Agenda Item F.1
Situation Summary
April 2013

CURRENT HABITAT ISSUES

The Habitat Committee (HC) will meet on Friday, April 5, 2013, to discuss salmon and groundfish essential fish habitat, and National Marine Sanctuary issues.

At the March Council meeting, the Habitat Committee offered to prepare a letter asking the Department of the Interior to provide sufficient water to avoid a fish kill in the Klamath River this summer. A draft letter to this effect is attached (Agenda Item F.1, Attachment 1).

Council Action:

1. **Consider comments and recommendations developed by the HC at its April 2013 meeting.**

Reference Materials:

1. Agenda Item F.1.a, Attachment 1: Council letter to the Department of the Interior.
2. Agenda Item F.1.b, Supplemental HC Report.

Agenda Order:

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

PFMC
03/21/13

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Dan Wolford, Chairman | Donald O. McIsaac, Executive Director

April X, 2013

Secretary of the Interior
U.S. Department of the Interior
1849 C Street, NW
Washington, D.C. 20240

RE: Action Requested to Prevent Klamath River Fish Kill

Dear Secretary:

The Pacific Fishery Management Council (Council) is concerned that projected low flows in the Klamath River will substantially affect salmon essential fish habitat (EFH) and could create conditions leading to a fish kill in the Klamath River during the fall Chinook migration in 2013, such as occurred in 2002.

The purpose of this letter is to recommend, as we did last year, that the Bureau of Reclamation (BOR) proactively take action to minimize the potential for another fish kill by augmenting flow releases to alleviate stressful conditions for the 2013 fall Chinook run as these fish migrate through the Lower Klamath River. In particular, we recommend that BOR reserve an adequate block of water for real-time flow management during the fall season to ameliorate expected low flow conditions in the Lower Klamath River, if needed, as was done successfully in 2012.

The Council is greatly encouraged by the cooperation of Federal and state water managers in 2012 that enabled a record salmon run to successfully return to its spawning areas in the Klamath and Trinity rivers. We hope that similar cooperation in 2013 will again allow a large salmon run to spawn successfully. The flows provided last year helped result in the largest adult natural spawning escapement in the Klamath River Basin (122,000) since comprehensive records were initiated in 1978, along with record tribal and non-tribal in-river fishery levels. Coupled with the lack of any observed fish kill in spite of very low fall season flow conditions, these returns demonstrate the value and importance of real-time flow management for the Klamath River fall Chinook resource.

As you know, the Council is one of eight regional fishery management councils established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (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 regulated under a Council fisheries management plan. Each Council is

authorized under MSA to comment on any Federal or state activity that may affect the habitat, including EFH, of a fishery resource under its authority. Furthermore, for activities that the Council believes are likely to substantially affect the habitat of an anadromous fishery resource under its authority, the Council is obligated to provide comments and recommendations (MSA §305(b)(3)).

Forecasted Flows

Available data indicate that the 2013 water supply in the Klamath Basin will be below normal[1]. Precipitation has been substantially lower than average since January of this year. Air temperatures throughout the Basin have been above normal. Late winter or early spring precipitation events are not expected to change water supply conditions overall.

Forecasted Run Size

At the same time, the 2013 fall Chinook escapement is projected to be the second largest return on record. Alternatives for marine fisheries and river return in 2013 have been modeled by the Council's Salmon Technical Team. Ocean fishery modeling, including projections of the number of fish returning to the Klamath Basin, will continue through April; but currently the forecast is for a return of over 271,000 adult fall Chinook to the Klamath River mouth, second only in magnitude to the in-river population of 2012 (see figure below). This is nearly 1.7 times the 2002 adult run size associated with the 2002 fish kill and only 10% less than the observed record run of 302,100 adult fish in 2012. The positive performance of the 2009 brood year, as evidenced by the age-three returns last year, speaks to a relatively high abundance of large, age-four Chinook contributing to the 2013 run. Hence, with respect to biomass, the 2013 river run may be comparable to that seen in 2012.

Analysis

The low flows, combined with such a large run, could result in conditions similar to those that led to the September 2002 fish kill, when more than 33,000 adult salmon died in the Lower Klamath River. Several analyses, including one produced by the USFWS[2], concluded that low river flow and high densities of fish contributed to the outbreak of two diseases (*Ich* and *columnaris*) that caused the 2002 fish kill. The evidence is compelling that lower-than-average hydrology and greater-than-average fish densities may once again compromise the safe passage of adult fall Chinook in Klamath River in 2013.

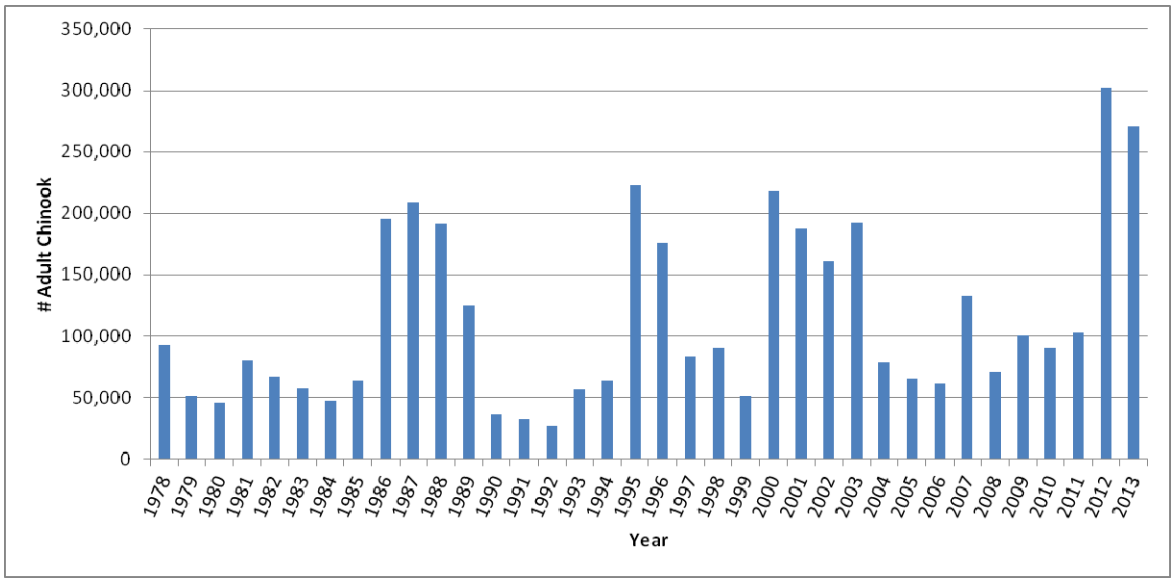
Therefore, we recommend you pursue measures to provide additional flow during the fall Chinook migration period, if necessary, to maintain the quality of essential fish habitat for salmon and to minimize the likelihood of another fish kill. We recommend that the

[1] Natural Resources Conservation Service, http://www.wcc.nrcs.usda.gov/wsf/west_fcst.html

[2] Guillen, G. 2003. Klamath River Fish Die-Off, 2002, Causative Factors of Mortality. http://www.krisweb.com/biblio/klamath_usfws_guillen_2003_killcause.pdf

BOR work with the Klamath Basin's biologists and scientists, such as the Trinity River Restoration Program's Flow Group, to determine the best manner for using this water to minimize the potential for another fish kill. This was successfully done in the fall of 2012 when 48,000 acre feet of supplemental flows were provided specifically to improve upstream migration conditions and reduce the fish health risk for the record fall Chinook return; and no fish kill, in fact, was observed. The Klamath Basin technical team infrastructure to monitor river flows, water temperatures, and the progression of the fall season returns remains in place, and is the appropriate technical forum to help guide BOR's real-time flow management actions to protect these fish.

The figure below contains the post-season estimated Klamath River adult fall Chinook estimated run sizes for 1978 – 2012 and the projected abundance for 2013.



Recommendation

As noted above, anticipated water supply and fish abundance for 2013 suggests a need to provide supplemental flow releases comparable to the safe thresholds identified in BOR's Environmental Assessment for late-summer flow augmentation in 2012[3]. This conclusion is additionally informed by the interagency federal trust responsibility for the tribal fishery in the Klamath and Trinity Rivers and prudent management considerations.

Accordingly, the Council recommends that the Department of the Interior initiate planning now and take all necessary steps in the coming months to ensure sufficient water is available to minimize the potential for another fish kill if conditions in the Klamath River prove to be dangerous to migrating Chinook salmon in the late summer and fall of 2013.

[3] Online at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=10731

Specifically, we recommend that you ensure an adequate amount of supplemental water for release from the Trinity and/or Upper Klamath basins during the peak migration and holding timeframe for the fall Chinook return. Such flow augmentation should be designed to maintain the quality of salmon EFH and minimize the likelihood of another fish kill, taking into consideration the river flow patterns and salmon abundance that resulted in the 2002 fish kill. To that end, we recommend that the Department of Interior work with the Klamath Basin's biologists and scientists to determine the best manner for using this water to minimize the potential for another fish kill.

In closing, this recurring issue leads us to recommend that the Department develop a permanent and comprehensive plan to address the needs of lower Klamath fish passage. We are prepared to assist with this effort in any way possible.

Thank you for your attention to this important matter.

Sincerely,

Signature Block

JDG:xxx

C: Pacific Council Members
Habitat Committee

HABITAT COMMITTEE REPORT

Klamath Letter

The Habitat Committee (HC) has submitted a draft letter regarding supplemental Klamath flows for 2013, which is in the briefing book (Agenda Item F.1.b., Attachment 1). We encourage the Council to adopt this letter for transmittal to the Department of Interior.

In the second paragraph of the "Analysis" section, 48,000 AF should be replaced with 39,000 AF.

For your information, in 2013 water supplies have been forecasted to be much drier than observed in 2012. Forecasted inflows in the Trinity River have resulted in a "dry" water year classification for 2013. Meanwhile, hydrology for the upper Klamath River suffers for a significant lack of snow pack and present forecasts are for a much lower than average hydrology. Given these hydrologic conditions in the Klamath-Trinity Basin and the projected high run size of fall Chinook, supplemental flows will again be necessary. As noted in the letter, the HC strongly recommends a long-term solution to this reoccurring habitat concern.

Removal of Klamath Dams

On Thursday April 4, the Department of the Interior released its final environmental impact statement (EIS) evaluating the removal of the four mainstem Klamath dams. The EIS is available at http//www.klamathrestoration.gov/. It identifies the preferred alternative as full removal of all four facilities; the matter now awaits congressional action before the Secretary of the Interior may make a determination of whether the removal of the four facilities is in the public interest.

Dam Tour

On Thursday, April 4, the HC and other Council family members toured the sites of the former Condit and Marmot dams and viewed the fish passage facilities at Bonneville Dam. The visit and short tour to Bonneville Dam focused on fish passage and monitoring, as well as the newly added lamprey passage structures. At the two dam removal sites, the group was impressed by

- How quickly the Sandy River and White Salmon river were restoring themselves after five years and one year, respectively, post dam removal.
- How quickly fish came back to use the newly opened habitat areas. For example, in one year after Condit Dam removal, adults from two stocks of fall Chinook were seen to be spawning upstream and downstream of the former dam site. Adult steelhead and one bull trout have also been documented upstream of the former dam site.
- How quickly the sediment moved through the systems and how quickly the original channel of the river found itself. The sediment released by the dam removal has significantly changed the lower White Salmon River from a deep backwater for the Bonneville Dam pool to a shallow river similar to other river mouths in the Columbia River Gorge. A historical access site for Treaty fishermen near the river mouth has been affected, and efforts are underway to make it usable again under these new conditions.

Columbia River Treaty

The HC would like to advise the Council on the renegotiation of the Columbia River water treaty with Canada. This is a timely issue that will have long-term effects on hydrosystem flow management, habitat availability and resilience, and ecosystem function in the Columbia River Basin. This is an important time for Columbia Basin interests to find common ground on flow management issues that address multiple uses including recovering and sustaining fishery resources. State, Federal and Tribal entities are in the process of developing flow management models for consideration in the Columbia River Treaty renegotiation process.

By mid-December the U.S. entities in the Sovereign Participation Process (U.S. entity/Federal government, tribes, states) will make a recommendation to the U.S. State Department on whether to renew, abandon or modernize the Treaty.

The HC will attempt to arrange a briefing on this topic and may offer to draft a letter for Council consideration for the September briefing book. We will continue to track this issue.

Northwest Power and Conservation Council Fish and Wildlife Program

The Northwest Power and Conservation Council Fish and Wildlife Program is currently undergoing a review and amendment process. The HC recommends the Council send a letter after the June meeting to the NWPPC suggesting two ways to amend the program: coordinating with the PFMC on ocean research and ecosystem matters; and exploring adaptive use of higher spill levels to improve juvenile salmon survival. The HC also suggests the Council ask for an extension to the comment period on the Fish and Wildlife Program amendments to correspond with the PFMC process.

A growing body of data summarized in the annual Comparative Survival Study (CSS) (http://tinyurl.com/dxcv2sy) shows improvements in smolt-to-adult ratios resulting from Court-ordered mainstem spill on the Columbia River, which is above the spill level identified in the current NMFS Biological Opinion. At a past HC meeting, a presentation on the CSS suggested that modest increases in spill could double adult returns back to Idaho. This indicates that mainstem dam operations incorporating enhanced spill above the levels in the Biological Opinion result in enhanced juvenile survival, and that the optimal strategy for enhanced juvenile survival through spill is not yet fully understood.

The HC proposes that the Council recommend that expanded spill operations be implemented at mainstem Columbia River dams at and above the level of recent Court-ordered spills as a deliberate adaptive management strategy. At a minimum, the new Fish and Wildlife Program should support management actions to test the effects of higher levels of spill and implement future spill programs under an adaptive management approach based on ongoing and future spill level research.

Additionally the HC believes the CSS should be expanded to include other stocks such as Snake River Fall Chinook and other Upriver bright fall Chinook stocks to better define effective future use of mainstem spill.
If directed by the Council, the HC will develop a letter to the Northwest Power and Conservation Council for Council consideration at its June meeting that expands on these and other general issues.

PFMC

SALMON ADVISORY SUBPANEL REPORT ON CURRENT HABITAT ISSUES

The SAS recommends the Council approve the letter to the Secretary of Interior (Agenda Item F.1.a, Attachment 1) regarding the proactive release of supplemental flow to the Klamath River. As you may recall, the Council sent a similar letter last year due to concerns regarding the potential for another fish kill. The Bureau of Reclamation provided additional flow during the 2012 fall chinook migration, which enabled a record run of fall chinook to successfully migrate to their spawning grounds.

We share the concern that factors which contributed to the kill of more than 30,000 adult salmon in the Lower Klamath River during 2002 will be present this year. The Klamath Basin is currently facing dry hydrologic conditions, drier than we faced during 2012, combined with a projected run of fish that is substantially larger than when the fish kill occurred.

Therefore, we recommend the Council request that the Department of Interior take all necessary steps in the coming months to ensure that sufficient water is available to minimize the potential for another fish kill during the 2013 fall chinook migration.

PFMC
04/07/13

Agenda Item F.1.c
Supplemental SAS Report 2
April 2013

SALMON ADVISORY SUBPANEL ON CURRENT HABITAT ISSUES

The Salmon Advisory Subpanel (SAS) supports the Habitat Committee (HC) recommendation to submit comments to the Northwest Power and Conservation Council (NPCC) concerning their Fish and Wildlife Program amendment process. The SAS recommends the Council include consideration of the following points in their comments to the NPCC.

1 We support the Independent Scientific Advisory Board's (ISAB's) review emphasis on more and better monitoring. As an example, we point out that despite numerous harvest cuts over past decades little monitoring or data collecting was done to demonstrate whether these cuts actually resulted in increased salmon populations. Action effectiveness monitoring across all Hs is a necessity and by extension we support increased funding for this activity.
2 Proliferation of chemicals and contaminants. The SAS supports the recommendations of the ISAB for addressing chemicals and contaminants.
3 The ISAB review discusses Hatchery Scientific Review Group recommendations and integrated and segregated hatchery practices. The SAS has additions to the ISAB recommendations for artificial production strategies on supplementation. The document does not discuss tribal supplementation hatcheries and practices. We strongly recommend this omission be addressed.

PFMC
04/07/13