

**National Marine Fisheries Service  
Pinniped-Fishery Interaction Task Force: Bonneville**

**May 31, 2016 Task Force Meeting**

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**Final Facilitator's Summary**

Task Force Members on the phone for all or part of the meeting:

Bruce Buckmaster, Salmon For All; Joyce Casey, U.S. Army Corps of Engineers (Corps); Bob DeLong, National Marine Fisheries Service (NMFS); Doug Hatch, Columbia River Inter-tribal Fish Commission (CRITFC); Chris Hathaway, Lower Columbia Estuary Partnership (LCEP); Chris Kern, Oregon Department of Fish and Wildlife (ODFW); Debrah Marriott, Lower Columbia Estuary Partnership (LCEP) Barry McPherson, Independent Research Scientist; Guy Norman, Washington Department of Fish and Wildlife (WDFW); Olney "JP" Patt, Confederated Tribes of Warm Springs (CTWS); Dennis Richey, Oregon Anglers; Carl Scheeler, Confederated Tribes of the Umatilla Indian Reservation (CTUIR); Rob Walton, National Marine Fisheries Service; (NMFS) Paul Ward, Yakama Nation; Jack Yearout, Nez Perce Tribes; Sharon Young, Humane Society of the United States (HSUS).

Resource Advisors: Robert Anderson, National Oceanic and Atmospheric Administration (NMFS); Robin Brown, Oregon Department of Fish and Wildlife (ODFW); Steven Jeffries, Washington Department of Fish and Wildlife (WDFW); Patricia Madson, U.S. Army Corps of Engineers (Corps); Scott Rumsey, National Oceanic and Atmospheric Administration (NMFS); John Whiteaker, Columbia River Inter-tribal Fish Commission (CRITFC); Bryan Wright, Oregon Department of Fish and Wildlife (ODFW); Sandra Jonker, Washington Department of Fish and Wildlife (WDFW).

Interested parties/others on the phone: Mark Bagdovitz, United States Fish and Wildlife Service (USFWS); Jeff Griffin, Community Member; Ninette Jones, Sea Lion Defense Brigade (SLDB); Matthew Tennis, Pacific States Marine Fisheries Commission (PSMFC); Gary Wise, Sports Fisherman; Chris Yates, National Oceanic and Atmospheric Administration (NOAA/NMFS);

DS Consulting Facilitation Team: Facilitator, Donna Silverberg; Notes, Emily Plummer and Tory Hines

*The following summary captures group discussion and recommendations from the May 31, 2016 Bonneville Pinniped-Fishery Interaction Task Force (Task Force) meeting. The meeting, in the form of a Go-To-Meeting webinar conference call, allowed the Task Force members to review new scientific information, hear public input and discuss questions included in a set of instructions sent to the Task Force prior to the meeting.*

*A total of twelve (12) Task Force members recommended approving the States' application; one (1) recommended conditional approval with a shorter permit granted in order to allow the Task Force to explore additional data about population status and trends; and one (1) Task Force member recommended denying the States' application due to a lack of evidence that the lethal removal program had been successful in fulfilling requirements of Section 120 of the Marine Mammal Protection Act.*

## **Welcome and Introductions**

Facilitator, Donna Silverberg, welcomed the group and explained that the purpose of the day's session was to develop Task Force recommendations to the National Marine Fisheries Service (NMFS) regarding the potential renewal or denial of an application, co-signed by the directors of the Washington Department of Fish and Wildlife (WDFW), the Oregon Department of Fish and Wildlife (ODFW), and the Idaho Department of Fish and Game (IDFG), on the States' behalf, requesting a 5-year extension of authorization for California Sea Lion (CSL) take under Section 120 of the Marine Mammal Protection Act (MMPA).

## **Purpose of Reconvening the Task Force in 2016**

Robert Anderson, NMFS, began by saying that the Task Force is here to provide NMFS decision makers with a recommendation to either approve or deny the States' January 27, 2016 application for a 5-year extension to the Letter of Authorization (LOA). He explained that the current request for an extension of the 2012 LOA carries forward all of the supporting information, including the content and justifications in the States' August 18, 2011 application that was part of NMFS' decision to approve the State's request in 2011. The States are not requesting any modifications to the existing LOA.

In formulating its recommendation, NMFS advisors requested that the Task Force follow the process and address the questions identified in the section titled "The Role of the Task Force and NMFS' Expectations of the Task Force", found in the Task Force Instructions e-mailed on May 18, 2016.

Furthermore, in the March 2, 2012 Report on Consideration of Statutory Factors under Section 120 of the MMPA, NMFS stated that, following the expiration of the 2012 LOA (June 30, 2016), they intend to reconvene the Task Force to evaluate the effectiveness of the 2012-2016 program and recommend whether it has or has not been effective in eliminating the problem interaction.

## **Background and History of Pinniped-Fishery Interaction at Bonneville Dam**

In December 2006, NMFS received an application co-signed by the directors of WDFW, ODFW, and IDFG, on the States' behalf, requesting authorization for take under Section 120 of the MMPA. The request from the States was to intentionally take, by lethal methods, individually identifiable, predatory California Sea Lions (CSL) in the Columbia River, which were having a significant negative impact on the decline or recovery of threatened and endangered Pacific salmon and steelhead. NMFS partially approved the States' 2006 request in 2008, issuing its LOA on March 18, 2008.

Shortly after NMFS issued the LOA, the Humane Society of the United States (HSUS) filed a lawsuit in the U.S. District Court in Oregon, alleging that NMFS' LOA violated Section 120 of the MMPA and the National Environmental Policy Act (NEPA). In November 2008, the District Court issued an order upholding NMFS' approval of the lethal removal program and its evaluation of impacts under NEPA. Plaintiffs appealed to the Ninth Circuit Court of Appeals, which declined to halt the removal program while the appeal was pending. On the merits, the Ninth Circuit vacated and remanded the LOA in November 2010.

In response to the court's 2010 decision, the States submitted a new request for lethal removal authorization on December 7, 2010. NMFS considered the request and new information available since its prior authorization, including the Task Force's recommendations. NMFS again authorized lethal take,

under similar conditions to the 2008 authorization (albeit with modifications), issuing a new LOA on May 13, 2011. HSUS again filed suit this time in Federal Court for the District of Columbia, alleging, among other things, that NMFS had not followed procedural requirements under MMPA Section 120 prior to issuing the new authorization (including public notice and comment on the States' application). In coordination with the States, NMFS revoked the May 13 authorization on July 22, 2011, and HSUS voluntarily withdrew their lawsuit.

On August 18, 2011, the States submitted a new request for lethal removal of CSL at Bonneville Dam under essentially the same conditions as the prior authorizations. NMFS reconvened the Task Force in October 2011 to evaluate the States' application and public comments and to recommend whether NMFS should approve or deny the proposed intentional lethal taking program. The Task Force's final report and recommendations were provided to NMFS on November 14, 2011. On March 15, 2012, NMFS issued the current LOA to the States. Unless modified, extended, or suspended, the current LOA remains in effect through June 30, 2016.

The States have now conducted removal activities during part or all of five seasons of salmonid migration (2012- 2016) since issuance of the 2012 LOA. During these activities, the States and the Columbia River Inter-tribal Fish Commission (CRITFC) also conducted non-lethal on-water hazing of sea lions, and the U.S. Army Corps of Engineers (Corps) modified the fish passage facilities at the dam to exclude sea lions and conducted active hazing from the dam and shoreline. The Corps has also continued to monitor predation and fish passage at Bonneville Dam.

As of May 13, 2016, the States had permanently removed (transferred to public display or euthanized) a total of 156 individually identified predatory sea lions. NMFS has routinely updated the list of identified predatory sea lions authorized for removal, to include animals that have met the criteria since the authorization was first issued. NMFS has provided the Task Force with periodic updates of these activities, including updates on salmonid predation and passage, as well as predatory sea lion removal reports and updated lists of predatory sea lions.

### **Overview of Task Force Assignment:**

Robert reminded the group that materials for the day's discussion were sent to the Task Force via e-mail on May 18, 2016. These materials included instructions for the Task Force, records of past Task Force discussions and recommendations, the States' 2016 application and 2012 LOA, substantive public comments, field reports and a summary document detailing the pinniped removal program.

In evaluating the States' application for a 5-year extension, NMFS reconvened the Task Force to develop recommendations that document the areas of agreement reached by the group, as well as the alternate points of view if agreement was not reached. NMFS asked that the Task Force recommendations fairly reflect the full range of opinion of the group, acknowledging differences of opinion and including minority views. NMFS contracted for professional impartial facilitation services to enhance the process by providing facilitation of the meeting itself, a meeting summary and report, and then assisting the group in assembling its recommendations. This report was drafted by the facilitators and Task Force members' feedback was incorporated into the final version of this report.

The first charge before the Task Force was to assist the agency in making a timely determination on the States' extension request. In consideration of the States' extension request – with no proposed modifications to the current program – the key questions before the Task Force are: (1) is pinniped

predation on at-risk salmon and steelhead still a problem, and (2) does the Task Force recommend that NMFS approve or deny the States' application to continue the program through June 30, 2021?

The Task Force was also asked to provide NMFS with applicable information, data, and analyses that the Task Force believed would be necessary in order to: evaluate the effectiveness of the 2012-2016 program; recommend whether it has or has not been effective in eliminating the problem interaction; and, if not effective, recommend changes to improve the program in the future.

### **Review of the Pinniped Removal Authority Program**

On January 27, 2016, the States' submitted an application to NMFS for a 5-year extension to the existing (2012) Letter of Authorization—the States' are not requesting any modifications to the Letter of Authorization.

On February 10, 2016, NMFS sent a letter to the State Directors acknowledging their request for a 5-year extension, and that the application contains sufficient evidence of the problem interaction and expected benefits of the taking.

### **Legal Authorities Applicable to the Recommended Action-MMPA Section 120**

Section 120 of the MMPA establishes a process for states to apply to the NMFS for authority to lethally remove “individually identifiable pinnipeds which are having a significant negative impact on the decline or recovery” of at-risk salmonids. *See* 16 U.S.C. § 1389. At-risk salmonids are (1) those that have been listed under the ESA as threatened or endangered, (2) those that are approaching listed status, or (3) those migrating through the Ballard Locks in Washington. The application must include a means of identifying the individual pinniped or pinnipeds, a detailed description of the problem interaction, and the expected benefits of removal. If NMFS concludes that the application presents sufficient information to warrant further action, NMFS is to convene a Pinniped-Fishery Interaction Task Force (Task Force), and the Task Force is required to recommend whether to approve or deny the proposed intentional lethal taking of the pinniped or pinnipeds.

In addition to the procedural requirements, Section 120(d) directs the NMFS and the Task Force to consider four substantive factors when evaluating whether an application should be approved or denied. *See* 16 U.S.C. § 1389(d). These include:

1. population trends and feeding habits of the pinnipeds; location, timing and manner of the interaction; and number of individual pinnipeds involved;
2. past non-lethal deterrence efforts and whether the applicant has demonstrated that no feasible and prudent alternatives exist and that the applicant has taken all reasonable nonlethal steps without success;
3. extent to which the pinnipeds are causing undue injury or impact, or imbalance with, other species in the ecosystem, including fish populations; and
4. the extent to which the pinnipeds are exhibiting behavior that presents an ongoing threat to public safety.<sup>1</sup>

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<sup>1</sup> The MMPA criteria do not specify other administrative decisions as a statutory consideration in issuing a Section 120 LOA. *See* 16 U.S.C. § 1389(d). Nevertheless, to comply with the Ninth Circuit's remand order, NMFS has

Section 120 also prohibits NMFS from authorizing the lethal removal of pinnipeds listed under the ESA or designated under the MMPA as depleted or strategic. The agency stated that the MMPA does not require any more of NMFS when making a determination whether individually identifiable pinnipeds are having a significant negative impact on the decline or recovery of at-risk salmonids.

- Rob Walton, NMFS, asked for clarification on the term “undue injury or impact”. Sharon Young, HSUS, stated that MMPA drafters had left the term vague.

### **Comments Received on the States’ January 27, 2016 Application**

Robert Anderson noted that on March 28, 2016 NMFS published a Federal Register Notice (81 FR 17141) with a request for comments. A total of 1,128 comments were received, 521 mail-in comments and 607 e-comments. Five comments received were substantive non-form letter comments on the States’ application.

Two of the letters (CRITFC and NW River Partners) expressed support for the States’ request for an extension. One letter (HSUS) asked NMFS to deny the States’ request and the Marine Mammal Commission submitted a letter highlighting their concerns and recommendations. Another letter requested an extension of the comment period so the public can have more time to submit their comments.

The remaining 1,123 commenters expressed the view that killing sea lions is morally wrong or a poor substitute for resolving larger threats to salmon recovery. The comments were similar to those raised in response to the States’ previous applications. All comments were posted and made available at [regulations.gov](http://regulations.gov).

### **Review of State and U.S. Army Corps of Engineers Field Reports**

Robin Brown, ODFW, presented a review of state activities, which have included trapping, removals, branding, instrumentation, post-mortem exams and basin-wide monitoring. He extended appreciation to Steven Jeffries of Washington Department of Fish & Wildlife and Bryan Wright of Oregon Department of Fish & Wildlife for their contribution and work on this project. CSL trapping began in Astoria in 1996 and at Bonneville Dam in 2007. Similarly, branding began in Astoria in 1997 and in 2010 at Bonneville Dam, whereby an individualized alphanumeric brand was placed along the lower back and rump area of the CSL.

Daily trapping results at Bonneville Dam from March-May, 2016 were 0-40 per day for CSLs and 0-20 per day for Steller Sea Lions (SSL). During that same time period 0-30 CSLs per day were released and between 0-7 were removed per capture event. In general, two thirds of the pinnipeds trapped were CSLs and trapping began during the spring Chinook run, which typically starts in April. On average, 30-40 sea lions were found in traps each morning at Bonneville starting in April. The bulk of those trapped were released as they did not meet the criteria to qualify for removal. Since the program began in 2008, a total of 166 animals were removed from Bonneville and Astoria. At Bonneville, 15 were sent to permanent

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explicitly considered other administrative decisions referenced in the court’s opinion and has provided a cogent explanation as to their relevance.

holding facilities, 7 died due to accidents during trapping, and 139 were chemically euthanized. At Astoria, a total of 5 were chemically euthanized. A bioenergetics model of CSLs at Bonneville Dam suggests they require 2-5 salmonids per day to meet their metabolic requirements. Applying this model to the removal efforts through 2015 suggests the States potentially prevented the loss of an additional 15,000-20,000 salmonids. Without the removal program, the estimated loss of 50,000 salmonids since 2002 likely would have been 30-40% higher.

In addition to lethal removals, the State has been examining foraging behaviors of CSLs. Satellite tracks of some tagged individual packs showed animal behavior over an entire spring season and the geographic dispersion of these animals during other times of the year. As illustrated in the presentation, pinnipeds forage in various areas near the dam, many of which are outside the observation zone. Accelerometers have been placed near the pinniped's head to track the direction and velocity of movement. When a sea lion captures a large fish, they bring it to the surface in order to consume it. The accelerometer records activity which indicates predation events as they occur. The following questions were asked by Task Force members after the presentation:

- **Question:** Sharon Young asked for clarification on how the agency identified the eight predation events that were noted on slide 11 showing the accelerometer information.
  - **Response:** Bryan Wright, ODFW, noted that when examining the data, predation events are indicated when the consistent dive pattern is disrupted and there is a corresponding increase in accelerometer readings similar to earthquakes on a seismograph. Predation events indicated by accelerometer data are validated by videotapes. Bryan also noted that the tags record 8 to 16 samples per second which produces millions of records per day. These data are still being reviewed from last year and currently ODFW is developing an algorithm to better detect predation events.
- **Question:** Sharon Young followed up asking if SSLs are branded in addition to CSLs.
  - **Response:** Robin Brown stated that in the past SSLs were branded, but branding of SSLs ceased about three years ago.
- **Question:** Since information on residence time is discussed in reports, Sharon Young asked how individual SSLs are documented, if branding is no longer used.
  - **Response:** Robin noted that most SSLs were branded prior to 2013, roughly 39 total, if a new SSL is discovered it is documented by its natural markings.
- **Comment:** Sharon Young noted that the amount of caloric intake necessary for survival determines the amount of fish eaten. ODFW estimated that CSL removals through 2015 potentially prevented the loss of an additional 15,000-20,000 salmonids beyond the 50,000 that USACE has estimated to have been taken since 2002. However, she pointed out that if one sea lion is removed and, as data on transience appear to indicate, another sea lion simply replaces the previously removed animal; it is unclear how many fish would be saved because the rate of predation remains the same.
  - **Response:** Bryan Wright noted that ODFW views sea lion predation as an additive problem, and believes one does not replace another. Further, from 2008-2012 the average daily CSL sightings declined but, in 2013, CSL numbers increased which could be due to a number of factors, like warming ocean conditions, “the blob”, or large returns of smelt to the lower Columbia River.
- **Question:** Paul Ward, Yakama Nation, asked for additional information about the age, gender and general health of documented CSLs.

- **Response:** Robin Brown stated that all CSLs are male, 4 to 11 years of age and appear to be in good health. By the third week of May, CSLs head south to breeding areas and by the end of May only one or two sightings occur at Bonneville.
- **Question:** Rob Walton, NMFS, asked if, of the 50,000 salmonids the state indicated, are all spring Chinook or are steelhead included as well.
  - **Response:** Robin Brown clarified that the 50,000 includes both winter Steelhead and spring Chinook.
- **Question:** Chris Kern, ODFW, noted that some CSLs which had been trapped multiple times gained 100 to 500 pounds; he asked whether the estimated consumption of 2-5 fish per day requirement was equivalent to a “maintenance” level dietary intake, or reflective of conditions of dramatic weight gain?
  - **Response:** Robin Brown noted that the Corps has data that shows consumption may be up to 10-12 Chinook salmon in a day. It is possible CSLs are eating more Chinook, but these animals also can fast for several days, while a peak of 10-12 can occur, 2-5 may account for fasting.
- **Question:** Bob DeLong, NMFS, asked how many different CSLs provided the accelerometer data over the years.
  - **Response:** Bryan Wright stated that ODFW and CRITFC placed instruments on seven different animals last year. Each animal carried the device for 1-2 weeks. This year, roughly 5-10 instruments were placed on animals in the river and those data are currently being downloaded.
- **Question:** Sharon Young asked if, over the last year, more juvenile CSLs have been documented appearing at the dam.
  - **Response:** Robin Brown stated that juvenile documentation has varied over the years. During warm water events it was common to see an influx of juveniles into the Pacific Northwest. In 2015, a large number of 3-4-year-old CSLs were documented on the docks in Astoria and some came to Bonneville. For 2016, there was again an abundance of young animals in the lower River but they did not come to Bonneville Dam.
- **Question:** Guy Norman, WDFW, asked ODFW to address trapping effectiveness comparing this year to last year. It appears that more CSLs were trapped in 2016 than in 2015.
  - **Response:** Robin Brown stated that numbers of animals using the traps was similar when comparing 2015 to 2016. One of the reasons trapping success increased in 2016 is due to NMFS’s ability to expedite paperwork authorizing the addition of animals to the lists for removal. Moreover, trapping techniques have become more effective in the past two years than in prior years.

Patricia Madson, USACE, presented on pinniped activities at Bonneville Dam. The program objectives include estimating consumption of adult salmonids, evaluating deterrent methods utilized at Bonneville Dam and analyzing seasonal timing and abundance of pinnipeds at Bonneville Dam. Hourly blocks of observation data are collected at each tailrace throughout the day. The tailraces are divided into zones to describe areas of predation activity at the dam. Observed surface catches are spatially defined by the zone of occurrence and pinnipeds are identified both by species and individual (based on identifiable markings and brands). Point counts are taken at the three tailraces and at Tower Island, which is a known haul out location, simultaneously. The traps are also anchored in the vicinity of Tower Island. CSLs and SSLs regularly travel to Bonneville Dam from January through May.

Monthly averages of observed SSLs in 2016 ranged from 5 in February to 40 in April of 2016. The first CSL in the Bonneville tailrace was observed on February 26, 2016. Monthly averages for CSLs ranged from 4 in March to 22 in April. The maximum single-day count of CSLs was 66 and the maximum single-day count for SSLs was 54, both occurring on May 4<sup>th</sup>. Moreover, no harbor seals were observed this year. The maximum single-day counts for CSLs and SSLs combined in 2016 was 120 on May 4<sup>th</sup> and is a new record for Bonneville Dam followed by the 2015 single-day count of 116 on April 22.

Predation observations concluded that spring Chinook salmon were the main prey species observed this year followed by lamprey. Through May 13<sup>th</sup>, 3,805 spring Chinook catches were observed by both SSLs and CSLs. Spring Chinook consumptions by CSLs at Bonneville Dam through May 13<sup>th</sup> were estimated to be 5,677. Salmonid consumption was low in 2012, but on an upward trend every year thereafter. Estimated expanded consumption of salmonids in 2012 to 2015 was 2,107, 2,714, 4,313 and 9,981 respectively. *[Facilitator Note: A Task Force member stated that according to the Corps' report for 2015, expanded consumption of salmonids should be either 8,324 as noted in Table 2 or 9,981 per Table 1. [http://www.westcoast.fisheries.noaa.gov/publications/protected\\_species/marine\\_mammals/pinnipeds/sea\\_lion\\_removals/2015\\_\\_coe\\_field\\_rpt.pdf](http://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/pinnipeds/sea_lion_removals/2015__coe_field_rpt.pdf)]* Preliminary data for 2016 is on track to eclipse the 2015 consumption estimate. As of May 13<sup>th</sup> estimated salmonid consumption was 8,360. *[Facilitator Note: A Task Force member stated that combined consumption of CSLs and SSLs is 8,360, and CSL predation is 5,802. [http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2016/160513\\_Bonneville\\_pinniped\\_update.pdf](http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2016/160513_Bonneville_pinniped_update.pdf)]*

Consumption in 2015 and 2016 has increased substantially with the increase in CSL and SSL abundance. In 2015, Chinook passage was estimated to be 283,696 and expanded spring Chinook consumption estimates were 9,780. Therefore, it is estimated that pinnipeds consumed 3.3% of the spring Chinook run in 2015. It is noteworthy that, in years of smaller run sizes, high predation events will have a greater impact on early arriving spring Chinook.

Sea Lion Exclusionary Devices (SLEDs) and Floating Orifice Gates (FOGs) were installed as non-lethal obstructions to prevent sea lions from entering fishways. With minor adjustments, these non-lethal devices were effective in keeping sea lions out of the fishways. Other forms of non-lethal hazing included vessel chasing, above-water pyrotechnics, rubber bullets and underwater percussive devices known as seal bombs. The following questions were asked after the presentation:

- **Question:** Sharon Young asked if the consumption data include all pinnipeds.
  - **Response:** Patricia Madson stated that the consumption data includes both SSLs and CSLs.
- **Question:** Chris Kern asked if the CSL consumption rate of 5,677 through March 14<sup>th</sup> was accurate.
  - **Response:** Robert Anderson noted that in Appendix A of the 2015 Report, the numbers may vary slightly, but the percentages are the same. Patricia Madson also noted that all 2016 data is considered preliminary and not yet final.
- **Question:** Paul Ward noted that by the third week of May most sea lions have left Bonneville Dam. He asked what the Chinook passage numbers were through the third week of May.



- **Response:** The table shows Chinook runs through June 15<sup>th</sup>. The Corps looks at run data through the end of the season although predation data is not available for the last two weeks. The run size likely was not much higher than 146,071.
- **Question:** Paul Ward noted that the table is counting two different things, salmonids with sea lions present and salmonid numbers when sea lions are no longer present.
  - **Response:** The Corps examines the impact to the entire run. The peak of the run occurs the first week of May and that is when predation is the highest. In the 2015 field report, January 1-May 31, CSL consumption expanded to 7,779 salmonids, which is 3.1% of the entire run.
- **Question:** Sharon Young asked for clarification about whether 3.1% of run consumption was attributed to CSLs and .2% was contributed to SSLs.
  - **Response:** Robert Anderson noted that .88% of consumption was attributed to SSLs. Patricia Madson stated that yes this represents the % consumption between January 1 and May 31.
- **Comment:** Sharon Young noted that this Task Force is meant to discuss CSLs and, as a result, the Corps consumption data is confusing. It would be helpful if the Corps would go back and simplify the data by breaking out consumption data by species.
- **Comment:** Appendix A of the 2015 Report shows different total salmonid passage numbers than on slide 11. Does slide 11 include all adults through June 13<sup>th</sup>?
  - **Response:** Slide 11 is not specifying CSLs, it is combined pinniped data for 2012-2015. The handout shows consumption and the impact on the full run January 1-June 15.
- **Comment:** Sharon Young noted that, in weekly reports from the dam, SSL abundance is higher than CSL, but the tables indicated that CSLs were eating twice as much as the SSL. Is there a theory as to why more SSLs are documented, but they are eating less?
  - **Response:** Some SSL predation occurs in the channels outside the observation area and it is possible SSLs are consuming fish intact rather than bringing them to the surface to eat. We could be missing those counts if they are swallowing fish whole. Additionally, SSLs engage in kleptoparasitism where they are stealing salmonids from CSLs and those counts are missed as well.
- **Question:** Sharon Young referenced a Corps report that discussed 127 uniquely-branded CSLs through mid-May of 2016. Of the 127, 89 were observed in previous seasons and 38 were newly observed. In 2015, 30% of CSLs were considered new and in 2016, 15% were considered new. What is the explanation for more branding if numbers of newly observed CSLs are declining?
  - **Response:** In 2015, 195 CSLs were identified. Of those, 166 were considered newly identified. Many of those returned in 2016, 89 repeats and 42 newly identified. An increase in new and unbranded individual CSL's migrated to the dam in 2015. Branding of sea lions is the most efficient way to track individuals. If data is desired on individual sea lions, then branding will be required.
- **Comment:** Doug Hatch, CRITFC, added that SSLs move up and down the river daily, often times outside of the observation area of the Corps.
- **Question:** Chris Kern asked how predation is characterized when it occurs: is it when a pinniped catches a salmon or is it when a pinniped is observed consuming a salmon? If kleptoparasitism occurs, is it considered eaten by both the CSL and the SSL?
  - **Response:** There are 3 categories to note: catch, loss and steal. The initial "catch" is assigned to the CSL or SSL that caught the fish. If the individual can be identified by

brand or highly identifiable markings, that information is included with the “catch”. During kleptoparasitism, the “steal” is assigned to the CSL or SSL who “stole” the fish but the “catch” remains assigned to the CSL or SSL that originally hunted and caught the fish.

- **Comment:** Sharon Young reiterated her request that the Corps separate out data for CSLs and SSLs. Specifically, she asked the Corps to return to its prior practice of separating out CSL and SSL data for the years 2002-2014, and not averaging or ‘lumping’ monthly data across multiple years into a single line to contrast with a current year as it is useful to look back and see the inter-annual variability of when predation is taking place across years.

John Whiteaker, CRITFC, presented information on sea lion monitoring and non-lethal hazing. The project objectives included: analyzing boat-based non-lethal hazing, developing sea lion abundance estimates for the Columbia River and developing sea lion predation estimation technologies. Non-lethal hazing methods utilized were cracker shells, seal bombs, and boat chasing. In general, 30 hazing days were conducted from March-May. For 2015, 476 encounters with CSLs occurred, a dramatic increase from previous years. He noted that total-ammunition-used for hazing has declined based on recommendations from animal trainers. The vast majority of observations occur in the boat restricted zone and 72.6% of pinnipeds move downstream as a result of hazing efforts, but is unclear how long they stay downstream. During hazing observations, 21.2% of observations include a predation event, with CSLs primarily consuming salmonids and SSLs primarily consuming sturgeon.

CRITFC reported on tandem surveys to develop a method of abundance estimates include two boats operating in the navigation channel one half mile apart. GPS locations for sea lion sightings were recorded and observations were plotted on a map and assigned to one of three groupings: animals seen by only the first boat, animals seen by only the second boat, and animals seen by both boats. Statistical models were then applied to estimate the abundance of sea lions. Moreover, the Columbia River was divided in to four zones from Astoria to Bonneville. Zones one and two near Bonneville Dam were surveyed every week and zones three and four were surveyed less frequently. The States are working to improve predation estimates through accelerometers in addition to regular tandem surveys. The following questions were asked after the presentation:

- **Question:** Bob DeLong asked if there was a predation estimate throughout the four zones.
  - **Response:** 2-3% of sea lion sightings are during predation events. Ideally, the accelerometer will provide better estimates of predation outside the dam area.
- **Question:** Chris Kern asked for clarity on the term “predation observation rate” and how that rate is calculated.
  - **Response:** The rate of hazing events that also includes a predation event for all species.
- **Question:** Chris Kern followed up asking if there is a way to characterize how much time CSLs spend inside and outside the boat restricted zone.
  - **Response:** Hazing boats start at the dam and work down river, the majority of the time is spent in the boat restricted zone.
- **Question:** Rob Walton asked how much of the pinniped diet consists of smelt.
  - **Response:** Roughly 70-80% of what sea lions are foraging on during boat surveys through the entire river is estimated to be smelt.
- **Question:** Rob Walton followed up by asking if an increase in smelt runs would decrease the amount of take occurring on salmonid populations.
  - **Response:** It depends on the timing of both runs as well as if there is a lack of anchovies and sardines. There are many variables to consider in addition to an increase in the smelt

run: for example, the California current and warming ocean temperatures. Back in the 1970s smelt runs were strong; when sea lion scat was evaluated, 97% of what the sea lion ate was smelt. Because smelt are high in calories, pinnipeds prefer smelt over other fish species.

## **Public Input**

Members of the public were invited to speak following the above presentations. Below are the points raised during public comment:

- Ninette Jones, SLDB, noted that there has been amazing support for sea lions all along the west coast. The States' removal request received 1,000 comments, most of which asked to deny the extension. One of the common issues raised was the concern for the health of sea lions. Other concerns include rising sea temperatures, the blob, and algae blooms which are creating dead zones in our oceans. Her group has observed that sea lions along the Columbia River are contracting domoic acid poisoning as a result of these poor conditions. Additionally, sea lions are routinely diagnosed with cancer due to toxins in the water. Thousands of CSLs are starving and many pups are stranded due to overfishing, lack of prey, and warming waters. She had a few recommendations for the Task Force to consider:
  - (1) When sea lions are lethally removed, their teeth should be analyzed. This is not being done and the teeth provide valuable information about the age and health of the animal. Teeth should be analyzed and the results should be released to the public.
  - (2) As noted by Task Force members, it would be helpful for members of the public to see observed predation numbers separated by sea lion type.
    - Also, in prior years, the Corps used student observers to document predation. They provided detailed reports that were helpful. The Corps is now paying federal observers to do the same work and the information is not as detailed and far more confusing. She asked that the Corps go back to using student observers.
  - (3) Her group asked that trapping not occur during nighttime hours. Trapping at night is dangerous for the people and animals involved. 2 CSLs died as a result of being squished by the weight of a SSL. CSLs that are crammed in a trap with SSLs may suffer internal injuries that are not observable. She expressed concern that many sea lions are being released with internal injuries as a result of poor trapping techniques.
  - (4) Provide the results of domoic acid testing for 2016. In 2008, 35% of pinnipeds were found to have domoic acid in their systems. Ocean conditions have only worsened since then and it is important to know how many pinnipeds are affected by domoic acid.
  - (5) ODFW should expand wildlife watching opportunities. Pinnipeds have worldwide support and they belong to us all, not to the few government agencies who control the river and the Bonneville Dam. Remember, sea lions are eating at the dam because they need to eat there. If fish were available elsewhere they would be elsewhere. And, sea lions have been documented in the river for thousands of years; it is their right to be in the river as an aquatic mammal.
  - (6) Finally, shad start running in May. In 2014, 2 million shad crossed the dam. It is very possible that sea lions are eating and removing non-native species from the river. The majority of species shown in the river are shad; as a result, sea lions are helping remove these non-native species.

## **Task Force Business – Review of Questions**

Task Force members reviewed the three questions posed to them by NMFS. The following clarifying questions were raised during the review, prior to the Task Force’s deliberations:

(1) Is pinniped predation on at-risk salmon and steelhead still a problem?

- (a) Population trends, feeding habits, the location of the pinniped interaction, how and when the interaction occurs, and how many individual pinnipeds are involved;
  - **Question:** Rob Walton asked if an update on population trends is available.
    - **Response:** Robert Anderson noted that no new publications have been provided since 2011. The NOAA Science Center is working on an updated stock estimate which will consider die off and pup estimates.
  - **Comment:** Bob DeLong noted that population assessment methodology being used in the CSL status update was presented at the Pacific Scientific Review Group (PSRG) in February 2016. The status of stocks report for the CSL population will be available for the 2017 Pacific SRG Meeting and will be published thereafter.
- (b) Past efforts to nonlethally deter such pinnipeds, and whether the applicant has demonstrated that no feasible and prudent alternatives exist and that the applicant has taken all reasonable nonlethal steps without success;
  - No questions or comments raised by the Task Force.
- (c) The extent to which such pinnipeds are causing undue injury or impact to, or imbalance with, other species in the ecosystem, including fish populations;
  - **Question/Comment:** Rob Walton asked for clarity on the term “undue” and which fish populations were being targeted. He also noted it would be helpful if there were more data on which species were targeted more, spring Chinook or winter Steelhead, and how the take was distributed.
    - **Response:** Sharon Young noted that “pinniped predation is proportional to presence of ESA-listed fish in the spring runs—and data provided to the task force in prior meetings indicated that the spring run was comprised of 20% listed fish and 80% non-listed.” However, information is provided on overall run size which is what the Task Force has considered. She also noted that data on individual run times could be found on NMFS website and in DS Consulting’s past summaries. Consumption rates are in proportion to fish present in the run even though runs occur at different times.
    - **Response:** Robin Brown also noted that the fish passing in the first two to three weeks of the season are impacted at the greatest rates.
- (d) The extent to which such pinnipeds are exhibiting behavior that presents an ongoing threat to public safety;
  - **Comment:** Doug Hatch noted that a number of interactions with sea lions were documented upstream of Bonneville. There is an e-mail thread with tribal fishermen reports of these interactions.

- (2) Taking into consideration the States' application, the public comments, the available information regarding the problem interaction, prior recommendations, terms and conditions of the current LOA, the four MMPA section 120(d) considerations, and the available information regarding the problem interaction, does the Task Force recommend that NMFS approve or deny the States' application to continue the program through June 30, 2021?
  - **Question:** Rob Walton asked if today's meeting is only a preliminary step in the process and what will NMFS be considering?
    - **Response:** Donna Silverberg noted that a final Task Force recommendation is being sought by NMFS. The discussion at this session will be summarized and a report of the Task Force recommendations will be prepared which all Task Force members would have a chance to review, refine and then approve before it is submitted to NMFS later in June.
  
- (1) What applicable information/data/analyses does the Task Force need to evaluate the effectiveness of the 2012-2016 program, recommend whether the program has or has not been effective in eliminating the problem interaction and, if not effective, what changes does the Task Force recommend to improve the program in the future?
  - **Comment:** Robert Anderson noted that 2016 data are not yet available for a thorough analysis at this time. Instead, he asked Task Force members to provide NMFS with initial ideas and requests for additional broader or valuable information that they believe would be needed to answer whether or not the 5-year program was effective.
  - **Comment:** Sharon Young expressed that she felt it inappropriate to ask the Task Force to vote on renewing the authorization for another 5 years if members are not allowed to first discuss whether the prior 5-year authorization met its goals.

### **Evaluating the State's Application for a 5-year Extension**

For the evaluation, NMFS requested that the Task Force: review the States' application; the public comments; the available information regarding the problem interaction; and the Task Force's prior recommendations and the terms and conditions of the current LOA. In considering whether the States' application for a 5-year extension should be approved or denied, **NMFS requested that the Task Force consider the following questions:**

- 1) Is pinniped predation on at-risk salmon and steelhead still a problem?

In answering this question, and consistent with Section 120(d) of the MMPA, the Task Force, in considering whether the States' application should be approved or denied, shall consider—

- 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. Past efforts to nonlethally deter such pinnipeds, and whether the applicant has demonstrated that no feasible and prudent alternatives exist and that the applicant has taken all reasonable nonlethal steps without success;
- c. The extent to which such 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 an ongoing

threat to public safety.

- 2) Taking into consideration the States' application, the public comments, the available information regarding the problem interaction, prior recommendations, terms and conditions of the current LOA, the four MMPA section 120(d) considerations, and the available information regarding the problem interaction, does the Task Force recommend that NMFS approve or deny the States' application to continue the program through June 30, 2021?

### **Task Force Responses to NMFS' Question 1(a)-(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:
  - **Comment:** Bob DeLong, NMFS, expressed that it is more relevant, in consideration of Section 120 authorization, to discuss the abundance of animals in the river. Abundance in the river dramatically changes over the years with profound population increases during the winter and spring months. Moreover, since 2015 the dynamics of the animals in the river has changed such that we are seeing an increase of immature males, ages 3 to 4, making up half of the observations in Astoria. Thousands of adult CSL males spend winters away from rookery islands and migrate north where prey is abundant. He expressed concern about the dynamic nature of male sea lion movement in the nonbreeding season as determinates of CSL abundance in the Columbia River which in turn to some degree determines abundance at Bonneville Dam.
  - **Comment:** Sharon Young, HSUS, noted that pinniped numbers at Bonneville have increased since 2014 despite removal efforts. There were three times as many pinnipeds killed in 2014 compared to 2013, and twice as many killed in 2015 compared to 2014. The increase in abundance despite removal efforts is a trend worth noting. Additionally, the salmon run in 2013 was the highest since 2002. Predation estimates increase when the run size is larger. The improved predation observation downstream is important, yet the increase of individual pinnipeds every year appears to speak to the ineffectiveness of the lethal removals. Killing the maximum allowed (92 CSLs), will not change the number or proportion of CSLs moving upstream to the Dam. She thought it would also be helpful if documentation provided more precise information on how much each individual CSL is consuming since this seems a subjective guess. She also questioned the states' ability to accurately identify individuals. She noted an incident where CSL Number 1-68 was reported killed at the dam and yet time-stamped photos of that same CSL were taken in Astoria that same day. This means either a different sea lion was killed and it was misreported or more than one sea lion was branded 1-68. There should be better accounting of who the predatory sea lions are and how they are listed, documented and accounted for by the States. In terms of undue impact, the Task Force must consider predation as only one of a number of impacts on fish, many of which are not adequately addressed (e.g., impacts of non-native fish).
  - **Comment:** Guy Norman, WDFW, stated that it is useful to look at the proportion of overall sea lions counted in the river. One question to ask is what proportion of the total abundance in river is moving up to the Bonneville Dam? Given the large increase in numbers of CSLs in the lower river, the proportion of those moving upstream is likely no greater than in previous years. We are

concentrating on predation at Bonneville Dam, so the Task Force should look at the CSL recruitment level and whether it has increased. Also, the river has experienced large spring Chinook runs in past years, partly due to ocean productivity and predation reductions. Under Section 120 of the MMPA, the focus should be on the threat to an endangered species and how predation impacts that species. From an Endangered Species Act (ESA) perspective, there are 32 sub-populations of wild Chinook, whose populations may be stable, but are still low in terms of total abundance (less than 100 for some sub-populations). The impact of sea lion predation on all populations of Chinook should be viewed in a cumulative fashion. As ocean productivity declines, and overall Chinook populations dip below 200,000, the Task Force should focus on the cumulative effect of all impacts.

- **Comment:** Chris Kern, ODFW, noted that the MMPA was successful in building up CSL populations from their depressed status prior to the Act. The Task Force should consider the relative importance of CSLs in the Columbia River compared to the specific population of salmonids. The removal program provides a way to reduce predation from what it otherwise would be and part of that discussion involves discussing total populations of salmonids. Hatchery fish populations appear to be increasing under recent good ocean conditions. However, the fact that many wild populations remain only “stable” under such conditions mean they are not seeing the same benefits in productivity. Is there more that could be done to protect endangered species in addition to lethal removal of pinnipeds? Oregon believes more should be done to secure additional benefits for salmon. To wait and require a sequential process where you require each action to prove up before another action can be implemented from all adverse impacts will cause the species to go extinct. Oregon wishes to try multiple actions at once to prevent extinction. The history of action in the basin suggests taking multiple actions simultaneously rather than one at a time.
- **Comment:** Paul Ward, Yakama Nation, stated that he supports the state of Oregon’s position and agrees that multiple actions should be taken when available to support salmonid recovery. Yakama Nation does not want to sit idly by as ocean conditions decline. It is unlikely that there is a long term risk to CSL populations by removing a few hundred from the Bonneville Dam.
- **Comment:** Bruce Buckmaster, Salmon For All, noted that the scope of the pinniped salmonid interaction is not limited to Section 120 of the MMPA. Five years ago, Task Force members asked for some sense of the total impact on the spring salmon run by CSLs. Today, we still do not have a reasonable number and the Task Force still needs to see population numbers. Without that information, the narrative is distorted in a way where Section 120 is not doing enough. He asked the Corps’ staff to present data, with reasonable confidence, as to the true impact of CSLs.
- **Question:** Rob Walton, NMFS, asked if the in-river increase in pinniped numbers was due to warmer ocean temperatures.
  - **Response:** Bob DeLong, NMFS, noted that the number of pinnipeds in the River correlates to the amount of prey available.
  - **Response:** Guy Norman, WDFW, noted that in the 1990s, large smelt runs did not attract large numbers of sea lions. It is possible the pinniped increase is due to a behavior change.

- **Response:** Bob DeLong stated that in the 1990s there was roughly half as many sea lions compared to 2016. It is possible that, during high smelt runs in the 1990s, abundant prey sources in the ocean (e.g. squid, eulachon and herring) kept sea lions out of the river.
- **Comment:** Joyce Casey, Corps, stated that the Corps' is responsible for dam management. And, the Corps has heavily invested in salmon recovery through habitat restoration and removal efforts. The Corps views their involvement as a Task Force member through a multi-pronged approach while acknowledging a wide variety of solutions may be available.
- **Question:** Dennis Richey, Oregon Anglers, asked if there was a study that determined half of the salmon run was consumed by pinnipeds prior to the installation of Bonneville Dam?
  - **Response:** Robert Anderson noted that Michele Rub (from NMFS Science Center) has reported that 10-40% of sea lions in the estuary at large may be accountable for unaccounted fish. Her fish tagging study is ongoing and it is unclear when final results will be published.
  - **Response:** Sharon Young stated that part of Michele's analysis speculated that pinnipeds might be preferentially targeting pit-tagged fish because an acoustic frequency emitted by the tag might actually serve as an attractant.
- **Comment:** Bob DeLong, NMFS, noted that Table 6 of the '2015 ODFW, WDFW & CRITFC Report' states that, of the 31 pinnipeds euthanized, 73 salmonid remains were recovered. The average fish removed from the GI tract of the pinniped was 2.3 fish. This data provides credence to the idea that CSLs are at Bonneville to feed on spring Chinook.

*b. Past efforts to nonlethally deter such pinnipeds, and whether the applicant has demonstrated that no feasible and prudent alternatives exist and that the applicant has taken all reasonable nonlethal steps without success;*

- **Comment:** Dennis Richey, Oregon Anglers, noted that a company in Scotland upgraded their signal system to reduce mortality of fish in the hatchery to 0, ODFW has this information.
  - **Response:** Patricia Madson stated that these sorts of systems don't operate well in areas of turbulence and high ambient noise, such as those present in the Columbia.
  - **Response:** Sharon Young also noted that the California Commission will not allow this type of system, as is similar to an intense pulsed power system used in the 1990s which could harm animals and would impact more than just pinnipeds. However, there are other technologies out there and the report of a national expert workshop on non-lethal deterrents is available on NMFS' website.

*c. The extent to which such pinnipeds are causing undue injury or impact to, or imbalance with, other species in the ecosystem, including fish populations;*

- **Question:** Rob Walton, NMFS, asked for clarification from fish biologists on Sharon's comment about the 20% listed and 80% non-listed run. He asked to what extent does Section 120 target listed species as opposed to other species? Specifically, does Section 120 target listed species only in the Columbia or broader?



- **Response:** Guy Norman, WDFW, stated that the 20% is an average total for overall wild spring Chinook. It varies every year and, within the wild run, the vast majority of fish are ESA listed. In general, some wild fish are not listed and some hatchery fish are listed. Also, of the 32 wild populations, 28 are found in the Snake River. Section 120 addresses the significant impact of predation on listed salmon and steelhead.
- **Response:** Chris Kern noted that Section 120 of the MMPA subsection b(1) reads: A State may apply to the Secretary to authorize the intentional lethal taking of individually identifiable pinnipeds which are having a significant negative impact on the decline or recovery of salmonid fishery stocks which—
  - (A) have been listed as threatened species or endangered species under the Endangered Species Act of 1973 (16 U. S.C. 1531 et seq.);
  - (B) the Secretary finds are approaching threatened species or endangered species status (as those terms are defined in that Act); or
  - (C) migrate through the Ballard Locks at Seattle, Washington.
- **Response:** Sharon Young, HSUS, noted that the Task Force was asked whether to grant or deny the 120 application for salmonids in the spring run in the Columbia River. As for the application itself, the States are limited to requesting lethal removal for sea lion predation on fish as detailed in b(1)(A)-(C), which the Task Force will also consider in determining whether to grant the application
- **Comment:** Carl Scheeler, CTUIR, stated that, from his perspective, ‘undue’ means unnatural. The hydro facility is blocking fish passage and making fish vulnerable to pinnipeds. In the absence of the dam, impacts to fish species would be far less.
- **Comment:** Chris Kern noted that ‘undue’ is defined by Webster’s dictionary as: not appropriate; immoderate; excessive; or unreasonable. Predation at Bonneville was not significant fifteen years ago, but it has skyrocketed since then to create an undue injury to salmonids. The dam creates an unnatural situation where a high density of fish occurs as they try to pass the dam. This is a human managed situation due to a manmade dam. Undue impact can be reduced through pinniped removal efforts, it may not eliminate the undue impact, but it can reduce it.
- **Comment:** Paul Ward, Yakama Nation, asked if Task Force members considered the possibility of resident orca pods off the Pacific Coast providing natural removal of sea lions through predation.
  - **Response:** Bob DeLong, NMFS, stated that there are three pods of Southern Resident Killer Whales; two of those pods spend time off the Columbia River from March to May where they feed on Chinook salmon. The ESA listed Southern Resident Killer Whales are considered salmon feeding specialists. They are not considered in Task Force deliberations and there are few data available on what amount of salmon those killer whales are consuming.
- **Comment:** Chris Kern relayed that during discussions of impacts of salmon fisheries on Southern Resident Killer Whales, some participants raised the potential concern that competition between SRKWs and other marine mammals, notably CSLs, might have a population impact on SRKW recovery.
  - **Response:** Guy Norman noted that cumulative sources of impact that effect the productivity of wild and listed Chinook is part of an ongoing discussion. However, the question of whether pinnipeds are creating an undue impact is what the Task Force is

- considering. When we start to consider all other sources of predation, including other birds and fish, are we minimizing the impact of pinniped predation at Bonneville Dam?
- **Response:** Sharon Young asked if the lethal removal program is reducing the impact. The answer to that from the states' application is "no". She read from the states' application which states that "it is clear that the ultimate goal of eliminating the significant negative impact of CSL predation on listed salmonids in the lower Columbia River has not yet been achieved." The States' application says they have not been able to achieve a reduction in significant negative impacts, so what will the States do if predation rates continue or continue to rise?
  - **Response:** Guy Norman noted that to answer whether the program is effective it is pertinent to look at what predation rates would have been if no action had been taken.
  - **Response:** Chris Kern stated that up until 2013 the program was successfully lowering CSL numbers. If the Task Force determines that the program is not effective, Section 120 requires the Task Force to recommend additional actions. Oregon believes the current program should be extended in addition to more monitoring and analysis.
  - **Comment:** Robin Brown, ODFW, stated that NMFS expedited pinniped removals for 2015-2016. As the ability to remove them becomes more streamlined, it should be possible to get out ahead of the curve through removal efforts.
    - **Response:** Sharon Young asked if predation numbers were expected to be down for 2016. All things being equal, predation numbers and rates should rapidly decline if the program is showing a positive effect from killing so many more animals.
    - **Comment:** Guy Norman noted that the program's effectiveness should be viewed within the same year as well as the past several years.
    - **Response:** Sharon Young noted that the predation rate has not dropped as a result of the removal program. There were fewer animals in 2012-2013, but the run size that year was also smaller. When the run size dips, the number of sea lions also generally dips.
  - **Comment:** Doug Hatch noted that the predation rate as a metric is not helpful because it has been driven by fish population size; he suggested that looking at consumption rates by sea lions is a better measure.
    - **Response:** Sharon Young stated that the State has not been successful in eliminating what they characterize as a significant negative impact, given the current metric. The issue before the Task Force is: whether the states can be successful in eliminating that impact through this authorization.
    - **Response:** Robert Anderson noted that in the past this question was addressed by looking at the numbers and the salmon recovery policy, in addition to productivity, abundance, and genetic life history. Task Members should consider whether predation is causing a significant negative impact to at risk stocks.
  - **Comment:** Bruce Buckmaster, Salmon For All, noted that the significant negative impact discussion revolves around population, but Section 120 refers to individuals. The individual animals identified as affecting the run were removed under Section 120; this was and is a highly effective way to deal with predation by individuals.
    - **Response:** Sharon Young clarified that the question is whether individual pinnipeds are having a significant impact on listed salmonids. It doesn't address pinniped populations.

- **Comment:** Chris Kern also noted that there were definitely impacts to “other species in the ecosystem, including fish populations” – specifically concerns over predation on lamprey and spawning sized white sturgeon.

(d) The extent to which such pinnipeds are exhibiting behavior that presents an ongoing threat to public safety.

- **Comment:** Dennis Richey, Oregon Anglers, noted that last year a sea lion collided with his fishing boat, causing him to nearly fall out of the boat. Moreover, another fisherman lost the use of his ring finger after a sea lion stole a fish from the line. There are other documented incidents which occur weekly.
- **Comment:** Doug Hatch, CRITFC, noted that sea lions are getting through the locks at Bonneville and residing in the pool upriver of the dam. There were 57 reports of tribal interactions with sea lions. CRITFC would like to see criteria added to allow for removal of sea lions above the dam. Currently, sea lions above the dam are outside the scope of removal, adding criteria to the LOA would be a simple addition.
- **Comment:** Chris Kern, ODFW, noted there was a report of a gentleman being pulled out of his boat due to a sea lion grabbing a fish from his landing net. There are other safety concerns at the east end of the mooring basin and in Astoria as a result of human-pinniped interactions.

**Task Force Responses to NMFS’ Question 2**

(2) Taking into consideration the States’ application, the public comments, the available information regarding the problem interaction, prior recommendations, terms and conditions of the current LOA, the four MMPA section 120(d) considerations, and the available information regarding the problem interaction, does the Task Force recommend that NMFS approve or deny the States’ application to continue the program through June 30, 2021?

Robert Anderson noted that NMFS’ decision on whether to grant the States’ application for extension has not been made. He also clarified that, even if the extension were to be granted, NMFS has the ability to modify or revoke the application with 72-hours’ notice to the states. The facilitator then asked Task Force members whether they approve or deny the States’ request for a 5-year extension and why:

- **Humane Society of U.S.: DENY** - Despite high numbers of CSL removals, the number of CSL and salmon take is at an all-time high. New CSL seem to replace those that are removed. There is no net benefit to the program as it is currently configured and we see no change in adverse impact to salmonids as was considered necessary in Section 120.
- **Oregon Anglers: APPROVE** – Recognizing that current efforts may be somewhat ineffective; Oregon Anglers would like to see a broader approach to removal upstream of the I-5 Bridge. The CSL numbers are at an all-time high and are not getting better anytime soon.
- **Confederated Tribes of Warm Springs: APPROVE** – Would hate to see what would happen in the absence of this effort. This is one of many efforts and needs to be part of the solution.
- **Confederated Tribes of the Umatilla Indian Reservation – APPROVE**: We need to work to increase the effectiveness of the program to target animals and remove constraints.

- **Columbia River Inter-tribal Fish Commission: APPROVE** – Pinniped predation on salmon is still a problem, and this is the only tool, although not the best, we have to deal with it. Would like to encourage NMFS to broaden authority.
- **Nez Perce Tribe: APPROVE** – For much of same reasons stated.
- **Yakama Nation: APPROVE** – Lethal removal is a tool in the toolbox that should remain. Some fish runs are being eliminated due to many factors, including predation and climate change. Removing one tool is not the best action going forward. Moreover, the few male CSLs being removed is likely not impacting the CSL population as a whole.
- **National Marine Fisheries Service – Marine Mammal Specialist: APPROVE** – There are increasing numbers of CSL and we are just getting better capabilities to trap and remove successfully. We will need to take more annually in order to protect the runs.
- **Washington Department of Fish and Wildlife: APPROVE** – The impact is significant on Chinook, removal is comparable to what is being done with other tools to mitigate other sources. With the increase of CSL in the river and potentially increasing climate change and ocean productivity having a negative impact on fish, we need to remove even more. Efficiency of removal is getting better: need to extend the program to really give it a shot.
- **Lower Columbia Estuary Partnership: APPROVE** – Due to concerns over changing climatic conditions and ocean conditions, this is not the right time to discontinue this approach.
- **Salmon for All: APPROVE** – We need to do what we can to reduce predation and improve salmonid populations. The program must continue.
- **Oregon Department of Fish and Wildlife: APPROVE** – There is undue impact on salmonids and evidence that predation has been reduced from what it otherwise would have been. We are already seeing impacts of el Nino and will likely have productivity changes on northerly migrating stocks soon to follow what’s already been observed on southerly migrating stocks.
- **National Marine Fisheries Service, Portland Branch: CONDITIONAL APPROVAL** – The priority is the listed salmonid species; more information is needed about which salmonid runs are at greatest risk of predation and about the population status of CSL. Instead, suggests that there is more work to do before giving the full 5-year permit: provide a shorter permit in order to give the Task Force time to explore the information and issues before giving the full extension.
- **U.S. Army Corps of Engineers: APPROVE** – This is a problem we need to approach from a variety of methods and that is what we are doing here. Salmon recovery on the Columbia River is not something we can come at from one angle, there are many factors created by this problem and many factors will solve it. The Corps has done a lot in terms of capital investment, we see this as another piece that unfortunately needs to be done to address this problem.
  
- **Question:** Guy Norman asked why Rob Walton was uncomfortable with the five-year extension yet would like to continue the program past the June 30<sup>th</sup> deadline.
  - **Response:** Rob Walton, NMFS, said information about the population status of CSLs is key for his consideration. In addition, overall predation from the river mouth to the dam is important and which salmon populations are at greatest risk of predation. He would like to see the best available information on these points. Additionally, he would like clarification on the term “undue”. He would suggest a deadline for this additional information and consideration, maybe to February 2017?
  - **Response:** Sharon Young, HSUS, noted that Rob Walton represents NMFS on the Task Force and, in that capacity, he is casting a vote on the States’ application which NMFS (his own agency) ultimately will approve or deny. Other Task Force members consist of

entities who are requesting the authority from NMFS. The voting by NOAA and the States appears to be a conflict of interest for NOAA as the approving authority and the states as applicants.

### **Task Force Evaluation of the Effectiveness of the 2012-2016 Program – Question 1**

- 1) What applicable information/data/analyses does the Task Force need to evaluate the effectiveness of the 2012-2016 program, recommend whether the program has or has not been effective in eliminating the problem interaction and, if not effective, what changes does the Task Force recommend to improve the program in the future?

### **Task Force Responses to NMFS' Question 1**

The Task Force began discussing what would be needed to evaluate the effectiveness of the 2012-2016 program. The facilitator noted that the following items had been mentioned during earlier discussions:

- Distinguish between CSL and SSL in providing any future data and information;
- Provide information on recruitment levels: overall sea lions in the river vs. those at Bonneville dam;
- Provide the numbers of “true impacts”, not just percentages of predation rates;
- Look across years and within the same year;
- Show the impact of NMFS timing of ‘approved for removal’ has, if any, on actual removal and predation rates;
- Provide information or ideas about: what would make this program successful?

Task Force members agreed with this list and added additional comments. Their discussions are summarized in bullets below:

- Of the animals that have been removed, which ones are new to Bonneville or are they repeat visitors from past years? It would also be useful to know if there are trap-shy animals which are identified through markings that continue to return to the fishways acting as efficient predators.
  - **Response:** Patricia Madson, Corps, noted that Table 7 of the Corps’ 2015 Field Report provides the number of CSLs and SSLs who return to Bonneville as well as new sightings for 2015. It also lists the number of years an animal was observed returning to Bonneville, with one CSL returning for six years without being removed.
- Request for more information on run timing compared to predation timing.
- Providing data on predation both within years and across years to note inter-annual variability.
- Request to see again the timing of different runs overlapped with sea lion presence.
- Request for scat and stomach analysis to determine stock identification at Bonneville and Astoria to determine whether the diet downriver differs from the diet at the dam.
- Metrics that point to success of the program such as reduced number of animals or reduced predation. If one or both of those metrics are not going down as pinnipeds are removed, then the significant negative impact is likely not reduced.
- Which runs are listed, what is the size of those runs, and which salmon runs are not listed?

- Request for streamlining the accelerometer data, as well as providing percentages of pinnipeds at Bonneville that were also observed in Astoria.

### **Summary of Discussion and Recommendations to NMFS:**

To close the session, facilitator Donna Silverberg noted that the States had provided the Task Force with data and background on non-lethal activities to deter sea lion predation near Bonneville Dam. Additionally, the Task Force examined the impact of lethal removal of sea lions, whether sea lion predation was still considered a problem and whether the program was deemed effective. One member of the public expressed concerns about lethal removal and provided recommendations to Task Force members. Finally, the group discussed what data and analyses would be helpful to further discuss the effectiveness of the 2012-2016 program. A variety of viewpoints were expressed on whether the program was or was not working. The group was polled on their approval or denial of the States' request for a five-year extension, input which NMFS will use in making a final decision.

Robert Anderson, NMFS, thanked Task Force members and participants for taking the time to provide their input as NMFS considers the States' application. Donna Silverberg thanked the participants for providing thoughtful opinions on a difficult subject. The meeting was adjourned.

*[Facilitator's Note: This meeting summary 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. Five Task Force members and four Technical Support staff responded to one or both drafts with edits. The final summary was approved with consensus by the Task Force members (all 1s, 2s, and a 4 using the Five Fingers of Consensus). During final approval, HSUS noted that although the reports are, in fact, an accurate reflection of Task Force discussions, HSUS does not want to register total agreement because they continue to disagree with granting the States' application since the Task Force was not permitted prior to voting to analyze how effective the program was from 2012-2016. Further, HSUS noted that they have serious concerns about the States' ability to individually identify CSL due to the recent incident with 1-68/1-60 in which the wrong animal was put on the list and killed before the mistake was only inadvertently discovered as a result of a citizen's photos.]*

*Final Summary respectfully submitted this 22nd of June, 2016.*

*Donna Silverberg  
Owner, DS Consulting*