

NMFS' Pinniped-Fishery Interaction Task Force

October 24, 2011 Task Force Meeting

Facilitator's Final Report

Task Force Members in attendance for all or part of the meeting: Daryl Boness, Independent Research Scientist; Bruce Buckmaster, Salmon For All; Jody (Charles) Calica, Confederated Tribes of Warm Springs; Joyce Casey, US Army Corps of Engineers; Robert DeLong, NMFS Science Center; Doug Hatch, Columbia River Inter-Tribal Fish Commission; Chris Hathaway, Lower Columbia Estuary Partnership; Barry McPherson, American Fisheries Society; Guy Norman, Washington Dept. of Fish and Wildlife; Joe Oatman, Nez Perce Tribe; Dennis Richey, Oregon Anglers Association; Carl Scheeler, Confederated Tribes of the Umatilla Indian Reservation; Rob Walton, NMFS; Paul Ward, Yakima Tribe; Steve Williams, Oregon Dept. of Fish and Wildlife; Sharon Young, Humane Society of US.

Resource Advisors: Robin Brown, ODFW; Charlie Corrarino, ODFW; Garth Griffin, NMFS; Sandra Jonker, WDFW; Brent Norberg, NMFS; Robert Stansell, COE; and Bryan Wright, ODFW

Interested parties/others on the phone or in the room: Barry Espenson; Deborah Lipman; Fanny Martinez; Sandy McElhaney; Henry Miller; Josh Oliver; Bernadette Price; Joe Scordino; Jessica Sall; Quinton Smith; Nancy Usiatynski; Jason Vogel; Glen Venezia; Karen Ward; Louise Ward; and Gary Wise

DS Consulting Facilitation Team: Facilitator, Donna Silverberg; Notetaker, Robin Gumpert

The Pinniped-Fishery Interaction Task Force was convened by the National Marine Fisheries Service (NMFS) to review new and relevant information and to advise NMFS on the latest application for removal of California Sea Lions under Section 120 of the Marine Mammal Protection Act submitted by the States of Idaho, Oregon and Washington. The following report is a summary of the one-day conference call discussion that was held on October 24, 2011. It is not intended to be a verbatim transcript of the meeting, rather a summary of discussions and recommendations from the Task Force members. At the end of the day's discussion, fourteen of the Task Force members were supportive of the States' application and two were not. The reason for this support or lack of support is clarified below:

Welcome/Housekeeping/Introductions

Introductions were made and Donna Silverberg provided instructions for the day: The meeting, in the form of a Go-To webinar conference call, allowed the Task Force members an opportunity to build off their 2007 and 2010 discussions, review new scientific information, hear public input and discuss four questions included in a set of instructions sent to the Task Force last week.

Overview of Context and Task

Garth reminded the group that materials for today's discussion were available on NMFS' website and all past and current Pinniped-Fishery Interaction Task Force information could be found on the DS Consulting website. Garth noted that NMFS granted partial authorization to the States to remove

California Sea Lions under certain circumstances in 2008. Due to court related activities and accidental deaths in 2008, the program realized only a partial year of operations that year. The removal program operated in full in 2009 and 2010, but stalled again in 2011 because of the US Court of Appeals for the Ninth Circuit's November 2010 decision. Since the 2008 authorization, a total of 37 California sea lions have been permanently removed.

History of litigation: A one-page summary was provided to Task Force members and shared via Go-To and the web pages designated to this process. Garth noted that the court invalidated NMFS' March 2008 MMPA Section 120 authorization, but upheld the agency's accompanying NEPA analysis. In 2011, after receiving a request from the States to reinstate their MMPA authorization, NMFS reissued the States' authorization at the end of the season but then revoked that authorization in July 2011. Thereafter, the States submitted a new application for 2012-2016, which brings us to today's review with the Task Force. Garth noted that there is currently no pending litigation on this matter. NMFS plans to announce its finding on the States' 2011 application by the end of February.

Overview of assignment: Instructions were sent to task force members, and for the benefit of others on the phone today, Garth read the instructions memo. The Task Force assignment for today was to review the States' 2011 application, new data, and public comments received on the States' Section 120 application, and also to consider the factors in Section 120(d):

- a) population trends, feeding habits, the location of the pinniped interaction, how and when the interaction occurs, and how many individual pinnipeds are involved;
- b) the past efforts to non-lethally deter such pinnipeds, and whether the applicant has demonstrated that no feasible and prudent alternatives exist and that the applicant has taken all reasonable non-lethal steps without success;
- c) extent to which pinnipeds are causing undue injury or impact to, or imbalance with, other species in the ecosystem including fish populations; and
- d) the extent to which such pinnipeds are exhibiting behavior that presents ongoing threat to public safety

Four specific questions were asked of the Task Force:

- 1) If we do not have the ability to quantify the impacts of pinniped predation on extinction risk of salmonid populations, are there qualitative criteria you recommend we consider in determining whether pinniped predation is significant?
- 2) If we had the ability to quantify the impact of pinniped predation on extinction risk of salmonid populations, do you have advice on how to approach setting a threshold for significance? For example, are you aware of other contexts in which managers consider a level of impact to be significant and what those levels are?
- 3) As noted in the materials we sent in advance of today that you reviewed today, Steller sea lion presence at Bonneville Dam appears to be growing, as does the numbers of salmonids being consumed by Steller sea lions. Do you recommend that we consider re-allocating funds away

from California sea lion non-lethal deterrence? Do you have any specific thoughts/recommendations on non-lethal deterrence measures for Stellers?

- 4) Does anything in the States' 2011 application or the new information that you have reviewed in consideration of the application, change your support for or against a removal program consistent with the States' application?

Garth also noted that he would like to see the Facilitators' Report of today's call be completed (including Task Force refinements, as needed) and submitted to NMFS by November 14.

Review List of New Scientific Information Available to the Task Force Members

Garth reviewed the following materials that had been made available to the Task Force: the States' new application, the States' and Corps' annual reports of pinniped-fishery interactions, and comments received on the States' application (over 2,000 individual comments had been received and were coalesced into about 800 comments). More in-depth comments included those from, among others, the Humane Society of the US, Angler Groups, US Marine Mammal Commission, International Organizations, and Fish and Wildlife Environmental Organizations.

Task Force members asked questions of the resource advisors about the information from the scientific reports.

- To the States: At the last meeting the States indicated they would look into pursuing alternatives to Section 120. Nothing in the materials suggests that any action has been taken on this.
Response – Oregon has not moved forward exploring alternatives, but does not consider anything to be off the table. At this point, the State has chosen to use Section 120 as the one known tool. While Washington is supportive of alternatives, e.g. technology, nothing viable is being pursued at this point. Relative to the Marine Mammal Protection Act, Oregon and Washington are not pursuing any other alternatives under the Act at this time.

Garth asked what specific section of the MMPA would/could be cited and what the advantage of doing so was. Task Force member response: The lethal action could be pursued with fewer restrictions, for example the constraint for individual identification of sea lions may not be needed.

- To the USACE report: 2011 consumption rates dropped compared to prior years. Do you have any additional thoughts as to why?
Response: Fewer California Sea Lions (CSL) were present. In particular, the average number present per day was less than prior years. Follow up question – what about the impact of very high flow conditions this year?
Response: USACE looked for but did not find a correlation between the predation rates and higher flows in the past few years. That being said, high flows and record high tailwater levels could have had an impact in 2011, making it more difficult for CSL to find prey.

- Rates of sport and commercial fishing take were compared with estimated take rates by sea lions at Bonneville Dam (BON) in the court process. Will this also be a consideration for NMFS in making a determination about the latest application?

Response: This is something NMFS needs to do; the Task Force was not tasked with considering court arguments but might choose to recommend that NMFS consider this factor. NMFS would like the Task Force to focus on the four questions outlined in the instructions.

Robert Stansell, USACE, shared additional information not found in the report on overall predation rates by CSL and Steller sea lions (SSL). The average daily abundance of CSL decreased while there was an increase of SSL. The adjusted estimate of salmonid and sturgeon predation by CSL dropped substantially while predation by SSL increased on both populations. Task Force note: A Task Force member cautioned about the use of ‘mean values’ – if a statistical analysis of the data is not done, there may be no significant difference in predation across any of the years before and after lethal removals were authorized.

- The Task Force was reminded, per Garth’s instruction, that NMFS’ Supplemental Information Report and all documents supporting the May 2011 Section 120 authorization and relevant to this meeting were posted to the NMFS site.

Public Input

Members of the public were invited to share any specific additional information or material not covered so far that they felt the Task Force should consider. Two members of the public offered their personal feelings on a lethal removal program. However, no additional or new data or substantive information on predation was provided by the public for Task Force consideration.

Task Force Responses to NMFS’ Questions

The Task Force began discussing the four questions outlined for them in the NMFS instructions. Their discussions are summarized in bullets below:

Question 1) If we do not have the ability to quantify the impacts of pinniped predation on extinction risk of salmonid populations, are there qualitative criteria you recommend we consider in determining whether pinniped predation is significant?

- What has been done since the Task Force last met to determine whether we have the ability to quantify impacts? This was a recommendation from the Marine Mammal Commission which provided some quantifiable standards and also suggested the Task Force did not have the expertise to do a quantifiable assessment.

NMFS response: No information has been submitted to date to lead NMFS to believe a quantification of impacts is possible at this time.

State response: The States shared a comprehensive analysis during the 2007 Task Force process which was included in the recovery plans for sub-basins throughout the region describing actions to address all sources of impact across the life cycle of the salmon. The analysis would

recognize that each individual impact above a baseline level (baseline = pre-European) could be considered 'significant'. The data and regional policy suggests that each source of impact needs to be addressed and reduced to lessen impact. This is and has been the 'all-H' strategy for the region. The region has taken an approach to salmon recovery and ESA requirements in the context of the comprehensive analysis.

- Information was shared from a recently published study that looked at the effect of attempted predation on fish that are injured but escape from predation --and then their relative spawning success. The study concluded that pinniped-caused injuries were generally *not* well correlated to survival of adult fish. It was noted that this is a relevant piece to understand predation impacts on extinction risk.
- A suggestion for quantifying significance: look at known and/or permitted levels of removal of wild returns and factor in the proportion of total predated at BON that are expected to be wild, then put in to quantitative perspective the pinniped predation on wild fish relative to other forms of predation. Data from the 2008 EA on mortalities of each adult ESU could give us some of these data.

State response: For a truly relative comparison of different sources of impacts we would need to quantify pinniped predation from the river mouth to spawning grounds. Also keep in mind that the strategy in the recovery plans does not compare magnitude of impacts of respective actions. Instead, ALL impacts need to be reduced to improve overall survival of the species. The strategy also recognizes that certain attributes of the system will be maintained – dams, tribal fishing rights, irrigation and some predation – as baselines.

Follow up comment: It may be the region's approach, but the MMPA and other Acts define 'significance' differently than it is being defined here by the region for salmon predation. Not addressing significance as suggested by the Court could leave the agency vulnerable to another lawsuit.

- The Marine Mammal Commission, in its comments to NMFS, suggested doing a "PVA" (population viability analysis) to see the threshold at which the viability of a species or stock is compromised. This would allow a weighting and understanding the connectedness of all impacts and contributing factors, and the threshold you need to stay below. It would be a way to do a quantifiable analysis.

State response: Some but not all recovery plans do include PVAs. It was also noted by a task force member that not all of the runs have recovery plans.

- A suggested quantitative criteria for listed populations: if the growth rate is <1 , any predation is 'significant' (instead of comparing which type predation is more significant than others.)
- Another approach: If any mortality factor is greater than it was at the time of listing, it is considered 'significant'. Is this language included in recovery plans?

State response: Basically, yes. This is one qualitative criterion that could be considered with pinniped predation. With respect to hatchery issues and harvest issues, continual modifications are made annually by the region to address these issues based on the Hatchery Science Review Group's (HSRG) recommendations and the US v. Oregon settlement, which reached an agreement that describes an abundance-based harvest management strategy.

CRITFC response: Hatchery management is a result of long standing and ongoing negotiations per a settlement agreement around treaty rights. From the Nez Perce Tribe's perspective, putting more burdens on hatchery management is not on the table. We are committed to managing hatcheries to protect fish and treaty fishing rights.

CRITFC cautioned that extinction risk analysis includes more than just abundance. In addition we must include impacts to productivity, spatial structure, and diversity. The diversity component includes both phenotypic and genetic diversity. For salmon, the greatest variation is included in the tails of the distribution of the salmon runs. Early in the season when fish ladder counts are very low the sea lion predation take actually exceeds the daily fish count. This impact to the leading edge of fish run could have devastating impacts on genetic diversity of listed salmon runs.

Follow-up comment: NMFS stated in its 2011 Supplemental Information Report that there had been no change relative to harvest levels or hatchery practices since the HSRG report in 2009.

- Suggested qualitative metric: If the cause of or threat to mortality is occurring now, but was not occurring at the time of listings, it should be considered a significant threat. Start with the recovery plan as a point of departure for considering significance.

NMFS response: Recovery plans discuss primary and secondary limiting factors but do not specifically define 'significant'. Predation is a limiting factor, and in some plans, is considered a secondary limiting factor (perhaps because it was not known at the time of developing the recovery plans what could be done about it).

State response: However, most plans do analyze the amount of overall reduction in the base impacts needed for recovery and a portion of reduction across all limiting factors. All limiting factors are being addressed and reduced to pre-ESA standards in some way, but it is not clear how this relates to 'significance'. Predation is included as a limiting factor in all recovery plans (e.g., Pike minnow, Caspian terns, cormorants and sea lions have been cited as four main predation sources).

- Diversity of the species is also an important factor and much of this diversity needs to be protected during the tails or 'bookends' of the salmon run. Predation by pinnipeds typically occurs during the early part of the run, which could have significant impacts on the runs' genetic diversity.
- Sea lion predation is a new and unexpected problem and could be underestimated since night-time predation, delayed mortalities and full river predation are not fully considered (though it was noted that USACE adjusted-estimates do take in to account night and/or unseen mortality.)

Taking a holistic approach to all sources of mortalities will require cooperation of many partners. Given this, a qualitative criteria could be:

“Is there evidence that those who are, or could be, implementing actions to reduce negative impacts on threatened and endangered Pacific salmon and steelhead of the Columbia River Basin from habitat, hydroelectric, hatchery, harvest, or other causes internal or external to the basin are demonstrating reluctance to implement such actions because of mortality to these fish from the new and unprecedented pinniped predation at and below Bonneville Dam?”

If so, then pinniped predation at and below Bonneville Dam could be seen as having a significant negative impact on recovery efforts for threatened and endangered salmon and steelhead in the Basin (and throughout the NW wherever implementers demonstrate reluctance).

- A new salmon virus discovered on the west coast could alert us to the importance of getting as much wild escapement as possible. Perhaps this could be a qualitative criterion.

Garth Griffin, NMFS summarized what he had heard thus far: The group generally believes that a quantitative analysis, if it were available, would be very helpful. At this time, a general feeling among many of the Task Force members is that there is nothing available and, therefore, a more qualitative analysis is required to answer the question regarding ‘significant’.

Question 2) If we had the ability to quantify the impact of pinniped predation on extinction risk of salmonid populations, do you have advice on how to approach setting a threshold for significance? For example, are you aware of other contexts in which managers consider a level of impact to be significant and what those levels are?

- In the context of the Federal Columbia River Power System (FCRPS) Adaptive Management Implementation Plan (AMIP), salmon population thresholds were set as an early warning and significant decline signals that would prompt action. This could be used for predation – if a population decreases to a level causing alarm, more action should be taken to address the risk of extinction. The threshold would take all actions to the next level.
- Population viability analyses look at all different factors contributing to decline and would allow weighting the level of mortality per limiting factor. Take a holistic look at all factors and how each is being addressed. Place pinniped predation in the broader context (through a Section 120 lens) and show the relative importance of taking action to address predation. If other impacts are higher than pinniped predation and not deemed significant, we need a rationale for why pinniped predation should be addressed as significant. In the absence of this holistic approach, NMFS remains vulnerable to questions about the significance of this problem.
- Managers are trying to address ALL forms of mortalities and use some qualitative considerations such as ease and cost of addressing. Predation on a portion of a listed stock that could have a genetic impact makes this more complex and not just a simple quantitative response. Instead

look at impacts on sea lion population by lethally removing vs. impacts to listed stocks if predation continues.

- A willingness to participate in recovery is very much there. The tribes and others have contributed dollars, expertise and time to work toward recovery in many areas, including hatchery management. Some factors have not been considered as much as others and we need to keep parties at the table to work with all of us on this recovery effort.
- Within the FCRPS' Hydrosystem Biological Opinion (BiOp), predation has been analyzed and then included as a limiting factor. What methodology was used to get to this?
NMFS response: We know about that methodology used in the BiOp and we want to know if there are other types of analyses that could be applied in this case. In addition to the supplemental comprehensive quantitative analysis in which pinnipeds were recognized as a limiting factor (but not a primary), NMFS also relied heavily on the Task Force recommendations to form that evaluation. To set primary vs. secondary limiting factor, NMFS relies on availability of data. For pinnipeds, the recovery plan for the Upper Columbia River Chinook uses data as current as 2007, for example, and needs updating. Now much more information is known about the impact of pinnipeds and of the information provided to the Task Force is the most current and reliable source of data we have for this limiting factor.

Question 3) As noted in the materials we sent in advance of today, Steller sea lion presence at Bonneville Dam appears to be growing, as does the numbers of salmonids being consumed by Steller sea lions. Do you recommend that we consider re-allocating funds away from California sea lion non-lethal deterrence? Do you have any specific thoughts/recommendations on non-lethal deterrence measures for Stellers?

- Current efforts by the States, Tribes and Corps are impacting both types of sea lions so it is not clear how we could re-allocate funds to focus on one over the other.
- With limited resources, focus on those that are having the most impact. SSLs are having an increasing impact. Where we are putting our dollars requires us to take a holistic and qualitative look. This question highlights the challenge we are facing.
- Set an allowable take and then determine how much to allocate to predation by the sea lions vs. other 'harvesters'.
- Evidence shows that SSL predation is increasing and that hazing has had a greater impact on them than on CSLs – with relatively minimal effect on the latter. Perhaps consider increasing hazing efforts which would target SSLs.
- Look at ways to reduce or eliminate haul out areas, as an alternative or addition to increasing hazing efforts? This could apply to both SSLs and CSLs.

Corps response: We have made efforts to reduce haul out and, so far, that has not done a lot to improve the situation. Currently the SSL are feeding on Fall migrating fish and are not hauling out, so it is unclear how our efforts in this manner would help.

State response: Hazing is becoming less of a deterrent the longer we employ these tactics. There was a difference in 2006 when we began, but that has since changed to virtually no difference between CSLs and SSLs. We have the ability to mark and study SSLs for movement. Also, any pinniped near a fish way gets hazed.

- What about hearing loss as a result of loud acoustic hazing – has this been verified?
Response: Some of the animals captured at Ballard under Section 120 authorization which had been seal bombed significantly, were sent to Sea World and, when they died, were studied. No anatomical evidence of hearing loss was found and they appeared to have normal hearing while in captivity.
- Don't move away from doing some hazing of CSLs, particularly for new and naïve animals. Impacts will be greatest on those animals. The USACE 2011 report stated that a possible reason for the reduction in night time predation was that the daytime hazing had been reduced. This would seem to indicate that the hazing has some effect.
- Note from the Managers: Oregon and CRITFC have some new research planned for this year with GPS phone tags. This will aid the ability to record hazing efforts. This also could help us determine individual reactions to specific hazing activities. New animals compared to older animals would be a useful evaluation, and may be possible to study this year. All will be done within the current level of hazing. The work could focus on SSLs but will we plan to tag and track both SSLs and CSLs.
- Are management agencies integrating efforts to haze both types of sea lions? Is there a need or way to better align efforts?
CRITFC response: We do not discriminate between the two. To focus on SSLs would require an earlier deployment of efforts (Feb. 1 or earlier) since they arrive earlier than CSLs. That being said, past efforts to start sooner had limited benefits.
- Are any new funds available for supporting non-lethal deterrent measures?
States response: The States have looked in to this but are not aware of any at the moment. The Oregon Legislature did provide additional funding for hazing for Willamette Falls and that will need to be our State's focus, at least in part.
- If SSLs are becoming more of a problem, what do resource advisors think about beginning hazing early?

State response: Three years of early hazing within and below the boat restriction zone (BRZ) did not reveal much. It is difficult to ascertain the impacts given such a large area. We concluded that the sea lions would move away from boats and relocate to other feeding areas. Sturgeon is the early focus and they are found throughout area. We are not sure it's worth the time, effort and cost to do so. This could be a comment on hazing efforts overall in terms of effectiveness.

- You should continue non-lethal efforts even if limited in effectiveness, if only because the MMPA requires that non-lethal actions must be taken before moving to lethal measures and new animals arriving at the Dam need to be exposed before being considered for lethal removal.

Question 4) Does anything in the States' 2011 application or the new information that you have reviewed in consideration of the application, change your support for or against a removal program consistent with the States' application?

- Daryl Boness: I do not believe based on the data available that efforts to kill California sea lions are going to solve the problem and therefore they should not continue under Section 120. Even with all of the CSLs removed to date, the mean daily presence of CSL and SSL has not changed. This tells me there will be replacement animals no matter how many you remove. 40 is a substantial number. We don't know the pool of unidentifiable totals vs. those identified, so looking at a mean daily value is a better approach than using total maximum abundance. Acceptable methods for lethal removal under Section 120 will not get us there (including no ability to address SSLs and the fact that the biggest contributor to variation in percent of run size that is taken by sea lions is the size of the run, which has varied from ca. 85,000 to ca. 280,000). The current data do not allow unambiguous evidence to support an interpretation that killing CSLs is working or will work to reduce salmonid predation. It has been established that CSL diet of animals at Bonneville consists of primarily salmonids and SSL consists of only small percentages of salmonids, although the overall proportion of salmonid predation being accounted for by SSL at Bonneville is on the increase such that CSL account for about 70% and SSL about 30%. While the mean daily numbers of CSL might be decreasing, as might be seen in the meantime at the dam per individual CSL, the mean daily numbers of SSL are increasing. The estimated total mean daily abundance of sea lions present at the dam (both CSL and SSL) likely shows no change over the past 4-5 years based on visual inspection (since no statistical analyses of data have been done) of the figure shown. At the same time the estimate of salmonid consumption is increasing. The bottom line is that in conjunction with killing ca. 40 CSL there has been increased salmonid consumption by CSL, increased salmonid consumption by SSL, and greater numbers of SSL at the dam such that the combined abundance of CSL and SSL at the dam is unchanged over the past 4-5 years. During this same period the percent of salmonid run size consumed by sea lions is about half of what it was when the States first applied for authority to kill sea lions. The primary reason for this appears to be because factors other than sea lion predation are far more important in determining how many salmon come back to spawn. Hence, something does not add up.

Corps response: Yes, there are many confounding factors including natural fluctuations and limits of our own management efforts. That said, 2010 saw an increasing number of salmon taken by CSLs and an increase in clepto-parasitism by SSLs. This could mean that the CSLs had to go out and catch more salmon. The Corps acknowledged that predation numbers and percent were both down in 2011 due to a variety of factors.

- Bob DeLong: In four years we have only removed 37 CSLs, in part because of interruptions to the removal program from litigation. This is not a sufficient number of animals removed to assess the success of the program. I do believe the abundance of pinnipeds has changed since the program began. We need to take a closer, statistical look at this to confirm. There are data supporting a decreasing trend in CSL presence and predation – both in average daily number and number of days individual CSLs are present at the dam – since the program began. How much weight should be given to these metrics?

Corps response: Yes, the data does show these changes almost exclusively because those animals that had been coming year after year had been removed. Recruits will occur (as was seen in 2010) but the number of new recruits should dwindle. It is a percentage of the run rather than a total number. The cause for this decline in CSL numbers is not clear: it may have more to do with the increase in SSLs.

[NOTE: A memo, 'OR and COE response to question raised at Oct 24 TF III meeting', was sent to all members of the Task Force as follow up to this discussion. The analyses provided in the memo did show that average daily abundance of CSL from 2009-2011 was significantly less than that observed from 2006-2008. The memo can be found on the NMFS web page dedicated to this issue along with a response from the Task Force member raising the issue of relative decline in numbers. This material can also be found on the DS Consulting web page dedicated to the Task Force work.]

- Steve Williams: The opportunity to fully implement our efforts as we originally set out to do has not been possible. I do believe our efforts to remove CSLs have had some effect, but we haven't fully seen what impacts could come from doing the full effort that was authorized. In the absence of doing anything, the problem will grow according to expert advice and as we are witnessing at Willamette Falls. Therefore, I want the opportunity to carry out our plan to continue the effort in multiple and contiguous years.

- How would the States have been able to address new animals that you didn't feel you were able to address, considering 35-70% of sea lions at the Dam are new from year to year?

States response: We were unable to complete a full trapping, marking and removal program with any consistency over the course of multiple years so we can't see or know the full effect of our efforts. Being a relatively new behavior (8 years) and a small portion of total animals, we need the ability to remove habituated animals at a level the Task Force originally identified in order to truly study the effects of the program.

Corps response: Although there are typically 35% new CSL's each year (2010 being the one exception) we do not know what the normal recruitment rate would be because of the implementation of several harassment actions over the years and the lethal removal program. These actions confound the picture regarding how many new animals the States would have to manage every year.

- How practical will it be to actually carry out the removal of the target number of animals?
- States' response: Since our original estimate, we added a trap, limited haul out areas, and have been much more effective at getting animals in to the traps. We might have removed 10-15 animals more had we not had to stop the program in the year that it was halted by a court. If we had the ability to do a full blown effort, we believe we could remove our target.

- Maybe a question is: what would have to change for those who supported lethal removal to no longer support lethal removal? Also, what would success look like if you were to be successful with the pinniped program?

Response: Success would be a CSL removal program in place for several years without interruption, CSL predation rates decreasing to 1% or less of returning adult fish, which would represent a 50% to 75% decrease in predation rates compared to rates from 2005 through 2009. This would be a dramatic improvement from the current situation. That said, the variation in percentage of run being consumed is influenced by many factors, not just sea lion predation. The percentage is mostly a function of the run size.

- The focus should be on protecting populations particularly during low run years, so our target should be to reduce enough animals so that during years of low runs/vulnerable populations, predation does not increase and hopefully decreases with use of this program.
- With respect to the States' application, it was clarified that one specific, the second bullet, says observations at the dam *or upstream*. The 2006 application was different than the current application, but the current mirrors the 2011 NMFS Letter of Authority (LOA).

Task Force members were asked their positions on whether they support the lethal removal program requested in the States' 2011 application to NMFS:

- Daryl Boness– leaning toward not continuing support for the lethal removal program
- Bob DeLong– in favor of continuing the program
- Barry McPherson – in favor of continuing the program, feel more strongly than before
- Paul Ward – supports continuing the program
- Joyce Casey – supports the States' application
- Chris Hathaway – support the previous Task Force recommendation and the current States' application
- Carl Scheeler – supports the application
- Jody Calica – strong support for the application

- Sharon Young – oppose; inappropriate application of Section 120
- Rob Walton – lukewarm support for continuing the program
- Bruce Buckmaster – strongly support the application
- Joe Oatman – support the application
- Dennis Richey – strongly support the application
- Guy Norman -- support the application
- Steve Williams – support the application
- Doug Hatch – support the application

The Task Force was referred back to page 2 of the Task Force Instructions and asked whether anyone wanted to offer anything different than what is contained in the States' 2011 application in terms of specific individuals, location, time and method of taking; criteria for evaluating success; duration of intentional lethal taking authority; or non-lethal deterrence.

- With regards to public safety, there is anecdotal information about a couple who had to swim away from their boat to get away from a CSL.
- With regards to take – what would be the amount? The authorization was for 85 individuals per year but the impact of removing 30 was what was analyzed in the 2007 Environmental Assessment. Response: 30 was the practical number per year based on the States' on the ground professional judgment. The application says 1% of PBR, which would put the number being requested around 85-91.
- What is the best available information around presence of pinnipeds and the timing of the run of a specific population?
State response: The challenge is in correlating passage with take timing. The NMFS Science Center might be able to do this; we could 'interrogate' ever-improving PIT-tag data to make a better determination.
- It should be a tool, but there is no explicit reference to shooting as an option for lethal take.
States response: It is implied on page 1 of the application, with the request for authority for removal options 'identical to the authority NMFS issued to the States on May 13, 2011'.
- The application does a good job defining take limits at 1% of the PBR level; it should also address the economic, social and cultural impacts of removing 1% of the PBR.
- With regards to measure of success, various Task Force members suggested and discussed <1% predation though NMFS did not pursue this standard in the Federal Registered notice; CSL reduction trends; and overall impact to salmon populations as target areas to measure success. Other suggested measures included that the removal program should be in place for multiple consecutive years (five as is indicated in the application), decline in predation rates, and decline in CSL abundance at Bonneville Dam comparable to similar run sizes. Also, a qualitative

measure was suggested – reduction in evidence that people are reluctant to implement actions to reduce threats to threatened and endangered salmonids – could be a measure of success.

Regarding non-lethal alternatives:

- SSLs are hauling out at Phoca Rock. Would deploying additional harassment, e.g. carbide cannon, be helpful?

Response: Construction of a barrier would be expensive and challenging but not impossible. It is not clear who owns the area. The States will check in to this as a new alternative.

- Have you explored ‘active denial system’ options for keeping SSLs off the traps so that it is easier to trap CSLs?

Response: We have research permits to collect information on foraging behaviors and overall predation to look at changes in abundance and behaviors of SSLs. We are using the traps to study them so don’t necessarily want to keep them off the traps.

Wrap Up: Garth summarized that what he heard of those Task Force members that support the States’ application is that they are comfortable with the guidance on the activities included in the States’ 2011 application. He also acknowledged that he heard additional ideas regarding non-lethal deterrent options.

Sharon Young clarified that it is her view that using Section 120 of the MMPA is not the appropriate tool for dealing with predation at Bonneville Dam and that other sections of the MMPA might be more appropriate as suggested in the comments of the Marine Mammal Commission. She has repeatedly stated that the States and NMFS still have not adequately addressed other significant threats to recovery including from inadequacies in hatchery and harvest management and the stocking of non-native fish predators, many of which have been pointed out by outside experts; the agencies continue to permit much greater levels of mortality from other sources (e.g., dams and fisheries) and they need to further address non-lethal measures. She noted that Section 120 was only intended for a limited number of identifiable animals in a limited space preying on declining fish (as was the case at Ballard Locks) which is cited in Section 120). The case at Bonneville is very different than at Ballard Locks – the run size is large and NMFS has stated it is stable or increasing, the individual sea lions seen at the Dam often differ from year to year, with new animals coming and going, and the confounding factor of SSL predation in the same area; all of which make it fit less ‘neatly’ under Section 120. This might be the reason the Task Force finds difficulty in determining a measure of success. She suggested that the States should consider a waiver under the MMPA or a transfer of management authority as a more appropriate tool in a situation like the Columbia River.

Daryl Boness clarified that such an approach might offer fewer constraints on the management agencies for taking action (especially if there is a desire to take more than 1% PBR).

Garth thanked everyone for contributing their time and expertise on this issue.

With that, the meeting was adjourned.

This meeting summary/final report was written by the facilitation team at DS Consulting. Task Force members were given the opportunity to review an initial draft, and their edits were included in a 'near final' draft. The near final draft was sent again for final review and refinements. More than two thirds of the Task Force members responded to one or both drafts with edits and/or approval for the report. All edits have been merged by the facilitation team into this final report.

Respectfully submitted this 14th day of November 2011.

Donna Silverberg

Owner, DS Consulting