

**RESTORATION PLANNING WORK GROUP/PARAMETRIX MEETING**  
**JANUARY 27, 1993**  
**10:00 A.M.**

**ATTENDEES**

John Strand  
Mary Sue Brancato  
Don Weitkamp  
Ray Thompson  
Jim Richardson  
Chris Swenson  
Karen Klinge  
Gail Irvine  
Sandy Rabinowitch  
Mark Fraker  
Jon Isaacs  
Bob Spies via teleconference

**AGENDA**

Welcome and Introductions - John Strand  
Purpose and Expectations of Meeting - John Strand/Don Weitkamp  
Outline of Monitoring Plan - Mary Sue Brancato  
    -Parametrix' understanding of the project  
    -Parametrix' approach  
    -Conceptual outline  
        -Generic  
        -Project specific  
-Workshop Design - Mary Sue Brancato  
    -Objectives/goals  
    -Participants  
    -Format  
    -Schedule

**The following was distributed:**

Conceptual Monitoring Model

John introduced Mary Sue and Don to Mark Brodersen of the Restoration Team. Pete Peterson was unavailable to attend via teleconference but agreed to review any products developed. Bob Spies stated that he also has commitments later in the day and will need to be disconnected from the teleconference in about an hour. Jim Richardson, a member of the peer review team, was also introduced. The purpose of this meeting was a need to come together for meaningful development of our project. The agenda includes looking at a working outline of the conceptual plan and discussing in more detail the workshop, which will help develop input to the conceptual plan. Don and Mary Sue will lead a discussion of these interim products. This will be the first major step in developing this contract. John stated we have provided background information to

Parametrix on the work (response, damage assessment, restoration) to date. Don stated he expected to do what has been outlined; however, they have come prepared to be pretty flexible. Many peer reviewers have been contacted already. Mary Sue and Don will be here tomorrow also to get as much accomplished as possible. They would like to start off generally conceptually and get more specific later. John stated that a room is available for Mary Sue and Don to use as a base of operation to talk with other RPWG members. John stated that many of those here have already been involved in coming together to develop the study plan for the monitoring design contract, and are aware of what Parametrix responded to in the RFP. Most people have a good idea what we are driving at in Phase I of this contract.

#### **OUTLINE FOR CONCEPTUAL MONITORING PLAN**

Don stated that Parametrix wants to be sure that we are all going in the same direction and get an idea of what is expected of the conceptual monitoring plan. Don stated we will begin with a model which has the basic elements expected in a conceptual monitoring plan. We need to take it step by step and reach basic agreement so that a consensus approach is followed. Don stated basically they are trying to do what RPWG would do if there were no other restrictions and responsibilities. It is their intention to do what we expect. Don stated that the model comes from plan logic and common sense. A lot of review has already been done and this is not being developed as we go along. They are trying to involve as many people as possible to have input in the process. Three groups are being utilized: scientific, agency and the public. The written proposal included a scientific group which has been deleted because of overlap with Bob's peer reviewers.

Don distributed copies of the conceptual monitoring model for review and suggestions. Because of their importance in the early phase of this process, he would like to deal with the first three basic circles: needs, environmental conditions, and objectives. John stated that Phase I lays the groundwork by establishing the process that we will follow to develop a monitoring plan. Phase II deals with development of detailed sampling protocols, QA/QC, etc., and is beyond the scope of this contract. Don asked if there are any questions and asked if RPWG was comfortable with the flavor so far. RPWG stated they were. Mary Sue discussed the specifics of the conceptual model. The needs were outlined using interviews, background material and the RFP and were based on the existing environmental conditions. Don stated that the statements were kept fairly general in identifying needs. He also wanted to represent that there is feedback as you go along and learn different things; however, the needs may not change. Gail asked how the needs relate to environmental objectives. Don stated the needs are the things the various parties want. The environmental conditions are what exist, such as an institutional constraint. So this addresses what we want and what we have to live with. Karen asked what the

communities refer to. Don stated that this is a difficult issue for them at this time, and they will need input from RPWG as far as who are the communities and how do we get their interest. Several technical experts have raised the issue of subsistence and recreation use and they would like as much help as RPWG can provide. Sandy stated that John and Chris have prepared a chart which lists the communities which were affected at one time or the other by the oil spill, and feels it will be extremely useful to Parametrix. Chris stated there has been a historic problem with subsistence users not accepting the data prepared by agencies. Don stated that this will be a good point to address in developing criteria for studies. Mary Sue stated it depends on whether you look at monitoring the people or the catch. Sandy stated that a component of the injury of some of the services is in people's head as a perception. A good analogy is that there are a couple thousand people spread out in these villages who depend on these resources for a large part of their diet, and they are less than confident about their food supply. A few years ago because of three bottles of contaminated Tylenol, the product was removed from the market from the entire country.

Don stated we need a definition of services which are expected to be covered. Ray stated he was looking for something more general and would like some definition of what comprehensive and integrated monitoring programs might be. Don stated a qualifier is that these are not really their ideas but what they are obtaining from others. They are trying to keep their own personal biases out of this. Their criteria is to select representatives of the ecosystem to get the most information possible. John stated that this is important in getting at the needs and what this program will address.

Mark stated he was involved in developing conceptual models of how parts of the ecosystem worked and was involved in hypothesis testing using this approach. There is the notion that because of the ecosystem's complexity, we should not try to deal with the whole ecosystem but should work first with the components. It is better to focus on one species and collect relevant information about the species relationships to the whole system. Mark asked how do you decide what to study and stated that VECs (valued ecosystem components) might be helpful. Adaptive Environmental Assessment Monitoring, an approach developed by UBC and LGL consultants, showed problems with the way things were being done (how we identify and prioritize monitoring and research needs). The notion was to go back and revisit data regularly to find out what is relevant, which will reveal what needs to be changed in light of new information. Don stated that there needs to be accountability because there are so many parties involved in the process. The integrated monitoring addresses how the data is recorded and integrated with other efforts. Mary Sue stated that there are many monitoring programs, and it is important to integrate them. Time and space are real issues but a trend needs to be established.

Jim stated that for all services, there are a number of problems in assessing impact. There is not a great deal of pre-spill or post-spill information because of the fairly scattered, remote area. From the outset there is a limit of available information. How the people were damaged has not been asked or exhausted. Bob Loeffler and Veronica Gilbert developed a questionnaire using a key informant approach to target user groups. With user groups there is a lot of seasonality involved. Another survey was done by The Nature Conservancy which conducted interviews with various user groups discussing impacts. While the information has been summarized, it has not been analyzed. It is, however, a start to showing the actual impact. Jim stated that you might not be able to do a lot for all these groups because in some cases the damage is perceptual and difficult to find out. Jim suggested the work previously mentioned might be used to find out what activity was being done and where and its importance to the users' experience. In determining this, you might be able to remove a threat. The first step is finding out what these users need. Sandy stated that RPWG has taken a stab at what the injuries are. Jim stated that is a lot more than what was known before.

Mary Sue stated that there is a distinction between monitoring activities and monitoring the biological aspects and questioned where is the line drawn in monitoring. Jim stated we need to go back and make assessments. If you are looking to do something to provide restoration to a particular group, you might want to take away a threat or try to enhance the use. Mary Sue stated that seems to be restoration more than monitoring, and used as an example, a group that will propose restoration options for enhancement. It is her understanding that monitoring is done to assess the effectiveness of the options. Don stated that in trying to assess attitudes, there is a tremendous difficulty because people will try to convey a different attitude and also you can influence an attitude just by paying attention to it. Don further asked how can we develop monitoring that will give realistic feedback.

Jim stated that an activity may become more crowded when people are made aware of it. An exercise when you don't have the initial baseline is to examine how much was caused in response to oil-related activities. Chris stated you must quantify the measurability of each monitoring method. Don stated that we will develop a matrix that has a substantial list of criteria. It will be of value for everyone to think of what criteria can be used to evaluate the various proposals for monitoring.

Mary Sue asked how much feedback is there from the Trustee Council. John stated that most feedback from the Trustee Council will be received through the respective Restoration Team members. Mary Sue wanted to know if there was any particular area which they needed to be sensitive to. Sandy stated that the Public Advisory Group (PAG) is a legal part of the settlement, and it might be important

for Parametrix to be sensitive to the PAG as it consists of 17 user groups. Mary Sue stated it would be useful to know which interests are represented. A copy of the list of PAG members will be provided. John stated the Restoration Team was invited to attend today's meeting; however, they had their own meeting scheduled. They will want to review the Phase I conceptual plan. The Trustee Council will be interested in the conceptual plan from an information point of view, but will want to approve the Phase II document (detailed technical plan). Sandy stated that the Trustee Council will be particularly concerned about money. Mary Sue asked if the Trustee Council will be involved in deciding the monitoring criteria to be used in Phase II. John stated that this will most likely be the responsibility of the RT or RPWG.

Jim stated that in reference to using an ecosystem approach in monitoring a service area, you could take the approach to work from the service up and find out what are the most important and highly used areas, which helps in prioritization. The Nature Conservancy has two binders of information. John stated that he does not know the availability of this information; however, he will ask Art Weiner if Parametrix can have access. Ray will also provide Forest Service information to Parametrix and Jim. Mary Sue stated the 1993 Draft Work Plan states some of the items to be monitored are wilderness and intrinsic values and asked if this includes national parks. Sandy stated there is a difference between wilderness and intrinsic values with a variety of laws which define them. Legislated wilderness is perceived wilderness. Intrinsic values have not been defined yet. There was some intent to define this pre-October 1991 when litigation was imminent. Chris stated there have also been some economic studies released which are available through OSPIC.

Mary Sue asked about identification of uplands because the work plan states that one of the monitoring items is adjacent uplands. John stated that The Nature Conservancy put together for the Forest Service a guidebook on how to identify which uplands are important and should be acquired. Don asked where Harlequins nest. Gail stated they nest upriver. John added they nest in riparian habitat along streams and rivers.

Gail stated we should consider starting spillwide and narrowing down and asking how generalizable are some injuries. There should be a spillwide-approach for scrutiny sake. There are broader spill issues that should be addressed in the monitoring plan. Don stated that you should look for the highest impacted area, considering the limitation of funds.

Mary Sue asked for information on recovery rates. John stated that copies of the final literature synthesis reports from Hubbs-Sea World, Point Reyes and San Diego State University will be provided to Parametrix, along with the annotated bibliographies.

Lunch break 12:05.

Bob was reconnected and asked if any one thing was discussed more than others in his absence. Don stated that services generated the most discussion and gave an overview of other areas which were discussed. John faxed Bob a copy of the conceptual monitoring model handout. Don stated we are trying to get agreement on three basic elements of the conceptual monitoring plan: needs, environmental conditions and objectives. Don stated he is comfortable with Spies' role in things prior to today.

Mary Sue began discussion of the first three circles on the diagram. Input for needs was received from interviews and background material. An opportunity was given for review of the needs. Mary Sue explained in more detail each of the needs. Gail asked what is restoration monitoring. Is it monitoring restoration of activities or monitoring the results of certain end points? Don stated that restoration includes protecting things and leaving them alone and that any kind of monitoring which monitors what is going on would be restoration monitoring. John stated that one of the concepts that came out of the literature synthesis was the need to define what recovery meant. RPWG has taken a crack at defining it in the framework document. Don restated the question, can you measure what has changed for the service as the only quantitative indication? Mary Sue stated that the biological versus the human aspect have been discussed previously.

Sandy stated there is a general perception that the spill area is wilderness. There are large areas that are designated wilderness by Congress or the state legislature. The difference could be important in some aspect of monitoring services. In a legal designation, you have a long-term guarantee that the lands will be managed according to statute. Don stated that he gets the impression that those non-defined wilderness areas are very important to many people. Sandy stated it is important when people see changes that they don't anticipate. Sandy gave the Cordova Road as an example.

Mary Sue stated that for each resource, pre-spill recovery is what is put into this model to have a way of evaluating if restoration activity was effective. Much feedback was received from the peer reviewers on the need to frame testable hypotheses where possible. Sandy asked for definitions of what types of hypotheses should be tested. Mary Sue stated it must be quantifiable, measurable and repeatable. Why a monitoring program is necessary must be made clear. Studies must be carried through the life cycle. Uncertainty refers to natural variation in populations, for example, how one population might increase and another might not. Don stated there will be a level of uncertainty when dealing with perceptions. Sandy stated RPWG has done a lot of work with the concept of uncertainty. There is an interesting body of work dealing with certainty, which talks about words used to describe things. Don

stated this type of information will be useful in the monitoring plan. Mary Sue stated that this method has been used in risk assessment. Jim stated that a jump from this is what does this mean in terms of risk assessment and understanding the damage. Don stated that this is a type of study which might not meet federal criteria because it does not have a testable hypothesis. Mary Sue asked for any suggested additions to the restoration needs category. Sandy suggested adding: develop a publicly credible program. If this isn't understandable by a broad sector of the public, they may not buy it. There is a huge public interest about the whole product. Don stated that this had come up earlier in discussion of services and asked if someone in the process has a reasonable understanding of what will make something publicly credible. Sandy suggested an editor could make the product a readable document which the public could understand. Jon stated that the value of restoration monitoring and its place is important to get across to the public. John stated that there were several favorable public comments regarding monitoring. Jim stated that a subset to services is that you need to identify restoration activities through some of the things we have discussed. Some information needs to be compiled on where people were injured before you can go to developing a monitoring plan. Mary Sue asked the distinction between restoration activity and monitoring and questioned if this is something the work groups are dealing with. Sandy stated that this text of the Restoration Plan has been written. Mary Sue stated that they are going on the assumption that the list has been defined by the work group and will develop criteria for which of these should be monitored. Mary Sue asked how long is the review process. John stated that in a couple of weeks, we would like to have it to a point to show the Trustee Council.

Sandy stated there has been debate about whether developing baseline data in preparation for the next spill is allowed under the terms of the civil agreement and doesn't feel it is expressly provided for under the civil agreement. Don stated that a number of people feel this is appropriate to include; however, if we can't, we have to be clear about why we can't. Gail expressed concern about the use of the term "baseline". Mary Sue stated that as far as gathering data and using the food chain approach, then you are going to collect some baseline data. The criminal settlement states there will be some monitoring. Sandy stated he isn't concerned with the activity but with the words used to present it. John stated it is an issue of presentation and the utility of monitoring can be used as a baseline to determine impacts from future change. Bob stated that there is rationale built in for study. Jon stated that if some of the data had been available, it would be easier to do services. Don stated that the people directly involved understand baseline but not those outside the scientific community. Mary Sue stated that this could be effectively reworded. Jim stated he was involved in an economic analysis of Glacier Bay and much of the information received was

unusable because of the lack of data. A model was developed which had a lot of blank cells in it. It is more useful to obtain information while people are thinking about who was hurt and what was the damage.

Sandy asked what kind of specificity they were thinking about in reference to trends in condition. Mary Sue stated that the feedback led to many definitions of condition such as reproductive success and growth. It also depends on the restoration option authorized. Don stated there is an inherent belief by many that the marine environment is constant.

Mary Sue stated that there was concern that restoration funds would go to programs which were routinely supported by agencies and were not new activities. Jim suggested that the best information on this will be received from talking to people individually and not in a public forum. Mary Sue stated that there was some concern expressed over who was involved in this process, that data was not correctly synthesized and shared, and that monies were going to federal and state agencies rather than utilizing experts nationwide. Don stated there are high levels of expertise, including non-involved expertise which should be brought it.

Mary Sue discussed the list of environmental conditions, which were also gleaned from the interviews. Sandy suggested two additions: the 1969 Organic Act and amendments and ANILCA. Don stated the objective was to state the obvious. Jon asked if there is a feeling for oiling in the sediment. John stated the geographic extent is not known at this time. Gail suggested adding uncertainty about the spillwide-effects. Don stated when the life cycle of the organism is known, it allows for interpretation and comparison. Jim suggested including existing management plans outside three mile limits. Karen asked if the monitoring plan will examine the feasibility and impacts to sea ducks in the Yukon-Kuskokwim Delta because there are effects outside the spill zone. Karen also asked if there is a place in the plan for experimental restoration techniques, such as using decoys to stimulate colonies to get back on a synchronized breeding schedule. They are now being looked at as special studies. John stated it might be implicit under the baseline monitoring category that you would conduct research to determine what other restoration approaches to use in the face of one not working. Mary Sue asked if any experimental studies have been funded. John stated that *Fucus* recolonization was one example. Karen stated that she is not sure that the category of special studies will work and feels there should be a component which allows for this. John stated that monitoring should address future research needs, but the cost of studies to get at what other restoration might be appropriate probably has to be dealt with as a proposal on an annual basis. Karen asked how long after a species recovers do you keep monitoring them. Don stated that is a decision point, but you would assume it is an assumption to cease monitoring at that point. Sandy suggested adding to existing



environmental conditions: where will the work actually be done. Land use can be changed in localized areas due to changes in government, which brings up the question: is there some benefit to considering areas where long-term management is locked in. Don stated that you might want to monitor some areas which are likely to change. Karen stated you might want to add special designations, which would insure that recovery will continue at a natural progression. John stated NERS (natural estuarine research sites) might be appropriate locations/designations for studying recovery. Jon stated if you want to keep long-term monitoring going, this might be something to look at.

Mary Sue stated that in conversations with the regional citizens advisory committee (RCAC), they do have some form of baseline data which they plan to collect. John also suggested consulting the shoreline monitoring information developed through HAZMAT. Mary Sue asked for contacts for determining what type of monitoring is being done with settlement funds. Karen asked if a monitoring panel is envisioned to review proposals. John stated he envisioned annual work plans for monitoring being reviewed by some group which screens proposals for funding. Jon stated you may have some group which provides direction. John stated there possibly will be an interagency group which guides the implementation of monitoring, but designing the infrastructure to manage the monitoring program was an issue to be addressed by the Parametrix contract.

Don stated that how and where in the conceptual monitoring plan accountability will occur needs to be discussed. A principal investigator may see monitoring differently from the peer reviewer.

Don asked can agencies be contracted to do work? John stated that would probably be subject to approval of the Trustee Council. There is also the issue of endowment. Mary Sue asked if there will definitely be an endowment. John stated that it is more of an option presently, but there is much political pressure to use an endowment as a funding vehicle.

Mary Sue asked what projects were approved. Barbara stated that a matrix is in the draft stages which contains projects approved at the last Trustee Council meeting. The matrix has to be approved by Dave before being distributed to the public.

John stated that RPWG, in conjunction with Bob Spies, is about to produce a chapter on injury assessment which might be helpful. Karen asked if there is anything in the monitoring plan which deals with the fact that so many of the monitoring studies are in PWS. Mary Sue asked if the restoration activities are covering broader ranges. Karen stated this is unresolved but is still being dealt with. Don stated that in order to be comprehensive, we need to cover space and time and also be economical because you can't cover everything. Sandy stated it is a myth that because you have the most amount of oil in PWS, you have the most amount of damage. The

largest number of bodies for dead birds came from outside PWS. Gail stated that you have the potential for long lasting effects outside the Sound because of emulsification of oil.

Sandy stated that the Restoration Plan will speak in more generic terms about options. The plan tries to stay above the level of specificity. Mary Sue asked if RFPs are solicited for the work. Karen stated you determine which ones need to be done first. Projects will be done through RFPs. Mary Sue asked if you would get bidders and evaluate those based on geographic distribution and how much information will be provided. John stated yes. Don asked if injury is not identified or restoration is not specified, will monitoring be funded in that area. John stated if you wanted to monitor something and there was no agreement there was injury but there was some link ecologically to an injured species, then there may be justification to include it.

Break at 3:40.

Mary Sue suggested the options of working on objectives now or having Parametrix use the information received from RPWG regarding expectations and taking a crack at drafting objectives. John stated RPWG would prefer that Parametrix draft some objectives and forward them to RPWG for review.

Jim stated that he could probably be dismissed at this point. John stated the procedures for setting up the workshop will be discussed. Don stated that if Jim has things to contribute down the line, to please call he or Mary Sue. Jim recommended asking Steve Planchon to attend the workshop.

#### **WORKSHOP DESIGN**

Mary Sue lead discussion of the following components of the workshop:

**Schedule** - John recommended late March or early April. Don stated the workshop centers around a draft product. The length of the workshop was also discussed. One day will be needed to focus a fairly large group of participants. John asked from Parametrix' perspective, what is the best time. Mary Sue stated she would agree with late March or early April. The group concurred on April 13-15. John also stated that RPWG has two weeks to go through a draft of the conceptual plan. Sandy suggested that the meeting could be held somewhere other than Anchorage. John stated that in order to give the Restoration Team an opportunity to attend, the meeting would need to be in Anchorage.

**Format** - John stated this would include some view of the workshop. Mary Sue suggested having subgroups with facilitators expressing what their groups had discussed. Sandy suggested that the approach The Nature Conservancy used for their key informant interviews

might be used for this workshop. Don agreed and stated he has had bad experiences with some workshop approaches. Telephone interviews have been a way of getting around one person being more vocal. Don stated we need to discuss what to implement which will give the best opportunity for obtaining information. Mary Sue suggested that the participants be monitoring experts. Don stated that they could probably speak with Steve Planchon to get a feel for the approach used by The Nature Conservancy. John stated that Karen had also used key informant interviews. Don stated that he will also talk with Karen for input. Sandy stated that The Nature Conservancy talked with a large number of people and got a phenomenal amount of data. The goal is to get the best information.

**Participants** - Mary Sue suggested Ken Reckhow as a participant because of his trend analysis expertise. John suggested Allen Merns because of his background in monitoring program design. John Paul, EPA, was also suggested. Gary Davis was suggested by Gail. John asked what number of participants could be accommodated. His initial view was that it should be a manageable number of people where you could get good insight for both resources and services. Gail suggested inviting Stan Senner. Sandy stated that some suggestion for services participants are also needed. John asked how many are needed. Sandy stated we need as many to cover the subject areas but not an excess of people and cost. John stated that the forum cannot be closed to RPWG or the Restoration Team. Mary Sue stated that the subgroups should not be large. Don stated that a subgroup of five would be a reasonable number. Mary Sue stated that we should aim for between 4 and 8 in a subgroup. Participants should represent each of the damaged resources. The number of total participants will be 30 to 40. Sandy encouraged some real emphasis on running the meeting with strong facilitators. Mary Sue asked how RPWG wants them to proceed with the workshop. John stated that Parametrix could explore a format and provide ideas to RPWG.

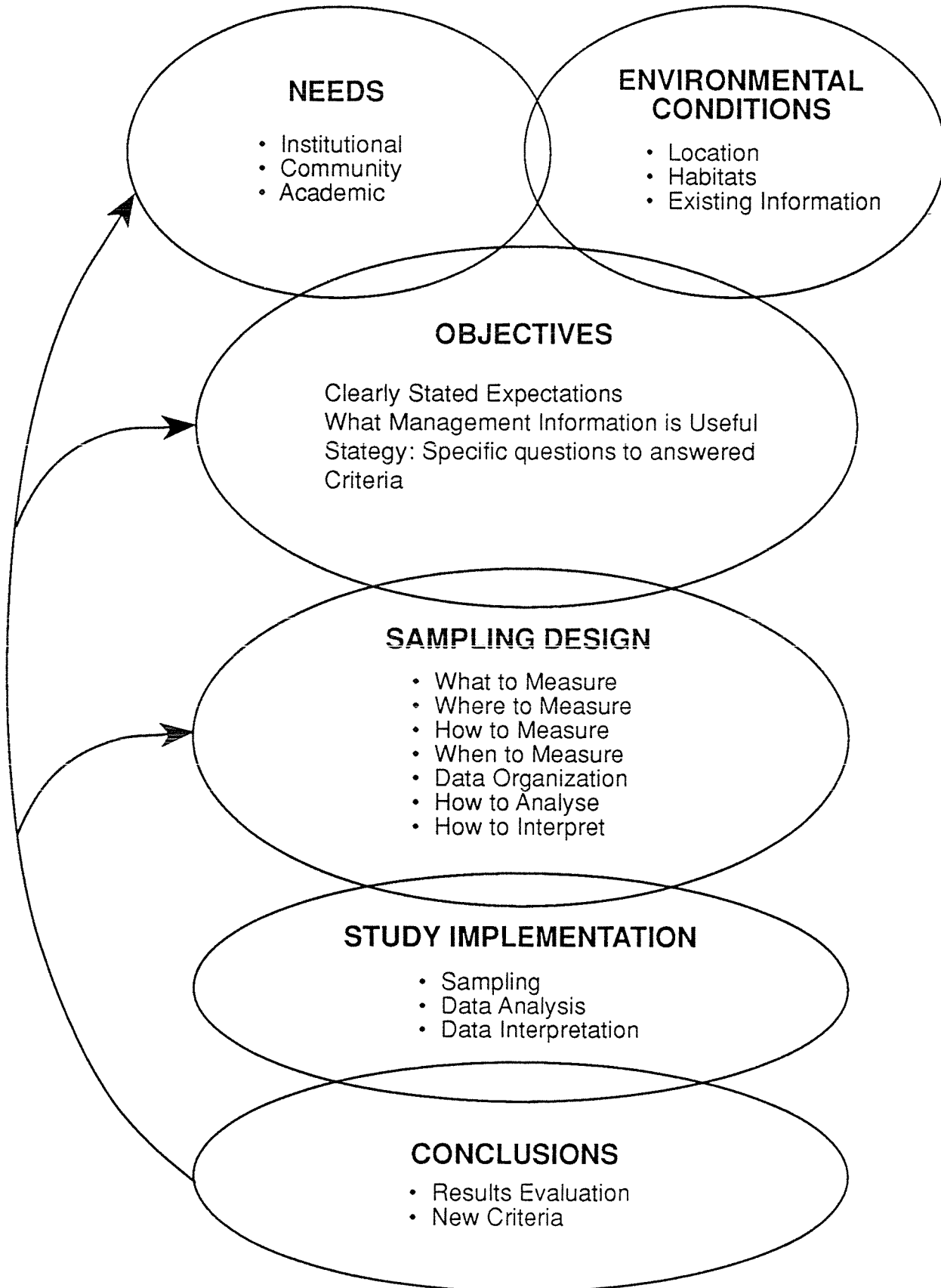
Meeting adjourned at 5:10.

**AGENDA****Monitoring (Conceptual Design) Planning Meeting****January 27, 1993****10:00 AM, CACI****First Floor**

- I. **Welcome and Introductions (John Strand)**
- II. **Purpose and Expectations of Meeting (John Strand, Don Weitkamp)**
- III. **Outline of Monitoring Plan (Mary Sue Brancato)**
  - A. Parametrix' understanding of the project
  - B. Parametrix' approach
  - C. Conceptual outline
    - (a) Generic
    - (b) Project specific
- IV. **Workshop Design (Mary Sue Brancato)**
  - A. Objectives/goals
  - B. Participants
  - C. Format
  - D. Schedule



# CONCEPTUAL MONITORING MODEL



## RESTORATION MONITORING EXXON VALDEZ

### NEEDS

#### Restoration

- develop a comprehensive and integrated monitoring program (blueprint for, with alternative levels of effort)
- document recovery (presence, absence, rate, mechanism)
- establish priorities for restoration monitoring
- monitor testable hypotheses where possible
- define why monitoring is necessary
- include an ecosystem level understanding of recovery
- develop a scientifically credible program that acknowledges uncertainty

#### Baseline

- develop baseline data in preparation for next spill
- provide guide to restoration activities
- produce information for long-term management
- provide well documented data base
- document long-term trends in condition of resources and services (trend analysis)

#### Institutional

- prevent use of restoration funds for routine agency activities
- provide information to all user groups
- assure human health protected
- involve experts in sampling design and data interpretation

### EXISTING ENVIRONMENTAL CONDITIONS

- cleaned spill beaches
- uncleaned spill beaches
- adjacent beaches and habitats with no oil
- some populations reduced or impacted by spill
- ongoing management and environmental monitoring (i.e., fisheries resources, RCAC)
- Endangered Species Act, MMPA, Migratory Bird Act, Stellar Sealion exclusion zones
- limited baseline data
- basic biology of some injured species unknown (e.g., Marbled Murrelets)
- Natural Resource Damage Assessment (NRDA) data

### OBJECTIVES