

CURRENT HABITAT ISSUES

The Habitat Committee (HC) will meet on Friday, April 4, 2014, to discuss California drought, salmon, and Coleman National Fish Hatchery issue; the proposed boundary expansion of the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, the Bay-Delta Conservation Plan, and other topics.

At the March Council meeting, the Council approved a letter on habitat concerns related to KZO Sea Farms, with edits. The final letter is attached (Agenda Item B.1.a, Attachment 1). The Council directed staff to send a letter to the U.S. Fish and Wildlife Service on Coleman National Fish Hatchery release planning; which letter is attached as Agenda Item B.1.a, Attachment 2. The Council also directed the HC to draft a letter commenting on the Bay-Delta Conservation Plan Environmental Impact Statement (Agenda Item B.1.a, Supplemental Attachment 3) for Council consideration.

Council Action:

- 1. Consider comments and recommendations developed by the HC.**
- 2. Provide guidance for comments on the Bay-Delta Conservation Plan.**

Reference Materials:

1. Agenda Item B.1.a, Attachment 1: Letter on KZO Sea Farms.
2. Agenda Item B.1.a, Attachment 2: Letter to USFWS.
3. Agenda Item B.1.a, Supplemental Attachment 3: Draft Letter to NMFS Regarding the Bay-Delta Conservation Plan.
4. Agenda Item B.1.b, Supplemental HC Report.
5. Agenda Item B.1.c, USFWS Report.

Agenda Order:

- a. Agenda Item Overview
- b. Report of the Habitat Committee
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. **Council Action:** Consider Habitat Committee Recommendations

Jennifer Gilden
Joel Kawahara



Pacific Fishery Management Council

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Dorothy M. Lowman, Chair | Donald O. McIsaac, Executive Director

March 20, 2014

Dr. Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Dr. Daniel Swenson
Corps of Engineers
Los Angeles District
P.O. Box 532711
Los Angeles, CA 90053-2325

Dear Dr. Lester and Dr. Swenson,

Please accept the comments below from the Pacific Fishery Management Council (Council) regarding potential aquaculture/mariculture projects. Although the KZO Sea Farms Mariculture Project comment period has passed, we see this project as a template to inform you of our concerns regarding aquaculture and mariculture projects in general. The Council's meeting schedule does not always allow us to comment during your comment periods.

As you may know, the Council is one of eight Regional Fishery Management Councils established by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1976, and recommends management actions for Federal fisheries off Washington, Oregon, and California.

The MSA includes provisions to identify, conserve, and enhance essential fish habitat (EFH) for species managed under a Council fishery management plan. The MSA requires the Council to identify and describe EFH and recommends designating "habitat areas of particular concern" (HAPC) for its managed species. EFH is the habitat necessary for every life stage of federally-managed species, which is designated using the best available scientific information; HAPCs are considered high-priority areas for conservation, management, or research because they are rare, sensitive, stressed by development, or important to ecosystem function. Each Council is authorized under the MSA to comment on any Federal or state activity that may affect the habitat, including EFH, of a fishery resource under its authority.

The Council is concerned that the KZO Sea Farms project has the potential to alter marine habitat in the vicinity of the sea farm. For example, moored shellfish farms have been shown to reduce current speeds; currents within sea farm structures can be as little as 25 percent of

the outside flow (Stevens et al. 2008). The project also has the potential to alter circulation patterns and disrupt stratification in and around the project.

Specific Essential Fish Habitat Concerns

The Council is concerned with aspects of the KZO Sea Farms project that may affect EFH for some of its managed species. The project is proposed as a 100-acre shellfish mariculture farm to be located approximately 8.5 miles offshore of Long Beach, California near the Edith Platform. As proposed, the project configuration would include 45 lines measuring 500 feet in length, spaced 100 feet apart, anchored on both ends at depths of 110 and 150 feet, and hovering approximately 20 to 30 feet below the surface. Anchors will be attached using helical screws and embedded in the seafloor. The lines will support 60 lantern nets used to grow Pacific oysters (*Crassostrea gigas*) and Mediterranean mussels (*Mytilus galloprovincialis*) on 1,800 feet of looped fuzzy rope that is supported by the lines. In addition to EFH concerns, this large-scale web-like configuration has the potential for attracting and entangling several forms of wild marine life, and displacing other uses of the area.

An analysis of the potential impacts of project design should occur prior to project designation and buildout for any mariculture project. Further, all proposed projects should provide data on the seasonal abundance and known breeding and feeding areas used by Federally-managed species, as well as the location of designated EFH Conservation Areas in the vicinity of the project. Adverse impacts to these special EFH areas should be avoided to the greatest extent practicable. The Council is aware that the KZO Sea Farms project proponents consulted the National Marine Fisheries Service on EFH for this project, and urges such consultations for any future similar projects.

Monitoring

In its Consistency Certification, the California Coastal Commission has noted that a well-developed monitoring plan is a necessary component of any mariculture project. Since the project is a relatively new ocean use in the California Current Ecosystem, the Council strongly agrees with this conclusion. The Council recommends a robust monitoring plan that begins with the collection of baseline information on existing ocean conditions, species abundance, and seafloor characteristics at both the proposed project site and a comparable control site not affected by the project or influenced by the project's footprint. In addition, the monitoring plan should include, but not be limited to, evaluating impacts to fisheries, living marine resources, seafloor habitat, and water quality, plankton distribution, and changes to physical ocean conditions such as currents and sediment deposition. To account for the natural variation in the environment, baseline information should be gathered over multiple seasons. Monitoring would occur during and after project construction, and throughout the duration of the project, in both the project area and the control site. The project should also monitor the effects of sedimentation and oxygenation from mussel and oyster culture on the

seafloor and the potential for changes in nutrient distribution in the surrounding area (Wilding 2012).

The Council encourages the inclusion of these components prior to the Coastal Commission's final approval of the monitoring plan for the KZO sea farm and future projects.

Invasive Species

The Council is concerned about the introduction of invasive species resulting from sea farm operations. Of particular concern is the likelihood that invasive species will ride along with brood stock during shipment or on vessels transiting in the vicinity. In addition, the physical structure of the sea farm will create artificial substrate upon which non-native species could colonize. Non-native species can be detrimental to native species and can alter habitat. The Council recommends a monitoring program specific to the assessment and control of invasive species and supports the Hazard Analysis and Critical Control Point (HAACP) plan required by the Coastal Commission for the KZO sea farm. The HAACP is appropriate for any future sea farms as well.

Decommissioning

A decommissioning plan should include provisions for removing all structures associated with the sea farm. A bond or other mechanism for financial security for this phase should be a requirement in the event of default or bankruptcy.

Financial Responsibility

The Council recommends requiring fiscal mechanisms to ensure removal of lost or damaged equipment, as well as site remediation that will survive bankruptcies, corporate name changes, etc. In addition, a mechanism should be required to hold fishermen harmless from liability in the event of accidental contact with the project structure, and a mitigation plan for lost and damaged fishing gear as a result of the project.

Marine Spatial Planning

Using marine spatial planning tools, KZO Sea Farms should identify important ocean use areas near the project, such as commercial, recreational, and tribal fishing grounds; marine sanctuaries and marine protected areas; recreational areas; navigational channels; oil and mineral extraction areas; military training areas; and approved dredge material disposal sites. To avoid these areas to the greatest extent possible, the project should meet with all stakeholders who have interests in the area. The Council recommends that future mariculture interests be considered in the broader context of responsible marine spatial planning, prior to specific project proposals.

Thank you for considering our comments. The Council looks forward to future opportunities to comment on the KZO Sea Farms Mariculture Project and on this emerging use of our shared ocean. Please feel free to contact us with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. O. McIsaac", followed by a horizontal line extending to the right.

D. O. McIsaac, Ph.D.
Executive Director

JDG:kam

Cc: Council Members
Habitat Committee Members
Ms. Jennifer Gilden

Citations

Stevens, C., D. Plew, N. Hartstein, and D. Fredriksson. 2008. The Physics of Open-Water Shellfish Aquaculture. *Aquacultural Engineering*, 38(3):145-160.

Wilding, T.A. 2012. Changes in Sedimentary Redox Associated with Mussel (*Mytilus edulis* L.) Farms on the West Coast of Scotland. *PLoS ONE* 7(9):e45159.
doi:10.1371/journal.pone.0045159



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Dorothy M. Lowman, Chair | Donald O. McIsaac, Executive Director

March 20, 2014

Dr. Ren Lohoefer, Regional Director
U. S. Fish and Wildlife Service
Pacific Southwest Region (Region 8) Regional Office
Federal Building
2800 Cottage Way, Room W-2606
Sacramento, CA 95825

Dear Dr. Lohoefer:

During its March meeting, the Pacific Fishery Management Council (Council) received a briefing on Coleman National Fish Hatchery's 2014 fall-run Chinook salmon releases, trucking, and drought conditions in the Central Valley. The Council recognizes that water conditions this year are extraordinarily poor and uniquely challenging, and appreciates the hard work and collaboration that has occurred to address these challenges. The Council also appreciates the U.S. Fish and Wildlife Service's (USFWS) proactive efforts to collaborate with the commercial and recreational fishing communities during the development of alternative release strategies that have culminated in a document titled, "DRAFT Contingency Release Strategies for Coleman National Fish Hatchery Juvenile Fall Chinook Salmon Due to Severe Drought Conditions in 2014."

The Council encourages the USFWS to use every means necessary to improve the survival of fall-run Chinook salmon smolts produced by the Coleman National Fish Hatchery in this critically dry year, and supports the trucking of smolts to an appropriate site below the principal diversion points from the Sacramento River into the Delta.

We also urge the USFWS to develop a consistent policy for future use that will define Coleman National Fish Hatchery release strategies based on drought forecasts, flow criteria, and water temperatures for future years, should severe drought conditions reoccur. Those strategies should be designed to maximize survival to adulthood and maintenance of the genetic profile for the Coleman stock, while minimizing homing strays to the degree possible. We also urge the USFWS to support flow conditions in the Sacramento system that provide for high survival of both Battle Creek releases of Coleman National Fish Hatchery fall-run Chinook salmon as well as natural spawning segments of the Chinook salmon population.

In addition, the Council requests continued strategy development and coordination between the USFWS and the California Department of Fish and Wildlife relative to the logistics and scheduling of 2014 hatchery releases in estuary areas so as to optimize the survival of fish after they leave the trucks. It is well-known that immediate predation on trucked salmon smolts can be severe by both birds and fish if precautions are not taken to avoid it. Please consider such

things as net pen acclimation, releasing fish at night and on or just prior to an outgoing tide, and different locations as ways to avoid predator attraction and high immediate mortalities. Further, please consider expending the staff resources necessary to actively evaluating immediate predation losses and adaptively react with a different strategy if mortalities are high.

Thank you again for your efforts, and the efforts of your staff, towards addressing this critical issue in a coordinated and proactive manner during this challenging time.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. O. McIsaac", with a long horizontal flourish extending to the right.

D. O. McIsaac, Ph.D.
Executive Director

JDG:kam

Cc: Council Members
Council Habitat Committee
Council Salmon Advisory Subpanel
Mr. Dan Castleberry, Region 8, Regional Office
Mr. Robert Clarke, Region 8, Regional Office
Mr. Jim Smith, Red Bluff Fish and Wildlife Office
Mr. Scott Hamelberg, Coleman National Fish Hatchery
Ms. Jennifer Gilden, Council Staff



March 31, 2014

Ryan Wulff, NMFS
BDCP Comments
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
BDCP.Comments@noaa.gov

Dear Mr. Wulff,

Thank you for accepting the comments of the Pacific Fishery Management Council regarding the Bay Delta Conservation Plan (BDCP) and associated Draft Environmental Impact Review/ Environmental Impact Statement (DEIR/DEIS). The Council is concerned that essential fish habitat (EFH) for Council-managed species will be impacted by the BDCP activity.

The Council believes the Bay Delta Conservation Plan (BDCP) will negatively impact essential fish habitat (EFH) for Council-managed species. Adverse effects on habitat for Chinook salmon of all varieties—late fall, winter, and spring—particularly concern the Council. The in-river conditions for all life phases of Chinook salmon are currently marginal at best, as described throughout the Operations Criteria and Plan (OCAP) Biological Opinion for management of the State Water Project and Central Valley Project. Lindley et al. (2009) point to the ultimate causes of collapse of Sacramento River fall-run Chinook as primarily anthropogenic, with the end result being severe truncation in the diversity of the fall- and late-fall run salmon population. The tenuous state of California's salmon populations, including two of four runs listed under the Federal Endangered Species Act (ESA), is beyond genuine dispute; they cannot withstand further degradation to the habitat they depend on.

The Council's examination of the effects of the alternatives, Section 11.3.4 of the BDCP EIR/EIS, reveals many examples of "slight" reductions in the quality of habitat for fall Chinook salmon. They are particularly frequent in the spawning and rearing habitat of fall Chinook salmon. In light of existing marginal conditions for fall Chinook salmon in the Central Valley, these "slight" impacts are not viewed as harmless by the Council. While individually each degradation might be small, when taken in total, the impacts are unacceptable. The Council is highly concerned that further reduction in the habitat-related diversity of fall Chinook will lead to the loss of the fall run as a sustainably harvested resource, and to the very survivability of the two ESA-listed runs (winter and spring).

The Council is also highly concerned that ultimately, the flow of fresh water through the Delta will continue to be unreasonably constrained by the project's overall water withdrawals. The mitigations described in the EIR/EIS (mostly unfunded, and therefore unlikely to be

implemented) cannot compensate for ecological degradation resulting from the diversion of water from the system. The Council requests that the BDCP incorporate and fund the ecological mitigations throughout the project area; and that their impacts to all salmon be analyzed in the EIR/EIS to demonstrate how the mitigations can be reliably expected to result in no further degradation to the habitat which, under Magnuson, has been identified as essential fish habitat for salmon.

Salmon Essential Fish Habitat

The EFH description of the Pacific Coast Salmon Fishery Management Plan (FMP) lists known threats to salmon habitat such as dam construction, reducing in-river flow, levee construction, logging riparian habitat, and pollution from both agricultural and urban runoff. These threats lead to loss of water quality as listed in the EFH description, including elevated water temperatures, increased turbidity and suspended solids, flooding and dewatering of spawning areas, and alteration of the natural flow regime. The EFH description identifies beneficial habitat factors listed as EFH including side channel habitat, channel margin shading, riffle/pool ratio and structure, and presence of large woody debris.

The Council is greatly concerned that almost none of these beneficial EFH elements presently exist in the Central Valley. While the BDCP contemplates some EFH conservation effort, there is no assurance of funding. Even though BDCP purports to address entrainment in the pumps and Delta habitat, Lindley et al. (2009) state, "...from this perspective the biggest problem with the state and Federal water projects is not that they kill fish at the pumping facilities, but that by engineering the whole system to deliver water from the north of the state to the south while preventing flooding, salmon habitat has been greatly simplified."

In addition to EFH for salmon, the BDCP would affect EFH for other Council-managed species. Section 11.2.1.3 of the DEIR/DEIS notes that EFH for salmon, but not for groundfishes or coastal pelagic species, occur in the plan area. However, Section 11.1.1 identifies Suisan Bay as being in the plan area, and San Pablo Bay and San Francisco Bay as areas that may be affected by the plan. These three areas contain estuarine and marine habitats that have been identified as EFH and habitat areas of particular concern for various species and life stages of groundfishes (e.g., starry flounder, English sole, rockfishes) and coastal pelagic species (e.g., northern anchovy, Pacific sardine). Appendix B to the West Coast Groundfish FMP and Appendix D to the coastal pelagic species FMP identify the species and life stages that occur in these areas and types of habitats. Therefore, the Council recommends that the DEIR/DEIS be revised to address these additional species.

The bullets under Section 11.2.1.3 do not accurately reflect the status or FMPs of the species identified. For example, the first bullet states that starry flounder and northern anchovy are "monitored species" under the groundfish FMP. However, the groundfish FMP (2011) does not distinguish between "managed" and "monitored" species, and northern anchovy are managed under the coastal pelagic species FMP, not the groundfish FMP. And, as noted above, the species listed do not represent a comprehensive list of species with EFH in these areas.

Central Valley Project Improvement Act

The Council notes that the 1992 Central Valley Project Improvement Act (CVPIA) and the recommendations of the independent audit of compliance and performance (Department of Interior, “Listen to the River”¹) have not been incorporated into the BDCP except as references. The Council believes that fish and wildlife resources have not been receiving equal prioritization with irrigation and domestic uses of Central Valley Project water. The Council believes that robust EFH in all categories should result from the recommendations of the CVPIA. The Council recommends the BDCP incorporate and fully fund the recommendations of the CVPIA and the independent audit “Listen to the River” into the BDCP and analyze those actions in the DEIR/DEIS.

Central Valley Hatchery and Wild Salmon

Due to the lack of habitat to support abundant natural spawning of Chinook salmon since dam construction, Council fisheries are dependent on salmon hatcheries in the Central Valley. Hatcheries can mitigate for the loss of adequate spawning habitats above the dams, but they cannot replace the natural production of an entire river. In order to reduce straying of hatchery-produced salmon, the juveniles from some hatcheries are typically released and allowed to migrate naturally to the Delta and out to the ocean. As is especially apparent in this drought year, the lack of adequate flows in the Sacramento River can prevent salmon from having even a vestige of their natural river life cycle, with the possible loss of even the hatchery stocks as well as nearly all naturally-spawned fish. The Council believes in-river flows must be adequate and continuous through the Delta and into San Francisco Bay to provide for proper exercise of the mitigation function of the hatcheries. The Council believes that CVPIA (b)(2) flows are a minimum requirement, and recommends using flows above (b)(2) where necessary to adequately mitigate the damage to fisheries resources caused by development of Central Valley water resources.

The Council notes the extreme importance of Sacramento River fall-run Chinook salmon to the economic well-being of California and Oregon coastal communities. Due to ESA conservation constraints, Sacramento winter run are of equal importance. The conservation actions we implement to protect the Sacramento River winter-run Chinook at times highly constrain the ocean harvest of fall-run Chinook by commercial and recreational stakeholders. With this in mind, the Council strongly recommends that the goal of BDCP be not simply to minimize impacts to salmon resources, but to fully support and fund measures to increase salmon and other Central Valley anadromous fish populations through habitat restoration, including increased freshwater flow through the Delta and into San Francisco Bay.

NMFS Incidental Take Permit; Reasonable and Prudent Alternatives

Regarding the National Marine Fisheries Service (NMFS) Incidental Take Permit (Section 1-25), the Council is largely in agreement with the comments of the California Advisory Council on Salmon and Steelhead Trout (Attachment 1). The Council is also aware that the NMFS California Central Valley Area Office has been in consultation with the Bureau of Reclamation

¹ https://www.usbr.gov/mp/cvpia/docs_reports/indep_review/FisheriesReport12_12_08.pdf

concerning implementation of Operational Criteria and Plan ESA Reasonable and Prudent Alternatives (RPAs) and EFH conservation recommendations. It is clear from communications between NMFS and the Bureau of Reclamation (Attachment 2) that the EFH conservation recommendations for Sacramento fall and late fall Chinook salmon have not been fully implemented.

The Council recommends the BDCP explicitly allocate resources for the implementation of EFH recommendations as well as ESA Reasonable and Prudent Alternatives in the OCAP Biological Opinion.

Research, Monitoring, and Evaluation

The Council appreciates the extensive monitoring and research program proposed in the BDCP, and has the following recommendations.

The Council encourages state and Federal water managers and resource managers to seriously consider implementing Passive Induced Transponder (PIT) tag technology in the BDCP and Central Valley Project, along with other monitoring and evaluation strategies. PIT tag technology has been highly useful in the Columbia River Basin, where it has revolutionized how hydro-system management is evaluated and managed in order to help protect and recover ESA-listed and other imperiled salmon and steelhead stocks in the Basin. The data available from PIT tag technology provide real-time information on juvenile abundance, emigration timing, reach passage survival, adult return timing, tributary and hatchery return timing, adult abundance, and early indications of straying. These data are valuable for monitoring and assessing all phases of salmon recovery programs. PIT technology has application to a broad suite of fishes in the freshwater environment, but has generally been targeted towards salmon and steelhead. Significant funding and effort have been invested in the Columbia River Basin to develop and implement the PIT tag system (to “wire up” the mainstem and tributaries for detection); however, the benefits gained from this applied science and its use in real-time adaptive management have far exceeded the costs.

Centralized documentation and monitoring of habitat restoration programs, particularly with GIS technology, is also essential to evaluation of program progress and success. The Council recommends that the database described in (Appendix 3.D) include projects not specifically funded by BDCP in order to monitor the affected ecosystem as a whole. This could enable BDCP conservation activities to work within a larger effort such as a NOAA Blueprint for the Central Valley. The Council stresses the need to know what other agencies and efforts are doing so that duplication and working at cross purposes do not occur.

Some monitoring activities in the BDCP are described as not expected to be needed for more than a few years. One example of this is the CM14 Tidal Natural Communities Restoration, (Appendix 3.D, page 13, “Conduct a site-level assessment of use by native and non-native fishes”). BDCP will monitor this restoration project for one year and then rely on existing programs for monitoring. The Council recommends that the BDCP continue to fund existing programs in this case, and to look throughout the BDCP monitoring program and ensure that the BDCP collaborates with other agencies to ensure that monitoring of the effectiveness of BDCP conservation programs continues to provide high-quality data that will enable program-level

decision making and adaptive management of Bureau of Reclamation and California Department of Water Resources (DWR) operations.

Research planned for the BDCP will investigate the effectiveness of many elements of the conservation program. The Council notes that in the Columbia River Basin, research into fish passage has been ongoing since the first dams were built in the 1930s. The Bureau of Reclamation and DWR should plan to continue to invest in research and applied science programs to understand the changing relationship of the Delta ecosystem and its fish populations, especially as climate change adds increased stressors. Change will occur, and continued research will enable the Bureau of Reclamation and DWR to mitigate the impacts to fish and wildlife affected by the BDCP and other programs.

Regional Oversight

The Council recommends giving the public a voice and visibility into BDCP fish and wildlife conservation programs, as these directly impact public resources. In the Pacific Northwest the Northwest Power and Conservation Council (NPCC) Fish and Wildlife Program provides a public forum to give policy guidance to the Bonneville Power Administration in terms of coordinating, reviewing, and guiding fish and wildlife program development and project spending. The NPCC forum enables all interested management entities, sovereigns, the interested public, and others to work together to develop and periodically amend a fish and wildlife program for natural resource protection and recovery, including monitoring and evaluation programs that track the progress of the program towards achieving its goals and objectives.

The NPCC was created by legislation as part of the Northwest Power Act of 1980, and similar legislative action may be necessary for such a forum for the Central Valley to have standing. The Council recognizes legislative action for funding and implementing a BDCP would have to be amended to include a public forum.

Fall Chinook Salmon

The subsection “Overfishing” in Chapter 11.1.5.4 (Harvest and Hatchery Management) is generally true. However, because the BDCP concerns only Central Valley-origin salmon, the mark-selective fisheries statements do not apply to Council-managed fisheries South of Cape Falcon, Oregon, and only a small fraction of the overall harvest of Central Valley-origin Chinook occurs North of Cape Falcon, Oregon. Furthermore, the Council sets sufficient escapement goals for Central Valley Chinook to allow for sustainable production of natural spawning Chinook, and the Council does not consider naturally spawning Chinook in the Central Valley overfished. The Council recommends permit applicants contact Council staff regarding the description of all fisheries impacts described in the BDCP document to assure that they clearly and accurately describe Council salmon management policy. As a start, the following paragraph briefly describes salmon fisheries South of Cape Falcon, Oregon.

The Pacific Coast Salmon FMP describes the harvest policy objectives used to craft seasons within all conservation and ESA Reasonable and Prudent Alternative constraints. The salmon FMP allows mark-selective fisheries for both coho salmon and Chinook; however to date, mark-selective fisheries for Chinook have only been used in the area north of Cape Falcon, Oregon. The Council also carefully addressed the impacts of

release mortality in the mark-selective fisheries. The Council estimates the release mortality in recreational fisheries north of Point Arena, California as 14%. South of Point Arena, the release mortality is calculated as an average of two release mortalities, 42.2% for mooching-style fishing and 14% for trolling-style fishing. The average release mortality is based on the proportion of the recreational fishery using the two styles of fishing. In 2013, the average was 17%. The release mortality of 26% for legal and sub-legal Chinook is used in commercial fisheries. The Council also uses models of encounter rates of marked and unmarked fish, as well as the fraction of sublegal fish in all of our fisheries, in order to calculate the appropriate impacts to all runs in Council-area fisheries.

Funding for Fish and Wildlife Conservation

Chapter 8 of the DEIR/DEIS describes potential funding sources for the BDCP, including Federal, state, and local sources; matching grants, and income from water contracts. These sources are simply potential sources, as the document clearly states. However, the Council has the following concerns. First, state and Federal funding is finite, and allocation to BDCP may re-allocate funding from existing programs the Council relies on. Second, reliable sources and levels of funding to carry out the BDCP must be identified by the permit applicants before NMFS will be able to issue an ESA Section 10 Incidental Take Permit. The Council recommends BDCP demonstrate funding certainty, particularly for fish and wildlife conservation programs, and also ensure that other programs will not lose funding as BDCP gains funding.

The Council appreciates your attention to these comments. We recognize that our comments are subject to our Council process, and thus may not be finalized within the BDCP comment period. Therefore, we ask that these comments be accepted out of consideration of our public processes.

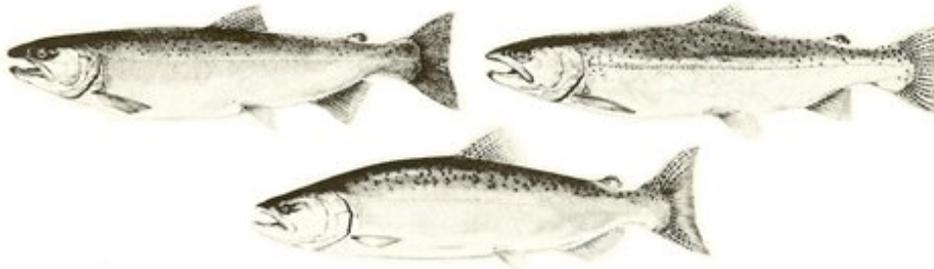
Sincerely

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Attachments:

Letter from the California Advisory Council on Salmon and Steelhead Trout (Attachment 1) dated February 26, 2014.

Letter from the Bureau of Reclamation (Attachment 2), dated July 28, 2010.



California Advisory Committee On Salmon and Steelhead Trout

February 26, 2014

Charlton H. Bonham, Director
California Department of Fish and Wildlife
1416 Ninth St., 12th Floor
Sacramento, CA 95814

Subject: Recommendation to deny incidental take permit and Natural Communities Conservation Plan for Bay Delta Conservation Plan

Dear Director Bonham;

The California Advisory Committee on Salmon and Steelhead in our capacity to advise you, the director of the California Department of Fish and Wildlife, in preparing and maintaining “a comprehensive program for the protection and increase of salmon, steelhead trout, and anadromous fisheries” in California,¹ recommends that the you deny issuance of an incidental take permit for the Bay Delta Conservation Plan’s Alternative 4 (BDCP) as a Natural Communities Conservation Plan (NCCP). The BDCP does not meet the requirements of Fish and Game Code 2820 for an NCCP and cannot legally be approved because it will contribute to the further decline of Sacramento River Winter Run and Spring Run Chinook salmon.

All races and runs of Central Valley salmon and steelhead populations have experienced over 90% declines since the State Water Project came on line in the 1960’s. In particular, naturally produced Chinook populations have experienced severe declines resulting in the listing of Sacramento Winter Run as endangered and the Spring Run as threatened under the federal and state Endangered Species Acts. Adult returns of these two species are far below the fish doubling goals of the Anadromous Fish Restoration Program. Attachments 1 and 2 are figures from the Anadromous Fish Restoration Program showing the severe declines these two runs of Chinook salmon have experienced in the Sacramento River basin.²

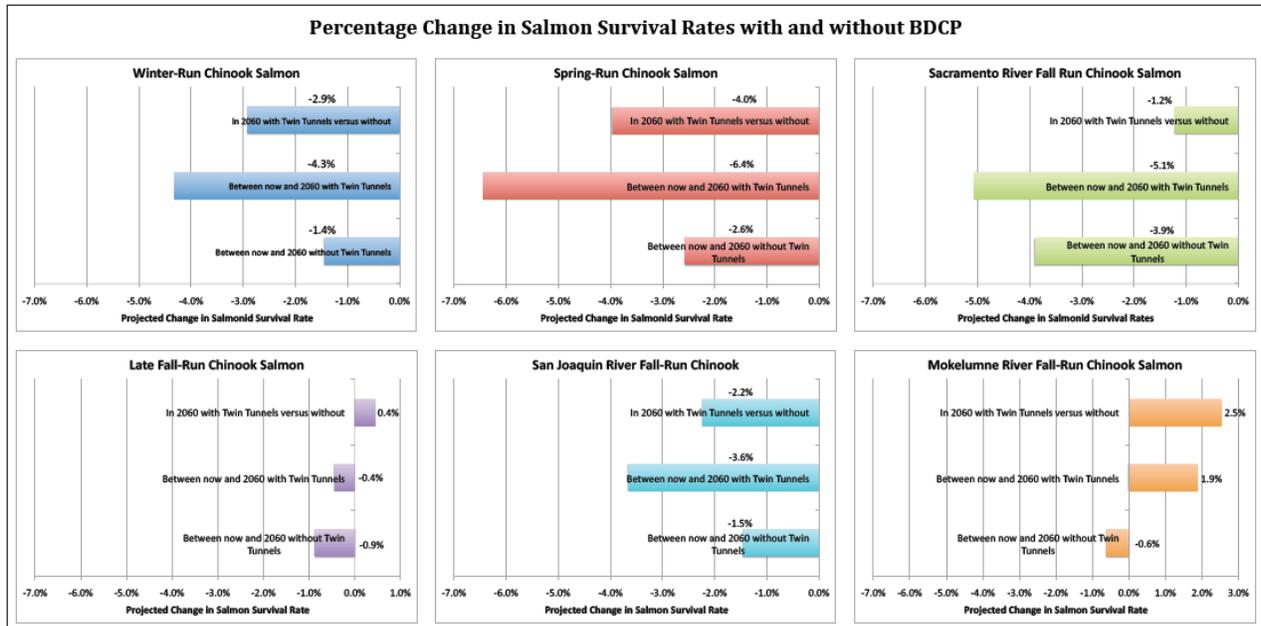
¹ California Fish and Game Code § 6920 (2008)

§ 6920. Preparation and maintenance of program; Consultation with public agencies

(a) The department shall, with the advice of the Advisory Committee on Salmon and Steelhead Trout and the Commercial Salmon Trollers Advisory Committee, prepare and maintain a detailed and comprehensive program for the protection and increase of salmon, steelhead trout, and anadromous fisheries.

² http://www.fws.gov/stockton/afrp/Documents/Doubling_goal_graphs_020113.pdf

Furthermore, according to data from Chapter 5, Effects Analysis of the November 2013 Draft BDCP, operation of the Twin Tunnels project will reduce winter run and spring Chinook salmon smolt survival by 2.9% and 4%, respectively. See Salmon Survival Rates Figure below taken from BDCP Chapter 5. Supporting data and source tables are shown in Attachment 3.³



BDCP promotes the unproven scientific hypothesis that habitat restoration can substitute for flow. However, the State Water Resources Control Board has already indicated that Delta inflows and outflows are presently insufficient to help listed species recover their former abundance.⁴ BDCP would reduce Delta outflow, which contributes to the decreases to salmon smolt survival rates modeled by BDCP.

The concept of improving riparian and subtidal habitat to create an aquatic food supply for the Delta to make up for too much water diverted is an unproven theory that has been criticized extensively by federal agencies in their “red flag” comments on the BDCP.⁵ Climate change will

³ Figure A taken from Draft Bay-Delta Conservation Plan, Chapter 5, Effects Analysis, Sections 5.5.3 through 5.5.6, Tables 5.5.3-10, 5.5.4-5, 5.5.5-8, 5.5.5-10, 5.5.5-18 and 5.5.5-20 See

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_5_-_Effects_Analysis.sflb.ashx

⁴ “Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem

Prepared Pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009.” SWRCB, August 3, 2010. Page 4, second bullet. See

http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf

⁵ See

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Federal_Agency_Comments_on_Consultant_Administrative_Draft_EIR-EIS_7-18-13.sflb.ashx and

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library_-_Archived/Effects_Analysis_-_Fish_Agency_Red_Flag_Comments_and_Responses_4-25-12.sflb.ashx and

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/NMFS_Progress_Assessment_Regarding_the_BDCP_Administrative_Draft_4-11-13.sflb.ashx and

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/NMFS_Evaluation_of_Flow_Effects_on_Survival_-_BDCP_Admin_Draft_-_4-11-13.sflb.ashx and

contribute to sea level rise directly in the Delta; this will help push X2 eastward into the Delta. BDCP analysis also shows that Sacramento River inflow will decrease directly from operation of the Twin Tunnels, and to some degree from lower upstream runoff (controlled by climate change and reservoir operation). The combined effect of continued high diversions from the Delta through BDCP (for the sake of “increased reliability”) and the effects of climate change and X2 movement eastward will have a deleterious effect on Sacramento Winter Run and Spring Run Chinook salmon.

All of the conservation measures in BDCP with the exception of CM1 (Twin Tunnels) are programmatic in nature. Funding is far from assured, as identified in a recent Legislative Analyst’s report. The LAO report identified that ecosystem restoration funding has not been secured and cost overruns are likely for land acquisition for habitat restoration. According to the report,⁶

“If bond funds are not available in the near future and no additional funding sources are identified, some ecosystem restoration may not be funded, including the restoration actions needed before the tunnels begin operation. The BDCP states that the SWP and CVP will not pay additional costs or forgo water in the event of a funding shortfall.”

The funding plan at Table 8-37 of Chapter 8 in BDCP confirms the LAO’s conclusion. The state and federal water contractors propose that they will only pay for 68.4 percent of BDCP’s costs. Nearly 95 percent of their financing commitment is solely to the Twin Tunnels project in Conservation Measure 1, and the rest of BDCP’s costs would be borne by taxpayers at large.

Because Sacramento River Winter Run and Spring Run Chinook salmon are already significantly depleted and BDCP will further reduce smolt survival, the Department of Fish and Wildlife cannot make a finding that the BDCP NCCP will lead to recovery of the species.

None of the alternatives considered in the BDCP Draft Environmental Impact Statement and Report would lead to the recovery of Sacramento River Winter Run and Spring Run Chinook salmon. None of the alternatives analyzed reduces the amount of water diverted upstream of or within the Delta. None of the alternatives analyzed considers meeting or moving toward meeting the State Water Resources’ Control Board’s Delta Outflow Criteria of 2010 that was specifically required by the legislature in 2009 “to inform planning decisions for the Delta Plan and the BDCP.”⁷

Therefore, findings approving a NCCP for the Bay-Delta Conservation Plan cannot be made pursuant to Section 2820 of the Fish and Game Code for the following reasons:

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/U_S_Fish_and_Wildlife_Service_Staff_BDCP_Progress_Assessment_4-11-13.sflb.ashx

⁶ “Financing the Bay-Delta Conservation Plan”, Legislative Analyst’s Office, 2/12/14. p 8. See

<http://www.lao.ca.gov/handouts/resources/2014/Financing-the-BDCP-02-12-14.pdf>

⁷ Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem by the State Water Resources Control Board, August 3, 2010. See

http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf

1. BDCP does not contribute to recovery and would jeopardize the continued existence of Sacramento River winter-run and spring-run Chinook salmon because smolt survival through the Delta is reduced by the project. (Fish & Game Code Section 2081(c))
2. The concept of habitat restoration measures to offset impacts from increased water withdrawals from the Delta (increased “reliability”) is not supported by science, including but not limited to the 2010 SWRCB Delta Outflow Criteria. (Fish & Game Code Section 2081(b)(2))
3. The applicants do not assure funding and water supplies for habitat restoration measures. Habitat restoration measures will not be “shovel-ready” when the Twin Tunnels begin construction. (Fish & Game Code Section 2081(b)(4) and 2820(a)(10))
4. BDCP does not include analysis of an alternative or alternatives that would meet the recovery goals for Sacramento River Winter Run and Spring Run Chinook salmon. Such an analysis should at least take into consideration the State Water Resources Control Board’s 2010 Delta Outflow decision. (Fish & Game Code Section and 2820(e))

In summary, the Bay-Delta Conservation Plan does not meet the requirements of the California Endangered Species Act or the Natural Communities Conservation Plan Act to recover Sacramento River winter-run and spring-run Chinook salmon. The BDCP NCCP is to be submitted to support issuance of an incidental take permit by the Department of Fish and Wildlife. For all of the above reasons, we urge you to reject approval of the BDCP as an NCCP.

We thank you for your consideration of these points and look forward to hearing back from you on this important matter.

Sincerely,



Vivian Helliwell, Chairman
 P.O. Box 307
 Eureka, CA 95502
vhelliwell@mcn.org

cc: Honorable Wesley Chesbro, Chairman Joint Committee on Fisheries and Aquaculture
 Kevin Shaffer, CDFW Program Manager, Anadromous Fisheries Branch

Attachments:

- 1- Anadromous Fish Restoration Program Figure 4: Estimated yearly adult natural production, and in river adult escapements of Winter Run Chinook salmon
- 2- Anadromous Fish Restoration Program Figure 5: Estimated yearly adult natural production, and in river adult escapements of Spring Run Chinook salmon in the Central Valley rivers and streams.
- 3- Central Valley Salmon Smolt Survival With and Without BDCP

ATTACHMENT 1

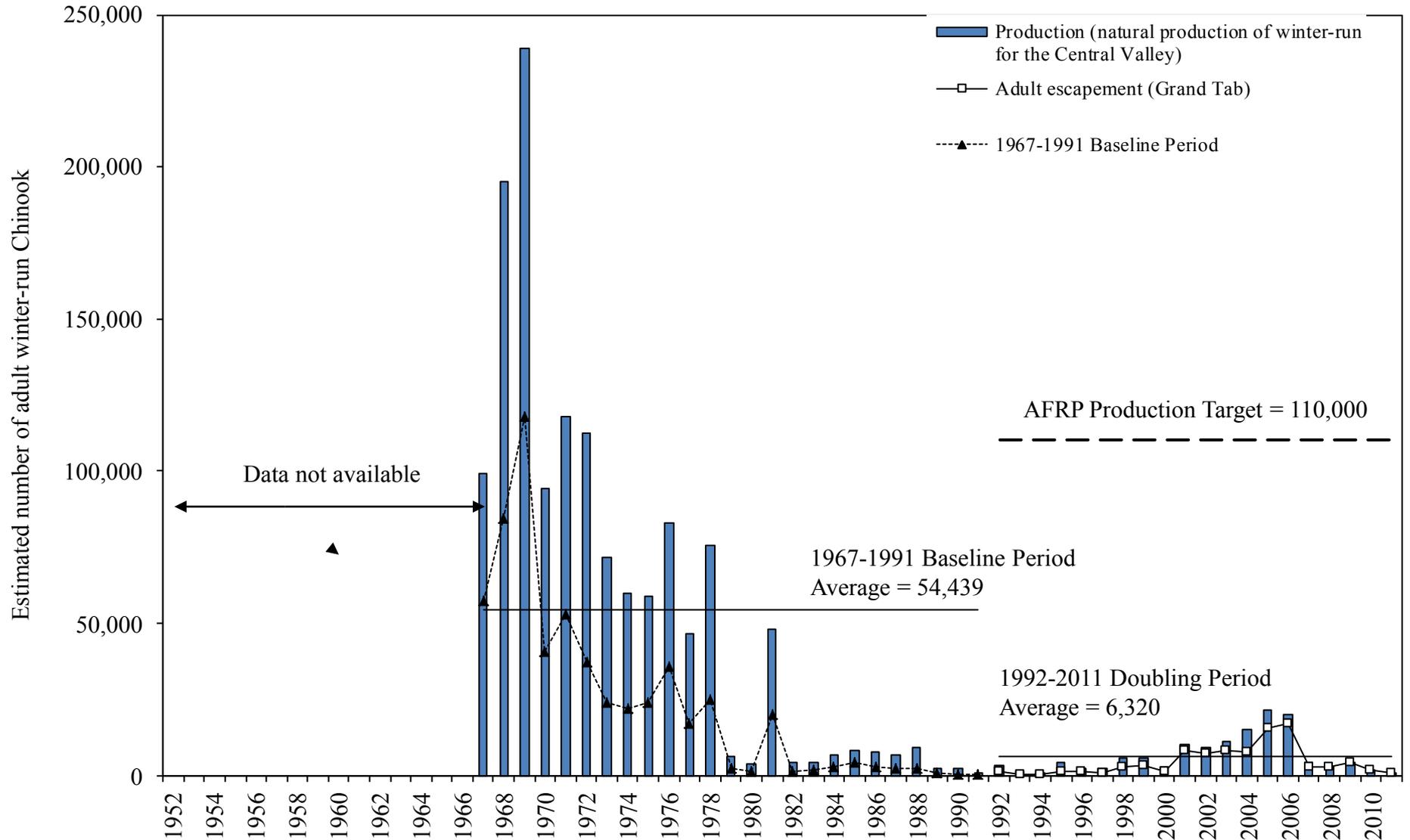


Figure 4. Estimated yearly adult natural production, and in river adult escapements of winter-run Chinook salmon in the Central Valley rivers and streams. 1992 - 2011 numbers are from CDFG Grand Tab (Apr 24, 2012). 1967-1991 Baseline Period numbers are from Mills and Fisher (CDFG, 1994).

ATTACHMENT 2

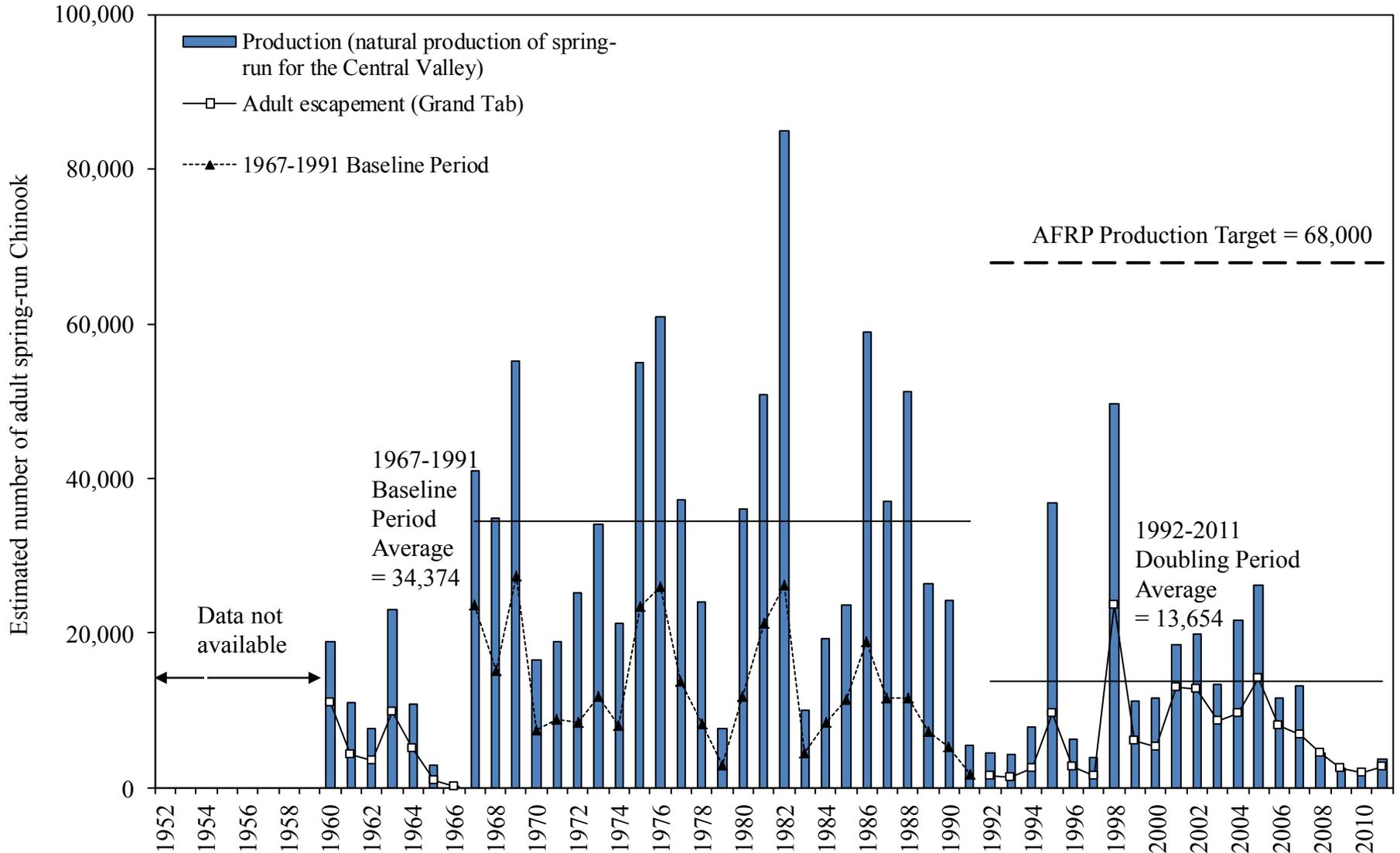


Figure 5. Estimated yearly adult natural production, and in-river adult escapements of spring-run Chinook salmon in the Central Valley rivers and streams. 1960 - 1966 and 1992 - 2011 numbers are from CDFG Grand Tab (Apr 24, 2012). 1967-1991 Baseline Period number are from Mills and Fisher (CDFG, 1994).

ATTACHMENT 3

Percentage Change in Salmon Survival Rates with and without BDCP

Salmon Run/Statistic	BDCP Chapter 5 Source Table	Baseline Conditions Now (EBC1)	Baseline Conditions in 2060 Without BDCP (EBC2-LLT)	Twin Tunnels Operation in 2060 (ESO-LLT)	Between Now and Without Twin Tunnels by 2060	Between Now and With Twin Tunnels by 2060	In 2060 With Twin Tunnels versus Without
Winter-Run	5.5.3-10						
Average		34.7%	34.2%	33.2%	-1.4%	-4.3%	-2.9%
Median		32.4%	31.8%	28.7%	-1.9%	-11.4%	-9.7%
Spring-Run	5.5.4-5						
Average		31.1%	30.3%	29.1%	-2.6%	-6.4%	-4.0%
Median		27.0%	26.4%	25.1%	-2.2%	-7.0%	-4.9%
Sac River Fall Run	5.5.5-8						
Average		25.7%	24.7%	24.4%	-3.9%	-5.1%	-1.2%
Median		22.8%	21.6%	22.4%	-5.3%	-1.8%	3.7%
Late Fall-Run	5.5.5-10						
Average		23.1%	22.9%	23.0%	-0.9%	-0.4%	0.4%
Median		20.1%	20.6%	21.3%	2.5%	6.0%	3.4%
San Joaquin River Fall-Run	5.5.5-18						
Average		13.7%	13.5%	13.2%	-1.5%	-3.6%	-2.2%
Median		10.7%	10.3%	12.1%	-3.7%	13.1%	17.5%
Mokelumne River Fall-Run	5.5.5-20						
Average		16.0%	15.9%	16.3%	-0.6%	1.9%	2.5%
Median		15.2%	14.0%	14.1%	-7.9%	-7.2%	0.7%

Source: Chapter 5, Effects Analysis, Sections 5.5.3 through 5.5.6, Bay Delta Conservation Plan, 2013.

**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

JUL 28 2010

In response refer to:
2008/09022

Donald Glaser
Regional Director
Mid-Pacific Region
U.S. Bureau of Reclamation
2800 Cottage Way, MP-3700
Sacramento, California 95825-1898

Subject: Response to Essential Fish Habitat Conservation Recommendations on the Long-Term Operations of the Central Valley Project and State Water Project

Dear Mr. Glaser:

NOAA's National Marine Fisheries Service (NMFS) received the Bureau of Reclamation's (Reclamation) January 12, 2010, letter responding to the Essential Fish Habitat (EFH) conservation recommendations provided by NMFS pursuant to the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended (U.S.C. 1801 *et seq.*) for the long-term operations of the Central Valley Project and State Water Project in the Central Valley, California (CVP/SWP operations). NMFS' EFH conservation recommendations were provided in combination with NMFS' biological opinion and conference opinion (Opinion) pursuant to section 7 of the Endangered Species Act (ESA) on CVP/SWP operations, which included a multi-part reasonable and prudent alternative (RPA) to avoid jeopardizing the continued existence of several listed species in the Central Valley, and avoid adversely modifying their critical habitats. The EFH conservation recommendations submitted with the Opinion were based on Reclamation's October 1, 2008, formal consultation initiation package, and were designed to protect EFH for Chinook salmon adversely affected by CVP/SWP operations. Actions specified in the EFH conservation recommendations were separated into three categories: 1) general recommendations from Appendix A of Amendment 14 to the Pacific Coast Salmon Fishery Management Plan (FMP; PFMC 2009); 2) habitat-based actions within the RPA; and 3) specific conservation recommendations for fall- and late fall-run Chinook salmon in the Central Valley system.

In 2008 and 2009, commercial fisheries in California were closed due to the collapse of the Central Valley fall-run Chinook salmon stock. Additional restrictions were put in place for 2010, allowing for a severely limited season. Review by Lindley *et al.* (2009) suggests this



recent collapse stems from a series of adverse marine and freshwater environmental factors. The report further states that habitat improvements must be made within the Central Valley freshwater environment to ensure sustainable populations of fall- and late fall-run Chinook salmon. The EFH conservation recommendations and RPA actions detailed in the Opinion are an integral first step towards this goal.

Essential Fish Habitat Provisions

The MSA requires that EFH be identified and described in federal FMPs [16 §U.S.C. 1853(a)(7)]. The Pacific Salmon FMP identifies and describes EFH for Central Valley Chinook salmon to include the Sacramento and San Joaquin Rivers and their tributaries (50 CFR § 660.412). Pursuant to the MSA, federal agencies must consult with NMFS with respect to any action authorized, funded, or undertaken, or proposed to be, that may adversely affect EFH [16 §U.S.C. 1855(b)(2)]. If NMFS determines that a proposed federal action would adversely affect EFH, then NMFS has an obligation to provide EFH conservation recommendations to the federal action agency [16 §U.S.C. 1855 (b)(4)(A)]. Any federal agency that receives an EFH conservation recommendation must provide a detailed response in writing to NMFS within 30 days, and include in its response a description of measures proposed by the agency to avoid, mitigate, or offset impacts to EFH. In the case of a response that is inconsistent with NMFS' EFH conservation recommendation, the federal agency must explain its reason for not following the recommendation. This explanation must include scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects [50 CFR §600.920(k)].

Reclamation's Response to EFH Recommendations

The NMFS appreciates Reclamation's time and consideration in reviewing the EFH conservation recommendations. However, Reclamation's January 12, 2010, response does not fully satisfy the consultation requirements in the EFH regulations [50 CFR § 305(b)(4)(B)]. In your written response, Reclamation does not clearly identify whether or how effects of CVP/SWP operations on fall- and late fall-run Chinook salmon EFH will be addressed. Specifically, the response does not sufficiently identify measures that will be implemented to avoid, mitigate, or offset the impact of CVP/SWP operations on EFH.

For example, conservation recommendation B.1 requests that Reclamation work through the appropriate CALFED program to investigate alternatives to the rice decomposition program and recommend ways to stabilize or increase flows after September 30 to reduce redd dewatering. Reclamation's response that NMFS' measure is not consistent with the CALFED Water Use Efficiency Program, and that Reclamation is committed to work through CALFED and the Central Valley Project Improvement Act to help address fishery needs in the upper Sacramento River fails to recommend a specific measure to address and/or reduce the effects of the rice decomposition program on lower in-stream flows and redd dewatering within the mainstem Sacramento River.

As further example, Reclamation's response to conservation recommendation E.2 states that the 24-month period is not long enough to provide solutions and that it is not practical to shut down the main export pumps for short periods of time. Reclamation does not describe why certain

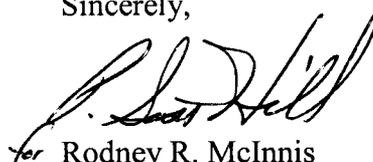
aspects of NMFS' recommendation are infeasible to implement nor does it identify alternative specific measures that avoid, minimize or otherwise compensate for effects on EFH.

NMFS respectfully requests that Reclamation re-evaluate all of their responses to NMFS' EFH conservation recommendations and clarify specific actions Reclamation will implement to reduce effects to fall- and late fall-run Chinook salmon EFH. If Reclamation intends to follow a recommendation provided by NMFS, Reclamation should clearly state so, including referencing an RPA action, and describe any steps that will be taken to implement the recommendation. Pursuant to 50 CFR 600.920 (j), if Reclamation does not intend to follow a recommendation provided by NMFS or disagrees with the need to protect fall- and late fall-run Chinook salmon EFH, Reclamation should clearly state so and provide the scientific justification for any such disagreement with NMFS over the anticipated effects of the proposed action or measures needed to avoid or offset such effects.

In addition to the need to comply with EFH consultation requirements for fall-run Chinook salmon EFH, NMFS reminds Reclamation of their responsibility to initiate consultation and provide an EFH Assessment regarding potential adverse effects of the CVP/SWP operations on EFH for species managed under the Coastal Pelagic Species FMP and the Pacific Coast Groundfish FMP. As requested in our July 2, 2008, letter (enclosed), the EFH Assessment should include a complete list of managed species within those FMPs that may be affected by CVP/SWP operations, including effects on specific life history stages and analyses of how modeled climate change scenarios would likely affect future operations and managed species throughout the action area and on all life history stages. The Coastal Pelagic Species FMP includes five species, and the Pacific Coast Groundfish FMP covers more than 90. Due to the large number of species covered under the Pacific Coast Groundfish FMP, NMFS provided Reclamation with a list of focus species for which to base the analysis of effects for groundfish EFH.

NMFS appreciates the substantial amount of effort that Reclamation has dedicated to the ESA and EFH consultations for this project. We look forward to continuing to work cooperatively with Reclamation and are available for technical assistance as this process continues. If you have any questions regarding the EFH components of this consultation, please feel free to contact Tristan Leong of my staff at 916-930-3724 or Tristan.Leong@noaa.gov.

Sincerely,



for Rodney R. McInnis
Regional Administrator

Enclosure

cc: Michael Chotkowski, Reclamation, Sacramento
Bob Hoffman, NMFS, Long Beach
Bryant Chesney, NMFS, Long Beach
Chris Yates, NMFS, Long Beach
Eric Chavez, NMFS, Long Beach
Dick Butler, NMFS, Santa Rosa
Howard Brown, NMFS, Sacramento
Garwin Yip, NMFS, Sacramento
Copy to file: 151422SWR2006SA00268

References Cited

- Lindley, S.T., C.B. Grimes, M.S. Mohr, W. Peterson, J. Stein, J.T. Anderson, L.W. Botsford, D.L. Bottom, C.A. Busack, T.K. Collier, J. Ferguson, J.C. Garza, A.M. Grover, D.G. Hankin, R.G. Kope, P.W. Lawson, A. Low, R.B. MacFarlane, K. Moore, M. Palmer-Zwahlen, F.B. Schwing, J. Smith, C. Tracy, R. Webb, B.K. Wells, and T.H. Williams. 2009. What caused the Sacramento River fall Chinook stock collapse? NOAA Technical Memorandum, NMFS Southwest Fisheries Science Center. NOAA-TM-NMFS-SWFSC-447. 61 pages.
- Pacific Fishery Management Council. 2009. Description and identification of essential fish habitat, adverse impacts and recommended conservation measures for salmon. Amendment 14 to the Pacific Coast Salmon Plan, Appendix A. Pacific Fisheries Management Council, Portland, Oregon.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
 NATIONAL MARINE FISHERIES SERVICE
 Southwest Region
 501 West Ocean Boulevard, Suite 4200
 Long Beach, California 90802-4213

In response reply to:
 2006/07858

JUL 02 2008

Mr. Ronald Milligan
 Operations Manager
 Central Valley Operations Office
 U.S. Bureau of Reclamation
 3310 El Camino Avenue, Suite 300
 Sacramento, California 95821

Dear Mr. Milligan:

This is in response to the Bureau of Reclamation's (BOR) May 16, 2008, letter requesting to initiate formal consultation with NOAA's National Marine Fisheries Service (NMFS) under section 7 of the Endangered Species Act (ESA). The request was received on May 19, 2008. The consultation concerns the potential effects of the Central Valley Project (CVP) and State Water Project (SWP) Operations Criteria and Plan (OCAP) on the following NMFS' jurisdictional species:

- Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*) and their designated critical habitat,
- Central Valley spring-run Chinook salmon (*O. tshawytscha*) and their designated critical habitat,
- Southern Oregon/Northern California Coast coho salmon (*O. kisutch*) and their designated critical habitat,
- Central Valley steelhead (*O. mykiss*) and their designated critical habitat,
- Central California Coast (CCC) steelhead (*O. mykiss*) and their designated critical habitat,
- Southern Distinct Population Segment of North American green sturgeon (*Ascipenser medirostris*), and
- Southern Resident killer whales (*Orcinus orca*).

The May 16, 2008, letter enclosed a biological assessment (BA) that was missing the appendices. NMFS was subsequently notified by BOR that the BA was being revised, and that a new BA would be submitted on May 20, 2008. On May 20, 2008, NMFS received the revised BA. On May 30, 2008, BOR hand delivered a revised BA containing the appendices and modeling results. This is the most recent BA received by NMFS and is consistent with the BA the BOR provided to the U.S. Fish and Wildlife Service.



In addition, although your transmittal letter did not request Essential Fish Habitat (EFH) consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended in 1996, the BA provided an EFH assessment in Chapter 16.

NMFS understands the challenge in preparing a BA on a project operation as vast and complex as the joint operations of the CVP and SWP. We appreciate the work that has gone into modeling project operations and attempting to predict effects on salmonids and green sturgeon. Much of the information you have provided will be critically important to us in developing our biological opinion.

As you may recall, the Department of Commerce, Office of Inspector General's (OIG) report of July 8, 2005, found deficiencies in the 2004 OCAP consultation related to the initiation package based on incomplete information. Specifically, "Contrary to the NMFS normal process, the regional office initiated the formal consultation with insufficient information, rather than suspending it until the BOR provided the information" (OIG report page ii). Therefore, NMFS is committed to not initiating formal consultation on OCAP until it determines that the initiation package is sufficient and complete.

As you know, over the last 30 days, my staff has been required to spend many hours preparing for the various required court filings and testimonies pursuant to the Pacific Coast Federation of Fishermen's Associations/Institute for Fisheries Resources *et al.* vs. Gutierrez *et al.* court case. As a result, we did not have time to conduct a detailed review and comment on the OCAP BA. Nonetheless, staff has had adequate time to review the information provided with your letter and found that all of the information necessary to initiate formal consultation has not been provided in certain key areas. Formal consultation shall not be initiated by a Federal agency until a BA has been completed and submitted to NMFS, as outlined in the regulations governing interagency consultation [50 CFR § 402.14(c)]. Formal consultation begins once NMFS has received all of the information necessary to evaluate the effects of the action on listed species and critical habitat. This letter transmits the information that is necessary to initiate ESA formal consultation and conduct an EFH consultation. The Enclosure provides our initial comments on the BA. NMFS may provide the BOR with additional comments on the OCAP BA at a later date during the consultation process [50 CFR 402.14(e)] following our complete review.

Endangered Species Act

Over the last two-plus years, NMFS staff provided technical assistance to BOR in the form of general and specific comments on the OCAP BA towards the development of a complete initiation package. All previous comments are incorporated by this reference and should be addressed in their entirety in the OCAP BA.

In addition, NMFS requires the following general information to initiate formal consultation on OCAP, as outlined in the regulations governing interagency consultation (50 CFR 402.14). We did not review chapters pertaining to Delta smelt or long-fin smelt. The Enclosure provides some more specific information required in the initiation package.

1. A description of the action to be considered [50 CFR 402.14(c)(1)].

The project description in the OCAP BA needs to be described in sufficient detail so that an analysis of effects can be conducted. Gaps in the project description include actions that are not reasonably foreseeable, but modeled in the analysis of effects, and therefore, reveal inconsistencies between the proposed action and the analysis of effects. For example, the modeling assumes a Vernalis Adaptive Management Plan (VAMP)-like action will continue through 2030, but the current VAMP action expires in 2009 with no stated renewal clause.

2. A description of the specific area that may be affected by the action [50 CFR 402.14(c)(2)].

The term "action area" is mentioned multiple times throughout the BA, but not defined. The geographical/spatial areas for the ESA and EFH consultations appear to be substantially different and inconsistent.

3. A description of any listed species or critical habitat that may be affected by the action [50 CFR 402.14(c)(3)].

CCC steelhead designated critical habitat should be included in the ESA consultation. Operation of the Suisun Marsh salinity control gates does affect CCC steelhead designated critical habitat.

4. A description of the manner in which the action may affect any listed species or critical habitat and an analysis of any cumulative effects [50 CFR 402.14(c)(4)].

The BA needs:

- a. Analyses of all proposed operations on all listed species that may be affected, including all of the environmental "stressors" (physical or biotic) caused by the proposed action to which each life history stage and each species would be exposed. The BA should include an analysis of the likely response of each life history stage and species to such stressors. Once effects are established at the individual level, effects need to be aggregated to determine the extent of the effects resulting from implementing the proposed action on broader scales, for example, at the river reach, tributary, and Division scales.
- b. Best scientific and commercial data available to support the effects analysis and conclusions;
- c. Summaries of recent past operations and the effects in instream flows, temperature, carryover storage, *etc.*, in conjunction with the modeling. Especially where an element of the proposed action cannot be modeled, such as in the application of adaptive management processes like the Sacramento River Temperature Task Group, the actual performance of these processes in the recent past should be analyzed and discussed as part of the environmental baseline. If the proposed adaptive management processes are the same as those that functioned in the past, then BOR can utilize the environmental baseline to

determine the expected effectiveness of the adaptive management processes in the effects of the action section.

- d. Additional modeling scenarios which NMFS has requested, but are not provided in the BA. We request a meeting with your modelers to design a realistic worst-case scenario. We have recently been criticized in other actions for not including realistic assumptions about future water demands, *etc.* We believe it is especially important to run a scenario that assumes all CVP B2 water is used for in Delta actions by March, and that this water is therefore unavailable for actions later in the water year. Also, it is reasonable to run a scenario with successive critically dry years, removing the 1.9 million acre feet storage soft target, *etc.*
 - e. Analyses of how the modeled climate change scenarios (Study 9.0 suite) would likely affect future operations and listed species throughout the action area and on all life history stages; and
 - f. Consideration of the effects of the proposed action within the context of the impacts of the environmental baseline and cumulative effects.
5. Relevant reports, including any environmental impact statement, environmental assessment, or BA prepared [50 CFR 402.14(c)(5)].

NMFS needs the report from the contracted technical review of the 2008 OCAP BA, and responses to the recommendations from the peer review of the NMFS 2004 OCAP biological opinion.

6. Any other relevant available information on the action, the affected listed species, or critical habitat [50 CFR 402.14(c)(6)].
 - a. Chapters 1 (Summary of Obligations Relevant to the Action) and 2 (Project Description) contain citations to numerous "agreements" that dictate project operations. The details of these agreements may be central to analyzing effects of the operations. We request that you scan and provide a DVD with any of these documents that contain significant detail on project operations.
 - b. References need to be included for all references cited.

Essential Fish Habitat

NMFS requires the following general information in order to conduct a thorough EFH consultation, as outlined in the regulations implementing the EFH provisions of the MSA (50 CFR 600.920). The enclosure provides some more specific information required.

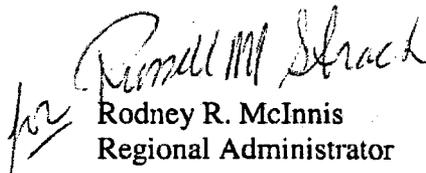
1. An analysis of the potential adverse effects of the action on EFH and the managed species [50 CFR 600.920(e)(3)(ii)]. The EFH Assessment lacks:
 - a. a complete list of managed species within the Pacific Coast Salmon, West Coast Groundfish and Coastal Pelagic Species Fisheries Management Plans that may be affected by OCAP;
 - b. in-depth analyses of all proposed operations on all managed species that may be affected, including sufficient detail to accurately assess potential impacts to EFH at

- various scales (*e.g.*, within a given watershed for salmon) and effects on specific life history stages; and
- c. analyses of how the modeled climate change scenarios would likely affect future operations and managed species throughout the action area and on all life history stages.
 2. Given the general scope and complexity of the project, as much additional information as possible, as described in section 600.920(e)(4) of the EFH regulations, should be provided in the EFH Assessment.
 3. The EFH Assessment needs to have a clear delineation of the action area.

Once we receive this additional information, we will send you a notification letter, which will also outline the dates within which formal consultation should be completed and the biological opinion delivered on the proposed action.

NMFS appreciates the tremendous efforts of BOR and Department of Water Resources staff in developing the BA. NMFS will continue to be available to provide BOR with technical assistance towards the development of a complete BA and initiation package. Please contact Mr. Garwin Yip at (916) 930-3611, or via e-mail at garwin.yip@noaa.gov, if you have any questions concerning this letter or require any additional information.

Sincerely,


Rodney R. McInnis
Regional Administrator

Enclosure

cc: Copy to file – ARN 151422SWR2006SA00268
NMFS-PRD, Long Beach, CA
Ann Lubas-Williams, BOR, 2800 Cottage Way, Sacramento, CA 95825
Jerry Johns, Deputy Director, 1416 Ninth Street, P.O. Box 942836, Sacramento, CA 94236-0001
Kathy Kelly & John Leahigh, DWR, 1416 Ninth Street, P.O. Box 942836, Sacramento, CA 94236-0001
Cay Goude, Ryan Olah, & Susan Moore, USFWS, 2800 Cottage Way, Sacramento, CA 95825
Carl Wilcox & Jim White, CDFG, 830 S Street, Sacramento, CA 95811
Perry Herrgesell, CDFG, 4001 North Wilson Way, Stockton, CA 95205

**Additional Information Necessary to Initiate Endangered Species Act Formal Consultation
and Essential Fish Habitat Consultation on the
Central Valley Project and State Water Project Operations Criteria and Plan
June 30, 2008**

Endangered Species Act

Over the last 2 plus years, NMFS staff provided technical assistance to Reclamation in the form of general and specific comments on the Central Valley Project (CVP) and State Water Project (SWP) Operations Criteria and Plan (OCAP) biological assessment (BA) towards the development of a complete initiation package. The following letters and comment documents are hereby incorporated by reference and should be addressed in their entirety in the OCAP BA (or responses as to why they are not incorporated).

- i. NMFS' June 19, 2006, letter responding to the Bureau of Reclamation's (Reclamation's) April 26 and May 19, 2006, requests to initiate formal consultation, which provided the information necessary in order to initiate formal consultation.
- ii. NMFS' February 21, 2008, letter to Reclamation and the Department of Water Resources, providing comments with regard to the development of the OCAP BA, and particularly, the draft project description.
- iii. Multiple e-mails from the U.S. Fish and Wildlife Service (FWS submitted on behalf of FWS, NMFS, and DFG) providing specific comments on various chapters of the OCAP BA, including the legal setting (Chapter 1) and project description (Chapter 2).
- iv. February 15, 2008, e-mails from Jeff Stuart (NMFS) to Shane Hunt (Reclamation), transmitting comments on species accounts for the anadromous salmonid species and green sturgeon (Chapters 3-6, and 8).

In addition, the following information is required to initiate Endangered Species Act (ESA) formal consultation.

1. A description of the action to be considered [50 CFR 402.14(c)(1)].

- a. Federal actions that warrant consultation are all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02). Lower Joice Island and Cygnus Units (OCAP BA pp.2-109 through 2-110) are no longer operated by DWR or BOR, therefore should not be part of the OCAP project description.
- b. Various actions are not reasonably certain to occur, and therefore, should not be modeled as part of the proposed action. For example:
 - i. The Vernalis Adaptive Management Plan, as part of the San Joaquin River Agreement, will expire on December 31, 2009, unless extended pursuant to the conditions of the agreement (OCAP BA p.1-12);
 - ii. The Environmental Water Account (EWA) program expired in 2007. The agencies are currently undertaking an environmental analysis of extending the EWA to 2011 (OCAP BA p.1-11). Also, the OCAP BA (p.2-21 & 22) is clear in stating that the future of the EWA is unclear and no decision has yet been made on what that

- program would look like. Until a new EWA is agreed to it is invalid to claim the operational assets granted the EWA in the CALFED Record of Decision (ROD). It is not appropriate to unilaterally label short-term actions, like VAMP and the Yuba Accord, as EWA and claim the long-term operational assets granted in the CALFED ROD.
- iii. The Yuba Accord, Component 1 Water, would be an EWA asset, but scheduled to expire in 2015 (OCAP BA p.2-21).
 - iv. The OCAP BA, p.2-118, penultimate paragraph, states, "The proposed Phase 8 program has some of the characteristics of a transfer program in that water will be provided upstream of the Delta and increased exports may result. This is a potential future action that is not included in this consultation. However, should the phase 8 program be approved, water made available from the program could be transferred as part of the transfer water analyzed in this project description." Because the proposed Phase 8 program is not included in this consultation, then the effects of the program (*i.e.*, transfers) should not be included/considered in this consultation.
 - c. The OCAP BA, p.2-121, 1st paragraph under "500 cfs Diversion...", states, "This operation is being incorporated into the OCAP project description and permitting will continue via the OCAP biological opinions." NMFS does not issue a permit at the end of an ESA section 7(a)(2) formal consultation. Therefore, the biological opinion that NMFS issues cannot replace the requirement for another permit.
 - i. There needs to be a better clarification of the additional allotment of 500 cfs during the summer to the pumping rate at Banks (under the CALFED ROD) to go to EWA assets when the EWA has been diminished.
 - d. The proposed action is not adequately described. For example:
 - i. OCAP BA p.2-7 states that a maximum of "about 300 cfs" will be diverted by the Freeport Regional Water Project. Please be exact or specify exact range and criteria for choosing levels within that range. What "agreement" is being referenced in the project description here?
 - ii. OCAP BA pp.2-14 through 2-19, Real Time Decision-Making: Please provide a schematic of how all geographic and project-wide groups work. What are their exact mandates, what organizations are represented in the groups, and how do they report information or recommendations to whom. This would assist in our understanding and provide public transparency of the adaptive management process.
 - iii. OCAP BA p.2-19 Clear Creek: please provide the "August 2000 agreement" referenced here.
 - iv. OCAP BA p 2-20 American River: What are the draft criteria being developed by the California Department of Fish and Game (DFG) that Reclamation is using? Please include these draft criteria in the project description.
 - v. OCAP BA p.2-21 and 2-22, EWA. This section is clear in stating that the future of the EWA is unclear and no decision has yet been made on what that program would look like. Until a new EWA is agreed to, it is invalid to claim the operational assets granted the EWA in the CALFED ROD.
 - vi. OCAP BA p.2-22, paragraph just above the section, "Central Valley Project": In the first sentence, what does, "and related action" mean? Without elaboration, it could mean all actions related to ensuring the adequate quantity and timing of flows that

would ensure the timely outmigration of anadromous salmonids from the San Joaquin River.

- vii. OCAP BA p.2-41, Red Bluff Diversion Dam (RBDD): How is the emergency closure provision modeled, if at all?
 - (a) What evidence does Reclamation have that the 12-in opening is sufficiently protective of green sturgeon trying to pass upstream and downstream through RBDD?
- viii. OCAP BA p.2-47, American River: The American River flow management standard needs to include temperature criteria. Without it, Reclamation, and subsequently, NMFS, cannot analyze the effect of operations on the American River on listed anadromous fish species. Also, please provide agreements with upstream operators of the dams scanned on a DVD. Please provide flood control agreement between Reclamation and Sacramento Area Flood Control Agency scanned on a DVD. Also, the last paragraph has a placeholder for the present level of American River Division water delivery.
 - (a) NMFS appreciates that the flow management standard has been included in the project description, but we need the project description or an appendix to include the exact language and details of the flow management standard so that we may consult on it.
- ix. OCAP BA p.2-62. The description of the New Melones operations is confusing and conflicting. Applicable water policies are "inferred" and "assumed." Was the temperature criterion purposefully eliminated? What are the proposed flows and temperatures at different times of year under different water year types? The project description says "under new operation procedures similar to what is descried [sic] here." What exactly is NMFS to consult on? Also we note that the 1997 Interim Plan of Operations (IPO) is inconsistent with the CALSIM model. The section implies that operations will follow the present IPO and at the same time describes that current operations deviate regularly from the IPO. Annual monthly flow schedules and habitat and temperature attributes relating to those flows must be presented in the BA in order to assess the effects of New Melones operations. It appears that annual decisions are made for allocation of water to the various categories and priorities listed, but there is no description of the process, nor what is the decision-making entity. There is no reference in the text to Table 2-11. Any long-term plan of operation for New Melones Reservoir will require re-initiation of the OCAP consultation.
- x. OCAP BA p.2-67: Please explain/clarify the statement within the Friant Division, "This division operates separately from the rest of the CVP and is not integrated into the CVP OCAP, but its operation is part of the CVP for purposes of the project description." We assume that current Friant operations are part of the project description. We understand that future Friant operations conducted through the San Joaquin River Restoration Program are not ready for this consultation. That future operation will need to be integrated into larger OCAP operations and will require a re-initiation of the OCAP consultation. Until those operations are in effect, the BA needs to describe in sufficient detail the effect of current Friant operations on the listed species in the San Joaquin River tributaries, the San Joaquin River, and the Delta so that NMFS can consult on this portion of the CVP's operations.

- xi. Figure 2-12 (OCAP BA p.2-77) is referred to when describing the Oroville Field Division. However, the text in figure 2-12 is so small that it is barely legible, and therefore, not a very useful graphic in understanding the current and proposed action in the Feather River. Please enlarge figure 2-12 to a full page and ensure that the text is legible.
- xii. OCAP BA p.2-119: Is the Yuba Accord part of the project description and subject to this OCAP consultation? If so, please provide a copy of it, scanned on a DVD.

2. A description of the specific area that may be affected by the action [50 CFR402.14(c)(2)].

- a. Although the action area is mentioned multiple times throughout the BA, it is not defined. For example:
 - i. The OCAP BA (p.14-7) stated that, "[s]almon originating in California streams are estimated to contribute 3 percent of salmon population off the Washington coast..." which indicates that the action area includes the Pacific Ocean off the coasts of California, Oregon, and Washington.
 - ii. EFH (OCAP BA p.16-2) appears to be limited to freshwater and the Bay/Delta. Since the action area is expanded to include the Pacific Ocean, the EFH assessment would likely include the EFH of additional managed species.
- b. Chapters of the BA, where applicable (*e.g.*, environmental baseline, effects of the action, summary of effects analysis, and EFH assessment), need to be adjusted based on the extent of the action area.

3. A description of any listed species or critical habitat that may be affected by the action [50 CFR 402.14(c)(3)].

- b. Central California Coast steelhead designated critical habitat should be included in the consultation (OCAP BA page 3-2) because the action area extends into Suisun Marsh.

4. A description of the manner in which the action may affect any listed species or critical habitat and an analysis of any cumulative effects [50 CFR 402.14(c)(4)].

- a. An effects analysis, including justification and rationale, needs to be provided regarding why OCAP is not likely to adversely affect Central California Coast (CCC) steelhead (OCAP BA page 3-2).
- b. An effects analysis should be included for CCC steelhead designated critical habitat.
- c. An effects analysis should be included for the Southern Distinct Population Segment (DPS) of North American green sturgeon for the Suisun Marsh Salinity Control Structure, the Morrow Island Distribution System, and the temporary barriers.
- d. An effects analysis for all species should be included for Roaring River and Goodyear Outfall (and Lower Joice Island and Cygnus Unit, if applicable).
- e. OCAP BA p.9-35, Level of Development (Land Use): Under the heading of "Sacramento Valley," why is the American River excluded? What is the effect of this on the results of the modeling? Was American River temperature control modeled?
- f. OCAP BA p.9-41, Regulatory Standards: Under the heading of "Upper Sacramento River," exactly what assumptions are built into the Shasta portion of temperature control. Where is the compliance point set?

- g. Combining all water year types into only 2 classifications [wet years (which combines wet and above normal water year types) and dry years (which combines below normal, dry, and critical)] for salvage and loss tends to over simplify results. Averaging the water year types will not provide worst case and best case scenarios. Salvage and loss would be more appropriately looked at by comparing all water year classifications.
- h. NMFS has requested additional modeling scenarios be conducted and these scenarios have not been conducted. We request a meeting with your modelers to design a realistic worst case scenario. We have been recently been criticized in other actions for not including realistic assumptions about future water demands, *etc.* We believe it is reasonable, and especially important, to run a scenario that assumes full build out of contract water demands with only guaranteed minimization measures (*i.e.*, all b2 water is used for in Delta actions by March, and that this water is therefore unavailable for actions later in the water year; no temperature control on the American River; the soft target of 1.9 million acre feet carryover storage in Shasta Reservoir not being met; and successive critically dry years).
- i. Southern Resident killer whales: Chapter 14 concludes with a "may affect," whereas it should have a subsequent effect determination of "not likely to adversely affect" or "likely to adversely affect." The mechanism for the "may affect" is a potential reduction in killer whale prey, but because of the lack of analysis, we don't know what the effects are. The analysis is limited to "may" and "could" without an analysis of the probability or extent of effect. The chapter provides more discussion of why an analysis cannot be done, rather than conducting an analysis while understanding and acknowledging the data gaps. In order to determine the effects of the action on Southern Resident killer whales, the question, "Does the project reduce prey availability in the **short-term** or hinder viability/recovery potential of prey in the **long-term**?" needs to be answered.
 - i. **Short-term effects** can be evaluated by comparing: (1) the level of prey reduction caused by project operations and (2) the level of mitigation from the action agencies' funding of hatcheries.
 - (a) The level of prey reduction caused by project operations can be quantified by quantifying the level of mortality on the salmonid life-stages affected, and evaluating how that level relates to fewer salmon in the ocean.
 - (b) Data necessary to determine the level of mitigation from the action agencies' funding of hatcheries include the percentage of returning Chinook salmon (all runs) that are hatchery-origin fish and the percentage of all funding for Chinook salmon hatchery programs that is contributed by the action agency(s). For example, if 50 percent of returns are hatchery-origin and the action agencies contribute 25 percent of all funding for Chinook salmon hatchery programs, then the action agencies are responsible for making $0.5 \times 0.25 = 12.5$ percent of the Chinook salmon that return. Using the above example, the level of mitigation (12.5 percent) is compared to the level of prey reduction caused by project operations.
 - ii. **Long-term effects** can be tied to the conclusions for salmon, provided analyses are conducted on all runs of Chinook salmon.
- j. Climate change: Climate change (Study 9 suite) was modeled for 4 scenarios: (1) wetter and more warming, (2) drier and more warming, (3) wetter and less warming, and (4)

drier and less warming. The results were applied to hydrology, and effects on potential reservoir storage and egg mortality. However, the model and BA lack:

- i. discussions of the implications of the model results for fish, including other life history stages besides eggs;
 - ii. other temperature effects, like effects on foraging, growth, development, susceptibility to disease, and changes in the aquatic food web;
 - iii. changes in peak flow timing and amount of flow, and the effects of extended drought periods;
 - iv. climate change effects on ocean conditions, including potential changes in Pacific Decadal Oscillation/El Nino Southern Oscillation cycles, ocean acidification, and the effect of sea level rise on operations in the Delta. These effects from climate change are cumulative effects that need to be considered in concert with the effects of the action. As ocean conditions change, the species will likely respond differently to the effects of the action.
 - v. comparison between study 9 (climate change) and study 7.0 (environmental baseline).
 - vi. consideration of the effects of climate change in the summary of effects analysis (OCAP BA chapter 15).
- k. Effects of the action “refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline.” (50 CFR 402.02).
- i. The environmental baseline section should include the past and present impacts of all Federal, State, or private actions in the action area, including the past and present impacts of OCAP on each of the listed species. For example:
 - (a) OCAP BA p.6-39 says,

“Water is drawn from the central Delta through lower Old River and Middle River to the export pumps when combined CVP/SWP pumping exceeds the flow of the San Joaquin River water down the upper reach of Old River and Middle Rivers. This situation likely increases the risk of juvenile salmon migrating to the south Delta and perhaps being entrained at the SWP and CVP facilities. This condition can be changed either by reducing exports or increasing Delta inflows or the use of physical barriers and gates. Decreasing exports to eliminate net upstream flows (or, if net flows are downstream, cause an increase in positive downstream flows) may reduce the chances of migrating juvenile salmonids moving up lower Old River towards the CVP/SWP diversions. Tidal flows, which are substantially greater than net flows, play an important role in salmon migrations.”

Base on the above paragraph, the reader does not know what the current operations of the CVP and SWP are, and their influences on the timing and survival of emigrating juvenile Chinook salmon.
 - (b) OCAP BA p.1-7 (Water Contracts): Please provide NMFS with, or refer us to, the specific location in the appendix where actual contracted deliveries are summarized for the last 15 years.

- ii. The BA needs to describe the cumulative effects of future reasonably certain to occur State, Tribal, local, or private actions in the action area.
- iii. Chapter 10 (CVP and SWP Reservoir Operations) provides a great deal of modeling information and results on the major tributaries. However, the entire chapter lacks any interpretation of model results or synthesis of effects on the listed species. For example, the specific number of years that Shasta End-of-September carryover storage is not likely to be met in the future is not indicated. This is critical for determining future impacts on cold water availability.
- iv. The Feather River section (OCAP BA pp.10-56 through 10-57) is very confusing and appears to use a different set of criteria for evaluation of SWP operations (*i.e.*, CESA or NEPA) than the OCAP BA. The operations on Feather River compare OCAP model runs to Study 4a, which appears to be from the 2004 OCAP BA, and is not a model run described in the 2008 OCAP BA.
- v. Chapter 11 should have incorporated the impacts identified in Chapter 10 and explained how they would impact individuals and then populations. Unfortunately, it does not go beyond making general statements about the impacts, and without citations or scientific rationale. For example, "Effects of RBDD operation on steelhead run timing would be unchanged from the current condition. About 16 percent of steelhead would still be delayed. Steelhead this early in the run are not ready to spawn and steelhead are repeat spawners so the slight delay of a small portion of the steelhead run is not a big effect on steelhead" (OCAP BA pp.11-47 through 11-48).
- vi. The critical habitat analysis (OCAP BA pp.11-78 through 11-79) lacks any analysis of effects of the action on primary constituent elements or essential features of critical habitat, and does not quantify impacts or summarize the significant effects resulting from project operations discussed in Chapter 10. Instead, the reader is referred to earlier chapters (3 and 5) that describe the life history of salmonids and their critical habitat designations. In the environmental baseline section, Reclamation needs to describe the critical habitat for each anadromous salmonid species in the action area by life history stage and habitat needs, then describe the past and present impacts of all Federal, State, or private actions in the action area, including the impacts past and present impacts of OCAP on those primary constituent elements and habitat features. Only then will NMFS, and other readers, understand Reclamation's summary of effects in chapter 11 that all primary constituent elements in the upstream areas (chapter 11) will remain about the same as a result of the project. Despite a lack of critical habitat analysis for the Delta (chapter 13), "likely to adversely affect" effect determinations were made for all anadromous salmonid designated critical habitats (chapter 15).
- l. In consideration of the risks associated with hatchery raised mitigation fish (OCAP BA pp.11-74 through 11-78), Reclamation should analyze the proposed operations of the Feather River Hatchery, rather than utilize the no action alternative under the National Environmental Policy Act (NEPA).
- m. Use of the NEPA term "less than significant" is inappropriate to characterize effects of the South Delta Improvement Project in an ESA evaluation.
- n. CVP and SWP delta effects on species (Chapter 13)

- i. Based on the analysis provided, the reader is not able to ascertain the magnitude of direct and indirect effects on listed species.
- ii. Combining water years into only two classifications (wet and dry years) tends to oversimplify results and effects to listed species.
- iii. The results for salvaged steelhead are probably significantly underestimated because steelhead salvage results are only based on non-clipped (wild) juveniles observed at the Delta Fish Facilities from 1998-2007. Since Coleman National Fish Hatchery and Feather River Hatchery steelhead are considered part of the CV steelhead DPS, all hatchery and wild fish need to be considered in the Delta effects section. The proportion of the total hatchery fish salvaged that are Coleman National Fish Hatchery and Feather River Hatchery origin also needs to be determined. Likewise, since salvage of hatchery winter-run Chinook salmon is not reported, those results are likely underestimated as well.
- iv. Temporary barriers:
 - (a) Effects to green sturgeon need to be analyzed (OCAP BA pp.13-59 through 13-61).
 - (b) Mitigation measures are described as "a necessary part of ESA consultation," yet no measures are described. This also indicates an inadequate project description.
 - (c) A notch in the barriers is described as providing passage for migrating adult salmon (OCAP BA p.13-62), but this was not described in chapter 2 (Project Description). In addition, there is no analysis to determine the effects (*i.e.*, effectiveness) of this "mitigation/conservation" measure on all of the anadromous listed species.
 - (d) The "design of the gate structures also will ensure successful passage" (OCAP BA p.13-69), yet no design is shown, or explanation given for this conclusion. The first part of this effects discussion says green sturgeon are *not blocked*, yet the second part says that their movement will be *minimized*. This statement seems to contradict the conclusion.
- o. Much of the statements and conclusions regarding the effects of the action need scientific bases, with reference to best scientific and commercial data available.
- p. All conclusions in Chapter 15 (Summary of Effects) end in "likely to adversely effect," yet there is no scientific basis for each conclusion.

5. Relevant reports, including any environmental impact statement, environmental assessment, or biological assessment prepared [50 CFR 402.14(c)(5)].

- a. Technical review of the BA: Maria Rea's July 30, 2007, declaration (submitted to the United States District Court, Eastern District of California, pursuant to Pacific Coast Federation of Fishermen's Associations/Institute for Fisheries Resources, *et al.*, vs. Carlos M. Gutierrez *et al.*, case number 1:06-CV-245 OWW LJO) stated that (aside from the specific dates) a final biological opinion would likely be issued 9 months after a final, technically reviewed, BA is issued. To date, NMFS has not been successful in obtaining a copy of the technical review report. Also, Reclamation is currently in the process of "...working on our response report to the OCAP technical review panel report..." [June 16, 2008, e-mail from Donna Garcia (Reclamation) to Rhonda Reed (NMFS)], which means either (1) Reclamation does not intend to incorporate the technical review

comments into the BA, or (2) Reclamation plans on issuing another revised BA to the U.S. Fish and Wildlife Service (FWS) and NMFS. Please provide NMFS the technical review report and your answer as to whether a revised BA that addresses the review is forthcoming, or if no further changes to respond to the review will be made to the BA.

- b. The NMFS 2004 OCAP biological opinion was peer reviewed by the California Bay-Delta Authority, Center for Independent Experts, and also the NMFS-Southwest Fisheries Science Center. Biological opinions are based on information provided in biological assessments. Although the peer reviews pertained to the NMFS' 2004 OCAP biological opinion, many of the comments applied to the 2004 OCAP BA. For example:

- i. The California Bay-Delta Authority (January 3, 2006) review identified 15 specific issues or areas in the biological opinion, which if addressed, would improve the scientific basis and synthesis of information used in the biological opinion. Issue 7, lack of a comprehensive population approach to jeopardy assessment, pertains to the biological opinion. However, issues that should be addressed in the BA include discussions of the potential effects of smolt migratory behavior and predatory fish on juvenile survival (Issue 9), inadequate accounting for fluctuations in ocean conditions that effect salmon survival (Issue 14), and too little attention devoted to effects of future global climate change (Issue 15).

- ii. Jean-Jacque Maguire (Center for Independent Expert reviewer, January 12, 2006) stated (on page 8 of 21) that,

“The salmon mortality model only evaluates the effects of temperature on mortality for early life stages, and it does not evaluate potential impact on emergent fry, smolts, juvenile emigrants, or adults, nor does it consider other sources of mortality (in-stream flows, predation, etc.), which at times may be more important than temperature related mortality. As such, it is of limited usefulness.”

As previously discussed, please provide responses as to how each peer review comment was addressed in the 2008 OCAP BA, as appropriate.

6. Any other relevant available information on the action, the affected listed species, or critical habitat [50 CFR 402.14(c)(6)].

- a. Reclamation did not include a listing of the references cited in the OCAP BA. This is critical in determining if the best scientific and commercial data available was used in developing the BA [50 CFR 402.14(d)].

Essential Fish Habitat

The following information is necessary to include in the EFH Assessment.

1. Pacific Coast Salmon (Salmon) EFH

- a. The Upper Klamath-Trinity Rivers Chinook salmon Evolutionarily Significant Unit (ESU) is exposed to the same project-related stressors (*e.g.*, high temperatures, low flows, limited spawning/rearing habitat, *etc.*) as the ESA-listed Southern Oregon/Northern California Coast coho salmon ESU, which is analyzed in the BA. Therefore, potential effects to the EFH of the Upper Klamath-Trinity Rivers Chinook

salmon ESU associated with the operation of the project should also be included in the EFH Assessment.

- b. There is a substantial amount of information included in Appendix A (entitled "Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon") of the Salmon Fishery Management Plan (FMP) that should be incorporated into the EFH Assessment.
- c. Salmon FMP Appendix A, Section 3.2: Tables A-8 and A-9 should be used to develop a comprehensive list of all the habitat types and components that can be impacted by activities associated with the operation of the project. Once established, this list should serve as the basis for evaluating impacts to EFH in each watershed to ensure a more consistent and comprehensive assessment. Table A-10 should also be used to evaluate how the project operations perform with respect to established indicators and ranges of acceptable values in each watershed. Moreover, the information within Table A-11 should be utilized to further address habitat concerns during specific life stages. Finally, the detailed information regarding potential impacts and conservation measures associated with nonfishing activities provided in section 3.2.5 is useful in determining any effect to the functioning of Salmon EFH. Therefore, incorporating this information into the EFH Assessment would improve the utility of the document.
- d. OCAP BA pp.16-6 through 16-48. There is a general lack of detailed information to accurately assess potential impacts to Salmon EFH within a given watershed associated with project operations. There are many cases throughout the EFH Assessment where potential effects are mentioned, but not fully assessed. For example:
 - i. The entrainment issue associated with the export pumps is mentioned on OCAP BA p.16-6 as having a "potentially significant but unknown impact," but no additional information is provided.
 - ii. OCAP BA p.16-48 states "Adult migration can be influenced by cross-channel operations and salinity gate operations within the Suisun Marsh area," yet this issue/statement is not developed further.
 - iii. The issue of redd dewatering or fry stranding may be introduced as being possible at certain times. However, specific flow levels or times of year during which those issues are likely to occur are not provided.
 - iv. Data on temperatures within an individual watershed that are known to cause increased disease incidence, and when those temperatures have been exceeded in the past, are not provided. Disease incidence, as it pertains to spring-run Chinook salmon at the Oroville Facilities on the Feather River, was discussed (OCAP BA p.5-45). However, it was not apparent where, if at all, this issue was addressed for fall-run Chinook salmon.
 - v. The information pertaining to the American River provides a potential example of a watershed where this type of evaluation and comparison with threshold values, or goals, was attempted, and therefore, where an adequate assessment of adverse impacts to salmon EFH may be possible.
 - vi. OCAP BA pp.16-30 through 16-32: The "Sacramento River" section provides a list of stressors identified in the Sacramento River and focuses on water temperature and flow fluctuations as the main short-term factors affected by project operations. In addition to providing spawning run times (and which runs face the most difficult conditions), the assessment includes figures depicting historical fall-run Chinook

salmon escapements and daily average flows in the river. However, the flow figure lacks data from 2002 – present, a critical time period in which a major decline in spawning escapement for fall-run Chinook salmon has occurred (especially the 2007 returns). This section needs a discussion of the different flow regimes that led to unsuccessful (and successful) broods, threshold flows and temperatures in the river, *etc.* For instance, at what flow level, especially in the stretch of the Sacramento River from Keswick Dam downstream to Red Bluff where the majority of Chinook salmon spawning occurs, does redd dewatering and/or the stranding of fry and juveniles occur? During what times of the year are these flow levels most likely to be observed? Without specific information on what flows and temperatures can be expected to negatively (and positively) impact these runs, such as historical time series data showing these threshold levels and previous instances when they have been exceeded, assessing their effects on EFH for fall- and late fall-run Chinook salmon will be highly problematic.

- vii. OCAP BA p.16-32: The temperature control device used to maintain desirable water temperatures in the Sacramento River for downstream fish habitat is mentioned here. However, there is no specific discussion as to how this device is used to address habitat needs for fall- and late fall-run Chinook salmon.
- viii. A conclusion is made that although the temperatures below Thermalito will be too warm for adult holding and spawning, they will be appropriate for juvenile rearing and emigration (OCAP BA p.16-50). Yet on OCAP BA p.16-42, it was noted that the vast majority of fish in the lower Feather River system emigrate as fry, indicating a limited amount of rearing habitat or a decrease in habitat suitability later in the season. Therefore, an analysis demonstrating the specific seasonal flow and temperature conditions that elicit the early migration response should be incorporated into the assessment. Alternatively, at a minimum, some additional explanation as to the specific conditions and/or thresholds that affect the habitat suitability, or lack thereof, in these different reaches in the Feather River should be included.
- ix. OCAP BA p. 16-50: The “Feather River” section concludes that flow and water temperature should be suitable year round for all fall-run Chinook salmon life history stages in the low flow channel (LFC). However, there is no rationale supporting this statement included within the text other than the statement that the remaining flow after diversions is typically 600 cfs in that section of the channel. In fact, on p.16-44, the statement was made that mean monthly flows in the LFC are only 5 – 38 percent of pre-dam levels. There is a discussion about general patterns regarding current and historic flows, but the assessment lacks specific information to compare with suitable temperatures for different life-stages.
- e. OCAP BA p.16-23: The “Population Trends” section lacks any discussion referring to the sharp decline in salmon production in the Central Valley in recent years. This decline includes a record low number of returning age-2 fish in 2007, and a record low projection of approximately 59,000 Sacramento River fall-run Chinook salmon returning in 2008. These circumstances led to an unprecedented total closure of Chinook salmon-directed fisheries off the coasts of California and Oregon in 2008. The magnitude of the population decline and the highly unusual actions taken to restrict the harvest of these fish warrant further discussion on this topic.

- f. OCAP BA p.16-27: The "Hatchery History and Operations" section is incomplete.
 - g. OCAP BA p.16-28. The "Hydrology" section is incomplete and limited to only two flow graphs, which are not referenced in the text.
2. West Coast Groundfish (Groundfish) EFH
- a. Amendment 19 and Appendices B, C and D include extensive material on EFH for groundfish species and should be used to evaluate the need to include additional groundfish species in the EFH Assessment. Specifically, several species, including Leopard Shark, Lingcod, English Sole and various rockfish species, are documented as having one or more life stages associated with estuarine environments (see summaries in tables 1 – 8 at the end of Section B.2 of Appendix B). The specific use of San Francisco Bay by various species, which is particularly relevant to this project, is included in Appendix B. If the review does not result in additional species being included in the assessment, justification as to why only starry flounder was chosen should be provided.
 - b. Appendix D (entitled "Nonfishing Effects on West Coast Groundfish Essential Fish Habitat and Recommended Conservation Measures") of the Groundfish FMP is divided into sections that address specific activities, describe any potential adverse impacts to EFH, and recommend conservation measures. Information from Appendix D that applies to OCAP should be incorporated into the EFH Assessment.
 - c. OCAP BA p.16-1: Starry flounder is referred to here as a "monitored" species under the Groundfish FMP. However, unlike the CPS FMP, the Groundfish FMP does not distinguish between managed and monitored (or assessed and unassessed) species.
3. Coastal Pelagic Species (CPS) EFH
- a. Appendix D to the CPS FMP should be used to evaluate the need to include additional CPS species in the EFH Assessment. If the review does not result in additional species being included in the assessment, justification as to why only Northern anchovy was chosen should be provided.
 - b. Appendix D to the CPS FMP addresses EFH for CPS species, which includes information on the general distribution of different life stages for the different species managed under the CPS FMP (e.g., table 2.0 of Appendix D). Information from Appendix D that applies to OCAP should be incorporated into the EFH Assessment.
4. Complete citation (and as stated above, the references), to all documents cited, including "NOAA ()" (OCAP BA p.16-7); "(citation)" (OCAP BA p.16-21), and "Stein xxxx" (OCAP BA p.16-21).



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Jean Thurston
Renewable Energy Program Specialist
Bureau of Ocean Energy Management
Pacific Coast OCS Region
770 Paseo Camarillo, Second Floor
Camarillo, CA 93010
jean.thurston@boem.gov

April XX, 2014

Re: [Docket No. BOEM–2013–0090; MMAA104000] Potential Marine Hydrokinetic Research Lease on the Outer Continental Shelf Offshore Oregon; Request for Competitive Interest

Dear Ms. Thurston,

The Pacific Fishery Management Council has an interest in commenting on the proposal by Oregon State University's Northwest National Renewable Energy Center to build a grid-connected offshore wave energy test site, known as the Pacific Marine Energy Center South Energy Test Site (PMEC-SETS) located approximately five nautical miles southwest of Newport, Oregon. The Council is particularly interested in actions that could have negative consequences for essential fish habitat (EFH) of Council-managed species.

As this proposal is the first offshore wave energy site to test connectivity to the electric utility grid via subsea transmission cable, the cable route and its placement must be considered during project siting, scoping, impact assessment and permitting, as this sets a precedent for all future projects. To our knowledge, this important aspect of the PMEC-SETS project is not addressed in the proponent's Lease Request or in the RFCI. At this point in the Bureau of Ocean Energy Management's (BOEM) procedural process, the cable route of the PMEC-SETS project is of greatest concern to the Council and the focus of this letter. Additionally we offer comments from the wider perspective of strategic coastal and marine spatial planning at the regional scale.

To put our interests into context, the Council is one of eight Regional Fishery Management Councils established by the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and recommends management actions for Federal fisheries off Washington, Oregon and California. The MSA includes provisions to identify, conserve, and enhance EFH for species managed under a Council's fishery management plan. Each Council is authorized under the MSA to comment on any Federal or state activity that may affect the habitat, including EFH, of a fishery resource under its authority.

The MSA defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Within the broader EFH designation, special habitat types and

geologic features may be designated as Habitat Areas of Particular Concern (HAPC). HAPCs are high priority areas for conservation, management, and research because they are rare, sensitive, stressed by development, or important to ecosystem function. The HAPC designation helps to prioritize and focus conservation efforts. Rocky reefs, estuaries, canopy kelp, seagrass, and a number of unique geological structures such as seamounts and canyons are designated as HAPCs for Council-managed groundfish species.¹

As proposed, the PMEC–SETS is to be located approximately five nautical miles offshore of South Beach, Oregon, about 1.5 miles seaward of a large submerged rocky reef, known locally as Seal Rock Reef. The reef is comprised of two massive (12 sq. mi.) contiguous rocky benches with striking parallel high-relief bedrock ridges. The two rock benches are separated by a 200-400m wide ancient riverbed channel running perpendicular to shore. The reef complex is a unique formation on the central Oregon coast, and supports an abundance of nearshore rocky reef species. Visual observation surveys have demonstrated that rocky reef fish species often aggregate along habitat interfaces, such as the large interface created by the sand channel and rocky bench. Seal Rock Reef supports the highest fishing effort in the recreational groundfish fishery, one of the state’s top two recreational fisheries.

While options are still being considered for routing the transmission cable to shore, the Council is concerned with any option that intersects the rocky reef environment. The Council prefers transmission cable routing options that bypass the reef completely, and are least likely to impact the reef habitat.

The Council’s initial concerns are for both short- and long-term actions and impacts, such as the physical vibration of the reef and noise generated by subterranean drilling, direct destruction of habitat features, disturbance of species during construction and subsequent cable maintenance, scouring and plume caused by seafloor trenching and transmission cable burial, electromagnetic fields emitted by the cable when it is used, and potential restrictions imposed on fishing.

Authorizing such actions of unknown consequence in habitats formally designated as sensitive and valuable sets a precedent that is incompatible with the conservation goals of EFH/HAPC designation. Rocky reef habitats are a finite resource, comprising less than 10 percent of Oregon’s nearshore environment. The Council urges BOEM to adopt a precautionary approach in this regard by establishing “no development” buffer zones encompassing rocky reef, canopy kelp, and seagrass HAPCs for both wave energy infrastructure lease sites and transmission cable routes.

From the broader perspective of marine spatial planning and future energy development within the California Current Ecosystem, the Council strongly urges BOEM to embrace the science-based approach of NOAA’s Coastal and Marine Spatial Planning process guided by the President’s National Ocean Policy Implementation Plan. Applying the nation’s spatial planning standard would take into account *all* coastal and marine natural resources, oceanographic conditions, and ocean uses, and would do so by employing a scientifically-based, data-driven spatial planning decision support tool in a public process that generates suitable and appropriate

¹ Likewise, the state of Oregon also considers many of these features as habitats of particular ecological importance which are classified as Conservation Areas under Oregon’s Statewide Planning Goal, Goal 19.

sites for energy development with the least environmental, social, and economic cost. Ideally, BOEM would conduct such a coastwide spatial analysis planning effort *prior* to the proposal process of site selection and leasing.

The Council intends to stay abreast of the PMEC-SETS project as it develops and will provide additional comments as opportunities arise. Please note that the Council's meeting schedule and opportunities for its advisory bodies to inform the Council do not necessarily align with public comment periods of other public processes. We appreciate your consideration of our comments if issues should arise outside the public comment window.

We look forward to assisting BOEM in finding development options that avoid and minimize impacts to important ecological and fisheries resources and in achieving the long-term goal of responsible development of this new and promising industry.

Thank you for considering our comments.

Signature Block

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

**[Docket No. BOEM–2013–0090;
MMAA104000]**

Potential Marine Hydrokinetic (MHK) Research Lease on the Outer Continental Shelf (OCS) Offshore Oregon; Request for Competitive Interest

AGENCY: Bureau of Ocean Energy Management (BOEM), Interior.

ACTION: Public Notice of an Unsolicited Request for an OCS Renewable Energy Research Lease, Request for Competitive Interest (RFCI), Request for Public Comment.

SUMMARY: The purpose of this public notice is to: (1) Describe the proposal submitted to BOEM by the Northwest National Marine Renewable Energy Center at Oregon State University (NNMREC–OSU) to acquire an OCS lease for MHK research activities; (2) solicit submissions of indications of interest in obtaining a renewable energy lease for MHK research or commercial activities on the OCS offshore Oregon in the area described in this notice; and (3) solicit public input regarding the area described in this notice, the potential environmental consequences of MHK energy development in the area, and multiple uses of the area.

On June 17, 2013, BOEM received an unsolicited request from NNMREC–OSU for an MHK OCS research lease offshore Oregon. The objective of NNMREC–OSU is to obtain a lease under 30 CFR 585.238 for renewable energy research activities, including MHK device installation and operational testing and the installation of monitoring equipment. The purpose of NNMREC–OSU’s proposed project, the “Pacific Marine Energy Center—South Energy Test Site,” is to design, develop and demonstrate a grid-connected MHK research facility on the OCS approximately five nautical miles (nmi) southwest of Newport, Oregon. The project would consist of four test sites (or berths), with each test berth capable of testing single or multiple MHK devices and equipped with its own subsea cable to transmit energy, as well as performance and environmental data, from the test berth to an onshore control center. Each of the test berth electrical cables would connect at a single submerged point, with a single transmission export cable capable of transmitting up to 10 megawatts (MW) of electricity to the mainland. The export cable would cross the OCS and state submerged lands. Additional

information on NNMREC–OSU’s unsolicited lease request can be viewed at: www.boem.gov/Oregon.

This RFCI is published pursuant to subsection 8(p)(3) of the OCS Lands Act, as amended by section 388 of the Energy Policy Act of 2005 (EPA) (43 U.S.C. 1337(p)(3)), and the implementing regulations at 30 CFR 585.238. Subsection 8(p)(3) of the OCS Lands Act requires that OCS renewable energy leases, easements and rights-of-way be issued “on a competitive basis unless the Secretary determines after public notice of a proposed lease, easement, or right-of-way that there is no competitive interest.” 30 CFR 585.238(c) states that BOEM may issue research leases if “no competitive interest exists”. This RFCI provides such public notice for the proposed lease area requested by NNMREC–OSU and invites the submission of indications of interest. BOEM is soliciting submissions of interest for MHK energy development only with this notice. BOEM will consider the responses to this public notice to determine whether competitive interest exists for the area requested by NNMREC–OSU, as required by 43 U.S.C. 1337(p)(3). Parties wishing to obtain a lease for MHK development for the area described herein under “Description of the Proposed Lease Area” should submit detailed and specific information as described in the section entitled, “Required Indication of Interest Information.”

BOEM has jurisdiction to issue leases on the OCS for MHK projects under subsection 8(p) of the OCS Lands Act (43 U.S.C. 1337(p)), and the Federal Energy Regulatory Commission (FERC) has jurisdiction to issue licenses under Part I of the Federal Power Act (FPA), 16 U.S.C. 792–823A (2006) for the construction and operation of hydrokinetic projects on the OCS.

This announcement also requests that interested and affected parties comment and provide information about site conditions and multiple uses within the area identified in this notice that would be relevant to the proposed project or its potential impacts. A detailed description of the proposed lease area can be found in the section of this notice entitled, “Description of the Area.”

DATES: If you are submitting an indication of interest in acquiring an MHK lease for the proposed lease area, your submission must be sent by mail, postmarked no later than April 23, 2014 for your submission to be considered. If you are providing comments or other submissions of information, you may

send them by mail, postmarked by this same date, or you may submit them through the Federal Rulemaking Portal at <http://www.regulations.gov>, also by this same date.

Submission Procedures: If you are interested in submitting an indication of interest in a lease, please submit it by mail to the following address: Bureau of Ocean Energy Management, Pacific OCS Region, Office of Strategic Resources, 770 Paseo Camarillo, Second Floor, Camarillo, California, 93010. Submissions must be postmarked by April 23, 2014 to be considered by BOEM for the purposes of determining competitive interest. In addition to a paper copy of your submission, include an electronic copy; BOEM considers an Adobe PDF file stored on a compact disc (CD) to be an acceptable format for submitting an electronic copy. BOEM will list the parties submitting indications of interest on the BOEM Web site after the 30-day comment period has closed.

If you are submitting comments and other information concerning the proposed lease area, you may use either of the following two methods:

1. Federal eRulemaking Portal: <http://www.regulations.gov>. In the entry entitled, “Enter Keyword or ID,” enter BOEM–2013–0090, and then click “search.” Follow the instructions to submit public comments and view supporting and related materials available for this notice.

2. Alternatively, comments may be submitted by mail to the following address: Bureau of Ocean Energy Management, Pacific OCS Region, Office of Strategic Resources, 770 Paseo Camarillo, Second Floor, Camarillo, California, 93010.

If you wish to protect the confidentiality of your submissions or comments, clearly mark the relevant sections and request BOEM treat them as confidential. Please label privileged or confidential information “Contains Privileged or Confidential Information,” and consider submitting such information as a separate attachment. Treatment of confidential information is addressed in the section of this notice entitled, “Privileged or Confidential Information.” BOEM will post all comments on www.regulations.gov unless labeled as privileged or confidential. Information that is not labeled as privileged or confidential will be regarded by BOEM as suitable for public release.

FOR FURTHER INFORMATION CONTACT: Ms. Jean Thurston, Renewable Energy Program Specialist, BOEM, Pacific OCS Region, Office of Strategic Resources,

770 Paseo Camarillo, Second Floor, Camarillo, California 93010, Phone: (805) 389-7585.

SUPPLEMENTARY INFORMATION:

Purpose of This RFCI

Responses to this public notice will allow BOEM to determine whether there is competitive interest in acquiring an OCS MHK lease in the proposed lease area. In addition, this notice provides an opportunity for interested stakeholders to comment on the proposed lease area, the proposed project and any potential impacts MHK energy development may have in the area. BOEM may use comments received to further identify and refine the area requested and inform future environmental analyses related to the project.

Determination of Competitive Interest and Leasing Process

After the publication of this announcement, BOEM will evaluate indications of competitive interest in acquiring an MHK lease in the proposed lease area. At the conclusion of the comment period for this public notice,

BOEM will review the submissions received and undertake a completeness review for each of those submissions and a qualifications review for each of the nominating entities. BOEM will then make a determination as to whether competitive interest exists.

If BOEM determines that there is no competitive interest in the proposed lease area, it will publish a determination of no competitive interest in the **Federal Register**. At that point, BOEM may decide to proceed with the noncompetitive lease issuance process for a research lease pursuant to 30 CFR 585.238. If BOEM determines that there is competitive interest, then it may move forward with the leasing process outlined in 30 CFR 585.211.

Whether following competitive or non-competitive procedures, NNMREC-OSU would need to submit any required plan(s) to BOEM and an application for a license to FERC. BOEM would consult with the BOEM Oregon Intergovernmental Renewable Energy Task Force and comply with all applicable requirements before making a decision whether or not to issue a lease.

BOEM would coordinate and consult, as appropriate, with FERC and other relevant federal agencies, affected tribes, affected state agencies and affected local governments during the lease issuance process.

Description of the Proposed Research Lease Area

The proposed research lease area is located off the coast of Oregon, beginning approximately 5 nmi southwest of Newport, Oregon. From its most northwest point (Point number 27, Table 2) the area extends approximately 5.18 nmi south and 5.18 nmi east. The project area consists of two full OCS blocks and two partial OCS blocks. The entire area is approximately 33 square miles (20,994 acres or 8496 hectares). The project footprint is anticipated to be smaller than the area described in this RFCI. BOEM may remove any lease blocks, or sub-blocks, from the area prior to issuing a lease if it is larger than needed to develop the project. The table below describes the OCS lease blocks and sub-blocks included within the area of interest.

TABLE 1—LIST OF OCS BLOCKS INCLUDED IN THE REQUEST FOR COMPETITIVE INTEREST

Protraction name	Protraction number	Block number	Sub block
Newport Valley	NL 10-10	6481	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P.
Newport Valley	NL 10-10	6531	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P.
Salem	NL 10-11	6451	A,B,C,E,F,G,H,I,J,K,L,M,N,O,P.
Salem	NL 10-11	6501	A,B,C,D,E,F,G,I,J,K,M,N.

The boundary of the proposed lease area follows the points listed in Table 2 in clockwise order. Point numbers 1 and

35 are the same. Coordinates are provided in X, Y (eastings, northings)

UTM Zone 10N, NAD 83 and geographic (latitude, longitude), NAD 83.

TABLE 2—LIST OF BOUNDARY POINTS INCLUDED IN THE REQUEST FOR COMPETITIVE INTEREST

Point number	X (Easting)	Y (Northing)	Latitude	Longitude
1	407600	4939200	44.600214	-124.164292
2	407600	4938000	44.589413	-124.164076
3	408800	4938000	44.589566	-124.148961
4	408800	4936800	44.578765	-124.148749
5	408800	4935600	44.567964	-124.148536
6	408800	4934400	44.557163	-124.148324
7	408800	4933200	44.546362	-124.148111
8	407600	4933200	44.546209	-124.163215
9	407600	4932000	44.535408	-124.163000
10	407600	4930800	44.524607	-124.162785
11	406400	4930800	44.524452	-124.177883
12	406400	4929600	44.513652	-124.177665
13	405200	4929600	44.513495	-124.192760
14	404000	4929600	44.513336	-124.207855
15	402800	4929600	44.513176	-124.222950
16	402015	4929600	44.513069	-124.232819
17	401600	4929600	44.513013	-124.238044
18	400400	4929600	44.512848	-124.253139
19	399200	4929600	44.512682	-124.268233
20	399200	4929600	44.523482	-124.268468
21	399200	4930800	44.534283	-124.268702
22	399200	4932000	44.545083	-124.268937
23	399200	4933200	44.555884	-124.269172

TABLE 2—LIST OF BOUNDARY POINTS INCLUDED IN THE REQUEST FOR COMPETITIVE INTEREST—Continued

Point number	X (Easting)	Y (Northing)	Latitude	Longitude
24	399200	4934400	44.566684	– 124.269406
25	399200	4935600	44.577485	– 124.269641
26	399200	4936800	44.588285	– 124.269877
27	399200	4938000	44.599086	– 124.270112
28	400400	4939200	44.599253	– 124.254995
29	401600	4939200	44.599418	– 124.239878
30	402800	4939200	44.599581	– 124.224761
31	403847	4939200	44.599722	– 124.211568
32	404000	4939200	44.599742	– 124.209644
33	405200	4939200	44.599901	– 124.194527
34	406400	4939200	44.600058	– 124.179409
35	407600	4939200	44.600214	– 124.164292

Map of the Area

A map of the area proposed by NNMREC–OSU and included in this RFCI can be found at the following URL: www.boem.gov/Oregon. A large-scale map of the proposed lease area showing boundaries of the area with the numbered blocks is available from BOEM at the following address: Bureau of Ocean Energy Management, Pacific OCS Region, Office of Strategic Resources, 770 Paseo Camarillo, Second Floor, Camarillo, California, 93010.

Department of Defense Activities and Stipulations

The Department of Defense (DOD) conducts offshore testing, training and operations on the OCS and may request that BOEM condition activities that might take place in the proposed lease area. BOEM will consult with DOD regarding potential issues concerning offshore testing, training and operational activities, and will develop any necessary stipulations to mitigate the potential effects of renewable energy activities on DOD activities in the proposed lease area.

Required Indication of Interest Information

If you intend to submit an indication of interest in an MHK lease for the area identified in this notice, you must provide the following:

(1) A statement that you wish to acquire an MHK lease within the proposed lease area. For BOEM to consider your indication of interest, it must include a proposal for the installation of one or more MHK devices within the proposed lease area. Any request for an MHK lease located outside of the proposed lease area should be submitted separately pursuant to 30 CFR 585.230 or 30 CFR 585.238;

(2) A general description of your objectives and the facilities that you would use to achieve those objectives;

(3) A general schedule of proposed activities, including those leading to commercial operations, as applicable;

(4) Available and pertinent data and information concerning renewable energy resources and environmental conditions in the area you wish to lease, including energy and resource data and information used to evaluate the area of interest. Where applicable, spatial information should be submitted in a format compatible with ArcGIS 9.3 in a geographic coordinate system (NAD 83);

(5) Documentation demonstrating that you are legally qualified to hold a lease as set forth in 30 CFR 585.106 and 107. Examples of the documentation appropriate for demonstrating your legal qualifications and related guidance can be found in Chapter 2 and Appendix B of the Guidelines for the Minerals Management Service Renewable Energy Framework available at: <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Index.aspx>. Legal qualification documents will be placed in an official file that may be made available for public review. If you wish any part of your legal qualification documentation to be kept confidential, clearly identify what should be kept confidential, and submit it under separate cover (see “Protection of Privileged or Confidential Information Section,” below); and

(6) Documentation demonstrating that you are technically and financially capable of constructing, operating, maintaining and decommissioning the facilities described in your submission. Guidance regarding the documentation that could be used to demonstrate your technical and financial qualifications can be found at: <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/Index.aspx>. If you wish that any part of your technical and financial qualification documentation be kept confidential, clearly identify what should be kept confidential, and submit it under separate cover (see

“Protection of Privileged or Confidential Information Section,” below).

Your complete submission, including the items identified in (1) through (6) above, must be provided to BOEM in both paper and electronic formats. BOEM considers an Adobe PDF file stored on a CD to be an acceptable format for submitting an electronic copy.

It is critical that you provide a complete submission of interest so that BOEM may consider your submission in a timely manner. If BOEM reviews your submission and determines it is incomplete, BOEM will inform you of this determination in writing and describe the information BOEM needs from you in order for BOEM to deem your submission complete. You will be given 15 business days from the date of the letter to provide the requested information. If you do not meet this deadline, or if BOEM determines your second submission is also insufficient, BOEM may deem your submission invalid. In such a case, BOEM would not consider your submission.

Requested Information From Interested or Affected Parties

BOEM is also requesting from the public and other interested or affected parties specific and detailed comments regarding the following:

(1) Geological and geophysical conditions (including seabed conditions and shallow hazards) in the area described in this notice;

(2) Historic properties, archaeological, historic and/or cultural resources potentially affected by the development of the area identified in this notice;

(3) Other uses of the area described in this notice, including navigation (commercial and recreational vessel usage) and commercial and recreational fishing; recreational activities (e.g., wildlife viewing and scenic areas), scientific research and utilities and communications infrastructure (e.g., undersea cables);

(4) Other relevant environmental information, including but not limited to: protected species and habitats, marine mammals, sea turtles, birds and fish; and

(5) Socioeconomic information, such as demographics and employment, or information relevant to environmental justice considerations.

Protection of Privileged or Confidential Information

Freedom of Information Act

BOEM will protect privileged or confidential information that you submit as required by the Freedom of Information Act (FOIA). Exemption 4 of FOIA applies to trade secrets and commercial or financial information that you submit that is privileged or confidential. If you wish to protect the confidentiality of such information, clearly mark it, and request that BOEM treat it as confidential. BOEM will not disclose such information, subject to the requirements of FOIA. Please label privileged or confidential information, "Contains Confidential Information," and consider submitting such information as a separate attachment.

BOEM will not treat as confidential any aggregate summaries of such information or comments not containing such information. Additionally, BOEM will not treat as confidential: (1) The legal title of the nominating entity (for example, the name of your company); or (2) the geographic location of nominated facilities. Information that is not labeled as privileged or confidential will be regarded by BOEM as suitable for public release.

Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3(a))

BOEM is required, after consultation with the Secretary of the Interior, to withhold the location, character or

ownership of historic resources, if it determines that disclosure may, among other things, cause a significant invasion of privacy, risk harm to the historic resources or impede the use of a traditional religious site by practitioners. Tribal entities and other interested parties should designate information that they wish to be held as confidential.

Dated: March 13, 2014.

Tommy P. Beaudreau,
Director, Bureau of Ocean Energy Management.

[FR Doc. 2014-06295 Filed 3-21-14; 8:45 am]

BILLING CODE 4310-MR-P

DEPARTMENT OF THE INTERIOR

Office of Natural Resources Revenue

[Docket No. ONRR-2011-0012; DS63610000 DR2PS0000.CH7000 145DO102R2]

Major Portion Prices and Due Date for Additional Royalty Payments on Indian Gas Production in Designated Areas Not Associated With an Index Zone

AGENCY: Office of the Secretary, Office of Natural Resources Revenue (ONRR), Interior.

ACTION: Notice.

SUMMARY: Final regulations for valuing gas produced from Indian leases, published August 10, 1999, require ONRR to determine major portion prices and notify industry by publishing the prices in the **Federal Register**. The regulations also require ONRR to publish a due date for industry to pay additional royalties based on the major portion prices. This notice provides major portion prices for the 12 months of calendar year 2012.

DATES: The due date to pay additional royalties based on the major portion prices is May 31, 2014.

FOR FURTHER INFORMATION CONTACT: Michael Curry, Manager, Denver B, Western Audit & Compliance, ONRR; telephone (303) 231-3741; fax number (303) 231-3473; email *Michael.Curry@onrr.gov*; or Rob Francoeur, Denver B, Team 2, Western Audit & Compliance, ONRR; telephone (303) 231-3723; fax (303) 231-3473; email *Rob.Francoeur@onrr.gov*. Mailing address: Office of Natural Resources Revenue, Western Audit and Compliance Management, Denver B, P.O. Box 25165, MS 62520B, Denver, Colorado 80225-0165.

SUPPLEMENTARY INFORMATION: On August 10, 1999, ONRR published a final rule titled "Amendments to Gas Valuation Regulations for Indian Leases" effective January 1, 2000 (64 FR 43506). The gas valuation regulations apply to all gas production from Indian (tribal or allotted) oil and gas leases, except leases on the Osage Indian Reservation.

The regulations require ONRR to publish major portion prices for each designated area not associated with an index zone for each production month beginning January 2000, as well as the due date for additional royalty payments. See 30 CFR 1206.174(a)(4)(ii). If you owe additional royalties based on a published major portion price, you must submit to ONRR by the due date an amended Form ONRR-2014, Report of Sales and Royalty Remittance (formerly Form MMS-2014). If you do not pay the additional royalties by the due date, ONRR will bill you late payment interest under 30 CFR 1218.54. The interest will accrue from the due date until ONRR receives your payment and an amended Form ONRR-2014. The table below lists the major portion prices for all designated areas not associated with an index zone. The due date is the end of the month following 60 days after the publication date of this notice.

GAS MAJOR PORTION PRICES (\$/MMBTU) FOR DESIGNATED AREAS NOT ASSOCIATED WITH AN INDEX ZONE

ONRR-Designated areas	Jan 2012	Feb 2012	Mar 2012	Apr 2012
Blackfeet Reservation	2.07	1.84	1.56	1.40
Fort Belknap	4.58	4.44	4.17	4.15
Fort Berthold	4.06	3.82	4.05	3.36
Fort Peck Reservation	5.22	5.17	5.09	4.14
Navajo Allotted Leases in the Navajo Reservation	3.29	2.70	2.50	2.02
Turtle Mountain Reservation	4.40	4.57	4.85	4.06

ONRR-Designated areas	May 2012	Jun 2012	Jul 2012	Aug 2012
Blackfeet Reservation	1.65	1.52	1.90	1.88
Fort Belknap	4.11	4.31	4.47	4.54
Fort Berthold	2.85	2.36	2.68	2.96
Fort Peck Reservation	4.27	3.69	4.30	4.36
Navajo Allotted Leases in the Navajo Reservation	2.09	2.52	2.64	2.83

HABITAT COMMITTEE REPORT ON CURRENT HABITAT ISSUES

Boundary Expansion of Gulf of the Farallones and Cordell Bank National Marine Sanctuaries

The Habitat Committee (HC) was briefed on the proposed boundary expansion of the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries. At the end of 2012, in response to public and Congressional interest, President Obama considered designating the area of interest as a National Monument, which would not have allowed for a public process. National Oceanic and Oceanic Administration (NOAA) instead recommended the current process. The Office of National Marine Sanctuaries (ONMS) began gathering public input beginning in early 2013 to scope the range of issues to be considered as part of the environmental analysis. ONMS has finalized and published a Draft Environmental Impact Statement (EIS) in the *Federal Register* on April 4, 2014. All documents, including the Draft EIS, proposed rule, and draft amended management plans, will be available at regulations.gov when the proposed rule is published (anticipated April 11, 2014). The public comment period is open until June 30, 2014. The HC applauds the effort of ONMS to align the comment period with the Council's schedule.

Based on the briefing, the goals and objectives of the proposed Sanctuary expansions are primarily to protect the habitat and ecosystem north and west of the current boundaries up to approximately Point Arena, California. The proposed boundary expansions do not include any new fishing regulations under the National Marine Sanctuaries Act. Fishing within the existing and proposed footprints of the two Sanctuaries would continue to be managed by California Department of Fish and Wildlife and NOAA Fisheries with advice from the Council. The HC recommends, and is available to draft, a comment letter for the June briefing book.

Coleman Hatchery Releases

As his last act in the HC, esteemed member Tim Roth distributed a U.S. Fish and Wildlife Service April 3, 2014 news release that provides an update of the ongoing juvenile fall Chinook release strategies at Coleman National Fish Hatchery this year (Supplemental Agenda Item B.1.c, USFWS Report 2). Because of the extreme drought conditions this year, the hatchery is operating under a Contingency Release Plan. The plan decreases onsite releases in Battle Creek, and increases trucking of juveniles to acclimation pens in Rio Vista, California, when certain environmental and water management triggers are met.

The news release explains that approximately 2.5 million juveniles were trucked to Rio Vista during the first wave of releases beginning on March 25 because at least one of the triggering criteria was met for that time period. Recent rains have resulted in better forecasted migration conditions to the point where none of the triggers are expected to be met for the next round of releases, and therefore about 4.5 million juveniles will be released onsite in Battle Creek beginning Friday, April 4. The remaining hatchery production of about five million juveniles is continuing to be marked and reared to release size. A decision to truck or release these fish onsite will be based on continuing assessment and forecasted environmental conditions at time of release and for the 21-day migration period.

Short-term environmental conditions in the Central Valley have improved enough to at least allow for an onsite release of Coleman National Fish Hatchery production which can be compared to the Rio Vista trucked releases. It is expected that the comparison of the fishery contribution, survival, and return rates of these two release strategies will further demonstrate the need for adequate emigration conditions and Delta Cross-Channel Gate operations to protect in-river wild and hatchery migrants, and can be used to help assess the efficacy of the Service's 2014 Contingency Release Plan. However, the HC expects that overall juvenile emigration conditions this spring, and adult return immigration and spawning conditions this fall, will remain very poor throughout the Central Valley because of the continuing extreme drought conditions.

California Drought

The HC discussed the current drought situation in California. Snowpack measurements by California Department of Water Resources have improved from 14 percent to 32 percent of normal. California state and Federal agencies are monitoring drought conditions and adjusting water flows on a weekly basis for the foreseeable future.

In response to the Governor's drought declaration, state and Federal agencies are currently attempting to manage water within the Delta within the confines of current regulations and allocations. The HC is concerned that later this year, state and Federal reservoirs may be drawn down to dangerously low levels, leading to high temperatures, low flows, low water quality, and other water quality problems. Congressional legislation has been proposed both in the House and Senate that, if passed, would compromise existing agreements and harm fish.

Bay/Delta Conservation Project Letter

The HC and Salmon Advisory Subpanel jointly drafted a letter for the Council (Agenda Item B.1.a, Attachment 3) that provides comments on the Draft EIR/EIS for the Bay Delta Conservation Plan. The HC recommends that the Council adopt the letter with the following edits:

- The second attachment listed on page 6 should be corrected to read: "Letter from NMFS to the Bureau of Reclamation (Attachment 2), dated July 28, 2010."
- Add an opening paragraph to the letter that describes the Council's responsibility under the essential fish habitat (EFH) provisions of the MSA to comment on any action that may adversely affect EFH, particularly when it affects anadromous fishery resources.

Principle Power Wind Project

Mr. Kevin Bannister from Principle Power addressed the HC and representatives from the Groundfish Advisory Subpanel to discuss the wind energy pilot project under consideration offshore of Coos Bay, Oregon. Principle Power was awarded a grant from Department of Energy to develop one of seven wind energy pilot projects in the nation. The funding is for an initial engineering plan and to initiate a process of outreach and economic analysis of small- and large-scale development. This project is a commercial demonstration project. The life of this project is planned for 20-25 years. The Bureau of Ocean Energy Management's (BOEM) determination of "no competitive interest" means that Principle Power can further develop the engineering plan

and submit their lease application and supporting documents. At this time, the plan is for five floating platforms occupying approximately four to five square miles. The project will not be expanded beyond this initial size.

The HC and Groundfish Advisory Panel raised the following concerns:

- Level of transparency of the BOEM/developer process
- Need for outreach to a wider fishing audience than just Southern Oregon Resource Council (a fishing stakeholder group)
- Concern for conflict with whiting fishing grounds
- Need to gather sufficient ecological baseline information prior to project installation, and develop a long-term monitoring plan

Principle Power will learn next week if the Department of Energy will choose this project as one of the three projects that move forward to Phase II and receive additional funds. In fall, Principle Power plans to submit a Construction and Operations Plan to BOEM which will be the basis of the National Environmental Policy Act review.

PMEC-SETS letter

In the letter to the Bureau of Ocean Energy Management (Supplemental Attachment 4), the HC recommends replacing the last paragraph on page 2 with the following, in order to highlight the:

From the broader perspective of marine spatial planning and future energy development within the California current ecosystem, the Council strongly urges BOEM to embrace the science-based approach of NOAA's Coastal and Marine Spatial Planning process guided by the President's National Ocean Policy implementation plan. Currently, the approach for ocean energy siting in Federal waters is dependent on developer/project-initiated interest in a location. In contrast, we suggest an approach that prioritizes areas for development at the regional scale, and prior to soliciting interest from developers. This approach would be consistent with the nation's spatial planning standard that would take into account multiple coastal and marine ecological resources (including important fish habitats), ocean uses, and oceanographic conditions. BOEM's Oregon Ocean Uses Atlas project is a good start for providing an overview of ocean uses that can be folded into a robust, scientific analysis and planning effort. Ideally, BOEM would conduct such a coastwide spatial analysis planning effort prior to the proposal process of site selection and leasing.

PFMC
04/05/13

GROUND FISH ADVISORY SUBPANEL REPORT ON HABITAT ISSUES

The Groundfish Advisory Subpanel (GAP) references the [Habitat Committee \(HC\) Report](#) under this agenda item and agrees with most of the HC's recommendations with regard to wind and wave energy (exceptions are noted below). Regarding potential expansion of marine sanctuaries in the Gulf of the Farallones and Cordell Banks, the GAP will reserve comments on this issue until June. Regarding Coleman Hatchery Releases, California Drought and Bay/Delta Conservation letter, the GAP has no recommendations.

Principle Power WindFloat project

Many GAP members were in attendance during Principle Power, Inc. Vice President Kevin Banister's presentation Friday in the HC.

One of the overarching issues to which the GAP has spoken before is the lack of inclusion of the seafood industry in siting wind and wave energy projects in the Outer Continental Shelf (OCS) off the West Coast. While the Bureau of Ocean Energy Management (BOEM) works with the Oregon Renewable Energy Intergovernmental Task Force, the members of that body consists solely of state and Federal agencies and elected officials. It is unclear if states and Federal representatives on the task force are knowledgeable about fisheries and the significant fishery disruptions that siting decisions could cause. Moreover and most critical, there is no allowance for seafood industry representatives nor any opportunity for the seafood industry to interact directly with BOEM through a process like the Pacific Fishery Management Council.

It is this lack of consultation with the seafood industry that is of utmost concern to the GAP, as we have stated before. For instance, while Principle Power, Inc., believed it was performing its due diligence by consulting with the local Coos Bay fishing fleet through the Southern Oregon Ocean Resource Coalition, the company did not consult with the at-sea whiting fleets, who consider the proposed lease area one of the most productive fishing areas on the West Coast. It is unfortunate the company was not aware of the whiting fleet's concern prior to its unsolicited lease request and points to an inherent problem with the siting process: neither BOEM nor prospective developers know whom to consult when it comes to fishing grounds on the OCS. Neither do they realize that thousands of individual fishermen and processing employees from California to Alaska depend on those areas.

Mr. Banister also stated the company plans to perform environmental impact assessments. The GAP believes there is little to no baseline data to inform these analyses. In addition, the impression was given that only after the turbines were in place would it be possible to perform meaningful environmental analyses. This seems to contradict the fundamentals of environmental policy.

One glaring omission is: How will the company and Federal managers handle so many environmental studies? Many questions – and one public comment – specifically question how the company and Federal managers will handle potential bird interactions. Some have described the turbines as “albatross cuisinarts.” The seafood industry is concerned that any endangered bird interaction could also prevent the fishing fleets from prosecuting their fisheries. This must not be allowed to happen.

One other important note is that this is definitely a commercial operation: The lasting duration of the project, 20 to 25 years, could have long-term effects on coastal communities. The GAP has commented on this project previously because it is an important issue to the GAP. This emerging issue of competing ocean issues is one in which the GAP has great concerns.

The GAP thanks the Council for allowing Mr. Banister to make a presentation to the HC and requests the Council add BOEM representatives to future GAP and HC agendas as appropriate.

PMEC-SETS letter (Pacific Marine Energy Center – South Energy Test Site)

The GAP agrees with the essence of the HC letter regarding this wave energy research site. However, with regard to the HC's suggested revision of the letter as proposed in the HC report, the GAP vehemently disagrees with using the BOEM Oregon Ocean Uses Atlas/Pacific Regional Ocean Uses Atlas Project.

The Atlas, as is currently developed, is woefully incorrect with regard to documenting recreational and commercial fishing effort outside of 3 nautical miles. The project is a joint BOEM/NOAA project and comments on its development are due by the end of April (the comment deadline was extended).

So far, the project's results are based solely on the input of fishermen at meetings in June 2013 in Coos Bay, Newport and Portland. From the GAP perspective, this is clearly inadequate.

The outreach and importance of the project was not made clear to the seafood industry in a manner robust enough to solicit comprehensive comments. It's unclear whether all fishing sectors were represented.

As such, many GAP members were unaware of this project moving forward. Though some members recognize the value of this as a preliminary basis or reference for potential wind and wave energy siting projects, its use at this point is far too premature.

To that end, we have attached four letters from various entities drawing attention to this issue: 1) Lincoln County, Oregon, Commissioner Terry Thompson; 2) the Oregon Coastal Caucus; 3) U.S. Rep. Peter DeFazio; and 4) other Oregon members of Congress (Rep. Suzanne Bonamici, Rep. Kurt Schrader, Sen. Ron Wyden, Sen. Jeff Merkley and Rep. Earl Blumenauer).

The GAP urges the Council *not* recommend use of the Atlas until the data can be considered accurate and more robust.

PFMC
04/05/14



Terry N. Thompson County Commissioner

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225 W. Olive Street
Newport, Oregon 97365
(541) 265-4100
FAX (541) 265-4176

February 11, 2014

Governor John Kitzhaber
State Capitol Building
900 Court St. NE, Suite 254
Salem, OR 97301-4047

Oregon Coastal Caucus
c/o Senator Jeff Kruse
900 Court St. NE, S-315
Salem, OR 97301

Representative Caddy McKeown
900 Court St. NE, H-376
Salem, OR 97301

Dear Governor Kitzhaber and Members of the Coastal Caucus,

On February 7, 2014 I received an email from Hugo Selbie, the Project Coordinator for the Pacific Regional Ocean Uses Atlas (PROUA). Mr. Selbie asked me to review and provide feedback on a preliminary set of "use maps" generated by the PROUA staff. I was one of the relatively few coastal residents that participated in one of the three PROUA workshops held last summer in Oregon.

PROUA, we are told, is the United States Department of Interior's (USDO I) effort to "broadly document" where ocean uses are occurring on the Outer Continental Shelf (OCS). USDO I will use this information when they lease ocean space for renewable energy development in federal waters within the OCS. Unfortunately, the efforts to date are woefully inadequate to document the extensive and varied historical uses of the OCS by coastal communities. Coastal communities need to be able to thoroughly and systematically identify and protect these historical uses, community resources, and most importantly jobs and our local economy if we are to support pursuit of these new opportunities.

Mr. Selbie's email noted that they need us to review these maps as soon as possible. USDO I is about to hold two "Data Validation Webinars" (February 18th and March 12th) that mark the final round of community feedback on PROUA. Here's what I plan to communicate to USDO I: *The PROUA data gathering and mapping process was deeply flawed and inadequate.* Here's what USDO I should have done: USDO I should have approached leaders in our region and asked, "How can we work together, *as partners*, to gather information from people on the Oregon Coast about how they use the Pacific Ocean?" Regrettably, that didn't happen. I will inform USDO I (and members of Oregon's Congressional Delegation) that we have found the PROUA process, its methods and outcomes, to be unacceptable. They talked to too few people. They asked the wrong questions.

For instance, one federal agency (the National Marine Fisheries Service) tells the coastal fishing fleet they can't fish in the Rockfish Conservation Area (RCA) until the protected species recovers. And now, even though these species are making remarkable recoveries and moving towards a day in the very near future when sustainable harvests will once again be resumed, we have USDO I determine that because we don't currently fish in the RCA, that makes the RCA a place to encourage the siting of ocean energy. That's a Catch 22. We need to have historic fishing grounds identified and protected in PROUA. This is only one example of many flaws in the methodology. The larger point I am making is, these issues are complicated. They need to be thoroughly and systematically vetted, studied and considered. To achieve a supportable decision framework in the OCS we need to work together.

In the wake of this unfortunate experience, though, I believe we have a tremendous opportunity. We should dedicate resources and launch a genuine *community-driven data gathering process*. For years, in Oregon, we've wanted an opportunity to integrate what ocean users know about the ocean with what members of the scientific community know about the ocean. This is our chance to undertake this multi-disciplinary effort. Therefore, I propose we petition Oregon's Congressional Delegation to have Congress invest \$1 million in the Oregon Science Trust for this historic



purpose. It is essential that the work accomplished with these funds be directed by a community and legislative based oversight committee.

Last week in Portland I met with Secretary of the Interior, Sally Jewell, BOEM Director Tommy Beaudreau and Oregon Governor John Kitzhaber to hear them announce a promising energy pilot project off the Oregon Coast in the OCS. At that time, Director Beaudreau publicly promised that the fishing industry would "have a seat at the table" in siting these uses in the OCS. Governor Kitzhaber added that siting wave energy must be done in "a way that is respectful and intentional about the other resources that we have off our coast, and those people who are currently using those resources." Director Beaudreau further stated that "up front stakeholder engagement [is required] in order to site renewable energy projects in the right places and to remove conflict by engaging a whole host of stakeholders, from fishermen to the maritime industry, to scientists involved in understanding ocean habitat, to other federal agencies and very importantly, the state, so that when we go forward with leasing these projects they're done in the right way and it's done in the right place . . ."

Two days ago, via email, I received these deeply flawed maps of the ocean (PROUA) based on a deeply flawed process. I feel like we've been left on the floor, not seated at the table. That needs to change to honor the commitments of Secretary Jewell, Director Beaudreau and Governor Kitzhaber. There is an opportunity to work together to develop a genuinely collaborative process that won't put us on a path of distrust and confrontation. We are all stewards of these ocean resources and should work together to best determine how they should be used, enjoyed and protected for future generations. Support of our proposal will honor those commitments.

Sincerely,



Terry N. Thompson

CC: Oregon Congressional Delegation
OCZMA Membership
Sally Jewell, Secretary of the U.S. Department of the Interior
BOEM



PETER A. DeFAZIO
4TH DISTRICT, OREGON

NATURAL RESOURCES
RANKING MEMBER

TRANSPORTATION AND
INFRASTRUCTURE

SUBCOMMITTEES:
AVIATION

HIGHWAYS AND TRANSIT
RAILROADS



Congress of the United States House of Representatives

March 13, 2014

PLEASE RESPOND TO:

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WASHINGTON, DC 20515-3704
(202) 225-6416
- 405 EAST 8TH AVENUE, #2030
EUGENE, OR 97401
(541) 465-6732
1-800-944-9603
- 125 CENTRAL AVENUE, #350
COOS BAY, OR 97420
(541) 269-2609
- 612 SE JACKSON STREET, #9
ROSEBURG, OR 97470
(541) 440-3523
- defazio.house.gov

Ellen G. Aronson
Pacific OCS Regional Director
Bureau of Ocean Management
770 Paseo Camarillo, Second Floor
Camarillo, CA 93010

Will Stelle
Regional Administrator, NOAA Fisheries Northwest Region
7600 Sand Point Way Northeast
Seattle, WA 98115

Dear Ms. Aronson and Mr. Stelle,

I am writing to express my serious concern about the Pacific Regional Ocean Uses Atlas project and the lack of public participation on the Oregon Coast to establish an accurate atlas. Without additional input and review from stakeholders – including, but not limited to, Oregon’s recreational and commercial fishing industries – I fear the maps will be flawed, incomplete, and inadequate for future ocean planning efforts.

I understand the Pacific Regional Ocean Uses Atlas (PROUA) project is intended to “document where coastal communities use the ocean across the full range of typical human activities and sectors” to assist in future ocean planning for offshore renewable energy development. That’s a laudable goal and such an atlas would be useful to future ocean planning processes. But, by definition, that process requires the participation, expertise, and buy-in of coastal communities and the diverse interests they represent.

I learned that the Bureau of Ocean Energy Management (BOEM) and the National Ocean and Atmospheric Administration (NOAA) held three workshops last June to collect Oregon ocean uses data to build the atlas. These workshops, which occurred in Portland, Newport, and Coos Bay, do not appear to have been widely advertised by the agency. Unsurprisingly, they were not widely attended by coastal residents. I received reports indicating that only three people attended the meeting in Newport and eight in Coos Bay. What was surprising was the fact that neither BOEM nor NOAA reached out to FISHCRED, a statewide commercial fishing nonprofit organization focused on data management and support of marine spatial planning. It seems to me that FISHCRED is exactly the type of organization BOEM and NOAA would be interested in engaging and learning from.

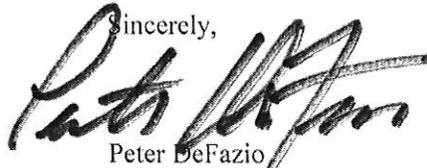
Despite limited feedback and community participation, last month BOEM/NOAA released draft “use maps” and solicited feedback from coastal residents by March 12. This raises questions about where the raw data came from to build the atlas tool and how accurate that data is. For example, it was brought to my attention that one of the maps indicates tuna and salmon fishing is restricted primarily to the northern coast of Oregon: “Newport and Coos Bay are primarily focused on mid-depth trawling.” This is inaccurate. Newport is the number one port for tuna landings and second in salmon. Coos Bay is second in tuna landings and third in salmon. Again, this error, and others yet to be identified, likely could have

been avoided had BOEM and NOAA more actively engaged Oregon's coastal interests, experts, and community members.

At the minimum, more time is needed to adequately analyze, review, and comment on the draft maps. But I also strongly urge both agencies to develop a more effective plan to engage coastal interests and to solicit and incorporate coastal use data from a broader group of users, experts, and stakeholders before the atlas is finalized. Creating a reliable, accurate, locally-developed atlas will be crucial to the atlas's credibility as a planning tool for the federal government, the State of Oregon, tribes, management and planning councils, interested stakeholders, and the general public. Under the existing process, I do not believe that credibility has been established.

Simply put, more coastal interests need to be consulted on this project and more time is needed to thoroughly review and vet the project. I respectfully request that you inform me how your agencies will accomplish our mutual goals of developing an accurate, credible, usable ocean planning tool that fairly incorporates the input, expertise, data, and local knowledge of Oregon's coastal communities and users.

Sincerely,



Peter DeFazio
Members of Congress

Congress of the United States
Washington, DC 20515

March 31, 2014

Tommy Beaudreau
Director
Bureau of Ocean Energy Management
U.S. Department of the Interior
1849 C Street, NW
Washington, D.C. 20240

Dear Director Beaudreau:

We write today on behalf of stakeholders along the Oregon Coast who are concerned with the ongoing efforts to map ocean uses along the Outer Continental Shelf (OCS). The Pacific Regional Ocean Uses Atlas (PROUA) project is an important one and we appreciate your agency, BOEM, working alongside the National Oceanic and Atmospheric Administration (NOAA) to accomplish the goals of data collection and strategic ocean planning. Coastal and ocean activities are continuing to grow in Oregon and throughout the Pacific Ocean and it will be vital for local, state, regional, and federal leaders to manage the diverse uses, especially as renewable energy development becomes more of a reality. Now that the PROUA process has released a set of preliminary use maps for Oregon, we request a more thorough public engagement process in order to validate the maps and strengthen stakeholder buy-in.

Without a robust dialogue with local interested parties, we have concerns that the final maps will include discrepancies and not be embraced by coastal residents and industries. For instance, the National Marine Fisheries Service designated the Rockfish Conservation Area as off limits to fishermen until sustainable harvests could resume. Because it is not currently utilized for fishing, PROUA pinpointed this area as a potential location for energy development, despite the fact that these species are making remarkable recoveries. Such historic fishing grounds should be recognized in determining locations for future energy development siting. Involving the fishing community more thoroughly in the process before the maps are finalized would enable BOEM and NOAA to develop more appropriate questions, draw on their extensive historical knowledge of the Oregon's offshore areas, and increase stakeholder participation in information gathering activities.

We recognize that the complexity of the project and the steps the federal agencies have taken to date to involve stakeholders. The PROUA project set up three Oregon workshops in June 2013 for the purpose of gathering input from community members. This reflects the theme of your recent stakeholder meeting in Portland with Secretary Jewell and Governor Kitzhaber to engage coastal community members as discussions of OCS energy siting proceed. However, we have heard that community members from Depoe Bay did not receive an invitation to the workshops, nor did any members from the historic Pacific City dory fleet attend the meetings. Further, no workshop was organized for the North Coast. Given those shortcomings and the misgivings with the preliminary use maps, it seems clear that more community involvement is needed. Instead, it appears that the Department of the Interior has only offered two "data validation webinars" for public input prior to the closing of its public comment period on April 30th. Adopting ocean use maps without a more concerted effort to engage the affected communities and industries would be unfortunate.

Many fishermen and community members are excited about the possibilities of energy in the Pacific Ocean and supportive of its potential. We hope this spirit of collaboration continues and is only strengthened as we move forward.

Sincerely,



KURT SCHRADER
Member of Congress



RON WYDEN
U.S. Senator



JEFFREY MERKLEY
U.S. Senator



SUZANNE BONAMICI
Member of Congress



EARL BLUMENAUER
Member of Congress



Oregon Coastal Caucus

Rep. Caddy McKeown, Chair
Sen. Jeff Kruse, Vice Chair
Sen. Betsy Johnson
Sen. Arnie Roblan
Sen. Doug Whitsett
Rep. Deborah Boone
Rep. David Gombert
Rep. Wayne Krieger

March 3, 2014

The Honorable Suzanne Bonamici
439 Cannon House Office Building
U.S. House of Representatives
Washington, D.C. 20515

Dear Congresswoman Suzanne Bonamici,

As elected officials and members of the Oregon Legislative Coastal Caucus, we are aware of how fortunate we are to have representatives in Congress who appreciate the importance to our state, of the appropriate conservation and development of ocean resources. We write to enlist your assistance in our efforts to sustain existing and create better economic opportunities for Oregonians and ask that you support, and encourage your congressional colleagues to do likewise, an appropriation of funds to the Oregon Ocean Nearshore Science Trust. These funds will vitalize the Trust so that it can help us achieve our goals of (1) creating a community-driven data collection process to support marine spatial planning, (2) establishing regulatory cooperation between key stakeholder groups, and (3) identifying and institutionalizing the knowledge and resources needed to better integrate our economic plans with federal regulations and policies.

We recently became aware that the United States Department of Interior is attempting to “broadly document” where ocean uses are occurring on the Outer Continental Shelf through a process known as the Pacific Regional Ocean Uses Atlas (PROUA). We note, unfortunately, that the PROUA process lacks the type of collaborative data collection and mapping process essential to effective planning and management of our oceans. And we strongly believe that, “to understand the patterns and implications of ongoing and future human uses of the ocean,” we need to gather and align state and federal data and policies on ocean use as well as integrate the best practices of ocean users with the expertise of the scientific community.

In seeking funding for the Oregon Ocean Nearshore Science Trust, we are also working to realize a goal of the Bureau of Ocean Energy Management (BOEM) to “minimize potential use conflicts and to inform ocean planning strategies for new and emerging uses.” We are confident that, as

our local vehicle, the Oregon Ocean Nearshore Science Trust, will create effective models of economic development that are in harmony with the goals articulated by the BOEM.

Local stakeholder groups support the Oregon Ocean Nearshore Science Trust as a significant step forward in promoting collaboration among traditional ocean users, the scientific community and our state and federal leaders. Over the years, we have drawn on a variety of local leaders to help us advance a working governance model capable of making exceedingly difficult management decisions about the location and scale of future offshore energy developments. We are seeking funding to help us build on the specific successes that will advance the healthy economic future that Oregonians in the coastal areas deserve and that our state needs.

Dedicated funding to the Oregon Ocean Nearshore Science Trust will provide the resources required to pioneer a new collaborative model with federal agencies. This is a tremendous opportunity to greatly enhance our understanding of the living resources of the Outer Continental Shelf and assemble the information needed to make well-informed decisions about offshore development.

We look forward to working with you in this effort and to your assistance in securing the needed funding. You have our thanks in anticipation of your kind attention and cooperation.

Sincerely yours,

Representative Caddy McKeown, Chair

Senator Jeff Kruse, Vice-Chair

Senator Betsy Johnson

Representative Deborah Boone

Senator Arnie Roblan

Representative David Gomberg

Senator Doug Whitsett

Representative Wayne Krieger

SALMON ADVISORY SUBPANEL REPORT ON CURRENT HABITAT ISSUES

Potential Marine Hydrokinetic Research Lease

The Salmon Advisory Subpanel (SAS) has concerns about the permitting process for site selection and leasing for offshore energy facilities. The SAS would strongly suggest that the initial permit application be reviewed by the appropriate Federal and State agencies, at a minimum the National Marine Fisheries Services and the U.S. Fish and Wildlife Service, to ensure consistency with other Federal and state programs and to ensure a full review for compliance with existing environmental standards.

Among the SAS concerns are the effects of energy facilities on resident and migratory fish species, electrical current, leakage, the potential impacts to migratory birds, and to marine mammal movement. We are concerned about the lack of research data available about the various platforms, cable integrity, anchoring footprints, electrical, magnetic and static current leakage, and displacement of fisheries.

Bay-Delta Conservation Plan

The SAS enthusiastically endorses the Habitat Committee's comments on the Bay Delta Conservation Plan. The SAS thanks the Habitat Committee for its hard work and willingness to incorporate input from the SAS.

PFMC
04/05/14

**HOOPA VALLEY TRIBAL COMMENTS ON
B.1 Current Habitat Issues**

The Hoopa Valley Tribe (HVT) appreciates this opportunity to address the Council regarding current habitat concerns. While the Pacific Northwest is experiencing one of the wettest years on record, the majority of California remains in one of the worst droughts on record. In Klamath Basin, concern grows as hydrological conditions are dangerously dry in both the upper Klamath and Trinity River Basins. For example, Trinity Reservoir storage stands at only 53% with little relief in sight.

Trinity Reservoir is the largest water storage facility in Klamath Basin and is linked with an export conveyance to the Central Valley Project (CVP). The US Bureau of Reclamation (BOR) operates the Trinity River Division (TRD) as part of an "integrated" CVP. Notwithstanding the fact that when authorizing the TRD in 1955, Congress gave clear direction that in-basin priorities for fish and wildlife protection would supersede all other purposes, BOR continues to prioritize its operations to address out of Trinity River basin issues including delivery of water to agribusiness.

The likely April 1 forecast for Trinity Reservoir will remain unchanged from March and falls within a "critically dry year" designation. This is a rare event with a recurrence interval of 12 within 100 years. Nonetheless, BOR has and continues to export water from Trinity Reservoir to the upper Sacramento River despite clear indications that Trinity Reservoir will fall below critical levels necessary to meet the needs of in-basin fisheries. Granted, the Central Valley and all of California will face hardships in the anticipated drought. However, the HVT is adamant in calling priority for Trinity water for the purposes of protecting our reserved fishery as intended by Congress.

Rather than developing rigorous water conservation measures in Central Valley, recent legislative proposals addressing California's drought actually aim to increase consumptive use to help meet agricultural and municipal purposes while relaxing environmental compliance standards. Today, as we address the Council, there are at least 4 drought bills before Congress. Regrettably, we expect that BOR will continue its current operations exporting water from Trinity Reservoir to meet CVP demand.

On the Klamath River, releases from Iron Gate Reservoir are capped to meeting minimum flow requirements under the prevailing Biological Opinion for protecting ESA listed SONCC Coho salmon. The HVT has consistently asserted the need to supplement these ESA protection flows to ensure adequate habitat for sustaining all culturally significant fisheries and not just those listed under the ESA.

To help meet this objective, the HVT participated in the Klamath Basin Task Force which was assembled last summer on request of US Senators Wyden and Merkley, Congressman Walden, and Oregon's Governor Kitzhaber. The Task Force was charged with developing revised costs for implementation of Klamath restoration, settle water management issues in the upper Klamath Basin, and seek affordable power for upper Klamath Basin irrigators. Perhaps the most

promising result of this effort has been the prospect of restoring an average 30,000 acre feet inflow to Upper Klamath Lake through land and water rights retirements. The HVT maintains that any surplus water developed in the Upper Klamath Lake must be passed to the free flowing section of the Klamath River to benefit the anadromous fishery below. This will likely be an uphill battle as BOR's irrigation project below Upper Klamath Lake and above the anadromous fish area lies in the path.

In summary, the HVT will continue to pressure the federal government to be consistent with the intent of Congress and ensuring a meaningful fishery for our membership. It is likely that we will approach the Council for support in this endeavor in June as the struggle to meet the needs of the Klamath fall Chinook intensifies. As noted in March, we fear that safe passage for the returning adult Chinook will be compromised by less than adequate flows in the lower Klamath River. We believe it a tragic oversight that BOR is not adequately preparing for such an eminent threat to our fishery resources which we share with the broader PFMC family!

U.S. Fish & Wildlife Service

News Release



Southwest Pacific Region

2800 Cottage Way, Suite W-2606

Sacramento, CA 95825

Tel: 916-414-6464; Fax 916-414-6486

<http://fws.gov/cno>

April 3, 2014

CONTACT: Steve Martarano, U.S. Fish and Wildlife Service (916) 930-5643

USFWS Announces It Will Release About 4.5 million Salmon Smolts from Coleman National Fish Hatchery Onsite Beginning Friday

Sacramento – The U.S. Fish and Wildlife Service (USFWS) announced today it will release approximately 4.5 million fall Chinook salmon smolts from the Coleman National Fish Hatchery (NFH) near Anderson, CA. The fish will be released onsite into Battle Creek beginning Friday. Last week, due to anticipated poor conditions in the lower Sacramento River and eastern Delta, the Service trucked about 2.5 million salmon smolts to acclimation pens in Rio Vista, CA, for release into the western Delta. Recent rains have resulted in better forecasted conditions, allowing this group of smolts to be released onsite, as is the normal practice for Coleman NFH.

Coleman NFH typically releases about 12 million fall Chinook smolts annually into Battle Creek, a tributary of the Sacramento River, allowing them to complete the imprinting cycle during their outmigration to the ocean. A continuing severe drought in the Central Valley of California, however, is producing conditions in the Sacramento River and Delta that may be detrimental to the survival of juvenile salmon. In response, the USFWS developed a set of triggers to be used to determine if an alternate release strategy would be necessary to avoid unacceptably high levels of juvenile fish mortality. That strategy involved trucking the smolts to sites closer to the ocean if any triggers were met as the smolts became ready for release. Last week, some triggers were met and the USFWS trucked about 2.5 million salmon smolts to Rio Vista for release. However, recent rains have improved river and Delta conditions, resulting in none of the triggers for trucking being met. Therefore, the USFWS will release this group of fish onsite this Friday.

The decision to truck or release fish onsite is based on continual assessment and forecasts of environmental conditions. The next group of juvenile salmon will be ready for release on April 23. At that time, the USFWS will reassess the triggers to determine if those fish can be released onsite or will need to be trucked to the western Delta.

Coleman National Fish Hatchery was constructed in 1942 as part of the mitigation measures to help preserve significant runs of Chinook salmon threatened by the loss of natural spawning areas resulting from the construction of Shasta and Keswick dams on the upper Sacramento River. Coleman NFH contributes up to 100,000 Chinook annually to the ocean fisheries as well as thousands of fish for the fisheries in the Sacramento River.

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We are both a leader and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service. For more information on our work and the people who make it happen, visit <http://www.fws.gov/cno>. Connect with our [Facebook page](#), follow our [tweets](#), watch our [YouTube Channel](#), and download photos from our [Flickr page](#).

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DRAFT Contingency Release Strategies for Coleman National Fish Hatchery (Coleman NFH) Juvenile Fall Chinook Salmon Due to Severe Drought Conditions in 2014

Background

Juvenile fall Chinook salmon from the U.S. Fish and Wildlife Service's (Service) Coleman National Fish Hatchery (NFH) are typically released directly into Battle Creek, a tributary to the Sacramento River. This strategy of releasing fish on-site balances the hatchery's multiple objectives, including: 1) contribution to ocean harvest, 2) contribution to in-river harvest (particularly in the upper Sacramento River), and 3) adequate returns of broodstock to Battle Creek to promote program perpetuation. Standard protocols for releasing juvenile salmon on-site also reduce straying, consistent with recent Scientific Hatchery Reviews, which place an emphasis on reducing impacts on natural-origin salmonids. Under typical conditions, on-site release practices used at the Coleman NFH have been successful at achieving the multiple hatchery objectives while minimizing impacts on natural-origin salmonids.

Continuing severe drought in the Central Valley of California is expected to produce conditions in the Sacramento River and Delta detrimental to the survival of juvenile salmon. The conditions being anticipated in 2014 could lead to the loss of an entire year class of juvenile fall Chinook salmon following their release from the Coleman NFH, thereby compromising the ability to achieve any of the hatchery's objectives. To circumvent unacceptably high levels of juvenile fish mortality that may result in 2014, the Service is considering an alternative strategy for releasing juvenile fall Chinook, involving transportation to acclimation net pens in the west Delta. This strategy is consistent with that used to release a large portion of Chinook salmon from Central Valley hatcheries operated by the California Department of Fish and Wildlife (CDFW).

Substantial data are available to show that transporting Coleman NFH fall Chinook salmon to the west Delta would likely produce substantial increases in ocean harvest opportunity but will also result in an increased rate of straying as they mature and return to freshwater. The levels of straying anticipated are likely to compromise some of the hatchery objectives, including contributions to harvest in the upper Sacramento River and the ability to collect adequate broodstock at the Coleman NFH in future years, particularly 2016. Although the levels of straying anticipated from releasing fish into the west Delta are unfavorable, this release strategy may in fact represent the best possible option when faced with the possibility of losing the entire 2013 production year. In future years, under less extreme conditions, the standard protocol for releasing Chinook from the Coleman NFH will continue to be on-site releases into Battle Creek.

Criteria and Contingencies

In coordination with the National Marine Fisheries Service (NMFS) and the CDFW, the Service has developed the following criteria and triggers that will be used to inform decisions on the release strategy to be implemented in 2014. These criteria and triggers were developed based on review of review of water temperature, river flow, Delta Cross Channel Gate operations (see attachment 1) and salmon return data from 1988-1992 (Niemela 1996). The 1988-1992 period represents the most recent extended severe drought in the Central Valley. At that time the Service released nearly the entire

production of fall Chinook to off-site locations to circumvent poor conditions in the lower Sacramento River and Delta. Conditions in the river and Delta were poorest during the spring of 1992 emigration season. Releases from the Coleman NFH into the west Delta in 1992 survived at a rate nearly 18 times higher than releases into Battle Creek, with a commensurate increase in ocean harvest. Owing to their markedly improved survival, west Delta releases from that same year also outperformed on-site releases in regards to returns to the hatchery. More than twice as many adult returns to the Coleman NFH in 1994 resulted from west Delta releases as compared to releases conducted into Battle Creek. If the Coleman NFH had released all production on-site in 1992, the hatchery would not have had sufficient returns of adults to meet production targets in 1994.

The criteria identified below are designed to minimize the risk of exposing Coleman NFH-produced salmon to river conditions that could result in extremely low survival. Each of the criteria indicated below are intended to be independent of the others, meaning that if any one or more of the criteria are anticipated to be met then Coleman NFH-produced salmon should be transported to the acclimation net pens for release into the west Delta. If none of the triggers are forecast to be met, then juveniles will be released into Battle Creek, as per standard operational protocol at the Coleman NFH.

Delta Cross-channel Gates operations – Survival of juvenile salmon is significantly reduced when gates are open and increased numbers of fish are diverted into the interior delta.

- Cross-channel gates are forecast* to be open within 21 days** days of the date when the hatchery salmon are ready to be released.
- Cross Channel gate operations are forecast* to be modified per the “Matrix of Triggers for DCC Gate Operations” developed for the protection of natural origin spring Chinook. This trigger is designed to avoid rendering the triggers ineffective because unmarked CNFH-produced fall-run Chinook would preclude the ability to discern natural origin spring-run from hatchery fall-run.

North Delta Emergency Salinity Barriers – Survival of juvenile salmon would be significantly reduced since additional fish would be diverted back into the mainstem Sacramento River and then have an increased risk of being diverted into the interior delta.

- Salinity Barriers are forecast* to be operational within 21** days of the date when the hatchery salmon are ready to be released.

Water Temperature – Increased water temperatures above 70 degrees has been shown to be detrimental to juvenile survival.

- Sustained Daily Average Water temperatures are expected to be greater than 70 F at Wilkins Slough within 21** days of the date when the hatchery salmon are ready to be released.
- Sustained Daily Average Water temperatures are expected to be greater than 70 F at Freeport within 21** days of the date when the hatchery salmon are ready to be released.

Flow – Decreased flows in the Sacramento River lead to significantly reduced survival of juvenile salmon because of increased travel times exposing the fish to increased predation and increased risk of diversion into the interior delta where survival is significantly reduced.

- A Sacramento River flow at Wilkins Slough of less than 3,500 cfs is forecast* to occur within 21** days of the date when the hatchery salmon are ready to be released.
- A Sacramento River Flow of less than 6,000 cfs at Freeport is forecast* to occur within 21** days of the date when the hatchery salmon are ready to be released.
- Delta outflow is forecast* to be less than 3,000 cfs within 21** days of the date when the hatchery salmon are ready to be released.

*The most recent Bureau of Reclamation 90% hydrology operations forecast and underlying modeling assumptions will be used to assess potential future flow conditions, Delta Cross Channel gate operations, and North Delta Emergency Salinity Barrier configuration.

** 21 days is the time period in which the vast majority of the hatchery fall-run are expected to have moved out of the Sacramento River and the Delta.

Implementation and Contingencies

The Service and California Department of Fish and Wildlife (CDFW) have coordinated a schedule for the delivery (trucking) of hatchery production from the five state and federal hatcheries to acclimation net pens in the west Delta. However, if a precipitation event occurs in March or April, environmental conditions/criteria may be re-assessed and if none of the criteria above are forecast to occur, then groups of Coleman NFH fall Chinook salmon juveniles meeting appropriate size criteria for an on-site release (i.e., at or about 90/lb) may be released into Battle Creek per usual procedures. Further, criteria are expected to be assessed during the following three periods: mid-March, first of April, and mid-April. If criteria above are not met or expected to be met within a three week window, then on-site releases of appropriately sized fish will also occur shortly thereafter. Criteria may also be re-assessed one to two weeks prior to scheduled trucking dates and, again, if criteria above are not met or not predicted to be met within a three week window, then on-site releases of those groups of fish will be considered to instead occur on-site shortly thereafter. If during any of these assessments, existing/predicted conditions are expected to meet the criteria triggering consideration of the alternative release strategy, then preparations will begin, continue, or be implemented to truck appropriate groups of fish to the acclimation net pens in the west Delta as scheduled.

Attachment 1. Flow, Water Temperatures, and Cross Channel Gate Operations during April and May for the years 1988-1992. April and May are when Coleman NFH fall Run smolt production were released in 1988-92.

