

**Minutes of the RPA Committee Meeting,
March 6-7, 2001**

Members Present:

Larry Cotter (chair)
Dave Benson
Shane Capron
Doug DeMaster
John Gauvin
Terry Leitzell
Alan Parks

Beth Stewart
Jack Tagart
John Winther
Sue Hills
Wayne Donaldson
Bob Small
Fred Robison

Gerald Leape
Jerry Bongon
John Iani
Matt Moir
Dave Cline
Steve Drage

Staff present: *Dave Witherell (coordinator), Cathy Coon (NPFMC), Tamra Faris (NFMS), Lauren Smoker (NOAA GC), Kristin Mabry (ADF&G), and others attending from NMFS AFCS and NMML.*

Background - This Committee was established to respond to the Steller sea lion (SSL) Reasonable and Prudent Alternative (RPA) and experimental design in a technical, operational, and practical sense to try to make it more functional. In the short term (by April), the Committee has been tasked with development of open/closed area recommendations for the latter half of 2001. The longer term task of the Committee is to provide an alternative RPA for analysis (by June), and make recommendations to the SSC, AP, and Council on the analysis.

Meeting - The third meeting of the RPA Committee was held on March 6-7 in Seattle at the Alaska Fisheries Science Center, beginning at 8:30 am. Larry Cotter briefly reviewed the tasks of the committee, the draft agenda, and format of committee meetings. Committee members introduced themselves, and the draft minutes from the February 20 meeting were reviewed and revisions were discussed.

Bob Small provided a summary of the letter from the State's sea lion restoration team. The Team provided recommendations in four areas: no-transit zones, no-fishing zones, critical foraging areas, and experimental design. Regarding no-transit zones, the team recommended a 3,000 ft no transit zones around all major haulouts when these sites are occupied. No-fishing zones should be ecologically based, and that size be based on depth and distance as determined from telemetry studies. Critical habitat designations should be revisited and perhaps revised based on updated information. Lastly, the team recommends that any experiment to understand the effects of fishing should not be implemented until a sound design has been developed. They provided some guidance on development of such a design.

Larry Cotter led a discussion of goals and objectives for the committee. The Committee tentatively identified the following as its Goal: **Develop an RPA that meets the mandates of the ESA, MSFCMA, and other applicable laws, while sustaining viable fisheries in Alaska.** The Committee considered adding a phrase ("and a rich, diverse ecosystem") to the end of its goal, but consensus could not be reached (addition of the phrase is still being discussed). The Committee spent some time developing objectives for research, sea lion protection, and sustainable fisheries. Although numerous individual objectives were identified, they distilled into the following:

- Remove jeopardy and adverse modification.
- Develop a sound experimental design for monitoring.
- Minimize social and economic impacts.
- Minimize bycatch of PSC and other groundfish.
- Promote safety at sea.

Doug DeMaster (NMFS) reviewed the summary information ‘cheat sheets’, as requested by the committee, on ESA definitions and guidance for SSL protection. An ESA summary sheet, prepared by Lauren Smoker (NOAA GC), provided ESA definitions for jeopardy, adverse modification, and reasonable and prudent alternative, as well as summary of agency requirements for determination and RPA development. Shane Capron reviewed the management actions contained in the RPA relative to the three major issues (protection of critical habitat and protection from further decline, protection from jeopardy, and monitoring). Doug reviewed the guidance form the BiOp relative to developing an acceptable RPA and experimental design. **The two primary criteria for closure areas were: 1) at least 50% of CH should be closed to fishing for pollock, cod, and mackerel, and 2) that the closures should protect at least 50% of the non-pup population and 75% of the areas where pups are born.** Doug noted that we may want to use this guidance for 2001 regulations, but he thought there was some flexibility here. He further noted that closures around rookeries and haulouts were probably more important than closures in the special foraging areas. Doug calculated that if closures for the second half of 2001 included all the CH in the Aleutians, Area 518, and rookeries and haulouts east of 170 degrees out to 10 nm, then 56% of CH would be closed (including state waters). Doug clarified that the 50% guideline was developed such that expected declines of SSL in open areas would be offset by increases in the protection areas. Regarding the ‘jeopardy bar’, Doug noted that NMFS used the guideline of 0.6% mortality per year for pinnipeds in determining whether mortality incidental to commercial fishing was negligible under the ESA. This criteria for adverse impacts was not specified in the BiOp, but has been used for years as determination criteria for MMPA fishery impact evaluation.

Marilyn Dahlheim (NMFS) gave a report on killer whales summarizing three types of available information: platform of opportunity program data, survey data, and photographic identification studies. Copies of 4 scientific papers were distributed. Platform of Opportunity data showed that killer whales are sighted throughout Alaska waters, but because there is almost no effort associated with these data, they cannot be used for estimating abundance or trends. Dedicated cetacean surveys using line-transect methodology have been completed throughout Alaska. Areas covered included the waters near the Pribilof Islands, the Aleutian Islands, the Alaskan Peninsula, and the western Gulf of Alaska. During these surveys killer whales were sighted, however because duplicate sightings could not be ruled out, no population estimates were made. Identification of individual killer whales is possible due to characteristic fin shapes or scars or nicks on the fin or saddle. Photo-identification studies of killer whales have taken in Alaska since 1984, and several photographic catalogs depicting individual killer whales are available. Based on photo-identification research from Prince William Sound westward, a minimum count of killer whales includes 670 residents and 89 transients. A minimum total estimate for all North Pacific (California to Alaska) killer whales is 977 residents, 449 transients, and approximately 200 whales that have been termed the “offshore” type. There are genetic and behavioral differences between these whale types. Resident whales are found in large cohesive groups and they feed mainly on fish. Transient whales occur in small dynamic groups and feed primarily on marine mammals. The amount of prey taken on a daily basis by transient whales is currently unknown. However in captivity, killer whales consume 200-250 pounds per day, or about 3-5% of their body weight. Large-scale movements by transient killer whales have been documented (e.g., Alaska to California).

Beth Sinclair (NMFS) gave a report on sea lion scat studies, and handed out summary tables. This study is currently in review and will be submitted for publication in May 2001. Her study examined scat collections from 1990-1998, which included a total of 3,400 scats containing identifiable hard parts. Collections were made from 31 sites in the winter and 31 sites in the summer. The foundation for the statistical analysis in this study was prey "frequency of occurrence", which is the percentage of scats that have prey remains that contain a particular species of prey. Frequency of occurrence values were reduced to factors accounting for most of the variance in the diet data by principle component analysis. Cluster analysis indicated that there is regional specificity of prey eaten, with regional clusters identified as follows:

Region 4 (west of Bogoslof)	prey: mackerel and cephalopods
Region 1 (Kodiak and AK pen.)	prey: pollock, salmon, flounder
Region 3 (Eastern AI to Cold Bay)	prey: herring, sandlance, cod, irish lord
Region 2 (Alaska pen to Unimak Island)	prey: wide variety of prey

Beth noted that it was important to recognize that prey species absent from the clusters were not necessarily absent from the diet in that region. For example, salmon are preyed upon in all four regions, but the cluster analysis resulted in salmon only being used to differentiate diet by area in Region 1. Beth added that there was overlap in prey between regions 1 and 3 in the area including the Alaska peninsula to Unimak Island. Analysis of prey diversity among the areas in winter and summer indicated that SSL were eating more diverse prey in the winter months, except in region 2. Her overall conclusions were that the regional differences suggest area-specific foraging strategies, and that SSL were targeting near shore prey when the prey was densely aggregated.

Doug DeMaster gave a brief overview of SSL biology and status. The current status is summarized in the stock assessment reports available on the web, together with information on pup counts, non-pup counts, diet studies, telemetry studies, etc. The current US western stock of SSL is estimated to be 34,600 animals. The average rate of decline is 5.1% from 1991-2000. Declines are in the areas of Prince William Sound (9%), central GOA (8%), and western AI (8%), whereas the other areas are stable. The two problems facing SSL recovery are that the current birth rates are too low, and that survival from pup to age 4 is low. Currently, the average pupping rate per female is 55-70%, but one would expect 80-90% based on studies of California sea lions. Similarly, the average death rate for non-pups is 20% per year, whereas only a 10% rate would be expected for a SSL population that was increasing at 5% per year.

Doug also reviewed some basic SSL biology. Females mature between ages 3-6. There is a one year gestation period, such that both birth and mating occurs in June. Pups generally leave the mother after 11 months, but will stay longer if another pup isn't born. There is no direct association of the males and female adults outside of the mating period, however they often share haulouts. Telemetry data have shown that pups < 1 year old typically dive 10-25 meters, while yearlings typically dive 10-50 meters. Bob Small provided a table with information on the 88 satellite tags deployed on SSLs by ADF&G. A more in-depth report on the results of telemetry studies will be provided at the next meeting.

Kristin Mabry (ADF&G) and Cathy Coon (NPFMC) reported on their progress with data analysis using geographic information systems (GIS). They examined fish ticket data for the period June through December 1995-99. They examined the data by target fishery (pollock, cod, mackerel, flatfish, rockfish) and also retained bycatch of non-target pollock, cod, and mackerel. The information was further split by gear type (trawl pot/jig, longline) and by vessel size category (<55', 55-60', 60-125', and >125'). There was disagreement expressed by the committee about the necessity for a <55' category. There was also discussion about using observer data (NORPAC) to get information from catcher-processors, because the fish ticket database only includes catcher vessels. The committee agreed that this data analysis would be especially important for the mackerel fleet, which is comprised of all c/ps. The committee also felt that it would be

necessary to split out the jig gear from the pot/jig category. Regarding SSL information, count data from the 151 major sites (including 37 rookeries) have been mapped using GIS, and the full database will soon be available. The committee suggested that the SSL count data be broken out into regions identified from foraging studies, with the AI further split into smaller regions. It was also suggested that the best counts came from aerial surveys done in June and July. Counts could be split into 4 categories (0-75, 75-200, 200-1000, and > 1000 animals) to help determine significance. Historical versus current significance could be determined if the data were lumped into 5 year blocks. The committee thanked Kristin and Cathy for their extraordinary efforts to prepare the information.

Chris Wilson, Neal Williamson, and Eric Brown (NMFS) briefed the committee on the echo-integration and bottom trawl surveys being conducted this winter on forage abundance and distribution. In the Shumagin Islands hydroacoustic survey from 12-19 February, test trawls found a high percentage of spent pollock, indicating that spawning was earlier than normal this year. The hydroacoustic survey in the southeast Bering Sea found pollock to be concentrated further east than expected, with pollock schools extending beyond the eastern survey boundary in Bristol Bay.

Sue Hills provided a quick overview of SSL research being done by Kate Wynne around Kodiak Island. Kate has been studying 12 SSL sites (11 haulouts, one rookery at Marmot) around Kodiak, including counts, scat collection, and local prey abundance. Preliminary results after one year showed that counts can be variable over seasons, and some haulouts only have sea lions present for a couple of months. Arrowtooth flounder and flathead sole together comprised of over 60% of the trawl survey catches. Regarding scat analysis, a total of 13 species had over a 10% occurrence in scats, indicating that many species are eaten by SSLs. Arrowtooth, cod, pollock, sandlance, salmon occurred at the highest frequencies. A more complete report may be given at the next meeting.

The Committee discussed data requests for the next meeting.

- Separate out jig from pot/jig combo – do not worry about vessel size categories for jig gear.
- Add Catcher Processor data (for pollock, cod, atka mackerel) from norpac to GIS format.
- Add bathymetry – both NOAA charts and polygons.
- Stick with the basic level of stat area and then sum over the 6 regional areas
- SSL Count distributions - examine on a seasonal basis, by food habits regions, in regulated rookeries and haulouts only. Identify significant areas through binning 0-75, 75-200, 200-1000, 1000+ . Lump data into 5 year blocks (>1979).
- Analysis of telemetry data, distance from site and land, diving depth.
- Add PSC closure areas as GIS overlay.
- Histogram for catch by month and gear – by ADF&G stat area INDUSTRY will provide, especially important for post AFA years.
- Economic data for 1999 for small vessels and shoreside processors relative to appropriations bill.
- Salmon and herring – total removals by stat area (for future meeting).
- Total removals of everything by stat area for cumulative impacts analysis (for future meeting).
- Fish ticket data and observer data by stat area for 2000 (for future meeting).

Topics and agenda for the next committee meeting were discussed. Agenda items will include a presentation by Kate Wynne on the Kodiak SSL studies, staff reports on data requests, setting the schedule for remaining meetings, and making final recommendations for the second half 2001 fisheries. The meeting will be held at the Hilton Hotel in Anchorage and begin at 1 pm on Monday March 26 and will continue through March 30, until final recommendations are developed. There will not be another committee meeting prior to the Councils April meeting.

The meeting ended at approximately 5 pm on March 7.