

SOUTHWEST ALASKA SEA OTTER RECOVERY TEAM

Meeting Minutes
for
8-9 March 2006
at the
Gordon Watson Conference Room
U.S. Fish and Wildlife Service
1011 East Tudor Road
Anchorage, Alaska 99503

Recovery Team Members in Attendance

Jim Bodkin, Kathy Burek, Douglas Burn, Jim Curland, Jim Estes, Lloyd Lowry, Ken Pitcher, Kathy Ralls, Tim Tinker

Recovery Team Members via Teleconference

Doug DeMaster, Kate Wynne

Recovery Team Members not participating

Lance Barrett-Lennard, David Benton, Margaret Roberts

Other Meeting Attendees

Jeff Williams, Lianna Jack, Verena Gill, Angela Doroff, Bob Small, Sonja Jahrsdoerfer, Judy Jacobs, Dana Jenksi, Rebecca DeKay, Ted Schwemm, Rosa Meehan, Greg Risdahl, Alvin Osterback, Peggy Osterback, Rowan Gould, Charlie Hamilton, Kelsey Logan, Tim Hess, Greg Balogh, Karen Oakley, Lenny Corin, Karen Laing

The meeting began with introductions of team members and other attendees. The meeting [agenda](#) was reviewed and approved without change.

U.S. Fish and Wildlife Service (USFWS) Regional Director Rowan Gould welcomed the team and offered [opening remarks](#).

Team leader Lloyd Lowry highlighted several points in the final draft of [terms of reference](#), which were approved by the team.

Recovery Planning Process

Judy Jacobs gave a Powerpoint presentation on [Recovery Planning under the ESA](#).

To provide the team with background, Douglas Burn gave Powerpoint presentations on [various players](#) in sea otter management and research in Alaska and a review of the [key factors](#) in ESA listing decision.

Jim Bodkin wanted to hear views of the recovery planning process from those members of the team that have served on other recovery teams. Lowry and Kathy Ralls have both been on several teams, and noted that each team is different.

Bodkin asked if there were any good recovery plans that the team could use as models. Lowry followed up on this point by asking if the team should use the southern sea otter recovery plan as a model. Jim Estes offered his opinion that the issues regarding southern sea otters are not well understood, and that the southern sea otter recovery plan may not provide a good model to follow. It was suggested that the plan for a species such as the Aleutian Canada Goose, might be a better choice.

Ralls stated that the southern sea otter recovery plan didn't serve its purpose. Estes replied that the reason for this was because we don't understand what is affecting the population. Doug DeMaster made the observation that the situation with southern sea otters is different due to political complications with shellfish and oil industry, but there are apparently no political concerns for the southwest Alaska DPS. Lowry suggested that the current monk seal recovery plan may be a good one for the team to look at. Burn said that based on his limited experience with recovery planning, no two recovery plans are alike so there is room for flexibility.

Bob Small from Alaska Department of Fish and Game gave a Powerpoint presentation on [lessons learned from the Steller sea lion recovery team](#).

Southwest Alaska Sea Otter Population Status

Burn gave a Powerpoint presentation on [sea otter survey areas](#) in southwest Alaska.

Ken Pitcher asked how many sea otters are in the southwest Alaska DPS and why the DPS was listed as threatened as opposed to endangered. Steller sea lions are listed as endangered in that area, why not sea otters? Burn responded that when stock assessments were revised, there were about 41,000-42,000 sea otters in the DPS, and that there appear to be different patterns of change going on in different areas within the DPS. Some areas have lots of otters and show no signs of decline so the entire stock did not meet the definition of endangered. However, if otters become extirpated in the areas that are continuing to decline the remaining population may then merit listing as endangered.

Kate Wynne asked about the variability of survey results in general. Burn responded about the different types of survey results (aerial and skiff-based) and their variability. In general, skiff surveys are raw counts with no variance, and aerial surveys can either be raw counts or use a sampling design. Estimates from surveys that use a sampling design do have a variance.

DeMaster asked if there was life history and count data on a web site so the team could begin to manipulate numbers and make inferences. Burn committed to setting up a secure web site for the recovery team and will work to post the data there.

Bodkin stated that he thinks the team needs to look at Castle Cape east to Kamishak Bay to evaluate population status in that area overall as there may have been some redistribution of sea otters in this area. For example, the increase of otters in Kamishak Bay coincides in time with the decrease of otters in the Kodiak archipelago.

Alvin Osterback stated that in the past people would see huge pods of otters along the south side of the Alaska Peninsula but sometimes they would be gone overnight. He stated that those observations occurred during the winter months in the early 1980s, and that otters seem like creatures of opportunity that come to an area, clean it out, and leave.

Sea Otter Population Structure

Pitcher asked if the recovery team was satisfied with current stock boundaries and whether if they were drawn differently then would the biological situation look very different? Burn explained the process USFWS followed to identify stock boundaries under the Marine Mammal Protection Act (MMPA), and that the USFWS had worked with the Alaska Regional Scientific Review Group who concurred with the current stock structure. Burn also stated that USFWS has no plans to revise stock boundaries at this time.

Kathy Burek asked what was the basis for the current stock structure? Bodkin responded that it was based on several factors, including biology, movements, phenotypic differences, genetics etc. This information is summarized in Gorbics and Bodkin (2001). Burn agreed to distribute the genetics papers and reports on northern sea otters. Discussion followed on how good the genetic studies have been and what samples are available. Lowry suggested an action item for the recovery plan may include the development of an integrated database on samples that have been analyzed and what samples are currently available.

Bodkin noted that historical data suggest that sea otter abundance in Kamishak Bay has been increasing over the past 10-15 years. Pitcher stated that we really need to know if Kodiak and Kamishak Bay belong in the southwest Alaska stock/DPS. Before the team moves forward with developing a recovery plan it is critical to agree that the DPS is appropriate. Burn stated that revision of stock boundaries is not what the team has been tasked to do – the current DPS is the listed entity for which we need to develop a recovery plan.

Burn noted that additional genetics samples may be collected opportunistically during future research projects, and the issue could be addressed at some point in the future, but he did not believe that it should be a focus of the recovery plan unless it is determined to be important from a recovery standpoint.

Sea Otter Movements

The team discussed the role of sea otter movements in determining population structure. Lowry asked what was known about movement between islands? Estes responded that otters typically don't move much and long-distance movements typically do not occur. Movement between islands in the Aleutians must occur at times, otherwise recolonization would not have happened. Bodkin pointed out that there is a lot of home range information based on VHF radios, but the data are biased against animals that move long distances because they may move out of the area being studied. Bodkin also noted that there is considerable variability in home ranges, and that better information on movements can be gotten by applying satellite-linked tags to sea otters.

Lowry stated that understanding sea otter movements could become critically important for the recovery plan. Burn asked if there was anything available in Karl Schneider's historical data that could tell us something about movement between islands in the Aleutian archipelago? Bodkin responded that there are some descriptions of the process of colonization in unpublished reports, but he was not sure how specific they are.

Angela Doroff noted that movement patterns may now be different because of behavioral changes resulting from reduced sea otter densities. The types of movements that occurred during recolonization may be very different now that the population has become reduced. There was additional discussion on what data Schneider had collected that Bodkin now has.

Recovery Units

The team discussed the merits of designating recovery units for the southwest Alaska DPS. Burek asked if there were guidelines on setting up recovery units. Lowry said that it was his impression that it is pretty flexible. Burek stated that if the plan is going to use recovery units it is important to have them defined from the beginning.

Bodkin noted that the Aleutian archipelago and a portion of the south side of the Alaska Peninsula have exhibited essentially the same rate of decline at same time. Burn pointed out that this was also true for part of the north side of the Alaska Peninsula. Bodkin noted that other areas have exhibited different patterns of decline (i.e., Kamishak Bay and Kodiak).

Bodkin observed that although we are dealing with the DPS as the listed entity, the team has some flexibility based on the use of recovery units. Lowry read the section of the recovery planning guidelines regarding recovery units.

Estes stated that the DPS could be divided into east and west portions. Lowry proposed four provisional recovery units: 1) Aleutian Islands; 2) north side of the Alaska Peninsula; 3) south side of the Alaska Peninsula from Unimak Pass to Castle Cape; and 4) Castle Cape to Kamishak Bay, including the Kodiak archipelago. The team agreed to use these [recovery units](#) in the preparation of background materials for the recovery plan.

Drafting the Recovery Plan

Lowry stated that there are essentially two parts to a recovery plan: 1) background information (biological description and analysis of threats); and 2) recovery actions (i.e., how to reduce/remove threats). Lowry distributed a draft outline for a SWAKSO recovery plan to team members only. The team agreed to work from that draft and to make changes as needed.

The team considered who will write the various sections of the biological background, which resulted in the following assignments:

- Burn offered to write the section on sea otter abundance and trends.

- Bodkin volunteered to write the remaining sections of biological background, including description and taxonomy, community effects/ecology, population biology (vital rates, population structure, life history), distribution and habitat use, behavior, feeding ecology, and physiology.

The team then moved on to a discussion of threats. Pitcher stated that from what he had read, there was not a lot of disagreement on the cause of the SWAKSO decline. Lowry noted that the team needs to focus on current threats to recovery rather than mechanisms of the previous decline, and Ralls noted that current threats to the population may not be the same as the reason for the decline. Burek suggested that the team list the threats and then discuss them. Estes noted that the team needs to consider in-breeding effects, which don't seem to be impacting reproduction right now, but may in the future.

Estes and Pitcher brought up the orca predation hypothesis. Bodkin stated a need to look at alternative hypotheses as well. Estes stated that even if there are no alternatives, we need to look at uncertainty in the orca predation hypothesis.

Burek stated that the team needs to discuss infectious disease and biotoxins as things that can affect recovery. Burek talked about results from Kachemak Bay on the edge of the decline, specifically the high prevalence of valvular endocarditis found in carcasses. She also talked about serology results that indicate exposure to morbillivirus. There is a need for additional data on disease and biotoxins especially from other parts of the geographic range of the DPS.

Tim Tinker noted these are some of the same issues the southern sea otter people have been wrestling with (different diseases but similar issues), and there is a need to pair necropsies and live animal capture data to understand processes. Verena Gill brought up the need to think about the role of interactions between disease and predation.

Burek stated that the answer is not to continue to do serology alone, but we must get the organism in hand and culture it or conduct PCR in order to validate the test. Lowry asked if Burek would draft background information on disease for the recovery plan. Burek agreed to do that and also to write sections on biotoxins and contaminants. Estes noted that he has contaminant data from the Aleutians, and would provide it to Burek. Tinker suggested that the team should have a matrix for the areas of decline and list available information for each.

Lowry asked who would be willing to write the section on food limitation, which did not appear to be an issue with regard to the population decline. Tinker volunteered to write this section.

The team nominated Barrett-Lennard to write the section on disturbance. Gill suggested this section could also address the threat from boat strikes, as they are the second leading cause of death seen in the necropsy cases. Lowry also said this category could include things like people on beaches with dogs. Doroff noted that there is information on human disturbance in existing stock assessment reports.

Wynne volunteered to write the section on entanglement. Jim Curland wanted to know how well the various fisheries are monitored. Lowry said that Kate is very familiar with the subject of fisheries observer monitoring. Curland asked if it was possible that this was more of an issue than we realize because it was not adequately monitored? Estes noted that Brian Hatfield has been collecting data on entanglement and would provide this information to Wynne.

On the subject of subsistence harvest, Lowry noted that this section would basically be just a presentation of existing statistics. Burn asked if it would be appropriate for him, as Agency Lead, to contribute as a writer. Lowry stated that Burn could write draft sections of the plan. Bodkin offered to work with Burn on modeling the impact of the subsistence harvest on recovery.

Lowry questioned whether the recovery plan should address illegal take (poaching) since it is so unlikely to be a factor? Estes believed the team should mention every potential threat even if it ends up being discounted. Rosa Meehan stated that the team does need to look at it since there have been cases on Kodiak where illegal takes have approached the level of legal hunting. Burn volunteered to work with the FWS Law Enforcement Division to collect the available information, and will write this section.

Lowry noted that there is a lot of material to be considered on the subject of predation. Tinker volunteered to draft this section, and Barrett-Lennard was nominated to assist him. Tinker and Estes stated that although a lot of animals have disappeared in the Aleutians, there have been relatively few carcasses observed during the period of the decline. Burek asked if there had been carcasses observed prior to the decline, to which Tinker and Estes answered yes. Burek asked if there could people be picking them up, and the answer was no. Ralls asked if biologists conducting surveys look for carcasses? There has been some carcass survey effort in the western and central Aleutians, with few carcasses observed. Jeff Williams noted that for many years there have been field camps all along the Aleutians in the summer and personnel working there have not been finding carcasses.

Pitcher will draft the section on habitat concerns (loss, interruption, degradation). Lowry asked if issues such as oil spills, building docks and refineries, boat strikes, and fishing effort fall into this category? Gill noted that there are proposed oil and gas lease sales in Bristol Bay that should be considered.

Pitcher asked if there has been any discussion on regime shift effects? Estes replied that there has been some consideration of this factor, and that there is nothing to suggest this has anything to do with the otter decline. It was proposed that the potential impacts of climate change should be considered. Lowry agreed to write this section of the plan.

Lowry stated that the team may need more information before it can do a complete threats assessment. Specifically, we need to know how other teams have approached the topic. Although the Revised Draft Recovery Handbook lists an appendix for threats

assessment, the appendices were not included in the pdf that was distributed to the team. DeMaster noted that the appendices are available on the NOAA Office of Protected Resources web site, and would provide Lowry and Burn with the web address. Burn stated that USFWS has recovery coordinators at the Washington office level that could help provide some guidance for the threats assessment section. Lowry stated that the team might be able to use Steller sea lion threat analysis model. DeMaster noted that the draft Steller sea lion recovery plan should be available to the public sometime in May.

Burek asked if the team should use both published and unpublished data in the plan. Lowry offered his opinion that the team should use all available data and reference it appropriately, to which the team concurred. Burn indicated that the Federal Register notice designating SWAKSO as threatened had reviewed and summarized quite a lot of information, and he will distribute an electronic copy that can be used by those drafting sections of the plan.

Lowry instructed members of the writing group to send the drafts of their sections to himself and Burn via e-mail with a deadline of 1 June 2006. All documents should be produced in Microsoft Word format. Lowry and Burn will then distribute the drafts to the remainder of the team for review and comment. Team members will provide review comments directly to the author of each section.

Research Needs

A draft research prospectus developed by Estes and Bodkin was distributed to the team at the end of the first day of the meeting. Bodkin asked if anyone had comments on the prospectus. Lowry stated that he liked the prospectus as it describes a holistic, ecosystem-oriented way to approach the question, and that a mechanistic approach that looked at specific sources of mortality and factors influencing productivity would be another option. Estes stated that he and Bodkin had imagined that the mechanistic approach would also be used, and that they hoped the document would help focus the team's discussions. Lowry asked how the team should have input into the research prospectus. Estes replied that he would like to have the team read the research prospectus with a critical eye so that it could be developed into a research plan. Bodkin noted that there is likely to be a suite of research topics of specific interest to management, and he would like to hear about that from the recovery team. Lowry asked if the document would be posted on the website. Burn stated that it could be, but questioned whether it should be available to the general public or recovery team members only at this point. Estes and Bodkin felt that it was not ready for public distribution yet, and they would send it to team members via e-mail asking for review and comments.

Delisting and uplisting criteria

Ralls stated that this is not just an academic exercise, and one possible result of developing criteria could be uplisting the DPS to endangered. Lowry stated that the team should determine the criteria and then FWS can assess the current status of the population against those criteria. The team could elect to use Population Viability Analysis (PVA) or develop criteria in some other way. Development of a single PVA may be difficult as there appear to be different things going on in different parts of the DPS.

Burn observed that the team should read the monitoring plan developed by USFWS/USGS/ASLC to see if it could and should be incorporated into the recovery plan. The team may decide to develop a monitoring plan that gathers specific information needed to measure population status relative to the delisting criteria. Tinker stated that the existing monitoring plan was written in such a way as to be monetarily feasible. Burn stated that the cost to implement the monitoring plan is about \$200K a year. However, USFWS has no funds available during the current fiscal year to implement the plan.

Pitcher and Ralls noted that it is more likely in the immediate future that sea otters would be uplisted to endangered rather than de-listed. Pitcher, who is on the Steller sea lion Recovery Team, observed that the situation looks worse for sea otters than for sea lions. Pitcher asked once again if the team is bound by the current stock definition, to which Ralls and Lowry responded yes, at least for the development of this recovery plan. Ralls stated that there should be nothing to prevent the plan from having different recovery criteria for the different recovery units.

Tinker volunteered to construct population models to help with developing delisting and reclassification criteria. There would be separate models for each of the four provisional recovery units identified earlier. Doroff asked if there might be other sources of funding (other than USFWS) to contract someone to conduct the PVAs, as Tinker is very heavily committed. Lowry stated that there would also be costs associated with getting a contractor up to speed and we may have to fix their mistakes later. Estes suggested that perhaps Tinker could develop one model for one recovery unit and then the team could use that as a template for the other recovery units. The team agreed with this suggestion.

Bodkin and Pitcher agreed to lead a working group on developing non-PVA based criteria for delisting and reclassification. Other members of the group will include Lowry, Ralls, DeMaster, and Doroff.

Recovery actions

Lowry recommended that he and Burn develop an outline for recovery action section, then circulate that to the team for the next meeting. The outline can be modified and details added at that meeting. Meehan suggested that the author of each threat section could also contribute suggested recovery actions for inclusion in the draft table. Lowry noted that he and Burn could do that by drawing from the draft text provided to them from the various authors. Lowry noted that the recovery action narrative should be fairly simple, but developing the implementation schedule will be more difficult.

DeMaster asked if there was a concern about oil spills in the range of this DPS. The response was yes, there is a concern about oil spills and a need to develop oil spill response capabilities in the area is a possible recovery action.

Burek asked about the potential for future funding for implementing recovery actions. Burn stated that he wasn't sure if there was money in the President's budget for sea otter

recovery actions, but that by summer 2006 we may know what funds will be available in FY07. Meehan noted that there is one directed add-on for sea otter recovery at the Alaska SeaLife Center in FY06, but we do not know what will happen in future years. It may also be possible for other divisions of the USFWS to contribute to recovery actions.

Curland asked if there was funding available for baseline abundance surveys. Meehan stated there was some, but not enough to fully implement the monitoring plan. Lowry observed that federal agencies are hampered by not being able to lobby Congress for funds so it is up to constituents to do that for the agencies. That approach may or may not be effective.

Estes stated that he was having difficulty imagining what kind of management actions could help recover the population, and that research will help the most. Lowry stated that the recovery plan will need to make explicit connections between recovery actions and threats to the population. Burn offered as an example the joint USFWS and TASSC request that hunters take only male sea otters. Although subsistence harvest is not believed to be a threat at this time, actions of this sort could help.

Critical Habitat

DeMaster wanted to know if the team will deal with critical habitat (CH). Burn noted that during the listing USFWS said CH was undeterminable, which temporarily delayed action but USFWS doesn't have the funding during the current fiscal year to work on CH designation. Burn stated that the team may provide some insight into the "primary constituent elements" that could be used to designate CH in the future. DeMaster stated that designation of CH it is a huge undertaking, and the team needs to decide if they will become involved in the process. Lowry said the team needs a better statement from the USFWS on what they want the team to do regarding CH. Burn responded that as Agency Lead he will get an official USFWS position on this issue.

Estes pointed out that in the SWAKSO case CH may not be the habitat where the otters actually live. Discussion followed that CH needs to be better defined. Burn pointed out that USFWS is constrained by the statutory definition of CH and a decision needs to be made whether the team will follow the ESA Section 7 definition. DeMaster stated that USFWS will get sued over CH if the agency doesn't take action, and that the team should work on CH as phase two after completion of a draft recovery plan. Lowry proposed that the team should develop the recovery plan in such a way that it leads well into CH designation.

Upcoming Team Meetings

Lowry stated that at the next meeting, the team should have drafts of the biological background and threat description sections, a draft outline of the recovery action section, and a prototype population model.

Burn asked if the next meeting would include all recovery team subgroups. Lowry stated that he would like to see the next meeting include the full team. It was decided that the next meeting will occur between 15 October and 15 December 2006. Burn will provide

team members with a calendar, asking them to indicate their dates of unavailability. He will then coordinate the calendars and look for the most suitable meeting dates.