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INTERIM SCIENCE REVIEW BOARD
JULY 10-11, 1994

ATTENDEES

Bob Spies
Chris Haney
Andy Gunther
Phil Mundy
Stan Senner
Pete Peterson

R - Responsive/Technical
Q - Qualifications/Facilities
C - Cost Effectiveness

Project	Title	Reviewer	R	Q	C	Comments
95042	Five-year Plan to Remove Predators from Seabird Colonies					Leave for consideration
95047	Seal Contamination					Get rid of
95049	Independent Review of Restoration and Monitoring Projects					Get rid of and may come back under RFP. Mundy - my scores would do this project in.
95050	A Test of Sonar Accuracy in Estimating Escapement of Sockeye Salmon					Mundy - not a bad concept, just not the right time; question of measurement of precision; the instrument has a short-term future. We would encourage testing of the accuracy of the replacement equipment.

95053	Cordova's Mini Imaginarium					Haney - it does not address an injured resource or service. Spies - it does not have any technical content. This is a policy issue.
95056	Monitoring Visual Sensitivity in PWS					Senner - tour-boat tourism was not an injured resource/service. Tours increased after the spill because people wanted to see what happened. Haney - the basic idea is to do a contingent valuation survey. I am concerned that this has not ever been done for the Sound. If it had, you could measure these intangible losses. (This project was withdrawn by the FS). Peterson - is there sufficient socio-economic work on this? Senner - what is the evidence of diminished recreation industry? Haney - is there a decline in the perceived value in PWS?
95079	Pink Salmon Restoration through Small-scale Hatcheries					Spies - he had problems with the concept of having another hatchery. Mundy - they are talking about doing something that is far more complex than they can ever imagine. The implementation is extremely difficult. Not a good thing to spend money on because more sophisticated genetic tools are needed. Senner - it is pointless to put more fish into an environment that is not responding now.
95084	Odiak Camper Park Expansion					Mundy - no scientific content. Senner - it is hard to argue they are mitigating a resource or service injured by the spill.

95085	Cordova Historical Marine Park					Mundy - it does not appear they are replacing a damaged resource; no link to restoration or recovery.
95088	Salmon Instream Restoration: Pink Creek and Horse Marine Bypass					Spies - this is a duplicate and should be eliminated and considered at 95139C.
95096	Restoration of Murres by Way of Social Attraction and Predator Removal	Haney Senner Peterson	2 2 3	1 4 ?	1.5 1 ?	Haney - it was redundant with ongoing work in the spill area. There is insufficient information for evaluating cost. Senner - this may be a concept where we have missed the boat for several years. In concept, there is merit to the idea. It was rated fairly low because there has been no indication that the social mechanism has been causing problems at the murre colony.
95097	Restoration of Murres by Way of Transplantation of Chicks: A Feasibility Study	Haney Senner Peterson Spies	1 2 1 2	4 4 ? ?	1 2 1 ?	
95099	Murrelet Vocalization in Conjunction with Artificial Nests: A Possible Means of Attraction	Senner Haney Peterson Spies	2 2 1 1	3 1 ? ?	1 3 ? ?	Senner - we don't know anything about vocalization around the nests and it seems moot. Haney - technique assumes the animals are around to hear these playbacks. It would require luck to get them attracted.

95002	Leave No Trace Education Program					<p>Spies - this would be considered as a policy question. Senner - it appears that this is a national program being done in cooperation with other agencies. It is not an oil spill program. Spies - it will be deleted from the list.</p>
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95025A	Factors Affecting Recovery of Sea Ducks and their Prey	Senner Haney Peterson Spies	3 3 4 3	3 3 3 3	2 3 ? ?	<p>Senner - there is some evidence of injury in several duck species. A lot of the duck work has focused on breeding season; however, there should be winter studies to show that some breeders are failing because of continued contamination and food shortages in the winter. There is some doubt regarding the ability to do all this work. This is a big agenda and may be too ambitious. Another red flag is in accessing the diet of female ducks. Taking 120 female harlequin ducks sounds pretty hard to sell or defend. Haney - this is a broad shotgun approach to the study. The investigators are adequate but are not specialists in this area. The personnel costs are too high. Why does the agency need money for personnel? Peterson - there are good grounds for looking at the overwintering ducks but we have no way of knowing. Haney - you have potentially population level things going on. Senner - there should be better integration with other proposals. The winter dimension is one that has been heretofore overlooked. Peterson - there are technical problems. Senner - this is potentially a Priority 1 or a Priority 2 where they go back and do their homework. Spies - there was not a great deal of integration on this project.</p>
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95025C	Pigeon Guillemots and River Otters	Haney Senner Peterson Spies	4 4 3.5 3	5 5 4.5 3	4 4 4	<p>Haney - an exceptionally conceived proposal with relevance to other studies. Other pluses were comparisons across taxa and across PWS with non-oiled sites. The budget may be more detailed than necessary. This was one of the best proposals. A lot of this may have already been done. There is a good justification made for using guillemots. Some preliminary work has already been done on river otters in Kachemak Bay. Senner - this was rated very highly. It was multi-species and involved a bird and a mammal. There was also potential to combine with or substitute for 95173. Both projects propose to get information on chick growth and prey brought back to nests. Haney - 95173 had more of a direct connection with FY95 WP. Peterson - it has a superb PI with a good record.</p>
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95173	Factors Affecting Recovery of PWS Pigeon Guillemot Populations	Haney Senner Peterson Spies	3 4 4 4	4.5 3 3.5 4	3 2 4 3	<p>Haney - the pigeon guillemot research is not identified as a high priority in the FY95 WP. It comes into play in 1996 and disagrees with the original timetable for monitoring. The species is in obvious stress throughout the Sound. Cuts here may be especially pertinent if the various elements can be picked up elsewhere. Costs for personnel seem to be especially high. Hayes is an asset because of experience with guillemots elsewhere. The project would have a higher priority in ranking in another year. Peterson - you could get some good handle on the prey field abundance; however, it needs more integration. Senner - you could integrate logistics and some of the data gathering. These projects seem to overreach and don't focus on questions. Haney - Roby could do it all; this group couldn't. Senner - there are elements that are good and distinct from the 95025C project; however, they both need to be better integrated. 95025C is a stronger proposal. Peterson - there needs to be some collaboration with fish people on the demersal fish component.</p>
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95025D	Settlement Rates of Nearshore Invertebrates, Oceanic Processes and Population Recovery, Are They Linked?	Peterson Spies	2 2.5	3 3	2.8	Peterson - there were no explicit hypotheses tests identified. It is not related to identifying slow things that are recovering. There is an issue that the original design of assessment is that where the oil hit has the greatest oil flux. Spies - the intellectual thread isn't there. There are good questions with no follow through. Salmon may be spreading himself too thin since he is working on the SEA Program also.
95025E	Algal Competition Limiting Recovery	Peterson Spies	3.5 3.5	3.5 3.5	4.0 4.0	Peterson - this project claims that Alaria has been especially slow to recover on certain shores in the Kenai Peninsula. This is something new. It involves Park Service lands. Stekoll is competent to do this. The budget seems reasonable. The problem is it seems a rather small part of our remaining concerns regarding the spill.
95025F	Availability and Utilization of Musculus spp. as Food for Sea Ducks and Sea Otters	Senner Peterson Haney	2.5 2.5 3	4 4.5 5	3 5 5	Senner - the presentation of methods was weak. Spies - this probably could be knocked out based on technical.

95025G	Recruitment Patterns of Nearshore Clam Populations in PWS	Peterson Haney	2 3	5 4	5 4	Senner - it is not clear what they are going to do. Peterson - The oil spill has not changed oceanographic patterns and we can't change them. The coordination of the physics and plankton was unconvincing. It is somewhat redundant. Haney - there was some demonstration of cost sharing on the budget. Peterson - this should be otter driven.
95025H	Effects of Predatory Invertebrates on Nearshore Clam Populations in PWS	Peterson Haney	5 3	4.5 4	? 4	Peterson - the clam recruitment is of no value to know about. There is no clear reason to think the spill has affected clam recruitment.
95025J	Primary Productivity as a Factor in the Recovery of Injured Resources in PWS	Spies Peterson	4.2 2	3.5 3.5	3 ?	Spies - this is generally a pretty good project. The question of how important pelagic production is will have to be addressed. It links the SEA results in terms of what the pelagic system is doing on an interannual basis. We are making some assumptions that if they don't pan out, will limit the use of SEA. Peterson - he doesn't see the linkage to damage. We could assume algae were hurt more than phytoplankton. He is concerned about using SEA to estimate productivity. The isotope work on organisms was very inexplicit. The budget may not be enough to do the job right. Haney - you will have all kinds of peripheral things that need to be sorted out for relevance

95006	Paint River Pink Salmon Development	Mundy Spies	1 1	5 1	1 1	Mundy - this doesn't address any of the questions we are interested in. This rated on the low side of fairly good.
95009E	Community Structure of Mobile Foragers Using the Nearshore	Mundy	4.5	4	3	Mundy - this is a pretty good project. It would duplicate some nearshore work in the SEA.
95017	Port Graham Coho Salmon Subsistence Fishery Restoration Project	Mundy	1	4	2	Mundy - this is under projects that should await legal review. The average score is 2.3. The resources were nominally damaged. The quality of the proposal was very poor.
95024	Enhancement of Wild Pink Salmon Stocks	Mundy	1	1	1	Mundy - if you make a small segment very successful and put it back into the stream, you depress the genetic diversity of the stream. This is something you have to be very careful of. This proposal would not be ranked very highly. Spies - if a large number of scientists are raising questions about the interaction of hatcheries, we have to think carefully about spending restoration money. Senner - does it help anything to have more pink salmon out there?

95043B	Cutthroat and Dolly Varden Rehabilitation in Western PWS	Mundy Haney	2 2	4 3	1 3	Mundy - they are unlikely to be able to tell what happened and whether or not it works. The monitoring philosophy is not there. This addresses an injured resource; however, we should not do any project where you can't tell what happened. What are the interactions between cutthroat trout and Dolly Varden? You might depress one population by building the other up. Gunther - there is no provision for monitoring the success of the project. Haney - it is off the focus for monitoring for the FY95 WP. Senner - in making decision about general restoration projects, one consideration is technical feasibility and likelihood of success. Chapter 3, Page 17.
95048	Historical Analysis of Sockeye Salmon Growth	Mundy	4	5	5	Mundy - one of the sockeye systems that received a large overescapement was Chignik Lake but the only information we have is scale patterns. This project is a cheap way to do more. This is a lot of information for the money. This would also address food and competition questions. Overall average is 4.6.

95009A	Trophics and Community Structure in the Intertidal and Shallow Subtidal					<p>Spies - this project didn't quite ring true.</p> <p>Peterson - how will the coastal ecosystem be changed? Spies - the fundamental question is there is no way of gluing these things together where you have small sites which have been studied, and looking at certain scales, you have invertebrate predators on different time and space scales.</p> <p>Peterson - this is not of significant importance on its own. This could show a kind of secondary impact we haven't looked at. Highsmith needs to work with an otter person.</p> <p>Spies - another concept is you have a system that you don't quite know how it operates.</p> <p>Peterson - this project is not without merit but the merit is not overwhelming. What is the difference between A and C?</p>
95009D	Survey and Experimental Enhancement of Octopuses in Intertidal Habitats					<p>Peterson - this project should be pulled out to stand alone and given a Priority 1 ranking.</p>
95009B	Primary Productivity as a Factor in the Recovery of Injured Resources in PWS					<p>Peterson - I don't see the relation of the herring eggs to the rest of the system.</p> <p>Haney - I have a problem with a big budget being devoted to primary productivity.</p> <p>Spies - this can be put in Category 2.</p>

95009E	Community Structure of Mobile Foragers Using the Nearshore					Haney - this had elements that were better than the other one. I like this idea. I don't see the foraging efficiency pulled together well in any of the other proposals. It is not really well developed here. This is a critical area for research. Senner - I had problems understanding what this proposal wanted to do. For example, how can you get information on impact without recording what the foragers are foraging on? This project is vague and is rated low enough that it probably falls out.
95009C	Trophic Dynamics and Energy Flow: Impacts of Herring Spawn and Sea Otter Predation on Nearshore Benthic Community Structure					Senner - this appears to be the underpinnings for A. Peterson - this will be the bottom of Group 1 or the top of Group 2.
95025B	Sea Otter Abundance and Distribution, Food Habits and Population Assessment	Haney Peterson	4	5		Haney - proposal seemed sketchy. The cost was modest.

95019	Distribution of Forage Fish as Indicated by Puffin Diet Sampling	Senner Haney	3 4	5 5		Haney - there is a lot here to justify a forage fish project. Senner - Hatch, Irons, and Lange should talk about joining forces to look at a suite of birds in combination with forage fish. The combination of those three projects would be sufficient to make it a Priority 1 project. Peterson - we would like to have a contrast in space as well as time.
95021	Seasonal Movement and Pelagic Habitat Use by Common Murres from the Barren Islands	Haney Senner	3 4	5		Haney - there is a high probability of failure because of the equipment. It would be nice to see the results of the pilot study first. The other component is using an instrument attached to the animal as it dives, which works reasonably well. Peterson - this sounds like it would combine beautifully with our forage fish package provided they demonstrate the feasibility. Senner - this could be put in Category 2 for a subsequent year.

95022	Foraging Efficiencies at Temporary Food Patches	Haney Senner	2 2	3 3		<p>Senner - this test seems pretty simplistic. Haney - the PI needs to delve into the literature a little bit more. Peterson - this does not merit inclusion at the moment. Haney - I would like to see this as another element of the forage fish package. Peterson - this looks like it might be redundant. Senner - in subsequent years, we need to look at integrating the efficiency element. Haney - there could be room for another person to come on board with a behavioral background. Senner - the investigators should consider combining with Irons, et al, to bring in a stronger forage fish element.</p>
95057	Movement of Larval and Juvenile Fishes	Mundy Spies Peterson	4.5 4 4	5 4.5 4.5	4.5 4 4	<p>Peterson - this project is a little broad and a little vague. The hypothesis should be more focused. This project needs to be coordinated with SEA because of their shared needs.</p>
95163	Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species					<p>Mundy - this project needs some sharpening. Senner - you need more horsepower on the fishing side. Haney - this project screams for John Piatt, who has extensive experience and creativity or someone of his experience. Peterson - Willette seems to be over committed already with the SEA program. Haney - he has strong reservations concerning magnitude and costs. Peterson - the hydroacoustics is also lacking.</p>

95320E	Algal Competition Limiting Recovery					Mundy - he scored this project quite highly based on the need. Peterson - the experimental samples are lacking.
95092	Recovery Monitoring of PWS Killer Whales					Bob - This project seems to be competing with 95013. They both use the same methodology and cost about the same per year. I was more impressed with 95013 and the qualifications of those people. 95092 was too narrowly focused. Haney - I agreed with the element that 95013 people were with the project from the beginning. Bob - 95013 was a much more solid proposal. Except for harbor seals, none of the marine mammal surveys for population would need to be done on a yearly basis because there would be small changes. I don't understand the rationale for needing 20 years.

95073	Impact of Killer Whale Predation on Harbor Seals in PWS					<p>Bob - I am pretty critical of this proposal because of the stable isotope analysis approach. I don't see how this general application can give us demographic information. The methodology is so general that it doesn't provide a way of meeting this project's objectives. These are new techniques that are evolving. We don't have any quantification of the magnitude. Haney - stable isotopes might provide some indication of how much of the total population was dependent on harbor seals. I agree it could not indicate what fraction of a killer whales diet consisted of feeding on harbor seals or salmon. Bob - stable isotope analysis is a trendy technique being applied without a good idea of what it can do. I am hesitant to commit half a million dollars when I don't think the promise is there, especially when there is very little discussion which justifies it.</p>
95062	River Otter Recovery Monitoring					<p>(NOTE: Computer died on this one). Bob - this was a good proposal.</p>

95001	Condition and Health of Harbor Seals					<p>Bob - I like the collaboration in this project. I thought this was a reasonable study that would identify any differences in the condition of the animals. Peterson - shouldn't we have animals from outside the Sound to compare baseline? Bob - I assume other areas will be used in collecting animals. Peterson - I question the need for 3 years. Bob - given the intensity of the study, you should look at the first year and then make a decision on multi-years. You would want to strengthen the conclusion before you accept it. I also question the amount of lab hardware that was budgeted for this project.</p>
95320J	Information Systems and Model Development					<p>Bob - this is a really good idea to try to integrate everything that has gone on. The complexity of what they are promising boggled me. It would be nice to see if they accomplish benchmarks before investing more money. There are not very many specifics on what is a reasonable progression of development. These are about 5 ambitious programs and some of them are not going to work. I don't see where they have identified priorities. What are the key components that would be worth pursuing if things started failing? We should evaluate this a little at a time. Spies - we will evaluate this mid-course during the first year.</p>

95031	Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS					Haney - this project was terribly expensive; however, I gave it a high score.
95086C	Herring Bay Monitoring and Restoration Studies					Peterson - a lot of this was redundant to what they promised before. Spies - it seems they ran out of fresh ideas.
95030	Productivity Survey of Bald Eagles in PWS					Senner - fund
95029	Population Survey of Bald Eagles in PWS					Senner - defer
95025C	Pigeon Guillemots and River Otters					Senner - pieces need to be assigned to the appropriate individuals. Upon subsequent evaluation, it may go in Category 1.
95086A	Coastal Habitat Intertidal Monitoring and Experimental Design Verification	Peterson	3.5			Peterson - I did not like the design verification. Spies - they have a legitimate case for going back but whether it is worth that much is something else. Peterson - how could you know all the dynamics of water transport to recreate it. The budget could be trimmed.
95025A	Factors Affecting Recovery of Sea Ducks and their Prey					Senner - this should go under Priority 1 but be retooled. It has a narrow focus but broadened integration.

95025J	Primary Productivity as a Factor in Recovery of Injured Resources in PWS					Spies - I would like to see the first year's data. Haney - we should wait to see what they have. They have a hypothesis set up where PWS is a lake or river. There is a top down aspect. What would primary productivity studies add to this understanding?
95094	Recovery of Intertidal Clams in PWS					Peterson - I would rate this as a 4 if it was coordinated with the Bodkin/Ballachey sea otter study.
95087	Sea Urchin Population Dynamics: Changes in Population Density and Availability as Prey of Sea Otters					Peterson - this project was not very good technically; however, this should be in Category 1 because it is going to the right beds. This is a quick look and see for a cheap amount of money. Spies - we could send this out for RFP.
95033	Kittiwakes as Indicators of Forage fish Availability					Senner - this should be moved up and linked with 95019.

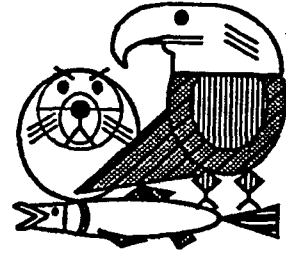
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Clarion Hotel

Exxon Valdez Oil Spill Trustee Council

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TO: Jim R. Ayers, Executive Director
Agency Liaisons
Bob Spies, Chief Scientist

DATE: July 8, 1994

TELE: 278-8012
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FROM: Molly McCammon
Director of Operations

SUBJECT: A Proposal Concerning Project Review on July 12th and 13th

Review of Administration, and Habitat Protection and Acquisition Projects. Projects listed in the spreadsheets that address Administration or Habitat Protection and Acquisition will be discussed at a separate work force meeting. These projects have significant budget and policy issues but few scientific issues.

Projects Withdrawn by the USFS. The following four projects were withdrawn by the USFS:

- 95007C. Crafton Island Site Restoration (\$27.7; USFS)
- 95056 Monitoring Visual Sensitivity in Prince William Sound (\$264.7; USFS)
- 95067 Overescapement Information Brochure (\$23.4; USFS)
- 95505A Channel Type Habitat Relationships (\$261.0; USFS)

Also, 95043B is a carry-over project. It is intended to request authorization to continue to use funds allocated for FY 94 (i.e., for 94043), and does *not* request any new money.

Initial Review: Projects with Low Funding Priority for FY 95. As requested, I have conducted an initial review of the projects submitted for FY 95. I recommend that the projects listed below have low funding priority for the 1995 Work Plan. Reasons for this recommendation are specific to each project and are explained following the list. The list does not represent a comprehensive list of projects that will not be recommended for funding; instead, it represents an obvious category with which I hope there is little disagreement. It is intended to reduce the need for discussion at the July 12-13th meeting. Please review the list and let me know of any disagreement. Any disagreement will be reviewed at the start of the July 12th meeting.

I have included 15 projects in this list: 13 general restoration projects; and one each of administration, and monitoring. No research projects are included in the list because the technical and scientific questions involved require input from the Chief Scientist. There is, however, an obvious need to ensure that all research projects the Trustees fund will contribute to restoration objectives. The *Invitation to Submit Restoration Projects* (pages 12-13) asks that all project descriptions describe how the project will help take the resource from its current condition to a restoration objective. Few research projects make this link. They describe how the research will

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help basic research and knowledge, but few describe which injured resource and service is being addressed, and how the information to be obtained will be used to benefit restoration.

95016. A Tribute to Prince William Sound (\$161.0; Gary Kremen).

95042. Five-year Plan to Remove Predators from Seabird Colonies (\$75.0; Pacific Seabird Group).

95047. Seal Contamination. (\$Unknown; Charles McKee).

95049. Independent Review of Restoration and Monitoring Projects. (\$31.9; Dr. Ruggerone, Natural Resources Consultants, Inc.).

95050. A Test of Sonar Accuracy in Estimating Escapement of Sockeye Salmon. (\$79.3; Dr. Ruggerone, Natural Resources Consultants, Inc.)

95053. Cordova's Mini Imaginarium (\$62.6; City of Cordova).

95056. Monitoring Visual Sensitivity in Prince William Sound (\$264.7; National Outdoor Leadership School).

95079. Pink Salmon Restoration through Small-scale Hatcheries (\$150.0; Nerka, Inc., and Acquabionics, Inc.)

95084. Odiak Camper Park Expansion (\$266.0; City of Cordova)

95085. Cordova Historical Marine Park (\$196.5; City of Cordova).

95088. Salmon Instream Restoration: Pink Creek and Horse Marine ByPass. (\$52.7; duplicate project)

95096. Restoration of Murres by Way of Social Attraction and Predator Removal; (\$167.0; R. Podolsky)

95097. Restoration of Murres by Way of Transplantation of Chicks: A Feasibility Study; (\$176.0; Richard Podolsky)

95099. Murrelet Vocalization in Conjunction with Artificial Nests: A Possible Means of Attraction to Habitat. (\$77.0; Richard Podolsky)

Project 95002. Leave No Trace Education Program (\$177.7; National Outdoor Leadership School).

Reason: The proposal's stated objective that is related to one in the *Invitation to Submit Restoration Projects* is "through education, reduce impacts of recreation users on recovering resources and in areas that are experiencing increased or new use resulting from changed use patterns." There is no evidence that recreation is having a significant impact on the recovery of injured resources.

Project 95016. A Tribute to Prince William Sound (\$161.0; Gary Kremen).

Reason: This project does not address an injured resource or service as listed in the *Invitation to Submit Restoration Projects*. In addition, if construed as addressing recreation, the project does not have a "sufficient relationship to an injured resource" as specified on page 36 of the *Invitation* (policy #5 of the *Draft Restoration Plan*).

Project 95042. Five-year Plan to Remove Predators from Seabird Colonies (\$75.0; Pacific Seabird Group).

Reason: The project conflicts with the *Draft Restoration Plan* policies numbers 3 and 9. The project proposes to prepare a plan for eliminating introduced predators on islands of the Alaska Maritime National Wildlife Refuge, which are all or almost all outside the spill area. While specific projects that will actually restore injured resources are within the scope of the restoration actions, a plan for National Wildlife Refuge lands should be completed by the U.S. Fish and Wildlife Service in the normal course of their activities. Thus, this planning project conflicts with *Draft Restoration Plan* policy #9 (Government agencies will be funded

only for restoration work that they do not normally conduct.) In addition, because it is wholly (or almost wholly) outside the spill area, there is a great likelihood that it conflicts with policy #3 concerning activities outside the spill area. Furthermore, many of the target species addressed by the project are not recognized as injured.

Project 95047. Seal Contamination. (\$Unknown; Charles McKee).

Reason: Incomplete. A lack of information precludes meaningful consideration.

Project 95049. Independent Review of Restoration and Monitoring Projects. (\$31.9; Dr. Ruggerone, Natural Resources Consultants, Inc.).

Reason: This project proposal would duplicate work already approved by the Trustee Council. The function proposed for this project is performed by the Chief Scientist and peer reviewers. A Request for Proposals for this function will be released in the fall; and the proposer should apply at that time.

Project 95050. A Test of Sonar Accuracy in Estimating Escapement of Sockeye Salmon. (\$79.3; Dr. Ruggerone, Natural Resources Consultants, Inc.)

Reason: Sonar is a standard tool of ADF&G. Ensuring its accuracy is part of normal agency management for the department. Thus, this project conflicts with policy #9 of the *Draft Restoration Plan*.

Project 95053. Cordova's Mini Imaginarium (\$62.6; City of Cordova).

Reason: While this may be a worthy education project, it does not address an injured resource or service as listed in the *Invitation to Submit Restoration Projects*. In addition, if construed as addressing recreation, the project does not have a "sufficient relationship to an injured resource" as specified on page 36 of the *Invitation* (policy #5 of the *Draft Restoration Plan*). The project has been referred to the State of Alaska, Division of Parks, Marine Recreation Project.

Project 95067. Overescapement Information Brochure (\$23.4; USFS).

Reason: The project description declares that the project "would be very helpful for public relations." However, it does not address an injured resource or service as listed in the *Invitation to Submit Restoration Projects*.

Project 95079. Pink Salmon Restoration through Small-scale Hatcheries (\$150.0; Nerka, Inc., and Acquabionics, Inc.)

Reason: Prince William Sound has some of the largest hatcheries in the world, which are experiencing financial problems. It has also been suggested that hatcheries may be impacting wild stocks, though this issue is unresolved. There is no information in the project description that would demonstrate that another hatchery that produces pink salmon on a large or small scale is warranted at this time.

Project 95084, and 95085. Odiak Camper Park Expansion (\$266.0; City of Cordova); and Cordova Historical Marine Park (\$196.5; City of Cordova).

Reason: These projects do not address an injured resource or service as listed in the *Invitation to Submit Restoration Projects*. In addition, if construed as addressing recreation, they do not have a "sufficient relationship to an injured resource" as specified on page 36 of the *Invitation* (policy #5 of the *Draft Restoration Plan*). The proposals have been referred to the State of Alaska, Division of Parks, Marine Recreation Project.

Project 95088. Salmon Instream Restoration: Pink Creek and Horse Marine ByPass.

Reason: This project was mistakenly included twice. It should be eliminated at this number and considered as Project 95139C.

Project 95096, 95097, and 95099. Restoration of Murres by Way of Social Attraction and Predator Removal; Restoration of Murres by Way of Transplantation of Chicks: A Feasibility Study; and Murrelet Vocalization in Conjunction with Artificial Nests: A Possible Means of Attraction to habitat. (\$167.0; \$176.0; and \$77.0; Richard Podolsky)

Reason: In previous years, these or similar projects have been rejected by the Trustee Council (and criticized by the Chief Scientist) on more than one occasion. Unless the Interim Science Review Board recommends this year to develop these proposals, there is little reason to review an incomplete version of previously rejected projects.

Projects that Should Await Legal Review. The following projects may have significant legal questions and should await advice from legal counsel. (Some of the projects discussed previously may also have significant legal problems.)

Project 95003, Area E Commercial Salmon Permit Buyback Program (\$11,735; Mykland)

Project 95093, PWSAC: Restoration of Pink Salmon Resources and Services (\$2,219.1; Olsen, PWSAC)

Project 95017, Port Graham Coho Salmon Subsistence Fishery Restoration Project (\$587.9; Daisy, Aquafarm)

Project 95080, Fleming Spit Recreation Area Enhancements (\$1,365; City of Cordova).

Project 95082, "Mor-Pac Hill" Campground Improvements (\$360.0; City of Cordova).

Projects that Should Await Consultation with the Subsistence Planning Project. The Subsistence Planning Project (94428) is evaluating subsistence projects. Ranking of subsistence projects for the Draft Work Plan should be done in consultation with that project.

Project 95009B. Survey and Experimental Enhancement of Octopuses in Intertidal Habitats.

Project 95024 and Project 95069. Enhancement of Wild Pink Salmon Stocks (\$350; Native Village of Eyak); and Restoration of Salmon Stocks of special Importance to Native cultures (\$672.6; ADF&G). These two projects are the same — only submitted by different groups.

Project 95244. Seal and Sea Otter Coop Subsistence Harvest Assistance (\$54.5; ADF&G)

Project 95272. Chenega Chinook Release Program (\$38.7; Jeff Olsen, PWSAC)

Project 95279. Subsistence Food Safety Testing (\$207.3; ADF&G)

Project 95428. Subsistence Restoration Planning (\$81.0; ADF&G)

An additional project, 95052, Community Involvement and Use of Traditional Knowledge (\$230.6; ADNR), should be considered in conjunction with these projects, as it has received a great deal of discussion and support in the subsistence planning meetings.

Projects that Should be Addressed Together or Combined

Similar Projects Submitted by Different Groups. Because these projects are so similar, they must be considered together.

- Killer Whale Monitoring
 - 95013, Killer Whale Monitoring in PWS (\$105.0; Craig Matkin, No. Gulf Oceanic Society)
 - 95092, Recovery Monitoring of PWS Killer Whales (\$99.5; NOAA)
- Killer Whale Predation
 - 95014, Predation by Killer Whales in PWS (\$156.9; Craig Matkin, No. Gulf Oceanic Society)
 - 95073, Impact of Killer Whale Predation on harbor Seals in PWS (\$99.5; NOAA)
- Primary Production in the Nearshore Ecosystem. (Two identical projects were submitted by the same person, once in each of the two "nearshore ecosystem" packages. The budgets are different, however)
 - 95009B, Primary Productivity as a Factor in the Recovery of Injured Resources in PWS (\$218.9; Stekoll, UAF)
 - 95025J, Primary Productivity as a Factor in the Recovery of Injured Resources in PWS (\$397.0; Stekoll, UAF)

Projects with similar objectives but differing methodologies.

- Nearshore Research, and Intertidal Monitoring Projects. Nineteen research projects (including two collaborative research packages), and six monitoring projects are similar in that they address related nearshore monitoring and research questions. The total proposed price of these 25 projects is \$6.2 million. The projects include those monitoring intertidal organisms, the two nearshore ecosystem "packages" (95009A-E, and 95025A-J), and five other nearshore intertidal research projects.

- Forage Fish Projects. The following six projects provide differing methodologies to answer related forage fish questions. The total price of these six projects is approximately \$3.3 million

95019. Distribution of Forage Fish as Indicated by Puffin Diet Sampling (\$284.4; DOI)

95031. Reproductive Success as a Factor Affecting Recovery of Murrelets in PWS (\$398.0; DOI)

95033. Kittiwakes as Indicators of Forage Fish Availability (\$198.5; DOI)

95057. Movement of Larval and Juvenile Fishes Within PWS (\$300.0; Norcross, UAF)

95163. Abundance and Distribution of Forage Fish and their Influence on Recovery of Injured Species (\$1,203.7; NOAA)

95120-BAA. Proximate Composition and Energetic Content of Selected Forage Fish Species in Prince William Sound (\$38.4; Worthy, Texas A & M)

95121. Stable Isotope Ratios and Fatty Acid Signatures of Selected Forage Fish Species in Prince William Sound Alaska (\$42.0; Worthy, Texas A & M)

95320-E. Juvenile Salmon and Herring Integration (\$1,492.0; ADF&G)

- Non-traditional sources of information. Four projects use non-traditional sources of information to provide a current or long-term record — archaeology, ethnography, or tree-ring studies. While there are significant differences among the projects, there is also considerable overlap in what they attempt to achieve. The four projects total approximately \$700,000.

95046. Long-term Record in Tree Rings of Climatic Features (\$153.6; Juday, UAF)

95052. Community Involvement and Use of Traditional Knowledge (\$230.6; ADNR)

95055. Prehistoric Ecological Baseline for PWS (\$149.6; USFS)

95078. Culture, History, and Ecosystems: An Assessment of Cultural/Historical Strategies to Building Long-term Understanding of Ecosystem Dynamics in the Exxon Valdez Oil Spill Area (\$166.7; DOI)

Revised Project 95320. Attached is a revised list of Project 95320 components, with new budget numbers and a description of changes that will be made in the Brief Project Descriptions. WE will not have revised BPDs for the July 12-13th meeting.

Attachment

Project 95-320 Budget (July 7, 1994)

<u>A. Continuing SEA Core</u>		<u>FY94 5K</u>	<u>Req FY95</u>	<u>95 Rev</u>
320-A	Salmon Growth and Mortality	263.4	378.6	267.8
320-B	Salmon and Herring Predators	1007.1	1592.0	1032.1 ¹
320-G	Phytoplankton and Nutrients	141.5	295.0	227.3
320-H	Role of Zooplankton	300.1	380.1	235.1
320-I(2)	Fish Food Webs/Stable Isotope	60.5	198.3	73.4
320-J	Info. Systems and Modelina	756.5	1555.3	789.6
320-K	Experimental Fry Releases	46.6	50.0	43.8
320-M	Physical Oceanography	773.1	825.2	545.2
320-N	Nearshore Fish/Acoustics	666.9	1192.5	600.6
320-P	Planning and Communciations	63.8	211.5	66.8 ²
320-Q	Avian Predation on Herring Spawn	84.9	124.8	99.0
SUBTOTAL		4164.4	6803.3	3980.6

<u>B. Requested New Core Studies</u>				<u>Funding Status</u>
320-Y	Hatchery Fry Predators	118.9	0.0 ³	Coordinating with SEA
320-S	Herring Disease and Ecotoxicology	375.0	0.0 ^{3,4}	Coordinating with SEA
95-166	Herring Natal Habitats	402.2	0.0 ³	Coordinating with SEA
320-T	Juvenile Herring Growth	412.6	378.6 ⁴	New SEA
320-U	Bio-energetics/Herring and Pollock	97.2	91.4 ⁵	New SEA
320-V	Whale Predation on Herring	181.5	0.0 ³	Coordinating with SEA
SUBTOTAL		1587.4	470.0	
TOTAL		4164.4	8390.7	4450.6

¹Including ADF&G general administration and program management for all UAF and PWSSC portions which will be proportionately distributed to each project when 4A's and 4B's are completed.

²Includes general administration

³If ranked high and funded in FFY95 this project should be added to SEA Core.

⁴This includes ADF&G and NOAA components

⁵This new project is now SEA Core

Attachment

Addendum to SEA package proposal, project 95320; Prepared by SEA 94320-P.

Project 95320 was submitted during June 1994 for a proposed total of about \$8.4 million. Following this submission, and in consultation with ADF&G and the EVOS Restoration Office, the budget total of this proposal was reduced to \$4.45 million. At the request of Molly McCammon and after consultation with SEA principal investigators, here is a very brief summary of the adjustments SEA will make in response to this proposed level of funding.

Four requested core studies were dropped from the SEA program proposal (see table). The four requested new studies that were dropped from SEA are still submitted for separate funding under the Trustee Council. If these projects are ranked high and funded in FY95, they would likely function best if added back to the SEA core program.

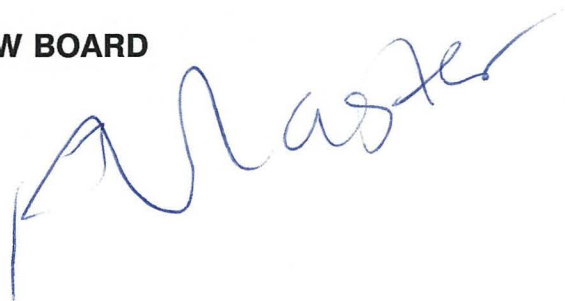
Thirteen core SEA projects remain, all proposing reduced budgets. In general, savings were achieved by four means. First, a large portion of the reductions were achieved by reducing the duration, geographic extent, and intensity of sampling, making data across the system sparser than anticipated. The picture we develop of the ecosystem, like a puzzle with missing pieces, will thus be less clear. Specifically, sparser data will somewhat reduce the accuracy and precision of results; the ability to generalize from results to other areas, taxa, or seasons; and the ability to integrate results across all components of the ecosystem. At the same time, these cuts increase the marginal cost of each sample collected, as well as the number of years needed to adequately test a hypotheses. Nevertheless, SEA proposes substantial sampling activity that will provide the base for the continued investigation of the core hypotheses proposed.

Second, some areas of investigation or activity were eliminated entirely, usually due to insufficient funds to purchase the necessary additional equipment or attract collaborators. Major items were cut from the Oceanography, Information & Modeling, Nearshore fish/Acoustics, and Stable Isotope projects. The lack reduces the ability to control and quantify biases inherent in different types of measurements, increases both the number and the impact of data gaps that may occur due to temporary equipment failure in the field, and reduces the scope and extent of modeling efforts supported by SEA.

Third, personnel and travel were cut back. For many projects, this will make the recruitment of staff and collaborators substantially more difficult, and the part-time absence of personnel working on more than one project will result in a dilution of effort in SEA. Personnel and travel reductions compromise our ability to conduct collaborative efforts with researchers not on site, as well as the ability of all projects to facilitate the involvement of interested public in the SEA program. Activities in several projects to provide information to the public about SEA research have been curtailed.

Fourth, the amount and efficiency of data and sample processing were reduced by loss of processing equipment, and of processing contracts. As a result, processing of all data will be slower and more limited in scope than anticipated. In some cases, funds anticipated in FY95 will be inadequate to process samples already collected. The reduction in data and sample processing ability may delay delivery schedules.

In response to the suggested budget revisions, SEA has altered its scope of work and somewhat restricted the topics of investigation. Nevertheless, within these boundaries SEA will be able to deliver high quality, well integrated, restoration science.

INTERIM SCIENCE REVIEW BOARD**JULY 10, 1994****1:00 P.M****ATTENDEES**

Bob Spies
Chris Haney
Andy Gunther
Phil Mundy
Stan Senner
Pete Peterson

R - Responsive/Technical
Q - Qualifications/Facilities
C - Cost Effective

SCORING SHEET FOR 1995 WORKPLAN PROPOSALS

Project #	Title	Reviewer	R	Q	C	Comments
95042						Leave for consideration
95047						Get rid of
95049						Get rid of and may come back under RFP

*Mundy - my scores
would do this project
in.*

95050							<p>Mundy - not a bad concept, just not the right time; question of measurement of precision; the instrument has a short-term future. We would encourage testing of the accuracy of the replacement equipment.</p>
95053							<p>Haney - it does not address an injured resource or service. Spies - does not have any technical content. This is a policy issue.</p>
95056							<p>Senner - tour boat tourism was not an injured resource. Tours increased after the spill because people wanted to see what happened. Haney - the basic idea is to do a contingent valuation survey. I am concerned that this has not ever been done for the Sound. If it had, you could measure these intangible losses. (This project was withdrawn by the FS). Peterson - is there sufficient socio-economic work on this. Senner - what is the evidence of diminished recreation industry? Haney - is there a decline in the perceived value in PWS?</p>

95079							<p>Spies - had problems with the concept of having another hatchery. Mundy - they are talking about doing something that is far more complex than they can ever imagine. The implementation is extremely difficult. Not a good thing to spend money on because more sophisticated genetic tools are needed. Senner - it is pointless to put more fish into an environment that is not responding now.</p>
95084							<p>Mundy - no scientific content. Senner - it is hard to argue they are mitigating a resource or service injured by the spill.</p>
95085							<p>Mundy - does not appear they are replacing a damaged resource; no link to restoration or recovery.</p>
95088							<p>Spies - this is a duplicate and should be eliminated and considered at 95139C.</p>

95096		Haney Senner Peterson	2 2 3	1 4 ?	1.5 1 ?	Haney - it was redundant with ongoing work in the spill area. There is insufficient information for evaluating cost. Senner - this may be a concept where we have missed the boat for several years. In concept, there is merit to the idea. It was rated fairly low because there has been no indication that the social mechanism has been causing problems at the murre colony.
95097		Haney Senner Peterson Spies	1 2 1 2	4 4 ? ?	1 2 1 ?	
95099		Senner Haney Peterson Spies	2 2 1 1	3 1 ? ?	1 3 ? ?	Senner - we don't know anything about vocalization around the nests and it seems moot. Haney - technique assumes the animals are around to hear these playbacks. It would require luck to get them attracted.
95002						Spies - this would be considered as a policy question. Senner - it appears that this is a national program being done in cooperation with other agencies. It is not an oil spill program. Spies - it will be deleted from the list.

95025A		Senner	3	3	2	<p>Senner - there is some evidence of injury in several duck species. A lot of the duck work has focused on breeding season; however, there should be winter studies to show that some breeders are failing because of continued contamination and food shortages in the winter. There is some doubt regarding the ability to do all this work. This is a big agenda and may be too ambitious. Another red flag is in accessing the diet of female ducks. Taking 120 female harlequin ducks sounds pretty hard to sell or defend.</p> <p>Haney - this is a broad shotgun approach to the study. The investigators are adequate but are not specialists in this area. The personnel costs are too high. Why does the agency need money for personnel?</p> <p>Peterson - there are good grounds for looking at the overwintering ducks but we have no way of knowing. Haney - you have potentially population level things going on. Senner - there should be better integration to other proposals. The winter dimension is one that has been heretofore overlooked. Peterson - there are technical problems.</p> <p>Senner - this is potentially a Priority 1 or a Priority 2 where they go back and do their homework. Spies - there was not a great deal of integration on this project</p>
		Haney	3	3	3	
		Peterson	4	3	?	
		Spies	3	3	?	

95025C		Haney Senner Peterson Spies	4 4 3.5 3	5 5 4.5 3	4 4 4	<p>Haney - an exceptionally conceived proposal with relevance to other studies. Other pluses were comparisons across taxa and across PWS with non-oiled sites. The budget may be more detailed than necessary. This was one of the best proposals. A lot of this may have already been done. There is a good justification made for using guillemots. Some preliminary work has already been done on river otters in Kachemak Bay. Senner - this was rated very highly. It was multi-species and involved a bird and a mammal. There was also potential to combine with or substitute for 95173. Both projects propose to get information on chick growth and prey brought back to nests. Haney - 95173 had more of a direct connection with FY95 WP. Peterson - it has a superb PI with a good record.</p>
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95173		Haney	3	4.5	3	<p>Haney - The pigeon guillemot research is not identified as a high priority in the FY95 WP. It comes into play in 1996 and disagrees with the original timetable for monitoring. The species is in obvious stress throughout the sound. Cuts here may be especially pertinent if the various elements can be picked up elsewhere. Costs for personnel seem to be especially high. Hayes is an asset because of experience with guillemots elsewhere. The project would have a higher priority in ranking in another year. Peterson - you could get some good handle on the prey field abundance; however, it needs more integration. Senner - you could integrate logistics and some of the data gathering. These projects seem to overreach and don't focus on questions. Haney - Roby could do it all; this group couldn't. Senner - there are elements that are good and distinct from the 95025C project; however, they both need to be better integrated. 95025C is a stronger proposal. Peterson - there needs to be some collaboration with fish people on the demersal fish component.</p>
		Senner	4	3	2	
		Peterson	4	3.5	4	
		Spies	4	4	3	

95025D		Peterson Spies	2 2.5	3 3	2.8	Peterson - there were no explicit hypotheses tests identified. It is not related to identifying slow things that are recovering. There is an issue that the original design of assessment is that where the oil hit has the greatest oil flux. Spies - the intellectual thread isn't there. There are good questions with no follow through. Salmon may be spreading himself too thin since he is working on the SEA Program also.
95025E		Peterson Spies	3.5 3.5	3.5 3.5	4.0 4.0	Peterson - this project claims that Alaria has been especially slow to recover on certain shores in the Kenai Peninsula. This is something new. It involves Park Service lands. Stekoll is competent to do this. The budget seems reasonable. The problem is it seems a rather small part of our remaining concerns regarding the spill.
95025F		Senner Peterson Haney	2.5 2.5 3	4 4.5 5	3 5 5	Senner - the presentation of methods was weak. Spies - this probably could be knocked out based on technical.

95025G		Peterson Haney	2 3	5 4	5 4	Senner - it is not clear what they are going to do. Peterson - The oil spill has not changed oceanographic patterns and we can't change them. The coordination of the physics and plankton was unconvincing. It is somewhat redundant. Haney - there was some demonstration of cost sharing on the budget. Peterson - this should be better driven.
95025H		Peterson Haney	5 3	4.5 4	? 4	Peterson - the clam recruitment is of no value to know about. There is no clear reason to think the spill has affected clam recruitment.

95025J		Spies Peterson	4.2 2	3.5 3.5	3 ?	<p>Spies - this is generally a pretty good project. The question of how important pelagic production is will have to be addressed. It links the SEA results in terms of what the pelagic system is doing on an interannual basis. We are making some assumptions that if they don't pan out, will limit the use of SEA-13. Peterson - he doesn't see the linkage to damage. We could assume algae were hurt more than phytoplankton. He is concerned about using SEA-14 to estimate productivity. The isotope work on organisms was very inexplicit. The budget may not be enough to do the job right. Haney - you will have all kinds of peripheral things that need to be sorted out for relevance.</p>

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INTERIM SCIENCE REVIEW BOARD
JULY 10, 1994
1:00 P.M

ATTENDEES

Bob Spies
Chris Haney
Andy Gunther
Phil Mundy
Stan Senner
Pete Peterson

SCORING SHEET FOR 1995 WORKPLAN PROPOSALS

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95053						<p>Haney - it does not address an injured resource or service. Spies - does not have any technical content. This is a policy issue.</p>
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95088						<p>Spies - this is a duplicate and should be eliminated and considered at 95139C.</p>

95096						<p>Haney - it was redundant with ongoing work in the spill area. There is insufficient information for evaluating cost. Haney scores: 2-connection to FY95 WP; 1-investigator and facility quality; 1.5-cost effectiveness; Senner - this may be a concept where we have missed the boat for several years. In concept, there is merit to the idea. It was rated fairly low because there has been no indication that the social mechanism has been causing problems at the murre colony. Senner: 2-4-1. Peterson: 3-?-?.</p>
95097						<p>Haney: 1-4-1; Senner: 2-4-2. Peterson: 1-?-1. Spies: 2-?-?.</p>
95099						<p>Senner - we don't know anything about vocalization around the nests and it seems moot. Senner: 2-3-1. Haney: 2-1-3. Haney - technique assumes the animals are around to hear these playback. It would require luck to get them attracted. Peterson: 1-?-?. Spies: 1-?-?.</p>

95002							<p>Spies - this would be considered as a policy question. Senner - it appears that this is a national program being done in cooperation with other agencies. It is not an oil spill program. Spies - it will be deleted from the list.</p>
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95025A					<p>Senner - there is some evidence of injury in several duck species. A lot of the duck work has focused on breeding season; however, there should be winter studies to show that some breeders are failing because of continued contamination and food shortages in the winter. There is some doubt regarding the ability to do all this work. This is a big agenda and may be too ambitious. Another red flag is in accessing the diet of female ducks. Taking 120 female harlequin ducks sounds pretty hard to sell or defend. Haney - this is a broad shotgun approach to the study. The investigators are adequate but are not specialists in this area. The personnel costs are too high. Why does the agency need money for personnel? Peterson - There are good grounds for looking at the overwintering ducks but we have no way of knowing. Haney - you have potentially population level things going on. Senner - there should be better integration to other proposals. The winter dimension is one that has been heretofore overlooked. Peterson - there are technical problems. Senner - this is potentially a Priority 1 or a Priority 2 where they go back and do their</p>
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95025C						<p>Haney - an exceptionally conceived proposal with relevance to other studies. Other pluses were comparisons across taxa and across PWS with non-oiled sites. The budget may be more detailed than necessary. This was one of the best proposals. A lot of this may have already been done. There is a good justification made for using guillemots. Some preliminary work has already been done on river otters in Kachemak Bay. Senner - this was rated very highly. It was multi-species and involved a bird and a mammal. There was also potential to combine with or substitute for 95173. Both projects propose to get information on chick growth and prey brought back to nests. Haney - 95173 had more of a direct connection with FY95 WP. Peterson - it has a superb PI with a good record. Haney: 4-5-4. Senner: 4-5-4. Peterson: 3.5-4.5-4. Spies: 3-3-_____.</p>
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95173						<p>Haney - The pigreon guillemot research is not identified as a high priority in the FY95 WP. It comes into play in 1996 and disagrees with the original timetable for monitoring. The species is in obvious stress throughout the sound. Cuts here may be especially pertinent if the various elements can be picked up elsewhere. Costs for personnel seem to be especially high. Hayes is an asset because of experience with guillemots elsewhere. The project would have a higher priority in ranking in another year. Peterson - You could get some good handle on the prey field abundance; however, it needs more integration. Senner - you could integrate logistics and some of the data gathering. These projects seem to overreach and don't focus on questions. Haney - Roby could do it all; this group couldn't. Senner - there are elements that are good and distinct from the 95025C project; however, they both need to be better integrated. 95025C is a stronger proposal. Peterson - there needs to be some collaboration with fish people on the demersal fish component. Haney: 3-4.5-3. Senner 4-3-2. Peterson: 4-3.5-4. Spies 4-4-3.</p>
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95025D						<p>Peterson - there were no explicit hypotheses tests identified. It is not related to identifying slow things that are recovering. There is an issue that the original design of assessment is that where the oil hit has the greatest oil flux. Spies - the intellectual thread isn't there. There are good questions with no follow through. Salmon may be spreading himself too thin since he is working on the SEA Program also. Peterson 2-3-___. Spies: 2.5-3-2.8.</p>
95025E	<p>Pete</p> <p>Spies</p>		<p>3.5</p> <p>3.5</p>	<p>3.5</p> <p>3.5</p>	<p>4.0</p> <p>4.0</p>	<p>Peterson - this project claims that Alaria has been especially slow to recover on certain shores in the Kenai Peninsula. This is something new. It involves Park Service lands. Stekoll is competent to do this. The budget seems reasonable. The problem is it seems a rather small part of our remaining concerns regarding the spill. NOTE: Get scores.</p>
95025F						<p>Senner - the presentation of methods was weak. Spies - this probably could be knocked out based on technical. Senner 2.5-4-3, Peterson 2.5-4.5-5. Haney 3-5-5</p>

95025G						<p>Senner - it is not clear what they are going to do. Peterson - The oil spill has not changed oceanographic patterns and we can't change them. The coordination of the physics and plankton was unconvincing. It is somewhat redundant. Haney - there was some demonstration of cost sharing on the budget. Peterson - this should be better driven.</p> <p>Peterson: 2-5-5. Haney: 3-4-4.</p>
95025H						<p>Peterson - the clam recruitment is of no value to know about. There is no clear reason to think the spill has affected clam recruitment. Peterson - 5-4.5-? Haney: 3-4-4.</p>

95025J						<p>Spies - this is generally a pretty good project. The question of how important pelagic production is will have to be addressed. It links the SEA results in terms of what the pelagic system is doing on an interannual basis. We are making some assumptions that if they don't pan out, will limit the use of SEA-13.</p> <p>Peterson: He doesn't see the linkage to damage. We could assume algae were hurt more than phytoplankton. He is concerned about using SEA-14 to estimate productivity. The isotope work on organisms was very inexplicit. The budget may not be enough to do the job right. Haney - you will have all kinds of peripheral things that need to be sorted out for relevance.</p> <p>Spies: 4.2-3.5-3. Peterson: 2-3.5-?</p>