATION OF SUPPLEMENT PACKAGE**

Comments are due to Bob so that text can be finalized. Veronica stated the supplement has been parceled out to primary authors. Veronica will review the table of contents. Ray will do a final proof of the document. The tables should be reviewed carefully because parts were re-keyed. The comments will be provided to Debra today or tomorrow.

#### **TELEPHONE RESPONSE**

Veronica developed and distributed a process for handling toll-free calls. Dave has made arrangements with OSPIC regarding the process. A proposed schedule for manning the calls was also prepared. Karen suggested having a form to record the comments rather than using a brochure. Bob stated the comments could be done on word perfect in paragraph form which could be rolled into r-base. John was added to the schedule in Ray's place (8/2-8/6). Veronica stated this effort should be viewed as team work. It is each RPWG member's responsibility to arrange for coverage if they are unavailable.

#### **WORK TASK SCHEDULE**

Bob stated a short-term schedule is probably best for now. Karen stated she would like to set up a meeting to discuss the prototypes on July 7th prior to forwarding it to the RT. Veronica stated by the middle of August, we should have a report on the public comments. Sometime in August RPWG will have to analyze the comments. The next stage is making recommendations. Karen stated she would be interested in getting some peer review help on how to merge the comments. Jack Cruz and Ken Reckhow were suggested. It might be appropriate to develop the right path first. Veronica stated an area where an objective third party could be useful is the objectives. Her sense is it is unrealistic to expect the comments report to be completed by August 6. It might be better to promise the public comment and the major policy issues reports by the end of September.



## MONITORING PLANNING UPDATE

John stated Parametrix has provided recommendations for how to conduct our monitoring planning. Karen stated that the RT needs to talk about the management model. John stated that this issue is addressed in section 7. The idea is to give the RT a briefing. They need a playback of what the consultant is saying. John stated he would like to run through the consultant's recommendations and then open it up to questions. There might be some discussion of the recommendations (points of clarification). John would try to set the ground rules of the briefing during his introduction. We need to address what are our needs. Karen stated the infrastructure and management model needs to be added in. John stated he meant to address what the model is going to be for moving ahead with Phase 2. Karen stated she feels this is a good approach. It could be focused in the context of an RFP. Chris asked how far are we trying to get with this presentation on the 29th. John stated he would like to have a green light to initiate Phase 2. We would then re-write the RFP. John stated after RPWG reaches a consensus on how to proceed, he will sit down with Dave to discuss bringing the RT up to date. Karen stated we need to get the RT to say which parts they buy off on. John stated it is a good idea to ask them their general feeling about what the consultant is saying. They were given a copy of the draft conceptual monitoring plan. Karen stated for the RFP, the RT needs to say whether they buy off on sections of the plan. The issue of a model for how to manage this, might mitigate what we do in Phase 2. John will restructure this presentation to include questions to get the RT to buy off on some of the recommended concepts. Chris stated another point to add to the list of things the RT needs to make a decision on is the relationship of monitoring to the annual work plans. Another is general discussion endpoints which are especially difficult and require policy decisions. Karen recommended having a full morning or afternoon for the presentation. Sandy suggested rephrasing question V-A: What should the purpose and the scope of monitoring be? Karen suggested adding the following questions: How does this product get us to where we want to go, and what is the minimum we can go ahead with now?

Veronica provided some comments regarding monitoring to John. John will prepare some view graphs for the presentation. Karen suggested using an overhead of the components of the RFP.

John stated the contract was extended until the 30th of June at no extra cost.

**To: RPWG**

**From: Karen**

Here is a very rough draft of a possible format for individual resource chapters (recovery plans?) in the restoration plan. I have written a general outline and have included an incomplete example using murre. I am hoping that there is enough here to let you understand my intent so we can discuss this approach along with Carol's and Chris'. I will try and have a more completed version available on Thursday.

Klinge DRAFT 22 June 1993

## GENERAL OUTLINE

### I. Description

This description would be written to emphasize the important characteristics about a resource that are necessary to understand the injury, the potential restoration opportunities and the other complicating factors that may influence recovery.

### II. Injury

Similar to what we have already done for the appendices except that it would be written to parallel the description discussion so that the two sections flow easily.

### III. Current Recovery Status

Our best available information on what is happening "now".

### IV. Restoration endpoints

Restoration endpoints with one or two descriptive sentences. I think there should be more than one of these that include long- and short-term endpoints and possibly alternate endpoints. There may also need to be different long/short-term endpoints for regions of the spill area that are missing background data.

### V. Restoration opportunities

This is where we would bring in the general restoration options, hab. acquisition possibilities and monitoring/research. It should be written in a manner to show how the opportunities help attain the different restoration endpoints, and could suggest monitoring topics to answer some of the unknowns regarding the resource. It should also contain information on the anticipated effectiveness and effects of the options if that is still relevant.

### VI. Restoration priorities

This may be taken care of in section V., but it could also be a discussion on its own. I don't know about this yet.

### VII. Recommendations

Here is another unknown. Following this pattern, we still leave some important decisions unanswered. Primarily, do we strive for all of the endpoints or just some? Some of that will be answered when we have the main policy decisions made, but there will probably be further choices. RPWG could make a recommendation on which ones we should follow.

## **Murres (INCOMPLETE DRAFT - BUT HOPEFULLY ENOUGH FOR DISCUSSION!)**

**Description:** Common and thick-billed murres are abundant seabirds in Alaska, with an estimated state-wide population of 12 million birds. In the Gulf of Alaska, common murres are approximately 10 times more abundant than thick-billed murres. The two species have very similar, but not identical, life history characteristics. This description focuses on common murres because of their abundance within the oil-spill area.

There are four important characteristics of the common murres' breeding and habitat requirements that are necessary to understand the injury and potential recovery of this species. Age, Density, Synchrony, and food.

1) Nesting density. Murres nest in breeding colonies that are usually found on steep cliffs. The stratified rock layers provide nesting ledges where murre pairs lay a single egg on the bare rock. Murres are highly social birds with maximum nesting densities of 28 to 34 birds per square meter documented (Tuck 1960) on ledges at some colonies. Scientists have documented that ledges with the highest nesting densities have the lowest predation rates within the colonies. Neighboring nesting pairs help guard the eggs and chicks from predators such as gulls, ravens and eagles.

2) Nesting synchrony. Murres also synchronize their breeding to reduce predation. Generally each pair lays its one egg within days of the neighboring pairs on the ledge, and usually all eggs within a colony will be laid within 7-10 days (VERIFY THIS). This provides so much available prey to the predators that they are unable to eat all of the eggs. This same synchrony means that the chicks will leave the ledges at the same time so that few chicks are left without neighbors to help defend against predators.

3) Age at first breeding. Murres are long-lived birds. Adults have an average life expectancy of 16 years, and some banded birds have lived to be 32 years old. Like many long-lived species, murres don't usually begin breeding until they are 4 or 5 years old. One of the many characteristics about this species that is still unknown is where the subadults are until they return to the breeding colonies. Scientists do know that the subadults tend to return to the breeding colonies after the adults are on the ledges. More and more of the subadults 'visit' the breeding colonies as they approach sexual maturity. This is an important point because the oil spill occurred in March when the breeding adults should have been congregating at the colonies. It is not known how many of the birds that were killed by the oil spill were subadults.

4) Food availability: [note: most of this section is from memory and it will need to be reworked, but I wanted the concept to be presented in this draft.] One of the complicating factors in addressing the murre colonies injured by the oil spill are the other environmental stresses that may be affecting the populations. Many seabird species have been declining for unknown reasons. During the winter of 1992-93 hundreds of murres died from unknown causes. They were found on the beaches, and

even the streets of Seward, Homer and Sitka. One hypothesis is that the forage fish populations that are the primary foods for seabirds are declining. The causes of this decline are unknown, but could be related to water temperature changes caused by the recent El Nino events, or by commercial fishing pressure on key fish species. Historically, seabird populations are highly variable so it is difficult to understand the causes of the current population declines.

**Injury:** This is the discussion in the brochure appendices, however I think it would be useful to include a discussion on the limitations of the NRDA study and talk a little about attendance patterns. The oil spill caused population declines and sublethal injuries at murre colonies in the Gulf of Alaska. Including both common murre and thick-billed murre, there are about 12 million murre in Alaska, and 1.4 million in the Gulf of Alaska region. About 1.2 million of the total population in the Gulf of Alaska nest on the Semidi Islands, which were not directly impacted by the oil. Murre are particularly vulnerable to floating oil and have been killed in large numbers by oil spills elsewhere in the world.

At the major breeding colonies studied (Chiswell Islands, Barren Islands, Puale Bay, and the Triplets), an estimated 120,000 - 134,000 adult breeders were killed by contact with oil. The oil arrived in early April just as birds were beginning to congregate at the colonies in anticipation of breeding. If the rate of mortality is adjusted for birds not counted on the colonies, but feeding at sea, it is estimated that 170,000 to 190,000 breeding birds were killed. In general, it is estimated that between 35% and 70% of the breeding adults at the above colonies were killed by the spill. It is not known where pre-breeding juveniles were at the time of the spill, or if many were killed.

The timing of reproduction also changed at oil-impacted colonies following the spill. At the Barren Islands and at Puale Bay, egg laying was about a month late in 1989, 1990, and 1991. In 1992 there were some indications that breeding was returning to normal at places in the Barren Islands colony. At the Chiswell Islands, laying was not observed in 1989, and laying was late in 1990. Due also to fewer birds occupying these colonies, it is likely that the rate of predation was much greater than normal, since these colonies rely on sheer numbers of birds to discourage predation by gulls and eagles. Furthermore, the delay in egg-laying (estimated to be one month) that has been seen in the Barren Islands, at Puale Bay and in the Chiswell Islands since the spill, may produce chicks that cannot survive the first autumn storms in the Gulf of Alaska. Conservatively, the estimate of lost production associated with delayed reproduction could exceed 300,000 chicks.

**Current Recovery Status:** The degree of recovery necessarily varies among the affected colonies. There are preliminary indications of that breeding synchrony was recovering at the Barren Islands in 1991 and 1992, but it is not yet known when the timing of

reproduction will return to normal. Agency scientists estimate that it could take many decades and perhaps close to a century before the injured murre populations return to their pre-spill levels. These estimates assume that disturbance does not increase near the colonies over this time interval.

**Restoration Endpoints:**

1) Long-term endpoint would be to return the injured colonies' populations back to pre-spill numbers to within the normal natural variation ranges. Including the non-breeding population of subadults.

2) Short-term endpoint would be to document productivity rates at the injured colonies. This endpoint would be met when the productivity at the colonies is equal (statistically) to other colonies with increasing populations.

a) The details of this (i.e. what is the appropriate range in productivity rates, and how often does this need to be documented?) would come from phase II of the monitoring program.

3) An alternate endpoint would be to replace the missing birds in the state-wide population of murres and other alcids. An estimated 150,000+ murres were directly killed by the oil spill and perhaps double that amount lost in reduced productivity at the injured colonies.

a) This endpoint may not be acceptable by itself. But it could be combined with #2. For example, the Trustee Council could decide that removing predators from islands that should support 100,000 birds (not unreasonable) combined with added protection and monitoring of injured colonies is a satisfactory restoration endpoint for murres.

**Restoration Opportunities:**

hab protection, monitoring & research, general restoration

I had hoped to have this drafted before I distributed this to all of you, but I haven't made it that far. Hopefully I will have a written draft of this section to give you on Thursday. The narrative below should give you an indication of what I think could be in these sections. My stalling point right now is a formatting issue - do we do this section by endpoint or by restoration category? For now, I am assuming I will write the draft to follow the endpoints.

**Long-term endpoint:**

Includes all habitat protection restoration opportunities (acquisition, special designations, and general restoration options that are protection based) that could last beyond the life of the settlement.

For each of the restoration opportunities (including each option) write about how it relates to and helps repair the known injuries. We can be specific enough to talk about colonies that are privately owned and things like the shooting disturbance at the Barren Islands. We should also provide some indication on why & how we think the possible actions might help. We could do some prioritization here, or leave it for another section.

Includes discussion of the monitoring and research needs that could help to understand the stresses on the population and perhaps help to create restoration ideas.

States that everything under the Short-term endpoint could also help achieve the long-term endpoint more rapidly (although it is not necessarily true).

#### Short-term endpoint:

Since this endpoint is to show a productivity rate equal to other increasing populations' productivity rate, all restoration opportunities which could increase production would be discussed here. In this example, the opportunities could include the social stimuli option, the predator reduction option, and possibly would include the reduced disturbance option. We could also discuss why captive rearing does not make sense in this situation.

#### Alternate endpoint:

This would be a discussion that includes examples of the possible gain in seabird population by removing foxes and rats from islands.

#### Other possible sections:

\*Priorities (both on restoration actions for common murre and relative to other resources or services).

\*Recommendations to the Trustees (We could recommend which endpoints makes the most sense, or combine them in a way that makes sense to us.)

I hope my thoughts will be clearer on Thursday, but this should be a hint on the direction I am headed.

Memorandum

June 22, 1993

To: RPWG

From: Carol Gorbics

Subject: Suggested format for Recovery Plans

Attached is an example Recovery Plan format and an example for a marbled murrelet-Alternative 5 Recovery Plan. (I haven't given any thought concerning a similar application for services.) It is based on the Recovery Plan format for federally Threatened and Endangered Species with only minor modifications to make it applicable to the EVOS.

I tried to be as complete and accurate as possible. I based the information on previous RPWG work, and the draft 1993 damage assessment and annual restoration progress reports for marbled murrelets. I assume that each RPWG member would have access to those reports for their agency. (All draft progress reports and draft damage assessment reports are due to Bob Spies by June 15, 1993.)

This may or may not be what the Trustee Council wants. I suggest we work up the marbled murrelet-Alternative 5 example as completely as possible (with RPWG input only) and present it to the Trustees and ask them if this is what they are looking for. However, to develop the actual recovery plan, we should develop a Recovery Team for each species that consists of a RPWG lead, the Principal Investigators, Peer Reviewers and other agency or non-agency resources we identify.

This will be on the agenda for the RPWG meeting Thursday, June 24.



## SUGGESTED RECOVERY PLAN FORMAT INCLUDING MARBLED MURRELET EXAMPLE

### I. INTRODUCTION

This section of the recovery plan serves several important purposes. First, it acquaints the reader with the species, its injury, its status, and the threats to recovery it faces. Second, because it is a source document for land managers, economic interests, and other interested individuals, it should touch on all relevant information. This does not mean that the Introduction should be a dissertation on the species; rather it should be more of a review or summary document. No topic should be covered in tremendous depth, but all major aspects of the species' biology should be mentioned, with appropriate citations for further information. Third, the introduction will serve an information source for the interested, but busy, decisionmaker. It should therefore be arranged so that the information it contains is quickly and easily accessible.

The following subsections for the Introduction may be adapted to suit the biology of the species; however, keep in mind that the busy decisionmaker will be thankful if the answers to obvious questions can be found by glancing at the Table of Contents and flipping to an appropriate page.

.....  
I. Introduction

A. Description: Brief, field guide type description of the injured species.

B. Injury Summary: Include information on the initial injury and current recovery status of the injured species.

I. Introduction

A. Description: The marbled murrelet (*Brachyramphus marmoratus*) is a small, abundant seabird in the family Alcidae which inhabits the coastal waters of southcentral Alaska. It was one of the seabirds affected by the *Exxon Valdez* oil spill. Little is known about the marbled murrelet because of its secretive habits and because it nests solitarily on tree branches or on the ground, up to 70 km inland (Carter and Morrison 1992).

This small alcid was listed as threatened under the Endangered Species Act in October, 1992, in California, Oregon and Washington (Stein and Miller 1992). It is also listed as threatened in British Columbia.

Marbled and Kittlitz's murrelet populations declined greatly in Prince William Sound since 1972 and 1973. In 1973, the estimated murrelet population in the Sound was 304,000 birds, while murrelet populations were estimated to be 107,000 in 1989, 81,000 in 1990 and 106,000 in 1991.

B: Injury Summary: Following the spill, pre- and post-spill counts of marbled murrelets were compared from the few areas within the spill area that had been surveyed prior to the spill. In the moderately and heavily oiled Naked Island area, there was a significant short-term effect of the oil spill on numbers of marbled murrelets, and a possible reduction of reproductive success over several years. In contrast, at the lightly oiled site at Kachemak Bay, no significant changes were found to have occurred. It is estimated that between 7,700 and 9,100 murrelets were killed directly by oil, which may represent 6% of the population in the spill area.

Numbers of murrelets in the Naked Island area and through the Sound have not changed significantly between 1989 and 1991. Numbers along the Kenai Peninsula appear to have returned and stabilized. Murrelet populations in areas with relatively light or weathered oil, such as Kachemak Bay and Kodiak Island, were not significantly affected by the spill.

C. Distribution: Give historical and occupied range both within the spill area and within Alaska. Note clearly if information on distribution is unknown or insufficient.

C. Distribution: The murrelet is the most abundant seabird in Prince William Sound in the summer (Islieb and Kessel 1976, Klosiewski and Laing ms) and the species is common throughout the spill area all year including throughout the breeding season. An estimated 95% of marbled murrelets in the United States occur in Alaska (Mendenhall 1992). The major centers of the marbled murrelet population in Alaska appear to be in southeastern Alaska, Prince William Sound, and the Kodiak Archipelago (Piatt and Ford in press). In the spill zone, the marbled murrelet coexists with its much less abundant congener, the Kittlitz's murrelet (*B. brevirostris*). Kittlitz's murrelets tend to congregate at the heads of fjords near tidewater glaciers (Islieb and Kessel 1973), areas which were mostly spared by direct oiling in 1989.

D. Habitat/Ecosystem: Describe critical elements of the species ecosystem that should be considered by persons proposing restoration activities or development activities that may affect the species or its recovery. Such elements may include sensitive life stages, symbiotic relationships, cover, food, the effects of actions favoring competitors, predators, etc. If known, describe the tolerance of the species to take of individuals or changes in essential elements of its habitat.

D: Habitat/Ecosystem: Murrelets are typically observed as single birds or in pairs, but high murrelet densities have been observed in some locations (Carter 1984, Kuletz ms), such as zones of upwellings at the mouth of bays or fjords and near tidal glaciers. Murrelets are a nearshore species, usually found within 2 km of shore. Unlike most seabirds, the marbled murrelet does not nest in large colonies. Marbled murrelets lay on egg (Sealy 1975) and nest inland on the branches of conifers (Marshall 1988, Varoujean et al. 1989, Singer et al. 1991, Nelson 1991, Kuletz et al. ms) or, in central Alaska, on the ground as well (Day et al. 1983).

Several factors may have contributed to the pre-spill decline and may continue to affect the recovery of the marbled murrelet: (1) loss of breeding habitat, (2) reduced forage fish availability, (3) incidental take in gillnets, and (4) disturbance from certain human activities.

Because marbled murrelets nest in old-growth and mature forests, the loss of nesting habitat due to logging or development of forests may also affect murrelet populations. Population declines over the southern portion of their range is likely related to habitat loss. Logging and development of forest lands within the spill area may affect the recovery of murrelets.

Murrelets are at risk to long-term adverse effects if the abundance of forage fish, including sandlance, capelin, and young herring are affected by the spill or other events.

Murrelets also sustain annual losses due to their incidental take in gillnets in PWS (Wynne et al. 1991, 1992). Based on the estimated mortality by gillnet and the estimated PWS murrelet population, 0.3% of the PWS population was taken in 1990 and 1.4% in 1991. Kittlitz's murrelets may lose about 1.5% of their estimated population per year. The majority of murrelets taken in gillnets were adults (Piatt, USFWS unpublished data). This rate of incidental take is low compared to British Columbia, where an estimated 7% of the murrelet population is lost annually to gillnets (Carter

and Sealy 1984). However, for long-lived birds, a consistent reduction in adult survival of 1-2% per year can be detrimental for the population (Croxal and Rothery 1991).

It has been suggested that murrelets are susceptible to disturbance from human activities on the water and along the shorelines adjacent to probable nesting areas. However, it has not been possible to substantiate this within the spill area.

E. Life History Ecology: Include what is known about breeding habits, litter or clutch size, diet, behavior, etc

E. Life History Ecology: Little is known about the life history of *Brachyramphus* murrelets. There are no demographic records which might provide information on their lifespan, age at first breeding, reproductive potential or overwinter survival. However, like other alcids, they are probably long-lived with low reproductive potential (Nettleship and Birkhead 1985, USFWS Marbled Murrelet Recovery Plan, unpublished) It is believed that they have 85-95% adult survivorship, do not reach maturity until 3-4 years of age, and lay only one egg annually. At least 15% of the population are non-breeders (Sealy 1975). A disruption of breeding pairs due to mortality or a loss of a large portion of the breeding population could have long-term consequences since high adult survivorship would be required to compensate for low reproduction.

Murrelets are a diving seabird and feed primarily on mid-water and surface schooling fish.

F. Strategy of Restoration: This is to provide the reader with a chronological overview of the species ecosystem restoration and maintenance recovery actions. A sentence or two should be included about all Priority 1 tasks identified in Section II, and major Priority 2 tasks may be mentioned.

F. Strategy of Restoration: The top priority (Priority 1) restoration strategies for marbled murrelets are to reduce additional stresses on the population within the oil spill area during recovery including (in priority order) reduction in loss of nesting habitat due to logging or development, protection of food resources, and reduction in incidental take by fishing boats. Additionally, similar protection outside the spill area would also enhance the overall population within Alaska. Priority 2 restoration strategies include development of accurate censusing techniques and assessing life history parameters such as hatching and fledging success, nesting ecology and severity of predation. Implementation of Priority 2 restoration strategies would be useful for long-term management of the species during recovery and beyond.

## II. RECOVERY

A. Objective and Criteria: State the primary objective of the recovery plan. State the recovery criteria in quantitative terms (e.g. number of individuals or populations) whenever possible. Provide an estimate of recovery time with all

## II. RECOVERY

A. Objective and Criteria: The marbled murrelet will be considered recovered when the following indications have persisted for three or more years:

- (a) trend surveys in Prince William Sound show a stable or increasing population,
- (b) trend surveys in selected areas throughout the spill area outside Prince William Sound show a stable or increasing population ,
- (c) reproductive success within the spill area (two or more regions, i.e. Prince

necessary caveats and cautions.

The brevity and apparent simplicity of the recovery objective section is quite deceptive. Quantifying recovery criteria may require educated guesswork. This may be difficult for scientists accustomed to basing their statements on hard data rather than conjecture.

However, it is important to note that concise and measurable recovery criteria are necessary. They represent the central pillar of the recovery plan.

William Sound and outer Kenai Coast) is not significantly different from reproductive success in certain areas outside the spill area (i.e. eastern Prince William Sound).

Recovery time for marbled murrelets is poorly understood since the population was declining prior to the spill and little is known about its life history. Estimates vary widely on when the population may stabilize. Some experts believe it may take up to 50 years to stabilize at some lower population size, while others experts think it may have already stabilized.

## B. Narrative Outline for Recovery

Actions Addressing Threats: This section should be concise and action-oriented. Actions not known to be required for recovery, even though possibly beneficial, may be included. Though most of the tasks included in the outline should be those that are expected to be carried out in the near future, all tasks necessary to achieve full recovery of the species should be identified. Limiting the Narrative Outline to tasks that are expected to be carried out in the near future will sacrifice long-term planning for short-term goals and will not give an accurate assessment of what is necessary to achieve the stated recovery objective. If all tasks known are outlined, time frames can be set as "to be determined" if they are dependent on the outcome of earlier planned tasks.

The Narrative Outline should step

## B. Narrative Outline for Recovery

### I. Protection of Nesting Habitat

Nesting habitat for marbled murrelets is only beginning to be understood.. Additional data collection and analysis dedicated to determining the relationship between the marbled murrelets and forested nesting areas. Study Objectives may include:

- A. Determine factors that make a given area suitable for nesting. Considerable work has been done in the spill area between 1991 and 1993 to provide information on this objective. However, additional work to expand the information throughout the spill area is crucial. As of spring 1993, only 53 nests have been documented in North America. Although it is accepted that marbled murrelets are associated with older-age forests through most of their range, it is uncertain if additional habitat such as ground nests are important within the spill area. A radio-telemetry feasibility study will be undertaken in 1993. This technique may prove useful in providing additional information on the relationship of nesting and habitat.
- B. Determine relationship between marbled murrelet behaviors and their activity in forested areas. Since nests will always be difficult to pinpoint, it is important to identify observable behavioral characteristics that may indicate nesting, breeding or other activities. This information will be critical to developing a methodology for evaluating habitat use.
- C. Develop specific guidance for determining the suitability of forested lands for murrelet nesting habitat. The information developed in A. and B. above should be incorporated into a training program or guidance document that is usable in the field to determine habitat suitability and murrelet use.
- D. Determine tolerance levels of murrelets to disturbance. This would include tolerance during nesting and rearing to activities such as nearby logging, lodge development and other human activities and tolerance to activities in offshore locations where murrelets are located. This is important to factor into protection guidance for land acquisition and

down recovery needs as far as is necessary to reach the task level. Tasks are items that can be funded or permitted independently. For example, under "Gather life history information...", do not list "study diet" and "study social interactions" as separate tasks unless you anticipate that separately funded studies should be conducted.

In the Narrative Outline, discuss the uncertainty surrounding cost estimates that might prove inaccurate or imprecise. Indicate the degree of confidence in the cost estimates. Estimates should be in current dollars; do not attempt to adjust for inflation.

Specifically identify in this section any recommendation for the protection of habitat that is essential to the species. Describe its extent and location. Available options for land protection (i.e. fee purchase, easement etc.) should be considered as options. Essential habitat need not be limited to currently occupied habitat or currently suitable habitat if it is deemed important for eventual recovery of the injured species.

The Narrative Outline should include a set of "Strategies" that will, when applied to the known threats, result in achievement of the recovery objective. It is important to consider all strategies that may alleviate known threats, such as research on disease, habitat protection, protection from taking, control of competing species, etc.

protection. For instance, it may be determined that lodge development and activities are not disruptive to murrelet nesting and rearing, and therefore would be an allowable activity under a protective program for recovering murrelets.

E. Evaluate specific tracts of land for quality of marbled murrelet habitat for potential acquisition or protection. Although lands are currently be evaluated for marbled murrelets based on the existing information, it is likely that habitat protection and acquisition will continue throughout the life of the settlement. Additional land evaluation will be ongoing.

F. Acquire or protect lands important for marbled murrelet nesting habitat.

- (1) Kachemak Bay
- (2) Seal Bay
- (3) Tonki Cape
- (4) Other lands

## II. Identification and protection of food resources

A. Determine distribution of murrelets during all seasons of the year. This is important to understanding the potential stresses on murrelet food resources. It is believed that marbled murrelets tend to feed close inshore. They generally occur within 2 km of the shoreline, outside the surf zone. It is important to more clearly understand seasonal distribution to understand the potential conflicts with prey abundance.

B. Determine availability (abundance and distribution) of forage fish. It is important to understand not only the availability but also the factors limiting that availability such as fishing pressures, habitat changes, natural phenomenon and others.

## III. Minimize incidental take of marine birds by commercial fisheries

Entanglement of marbled murrelets in gillnets deployed in coastal fisheries within the North Pacific is a recognized conservation problem. Within and adjacent to the area affected by the *Exxon Valdez* oil spill, there are several coastal gillnet fisheries for salmon, including the Prince William Sound drift and setnet, Cook Inlet drift and setnet, and Kodiak setnet fisheries. Under this option, the extent of marine bird mortality in these fisheries would be examined. If this mortality is found to represent a significant source of mortality for marine bird populations in the spill area, an effort to develop new technologies or strategies for reducing encounters between marine birds and gillnets would be made.

Mortality of marine birds in North Pacific high seas gillnet fisheries has been relatively well-studied through observer programs. Mortality of marine birds in coastal gillnet fisheries has been less well studied, and only a few studies of mortality in North Pacific coastal fisheries have been conducted.

Studies have documented mortality to common murre and marbled murrelets due to entanglement in gillnets particularly in California and British Columbia. Within Alaska, the only studies of marine bird entanglement and marine bird mortality in the *Exxon Valdez* spill area are those carried out for the National Marine Fisheries Service. The studied fisheries included the Prince William Sound drift and setnet fisheries and the Alaska Peninsula drift fishery. In both 1990 and 1991, observers found that only a small percentage of birds that came within 10 m of driftnets became entangled; almost

no birds became entangled in setnets. The majority of birds that became entangled in driftnets, however, died. Murres and murrelets were the most frequently entangled and killed species. Extrapolating based on estimated fishing effort, it is estimated that over 460 common murres and about 300 marbled murrelets died due to entanglement in Prince William Sound driftnets in 1991.

The significance of this level of mortality to the common murre and marbled murrelet populations of Prince William Sound is unknown. Common murres and marbled murrelets, however, were two marine bird species that the subject to injury from the *Exxon Valdez* oil spill.

A. Research and document the extent of marine bird mortality in coastal gillnet fisheries in the area affected by *Exxon Valdez* oil spill. No changes in fishing practices would be considered until a significant problem has been documented. The observer program that has operated in the Prince William Sound gillnet fisheries during the past two years was mandated by Congress, which is a sign of the level of concern about the problem of marine mammal entanglement. Although Congress has shown some interest in the entanglement of marine birds in high seas fisheries, Congress has not, as yet, expressed significant interest in the mortality of marine birds in coastal fisheries. Without such high level political support for changes to reduce mortality of marine birds, the possibility of such changes is doubtful.

B. Research new technologies or strategies for reducing encounters between marine birds and gillnet. This option is technically feasible. It generally follows the approach used in addressing other fishery-bycatch problems. This approach involves study of the problem followed by management actions aimed at reducing bycatch. In most cases, the action that has been taken is closure of the fishery, but technical solutions are also possible. A variety of techniques could be examined including: experiments with nets that are suspended one, two and three meters below the surface; removing the lower portion of the nets; temporary seasonal and area closures; or elimination of night fishing. In addition, a management plan directing fishing pressure away from injured marine bird habitats may be an effective restoration option.

C. Incorporate relevant methodologies and strategies to reduce encounters between marine birds and gillnets into State of Alaska fishery management plans until populations recover. This could facilitate recovery of marine bird species whose populations were reduced by the *Exxon Valdez* oil spill by reducing an ongoing source of mortality and reducing the time needed for injured marine bird populations to return to pre-spill levels. However, determining the potential effect of this option on injured resources is difficult because the extent of marine bird mortality due to gillnet entanglement has not been determined.

Although this approach suggested here is technically feasible, the importance of political considerations must be recognized. Indirect effects of implementing this option could include:

- o changes in the efficiency of coastal gillnet fisheries;
- o closure of coastal gillnet fisheries;
- o reductions in economic viability of coastal gillnet fisheries, which could have economic and social effects on communities such as Cordova, Valdez, Homer, and Kodiak;
- o changes in the incidental bycatch of marine mammals.

IV. Implementation of previous options outside the spill area. Any of the previous options may be implemented outside the spill area to provide additional protection of marbled murrelets and, potentially, increase their population to replace those birds lost within the spill area.

V. Conduct systematic surveys to determine overall population numbers. No technique currently exists to accurately census marbled murrelets. This information would be useful for long-term management of the species during recovery and beyond.

VI. Determine life history requirements. Little information currently exists which accurately describes such population parameters such as hatching and fledging success, understanding nesting ecology and gauging the severity of predation. Locating and studying more nests may be the best method of assessing such parameters. This information would be useful for long-term management of the species during recovery and beyond.

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C. Literature Cited/References: All citations from Part I and II should be listed here. This section should reference all source documents for the Recovery Plan, but it need not be a complete bibliography.

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### III. IMPLEMENTATION SCHEDULE

This is a very important section of the recovery plan. It will be used to secure and obligate funds, establish associated regulatory and other management priorities, and will provide the basis for tracking plan implementation. The Implementation Schedule should be preceded by a page defining task priorities and acronyms used in the schedule.

This section will likely be in tabular form.

A. Task Priority: In contrast to the Narrative Outline, tasks in the Implementation Schedule will be arranged in priority order; thus, all Priority 1 tasks will be listed first, consolidating them and increasing their visibility. Assign task priorities as follows:

**Priority 1** - An action that must be taken **within the spill area** to prevent a decline in **habitat quality** that may exacerbate the negative results of the spill for those species that have a **population decline** or evidence of **sublethal effects** occurring or exacerbated as a result of the spill.

An action that should be taken **within the spill area** to prevent a continuing **population decline** occurring or exacerbated as a result of the spill and to monitor such decline. This includes only actions determined to provide **substantial benefit** to species recovery either in decreasing overall recovery time or in assuring that recovery will occur satisfactorily.

**Priority 2** - An action that must be taken to reduce or eliminate the causes of adverse **sublethal effects** of the spill and actions that must be taken to continue to monitor such ongoing spill effects. This includes actions determined to provide at least some benefit to species recovery either in decreasing overall recovery time or in assuring that recovery will occur satisfactorily.

**Priority 3** - All other actions necessary to meet the recovery plan objectives.

B. Task Number: This should be taken directly from the Narrative Outline. Include only the lowest "stepped down" tasks.

C. Task Description: This may be taken verbatim from the Narrative Outline, or slightly modified for the sake of brevity.

D. Duration: Indicate whether the task is "ongoing," whether it needs to be "continuous," and the estimated number of years that will be required for its completion.

E. Responsible Party: Indicate which Trustee agency or agencies will have the lead or co-lead to accomplish the task. Although a single Trustee agency may be the lead for the overall Recovery Plan, several agencies may be involved in implementation or contract management related to specific tasks.

F. Cost Estimates: Cost estimates should be presented for each task showing the total cost and the annual break-down by federal fiscal year. Guidance on presentation and development of costs should be requested from the Financial Operating Committee.

G. Comments and Notes: Other relevant information may be included here as appropriate.





**Restoration Planning Working Group**  
EXXON VALDEZ OIL SPILL RESTORATION OFFICE  
645 "G" Street Anchorage, Alaska 99501

TO: RPWG DATE: June 23, 1993  
FROM: *WJ. YAK CS* Veronica Gllbert , Karen Klinge, Chris Swenson  
SUBJECT: Options Evaluation: Areas of Agreement and Disagreement in RPWG

At a recent RPWG meeting, we were asked to draft a statement of areas of agreement and disagreement among RPWG members regarding the treatment of options in the Restoration Plan. This is our draft statement.

RPWG agrees that the Trustee Council will adopt, through the Restoration Plan, policies, restoration objectives, and evaluation procedures regarding restoration projects. The policies would deal with the five issues raised in the brochure and, perhaps, those dealing with priorities and whether or not restoration actions would be limited to areas where damage assessment studies documented injury. The plan would also establish restoration objectives and prescribe procedures for evaluation of potential restoration projects. The evaluation procedure would include technical, scientific, public interest, and legal considerations.

RPWG disagrees about how the Trustee Council will treat restoration options. Alternative approaches to views on this issue are as follows:

1. The Trustee Council **would acknowledge** that certain options would meet the policies and criteria in the plan, assuming they also pass legal and agency review. However, this acknowledgement would not constitute a commitment to fund the projects included in the options, but projects which fall under the options would be further along in the evaluation process.
2. The Trustee Council **would not acknowledge** that any restoration option is consistent with the plan. However, the plan might refer to the options evaluation to illustrate the implications of policies and evaluation process or as a technical report to consult in developing annual work plans.
3. In the work plans the Trustee Council **would acknowledge** that certain options meet the appropriate policies and criteria; however this acknowledgement would not appear in the restoration plan.

RPWG needs to discuss this draft statement at its meeting on June 24 to determine whether it accurately reflects areas of agreement and disagreement. If so, and we still disagree, we should elevate this issue to the Restoration Team. The subcommittee suggests that any elevation to the Restoration Team place this issue in the context of proposed recovery plans or other vehicles for producing a draft restoration plan. This would allow RPWG to show how the options would be used (scope, location) for specific resources or services.

DRAFT

JUNE 29 MEETING WITH RT TO DISCUSS FUTURE OF MONITORING PLANNING

OUTLINE OF APPROACH

- I. Introduction (2 min)
  - A. Purpose and expectations of meeting
  
- II. History of Monitoring Planning Project (5 min)
  - A. Need
  - B. Approach
  
- III. Results and Recommendations of Conceptual Planning Contract with Parametrix, Inc. (15 min-hit high points)
  - A. Goals, Objectives, and Strategies for Monitoring
  - B. Process (mechanism) to Determine Monitoring and Research Priorities
    - 1) Conceptual Framework
    - 2) Conceptual Models
    - 3) Recovery Endpoints
    - 4) Criteria for Selecting Monitoring Activities
  - C. Resources and Services to be Monitored
  - D. General Guidance on what to Measure and Where
  - E. Integration
    - 1) Linkages
    - 2) Conceptual Models
  - F. Relationship with Other Monitoring Programs
  - G. Management Model
    - 1) Single Contractor
    - 2) Interagency Committee

IV. Discussion of Future Monitoring Planning Needs (10-min)

A. Development of Detailed Design Specifications

- 1) Endpoints for Injured Resources and Services
- 2) Technical Design for Injured Resources and Services (What, Where, When, How)
- 3) Data Management System
- 4) Quality Assurance Program
- 5) Cost Estimates
- 6) Coordination with Other Monitoring Programs
- 7) Strategy for Review and Update

B. Management Model and Infrastructure

C. Draft Restoration Plan Requirements

V. Issues and Questions to be Addressed (Time unknown; approach: deal with each issue in sequence)

A. What kind of monitoring plan do we need?

RPWG recommends:

B. Do we have to wait for the public to comment on the Summary of Alternatives before we move forward?

RPWG recommends:

C. Are there monitoring components that we know will be required by the Trustees, e.g. recovery and project monitoring, irregardless of the alternative selected?

RPWG recommends:

D. Can we initiate Phase II - Develop Detailed Design Specifications, at least for certain components, e.g. recovery and project monitoring? This assumes that we can add other monitoring components after Trustee Council has selected preferred alternative.

RPWG recommends:

E. If yes, how will this be accomplished? Who will perform the planning? Will this be done by: 1) an Interagency

Work Group, 2) a work group aided by a consultant, 3) the Restoration Team aided by one or two key individuals who have requisite experience and who will work closely with the Trustee agencies, 4) the Peer Review Team, or 5) other?

RPWG recommends:

F. What will be included in the Draft Restoration Plan?

RPWG recommends:

G. Other

## Outline of Final Restoration Plan

Chris S. 6/23/93

- I. **Introduction** (DONE: use intro in brochure)
2. **Policy Guidelines** (NOT DONE: finalized after TC decision)
  - Final policy alternative
  - Funding allocations (?)
  - Endowment
  - Habitat protection constraints
  - Monitoring Components
  - Prioritization rules for projects
3. **Implementation Process** (PARTLY DONE: based on old Chapter 4)
  - Role and nature of strategic plans
  - Project RFP's and annual work plans
  - Public input to process
  - NEPA requirements
  - Amendments to final plan
4. **Appendices** (MOSTLY DONE: updated as needed)
  - A. Allocations of Funds To Date
  - B. Injury and Recovery
  - C. Habitat Protection Process
  - D. Monitoring Program

Strategic, Multi-Year Plans for Each Resource and Service  
(Published in RP or as preface to each Annual Work Plan; to be updated as necessary, based on latest information)

1. **Injury and Recovery Summary:** State problems to be solved.
2. **Background:** Describe life history, ecology, dist., status, etc. at a level of detail determined by what is needed to understand injury and proposed restoration.
3. **Restoration Endpoint** Define endpoints for each resource and service and describe how they will be determined and identify data gaps. If appropriate, describe alternative means (policy decisions) for establishing endpoints for 'difficult' species and services.
4. **Implications for Monitoring** Describe how progress towards restoration endpoints will be monitored.
5. **Strategy for Restoration** Describe multi-year strategies and priorities for restoration, reflecting regional differences as necessary. Final actions are determined by approving projects in yearly work plans. Possible restoration actions discussed include one or more of the following:
  - natural recovery
  - monitoring
  - habitat protection
  - general restoration actions

## SAMPLE STRATEGIC, MULTI-YEAR PLAN FOR PINK SALMON

### 1. Injury and Recovery: The Problem to be Addressed

**Injury:** The oil spill caused sublethal injuries to wild populations of pink salmon in PWS, but there is continuing debate on whether the wild stock population has been affected. Little damage assessment work was done outside PWS, so undocumented injury in other areas may have occurred.

Seventy-five percent of the wild pink salmon spawn intertidally at the mouth of streams in Prince William Sound. There was no apparent change in the use of this habitat in the summer of 1989, and many salmon deposited their eggs in the intertidal portion of oiled streams. In the autumn of 1989, egg mortality in oiled streams averaged about 15%, compared to about 9% in unoiled streams. Since 1989, egg mortality has generally increased, until in 1991, there was an approximate 40 - 50% egg mortality in oiled streams, and 18% mortality in unoiled streams.

Although the differences between egg mortality in oiled and unoiled streams over the first two years are likely attributable to the effects of oil, the persistence of these differences three years after the spill was entirely unexpected and is not understood. In this regard, natural factors that vary between oiled and unoiled streams, e.g., the degree of wave exposure, have not been eliminated as possible causes of persistent differences. Also, the studies of pink salmon carried out after the spill have documented that adults released as fry from nearby hatcheries are wandering into streams and spawning with wild stocks. The potential effect of this phenomenon on egg survival has not been investigated. Some scientists suggest that the longer the differences in egg mortality persist, the less likely it will be that oil is the cause or a contributing cause.

Pink salmon fry released from hatcheries as well as wild pink salmon fry leaving their natal streams in the spring of 1989 were also exposed to oil in the open water. Both pink salmon and chum salmon larvae were exposed to sufficient amounts of oil to induce enzymes that metabolize oil. In addition, tagged pink salmon larvae released from the hatcheries and collected in oiled areas were smaller than those collected in unoiled areas, even after accounting for the effects of food supply and temperature. The rate of return of pink salmon adults is dependent on conditions during the larval stage; and lower food supply, temperature and growth will result in a lower return of adults the following year.

Despite the differences in egg mortality and larval growth, tagging data do not show that pink salmon populations were affected by the oil spill. For example, fry that were tagged as they left their streams in 1990, and were recaptured as returning adults in 1992, did not show differences in survival between oiled and unoiled streams. Fisheries experts disagree whether or not the increased egg mortality seen in the oiled streams is affecting the adult

populations. One complicating factor is that PWS wild stocks have been declining since before the spill for unclear reasons.

**Recovery:** The most apparent injury to pink salmon is to egg survival in PWS. This difference in mortality rates between oiled and unoiled streams persisted in 1991. For at least the first three years after the spill, the rate appears to be worsening, both in oiled and unoiled areas. While there is disagreement among experts on whether population level injuries exist, those who do believe that the spill reduced the adult population estimate that recovery will take more than a decade.

## 2. Background Information to Understand Injury and Restoration:

Pink salmon spawn from late June to mid-September and the eggs hatch from October through January. Typical egg to fry survival is 5-10%. The fry emerge from the gravel in streams and intertidal areas from late March through June and move rapidly to nearshore marine feeding areas. After approximately 8 weeks, the fry move to offshore waters. Fry to adult survival is 2-5%. Virtually all the juvenile pink salmon in PWS migrate and feed along the western shore of the Sound.

12-15 months after entering salt water, adult pinks return to spawn in natal areas. While some adults spawn in streams, up to 75% of pink salmon in PWS spawn in intertidal areas. All adults die after spawning. In PWS, even-year runs tend to be smaller than odd-year runs.

Fry feed on copepods and other zooplankton in nearshore nursery areas. Juveniles eat larger invertebrates and small fish. In the ocean, adults feed on euphausiids, squid and small fish. Spawning adults do not generally feed.

Eggs and young salmon are eaten by cutthroat trout, Dolly Varden, coho salmon, other fish and birds. Juvenile and adult salmon in offshore areas are eaten by a variety of seabirds, marine mammals and fish, including other salmon. Returning adults are eaten by bears, river otter, other mammals and birds, providing an important means of nutrient transfer from marine to terrestrial ecosystems. Decomposing carcasses provide an additional source of nutrients for lower order terrestrial organisms.

Wild and hatchery pink salmon support multi-million dollar commercial fisheries in Prince William Sound, Lower Cook Inlet and Kodiak. Pinks are also harvested to a lesser extent by sport and subsistence fishermen. Most harvests target mixed stocks of wild and hatchery salmon.

Since hatchery stocks are generally more numerous and were less impacted by the spill, they are able to sustain a higher harvest level. Wild stocks in mixed stock fisheries can potentially be overharvested if not protected by stock-specific management practices. An additional concern about hatchery fish in PWS is



their tendency to stray into wild stock streams, possibly causing genetic problems by interbreeding with wild fish adapted to specific environmental conditions not found in hatcheries. It is possible that pre-spill declines in PWS wild stocks are due to interactions with hatchery fish or the fact that wild fish are harvested in a mixed-stock fishery.

**3. Restoration Endpoints:** Occurrence of any one of the following could justify stopping restoration actions (this doesn't necessarily include stopping monitoring). Actual endpoints will, when possible, be more quantitative than those below.

1. Elevated egg mortality in oiled streams is no longer a problem and no other spill injuries (e.g., pop. decline) are conclusively documented.
2. Further research demonstrates that observed egg mortality (or other apparent injuries) are not due to the oil spill.
3. Restoration actions are not demonstrably helping recovery on a local or general level or are causing negative effects on other injured resources or services.
4. In the case of population enhancement options for wild stocks, the wild/hatchery population ratio returns to levels sufficient to maintain genetic diversity of wild stocks without harming the environment or interfering with existing fisheries.

**4. Implications of endpoints for the monitoring program:** In order to track progress towards endpoints, it will be necessary to monitor causes and degree of egg mortality, ongoing rate and causes of PWS wild stock decline, effectiveness of restoration actions, and impacts of general restoration options on select resources and services. For population enhancement projects, monitoring should focus on trends in genetic diversity of PWS wild stocks and any negative impacts of enhancement on pink populations and other resources.

**5. Restoration Strategy:** (The strategy should reflect a general prioritization scheme to be developed for the Restoration Plan)

**A. Prince William Sound**

Priority X:

**Additional research and monitoring to better define the problem:** This allows better definition of the problem to be solved and reasonable solutions. It would be accomplished by funding further studies on causes and degree of egg mortality in oiled streams and causes of ongoing population declines in PWS wild stocks.

Potential negative effects: none identified

Priority Y:

**Habitat protection to decrease or prevent non-spill stresses on recovering resources that suffered any sort of injury:** This strategy provides multi-species benefit, but is not particularly effective for pinks, especially intertidal spawners. It could be accomplished by protecting anadromous streams (and intertidal areas) via purchase, easements, special designations, and agency management and regulatory changes.

Potential negative effects: possible impact on local economies or recreation by more restrictive management practices

Priority Z:

**General restoration actions to enhance wild stock populations:** These actions are allowable under the settlement as enhancement or replacement but are not warranted as direct restoration since it has not been conclusively demonstrated that pink populations declined due to the spill. Enhancement could be accomplished through stream improvements, fish passes, relocating existing hatchery runs, and gathering management information (e.g., coded wire tagging) to decrease harvest pressures on mixed stock fisheries. Restoration project 93063 will develop specific proposals for appropriate and cost-effective instream habitat and stock restoration projects.

Potential negative impacts: great care must be taken to avoid creating environmental or fishery problems by increasing existing populations.

**B. Lower Cook Inlet/Outer Kenai (no NRDA studies)**

Priority X:

Priority Y:

Priority Z:

**C. Kodiak (no NRDA studies)**

Priority X:

Priority Y:

Priority Z:

**RESTORATION PLANNING WORK GROUP**  
**AGENDA**  
**June 24, 1993**  
**9:00 a.m.**

- 1) General Restoration Options - role in the R.P.  
- incorporating new options  
  
What does the Final R.P. look like? - overall process from  
policy to work plan
- 2) Examples of "Recovery Plan"-type Models
- 3) Restoration Endpoints
- 4) Monitoring Planning Update - June 29th Presentation to RT
- 5) Work Task Schedule (Summer)
- 6) Telephone Response Times
- 7) Update on Publication of Supplement Package

**TO: RESTORATION PLANNING WORK GROUP**

**FROM: KAREN KLINGE**

Last week I spent time thinking about **restoration endpoints**. I feel that it is important for us to develop these endpoints to use in the draft plan. Because we haven't talked much about restoration endpoints as a group, I want to give you my definitions. I hope we can talk about these on Thursday.

**What are they?** Restoration endpoints provide the measuring stick to evaluate the recovery status for each injured resource or service. I think there can easily be more than one endpoint for each resource or service.

**What do restoration endpoints do for us?** These endpoints will give everyone (TC, public and us) a way to evaluate our program so that we can determine if we have done what we set out to do - restore the injured resources and services. Although these endpoints cannot be "cast in stone" they will provide guidance to the restoration program and they will give us a way to determine when to stop spending money on a resource (especially if enhancement is not acceptable).

**How do they relate to the monitoring program?** The restoration endpoints that we develop will certainly influence any recovery monitoring program. We will need to monitor 'elements' that meet the endpoint. For example, if one restoration endpoint for harbor seals is to have #pups/100 adults equal to the same ratio in a location where the seals are in a stable population, then the monitoring program will certainly have to monitor pup/adult trends. However, the monitoring program may also have other endpoints for different portions of its program (especially related to ecosystem monitoring).

I think that we can develop the general endpoint in the way I wrote the one for harbor seals, but the details need to come from phase II of the monitoring program. Phase II should be able to tell us what number of pups/adults we need to see (within a range to account for natural variation) and how long we need to document it before we believe that we have met the endpoint.

.....

I have been working on explicitly stating restoration endpoints for the different injured resources. There are two problems to developing endpoints that are common to almost all of the injured resources:

- 1) Most resources are not expected to recover by 2001.
- 2) Recovery endpoints for areas that were studied (NRDA and historically) may be different than for areas without the studies. For example, we cannot use

a "return to pre-spill population size" endpoint for areas that do not have reasonable records for what a prespill population was.

I recommend that we look at each injured resource and develop the range of restoration endpoints that we think would be acceptable. I envision a Long-term endpoint which would express the ultimate recovery stage to aspire to, and a short-term endpoint that gives a recovery point that can be measured during the life of the settlement that would indicate if and, preferably, when the long-term endpoint should be achieved. I also think it would be useful to provide "alternate" endpoints that may include aspects of replacement or compensatory restoration to achieve an acceptable stopping point.

After we have developed a rough list of endpoints, I think we need to go to the agency scientists and to the peer reviewers to be certain we are on track.

I hope to provide an example of how these types of restoration endpoints fit into the "recovery plan" models, for our meeting on Thursday.

# Restoration Planning Working Group

EXXON VALDEZ OIL SPILL RESTORATION OFFICE

645 "G" Street Anchorage, Alaska 99501

## SUMMARY OF ALTERNATIVES: ANALYSIS OF PUBLIC COMMENTS

This paper describes the sources of public comment on alternatives for the Restoration Plan, objectives for analyzing them, and a method of analysis. Attached to this paper is a proposed database design.

### SOURCES OF PUBLIC COMMENT

In April 1993, we distributed over 28,000 copies of a brochure on alternatives and held 22 public meetings. The brochure contained a one-page questionnaire. It was mailed to a large mailing list inside and outside the state, inserted into local newspapers in some communities in the spill area, put in all post office boxes in small communities, and made available at local post offices and legislative information offices. In addition, about 3,000 individuals on the mailing list will receive a follow-up letter from the Trustee Council encouraging them to submit their comments and enclosing another copy of the brochure.

There are five major sources of comment:

- Synopses of verbal comments made at 22 public meetings, as recorded by notetakers.
- Responses to the questionnaire in the brochure. Over 400 brochure questionnaires have been returned. We expect over 600 by the time the comment period closes.
- Letters.
- Verbal comments received on our toll-free telephone line and recorded by staff.
- Comments on other Trustee Council documents, e.g., some comments on the '94 work plan addressed endowment, an issue to be decided in the Restoration Plan.

*These comments reflect the views of those who attended public meetings, submitted questionnaires, and sent letters. Because the process for gathering comments was not based on a statistically valid sample of any of the populations represented, they do not accurately represent the views of these populations as a whole.*

### OBJECTIVE

The objectives of the analysis of public comment on alternatives is to give the Trustee Council the information they need to make major policy decisions about the draft Restoration Plan and to assure those who commented that we heard their concerns.

## REPORTS

The Restoration Planning Work Group agrees on the content of the Summary of Public Comments. However, we disagree about whether the administrative record would also be released as a report. The administrative record consists of the original letters, completed questionnaires, meeting transcripts, and transcripts of phoned-in comments, as well as the database used to analyze these comments. Some RPWG members believe that only the summary should be produced as a report; others believe that the original comments should be provided upon request because they present the comments in context (in fact, the public meeting transcripts have already been given to the Trustee Council); still others believe that the Trustee Council should receive the database containing all comments sorted by topic. We intend to reach a decision on this issue by mid-August.

The introduction to the Summary of Public Comments would describe the methods of gathering and analyzing public comments. Under each heading we would describe the issue, summarize areas of strong agreement or disagreement, and reproduce "quotable quotes" from the comments themselves. The questionnaire would be reproduced in the appendix.

The structure of the questionnaire would guide the organization of the Summary of Public Comments. It would consist of four sections: 1) issues and policies, 2) restoration categories, 3) spending, and a new topic, 4) process. Most comments fall into one of these categories and should be discussed under that label whether or not they were offered as responses to the questionnaire. For example, comments about spill preparedness should be included under restoration categories; comments about continuing oiling should be addressed under issues and policies (injuries addressed).

The Summary of Public Comments will convey **strong trends** in opinions expressed by "stakeholders" (e.g., individuals living in the spill area, corporations or national environmental groups). Consequently, in our analysis we will look for areas of strong agreement or disagreement. We will use numbers of responses and percentages only to document strong trends. For example, we may report, "Based on 300 responses we received from the spill area, most (70%) preferred allocating funds to the spill area only." However, if the tabulation revealed that, for example, 55% of the responses within the spill area preferred ecosystem monitoring and 45% did not, we would report that the results were mixed; we would not report percentages because they do not reflect strong trends.

## METHOD OF ANALYSIS

1. Develop a list of "stakeholders" in this process. One stakeholder would be the general public; another might be national environmental groups.
2. Tabulate responses to all multiple-choice questions by stakeholder. Responses from one of the stakeholders -- the general public -- would be reported by the following regions:

- a. Within the spill area
  - 1) Prince William Sound
  - 2) Kenai
  - 3) Kodiak/Alaska Peninsula
- b. Outside the spill area
  - 1) Alaska
  - 2) Outside Alaska
- c. Location unknown

Example 1 illustrates this approach as it would be applied to the first policy question asked in the brochure. All figures are hypothetical.

### EXAMPLE 1

| Question: Should restoration actions address all injured resources and services, or all except those biological resources whose populations did not measurable decline because of the spill? | GENERAL PUBLIC |                   |       |        |                    |         |      | NAT'L ENV GROUPS |
|--|----------------|-------------------|-------|--------|--------------------|---------|------|------------------|
|  | ALL            | WITHIN SPILL AREA |       |        | OUTSIDE SPILL AREA |         | UNK  |                  |
|  |                | PWS               | Kenai | Kod/AP | Alaska             | Outside |      |                  |
| Number of responses  | 400            | 100               | 100   | 80     | 40                 | 40      | 20   | 20               |
| % of total responses   | 100%           | 25%               | 25%   | 20%    | 10%                | 10%     | 5%   | 5%               |
| <b>Response</b>  |                |                   |       |        |                    |         |      |                  |
| Target injured resources & services  | 72%            | 85%               | 70%   | 90%    | 47%                | 63%     | 60%  | 25%              |
| Target population declines   | 25%            | 10%               | 20%   | 8%     | 50%                | 22%     | 40%  | 75%              |
| No preference  | 3%             | 5%                | 10%   | 2%     | 3%                 | 15%     | 0    | 0                |
| Total  | 100%           | 100%              | 100%  | 100%   | 100%               | 100%    | 100% | 100%             |

3. Code open-ended comments, e.g., those reflecting a certain viewpoint or expressing a certain concern. Tabulate the frequency of certain comments by "stakeholder", as was done for multiple-choice questions.
4. In the Summary of Public Comments, report areas of strong agreement or disagreement by stakeholder and, for the general public, by region. Using Example 1, we might report that of the 400 responses to multiple-choice questions, nearly three-quarters (72%) favored addressing all injured resources and services. This trend held for all but one group. Most of the 20 responses received from national environmental groups favored targeting resources whose populations declined because of the spill. Furthermore, we might report that of 100 people who submitted open-ended comments on injuries to be addressed by restoration, two-thirds believed that our damage assessment information was flawed because it was



driven by the lawsuit and therefore did not study all of the right species.

5. In the Summary of Public Comment, we would present potential allocations as pie charts representing trends by stakeholder. Ideally, we would take the arithmetic mean among responses. Alternatively, we could develop a typology of responses, e.g., responses within 15% of each other would be treated as one group. One advantage of pie charts, especially if they are not associated with fixed percentages, is that they are less precise than specific figures and are therefore better suited to the data. Another analytical tool to identify trends would be cumulative distributions by category for each stakeholder. This would allow us to describe broad trends such as, "Among the 300 responses that proposed potential allocations, nearly half favored endowments of at least 20%; no endowment proposal exceeded 40%."

If the allocations do not add up to 100%, we would prorate them. For example, if the sum of the allocations is 90%, we would divide each allocation by 0.9.

**Attachment**  
**PROPOSED DATABASE DESIGN**

There are two different types of comment data. The multiple-choice responses and associated comments on the brochure are discrete comments. They would be entered in the Multiple-Choice Database. Free-ranging written comments on the questionnaire or in letters and verbal comments recorded at public meetings or received on our toll-free line will be entered on the Comments Database. For ease of data entry, both databases will be in RBASE, but the Multiple-Choice Database can easily be exported to Excel for analysis.

**MULTIPLE-CHOICE DATABASE**

This database would record all multiple-choice responses and associated comment fields from the brochure. However, it would not record comments noted in the open-ended comment field.

| <u>No.</u> | <u>Field Name</u> | <u>Description</u>   |
|------------|-------------------|--|
| 1          | INDEX#            | Index number of the brochure. Each brochure must be numbered with a unique number so we can make sure it was entered correctly.  |
| 2          | Person            | Person's name on the brochure if available.  |
| 3          | Organ             | Organization person represents (if they have one).   |
| 4          | Group             | Stakeholder code, e.g., national environmental group.  |
| 5          | Location          | Location code -- where did the person live? This will be taken from return address, public meeting location, or failing either of those, from the postmark. See preliminary list of location codes. If location cannot be determined, enter "Unknown."   |
| 6          | Region            | Computer-generated code designating the region of the location code, e.g., PWS, Kenai, Kodiak/AP, outside the spill area, etc.   |
| 7          | BroType           | Source of response, i.e., received at public meetings, mailed in, telephoned, or other.  |
| 8          | EntDate           | Date form is entered (computer will fill this in by itself).   |
| 9-72       | Various Names     | Each box gets a field (Yes/No) and each comment gets a 30-letter note field, a "quotable quote" field, and a fact/value field. For the Potential Allocation Box, each alternative gets a Yes/No field to note if people circled it, and then each entry under "Your Alternative" gets a numeric field, e.g., one for Habitat Protection. |

## COMMENTS DATABASE

This database would record verbal comments presented at public meetings or phoned in on our toll-free lines, as well as written comments submitted in the form of letters or entries in the open-ended comment field in the brochure. Each comment would be entered individually and assigned an issue code. In that way, we can group all comments on one issue.

Comments presented verbally at public meetings were recorded electronically on a computer by a notetaker at the meeting. Consequently, they can be entered electronically into the database without being retyped.

All other comments will be entered into the database by the staff. If a comment deals with more than one topic, create a separate record for each topic addressed. There should be only one issue code assigned to each record.

| <u>No.</u> | <u>Field Name</u> | <u>Description</u>  |
|------------|-------------------|---|
| 1-8        | Various           | Same as for the Multiple-Choice Database. That is, these seven fields are identical between the two databases.              |
| 9          | Comment           | The comment is written in. This field is quite large and can handle a number of typed pages for each comment, if necessary. |
| 10         | Issue             | Assign a single issue code to each comment. If a comment addresses more than one topic, create a separate record.           |
| 11         | Quote             | Indicate whether this comment is quotable.  |
| 12         | FactValue         | Indicate whether this comment primarily addresses a fact or a value.  |

## CODES

### Group

Field number 4 is the group name of the stakeholder. We have not yet identified these groups and therefore have no codes.

### Location

Field number 5 in each database is location.

| <u>Location</u>               | <u>Code</u> | <u>Comments</u>  |
|-------------------------------|-------------|--|
| <i>Spill Area Communities</i> |             |  |
| Akhiok                        | Akh         |  |
| Chenega Bay                   | Chb         |  |
| Chignik Lagoon                | Clg         |  |
| Chignik Lake                  | Clk         |  |
| Chignik Village               | Cvg         |  |
| Cordova                       | Cdv         |  |
| Homer                         | Hmr         |  |
| Ivanof Bay                    | Ivf         |  |
| Kenai/Soldotna                | Ksd         |  |
| Kodiak                        | Kdk         |  |
| Larsen Bay                    | Lsn         |  |
| Nanwalek                      | Nan         |  |
| Ouzinkie                      | Ouz         |  |
| Other Kenai Boro              | Okb         |  |
| Perryville                    | Pry         |  |
| Port Graham                   | Ptg         |  |
| Port Lions                    | Ptl         |  |
| Seldovia                      | Sdv         |  |
| Seward                        | Sew         |  |
| Tatitlek                      | Tat         |  |
| Valdez                        | Vdz         |  |
| Whittier                      | Wht         |  |
| <i>Outside Spill Area</i>     |             |  |
| Anchorage                     | Anc         | Entire borough, e.g, Girdwood, Chugiak                                     |
| Mat-Su Borough                | Mat         | All of Mat-su Borough  |
| Copper River-Interior         | Int         | Anywhere in Alaska outside the spill area and not included in another code |
| Fairbanks                     | Fbk         |  |
| Juneau                        | Jno         |  |
| Southeast Alaska              | SE          |  |
| Other US States               | USA         |  |
| Canada                        | Cda         |  |
| Other Countries               | Frn         |  |
| <i>Unknown</i>                | <i>Unk</i>  |  |

## Region

Field number 6 in each database is the region. It is generated by computer and aggregates location codes into the following regions:

| <u>Region</u>                | <u>Code</u> |
|------------------------------|-------------|
| Within the spill area-PWS    | PWS         |
| Within the spill area-Kenai  | Ken         |
| Within the spill area-Kodiak | Kod         |
| Outside the spill area-AK    | AK          |
| Outside the spill area-other | Out         |
| Unknown                      | Unk         |

## Source of Response

Field number 7 in each database is the source of the response. that is, whether it was received at a public meeting, mailed in, or received by telephone.

| <u>Type of Brochure</u> | <u>Code</u> |
|-------------------------|-------------|
| Mailed in               | M           |
| Public Meeting          | P           |
| Telephoned              | T           |
| Other                   | O           |

## Issues

Field number 10 on the Comments Database is for the issue code associated with each comment.

| <u>Issue or Concern</u> | <u>Code1</u> | <u>Code2</u> | <u>Explanation</u>   |
|-------------------------|--------------|--------------|--|
| ISSUES AND POLICIES     | 1            |              | General comments about issues & policy questions               |
| Injuries Addressed      | 1.1          |              | Comments about addressing population-level versus all injuries |
| Injury                  | 1.1          | Injury       | General injury comments  |
| General Resources       | 1.1          | Resc         | General Resource injury comments                               |

| Issue or Concern           | Code1 | Code2       | Explanation  |
|----------------------------|-------|-------------|--|
| <i>MARINE MAMMALS</i>      | 1.1   | Sea Mammal  | General comments on marine mammals' injury                                   |
| Harbor Seals               | 1.1   | Seal        |  |
| Killer Whales              | 1.1   | Killer      |  |
| Humpback Whales            | 1.1   | Humpback    |  |
| Sea Lions                  | 1.1   | Sea Lion    |  |
| Sea Otters                 | 1.1   | Sea Otter   |  |
| <i>TERRESTRIAL MAMMALS</i> | 1.1   | Land Mammal |  |
| <i>BIRDS</i>               | 1.1   | Bird        |  |
| <i>FISH</i>                | 1.1   | Fish        | Because of the amount of discussion on fish, individual species need coding. |
| Cutthroat                  | 1.1   | Cut         |  |
| Dolly Varden               |       | Dolly       |  |
| Herring                    | 1.1   | Herring     |  |
| Pink Salmon                | 1.1   | Pink        |  |
| Rockfish                   | 1.1   | Rockfish    |  |
| Sockeye Salmon             | 1.1   | Red         |  |
| <i>SHELLFISH</i>           | 1.1   | Shellfish   |  |
| <i>INTERTIDAL/SUBTIDAL</i> | 1.1   | Intertidal  |  |
| <i>OTHER RESOURCES</i>     | 1.1   | Other       |  |
| General Services           | 1.1   | Svc         | General Service injury comments  |
| Commercial Fishing         | 1.1   | Comm Fish   |  |
| Commercial Tourism         | 1.1   | Tourism     |  |
| Passive Use                | 1.1   | Passive     |  |
| Recreation                 | 1.1   | Rec         |  |
| Subsistence                | 1.1   | Subsist     |  |
| Oiling                     | 1.1   | Oil         | People speaking of continuing oiling, oil remaining on beaches, etc.         |
| Cleanup                    | 1.1   | Cleanup     | Comments about the clean-up  |
| Enhancement                | 1.2   |             | Enhancement, ceasing restoration once recovery has occurred                  |
| Location                   | 1.3   |             | General location comments  |
| Perryville                 | 1.3   | Perryville  | Perryville outside spill area  |
| North                      | 1.3   | North       | Extending spill area north   |
| Effectiveness              | 1.4   |             | Our effectiveness question   |
| Opportunities for H.Use    | 1.5   |             | General comments about opportunities for human use.                          |
| Don't build                | 1.5   | No build    | Don't build facilities   |
| Public use cabins          | 1.5   | Cabins      | Public use cabins  |

| Issue or Concern                            | Code1 | Code2         | Explanation  |
|---|-------|---------------|--|
| <b>CATEGORIES OF RESTORATION ACTIVITIES</b> |       |               |  |
| Habitat Protection & Acq                    | 2.1   |               | General habitat protection comments  |
| Pro Hab                                     | 2.1   | For Habitat   | Comments pro habitat protection  |
| Con Hab                                     | 2.1   | Con Habitat   | Comments against habitat protection  |
| Specific areas                              | 2.1   | Various       | We need to individually code comments about specific areas if a bunch of people spoke about them. We will code these as they come to us.   |
| General Restoration                         | 2.2   |               | General comments about general restoration   |
| Specific options                            | 2.2   | Various       | We need to individually code comments about specific options if a bunch of people spoke about them. For example, the Seward sea life center, etc. We will code them according to the list in the brochure: (Starting from one and going down). For example:<br>GR1: Determine the effects of dist...<br>GR2: Implement cooperative prog...<br>And so forth |
| Monitoring & Research                       | 2.3   |               | General comments about monitoring  |
| Recovery/Restoration                        | 2.3   | Recovery      | Recovery & Restoration Monitoring  |
| Ecological Monitoring                       | 2.3   | Ecological    | Ecological monitoring & research   |
| Research                                    | 2.3   | Research      | General research comments  |
| Admin & Pub Info                            | 2.4   | Admin         | General comments about administration & public information   |
| Spill Prevention                            | 2.5   |               | General comments about spill prevention  |
| Pro spill prevention                        | 2.5   | Pro Prevent   | Comments pro spill prevention  |
| Local Facilities                            | 2.5   | Local Prevent | Need for local spill-prevention facilities   |
| Con spill prevention                        | 2.5   | Con Prevent   | Comments against spill prevention  |
| Education                                   | 2.6   |               | General comments about education   |
| <b>SPENDING</b>                             |       |               |  |
| Endowment                                   | 3.1   | Endowment     | General comments about endowment   |
| Pro Endowment                               | 3.1   | Pro Endow     | Comments pro endowment   |
| Con Endowment                               | 3.2   | Con Endow     | Comments against endowment   |
| Alternatives                                | 4     |               | General comments about alternatives. Where there are enough comments pro and con, we will break them up into at least these subcategories. Currently, however, we guess that this will only be necessary for alternatives #2 & #5.   |
| Alternative 1                               | 4.1   |               | Comments about alternative 1   |
| Alternative 2                               | 4.2   |               | Comments about alternative 2.  |
| Pro Alt 2                                   | 4.2   | Pro Alt2      | Comments pro alternative 2.  |

| Issue or Concern    | Code1 | Code2    | Explanation                                    |
|---------------------|-------|----------|--|
| Con Alt 2           | 4.2   | Con Alt2 | Comments con alternative 2.                    |
| Alternative 3       | 4.3   |          | Comments about alternative 3.                  |
| Alternative 4       | 4.4   |          | Comments about alternative 4.                  |
| Alternative 5       | 4.5   |          | Comments about alternative 5.                  |
| Pro alt 5           | 4.5   | Pro Alt5 | Pro alternative 5.                             |
| Con alt 5           | 4.5   | Con Alt5 | Con alternative 5.                             |
| PROCESS             | 5     |          | General process comments                       |
| Civil Settlement    | 5.1   |          | General comments about the civil settlement    |
| Criminal Settlement | 5.2   |          | General comments about the criminal settlement |
| Trustee Council     | 5.3   |          | Comments about Trustee Council                 |
| Local control       | 5.4   |          | Comments about local control or empowerment    |
| Regional Bias       | 5.5   |          | Comments about region being ignored, etc.      |
| Brochure            | 5.6   |          | Comments about the brochure                    |

### Quotable Quotes

Each comment is assigned a "quotable quote" code. Only quotable quotes would be included in the report to give the flavor of the comment.

|              |   |
|--------------|---|
| Quotable     | Q |
| Not quotable |   |

### Fact/Value

Each comment is assigned a "fact/value" code. In reporting comments, we would try to separate comments about facts from those about values.

|       |   |
|-------|---|
| Fact  | F |
| Value |   |



## Restoration Planning Working Group

EXXON VALDEZ OIL SPILL RESTORATION OFFICE

645 "G" Street

Anchorage, Alaska 99501

TO: RPWG DATE: June 21, 1993

FROM: Veronica Gilbert

RE: Schedule for Receiving Comments on Alternatives through Toll-Free Calls

Some time ago RPWG assigned me to develop a process for handling toll-free calls conveying comments on alternatives. Here it is:

1. All calls will be received in the library. If a caller indicates that he or she would like to convey comments on alternatives, the call will be transferred to the RPWG area. [Dave Gibbons has already made these arrangements with the library.]
2. Two RPWG staff will be on call every week. The two assigned staff should work as a team: one team member must be available at all times. No one member of the team should be forced to bear the entire burden.
3. Each team should obtain a stack of questionnaires from OSPIC (near L.J.'s office). They should also obtain the telephone recording device, cassette recorder, and unused tapes from the team on duty the previous week. I will buy this stuff and give it to the first team on duty.
4. If the caller simply wants to complete a questionnaire and convey relatively brief comments, record them on a blank questionnaire. For comments other than multiple-choice responses, use one paragraph for each topic. Before hanging up, ask the caller for his or her name and address or at least the community they live in or the organization they represent. Record this information in the space provided in the lower right-hand corner of page 7 of the questionnaire. To the left of the address block, write "T" to indicate that the comment was submitted by telephone and also the date of the call.
5. If the caller wants to convey lengthy or complex comments, offer to tape them so that we can record them accurately. If the caller agrees to allow his or her comments to be recorded, activate the telephone recorder device. At the end of the recording make sure the caller gives his or her name and address or at least the community. For the record, state the date of the call. [We don't know if we will have to tape any calls, but if the need arises we should be prepared.]
6. Give completed questionnaires and tapes to Rebecca Williams.
7. Barbara will transcribe the tapes by August 6 or shortly thereafter.

Based on the vacation schedules you all provided last week, I am proposing the following assignments:

|             |                   |
|-------------|-------------------|
| 6/28 - 7/02 | Karen<br>Chris    |
| 7/06 - 7/09 | Sandy<br>Bob      |
| 7/12 - 7/16 | Carol<br>Veronica |
| 7/19 - 7/23 | Sandy<br>Veronica |
| 7/26 - 7/30 | Ray<br>Bob        |
| 8/02 - 8/06 | Ray<br>Chris      |

Please review these procedures and assignments and let me know by noon Thursday, June 24, if you would like to make any changes. Everyone has been assigned to two weeks, except for Carol and Karen because they will be unavailable much of the summer and John because he is in Juneau. Once the schedule is finalized, we will supply it to the Ron, CACI receptionists, and library staff so everyone knows who is to field calls.

Thank you.

## Restoration Planning Working Group

EXXON VALDEZ OIL SPILL RESTORATION OFFICE

645 "G" Street Anchorage, Alaska 99501

RPWG agrees to the following:

1. The Trustee Council will adopt, through the Restoration Plan, policies, restoration objectives, and evaluation procedures regarding restoration projects. The policies would deal with the five issues raised in the brochure and, perhaps, those dealing with priorities and whether or not restoration actions would be limited to areas where damage assessment studies documented injury. The plan would also establish restoration objectives and prescribe procedures for evaluation of potential restoration projects. The evaluation procedure would include technical, scientific, public interest, and legal considerations and would be similar for options and projects.
2. Existing options have undergone technical and scientific review, but not legal review. They also need further public interest review. Options would not be included in any final document unless they successfully pass all aspects of the evaluation procedure -- technical, scientific, legal, and public interest.
3. The results of the options evaluation process should be included in "recovery plans" that describe how restoration actions could be used to attain restoration objectives. Recovery plans would be updated annually.

RPWG disagrees about which document should contain "recovery plans" . Alternative views on this issue are as follows:

1. Include "recovery plans" in the draft Restoration Plan for the purpose of obtaining legal and public interest review.
2. Include "recovery plans" in Annual Work Plans, but not in the Restoration Plan.

## RPWG AREAS OF AGREEMENT

1. The RP will have only policies and evaluation procedures (including public interest) that guide the development of the work plan.
2. The RP will have the above and a description of some activities (options) that have been evaluated and determined to be consistent with the policies and evaluation (including public interest) procedures.
3. The RP has #1 and will specifically describe the activities (options) that are part of the RP. The RP will have provisions for adding additional activities (options) through the life of the plan.
4. The plan will have #1 plus a description of activities that have been scientifically evaluated, possibly but not legally evaluated, and are consistent with evaluation procedures.

Veronica suggested the following additional language:

In the agreement area add: RPWG agrees that existing options have undergone a technical and scientific review but not legal review and need additional public interest review.

## RPWG AREAS OF AGREEMENT

1. The RP will have only policies and evaluation procedures (including public interest) that guide the development of the work plan.
2. The RP will have the above and a description of some activities (options) that have been evaluated and determined to be consistent with the policies and evaluation (including public interest) procedures.
3. The RP has #1 and will specifically describe the activities (options) that are part of the RP. The RP will have provisions for adding additional activities (options) through the life of the plan.
4. The plan will have #1 plus a description of activities that have been scientifically evaluated, possibly but not legally evaluated, and are consistent with evaluation procedures.

Veronica suggested the following additional language:

In the agreement area add: RPWG agrees that existing options have undergone a technical and scientific review but not legal review and need additional public interest review.