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March 29, 2012

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Lynn Palensky, Program Development Manager

SUBJECT: Progress update on Lamprey Synthesis Report

At the March committee meeting, the Co-Chairs of the Lamprey Technical Work Group, Christina Luzier (US Fish and Wildlife Service) and Dave Ward (CBFWA Members Advisory Group), presented a progress update and an overview of the report to the Committee on the Lamprey synthesis report. The report, called *Synopsis of Lamprey-Related Projects Funded through the Columbia River Basin Fish and Wildlife Program* is anticipated to be submitted to the ISAB for review in April, 2012.

As part of this work and mentioned in the March update, the USFWS developed a Draft Conservation Agreement for Pacific Lamprey. The Service developed this Conservation Agreement to expedite implementation of conservation measures for Pacific Lamprey in Alaska, Washington, Oregon, Idaho, and California as a collaborative and cooperative effort among resource agencies and tribes. The agreement is attached. Christina will provide an overview of the Conservation Agreement at the committee meeting, and may seek Council support for the Agreement.

It is not our expectation that the Committee make a decision at this meeting whether to support the draft agreement and the staff has no position on that at this time. Once we know more about the draft agreement, the Committee and staff may decide at a later meeting to recommend support for the Conservation Agreement.

**DRAFT CONSERVATION AGREEMENT FOR
PACIFIC LAMPREY**

(*ENTOSPHEMUS TRIDENTATUS*)

in the States of
Alaska, Washington, Oregon, Idaho, and California

2012



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I. PURPOSE

This Conservation Agreement (Agreement) has been developed to expedite implementation of conservation measures for Pacific Lamprey (PL) in Alaska, Washington, Oregon, Idaho, and California as a collaborative and cooperative effort among resource agencies and tribes. This cooperative effort, through implementation of this Agreement and the associated Pacific Lamprey Conservation Initiative (Initiative includes: Conservation Agreement; Assessment and Template for Conservation Measures; and Regional Implementation plans), is intended to reduce or eliminate threats to the PL and reduce the likelihood that the species will need to be listed as a special status species by state and federal agencies under the Endangered Species Act of 1973, as amended.

The intent is to develop regional implementation plans that build upon existing information. For example in the Columbia River Region the implementation plans would heavily rely on the threats and the proposed actions identified in the Tribal Pacific Lamprey Restoration Plan for the Columbia River (2011), Army Corps of Engineers 10 year plan (2009), and the U.S. Fish and Wildlife Service (USFWS) Assessment and Template for Conservation Measures (Luzier et al. 2011).

Through the Agreement conservation will be advanced through the development of Regional Implementation Plans by tracking conservation actions, evaluating their effectiveness and learning from status monitoring and evaluation and research.

II. INVOLVED PARTIES

The parties to this agreement will include the interested tribes, states, federal agencies, NGOs and other stakeholders. Separate cooperative agreements may be developed with resource agencies, tribes and other supporting entities, who are not signatories to the agreement, in order to ensure implementation of specific conservation measures. These non-signatory interested parties will be encouraged to participate in regional implementation planning.

III. STATUS AND DISTRIBUTION OF PACIFIC LAMPREY

Although PL were historically widespread along the West Coast of North America, their abundance is declining and their distribution is contracting throughout Oregon, Washington, Idaho, California (Luzier et al. 2009). Current status in Alaska is unknown. Threats to Pacific Lamprey occur in much of the range of the species and include restricted mainstem and tributary passage, reduced flows and dewatering of streams, stream and floodplain degradation, degraded water quality, and changing marine and climate conditions. The contracted distribution and depressed abundance further elevate these threats.

For the purpose of implementing conservation actions PL distribution has been divided into ten Regional Management Units (RMUs) to bring a finer level of resolution to population descriptions, habitat and distribution, and to provide a more feasible structure for collaboration on conservation and restoration activities. Each of these RMUs include several 4th level Hydrologic Unit Codes (HUCs) which are the finer scale geographic

units used to evaluate lamprey status, threats and conservation needs. The individual HUC evaluations were synthesized to determine the overall status, threats and conservation needs for the RMU (Luzier et al. 2011). To date there has not been strong evidence for reproductive isolation from collection locations (Goodman et al. 2008; Lin et al. 2008), even for those separated by large geographic distances (Northern California to Japan). Higher proportions of drainage-specific or unique haplotypes were identified in southern regions, but were present in a low number of samples and therefore the implications on Pacific Lamprey population structure are equivocal. Recent results of Spice et al. (2012) do not support the concept that PL return to their birthplace to reproduce, suggesting that anadromous lampreys are unusual among species with long migrations, but suggest that limited dispersal at sea precludes panmixia in this species. These results and future studies that include samples from increased geographic locations leave uncertainty for population structure of PL. Therefore, dividing management units into finer geographic scales would provide a risk adverse approach for conserving PL. Experience with other fish conservation programs indicates that RMUs represent a more feasible, practical, and meaningful structure to organize and implement conservation throughout the distribution of PL.

The following summarizes the status and threats to PL identified in the Assessment and Template for Conservation Measures (Luzier et al. 2011).

Alaska - A risk assessment and query of ongoing and needed actions and research was not conducted for PL in Alaska. The State of Alaska has six species of lampreys but little research has been done on them so their distribution and status are unknown. The Alaska State Comprehensive Wildlife Strategy outlines the species, suspected distribution, general concerns, habitat concerns, conservation goals and objectives, and plan for monitoring the species and habitats.

Washington Coast and Puget Sound Regions - Little data exists for PL RMUs in Coastal Washington and Puget Sound. For the geographic areas that do have some demographic and threat data, the abundance of PL in these watersheds was characterized as 'rapidly declining' (Luzier et al. 2011). Threats include adult and juvenile passage, stream and floodplain degradation and reduced stream flows.

Columbia River Basin Regions (Lower Columbia/Willamette, Mid-Columbia, Upper Columbia, Snake, Mainstem) - RMUs of PL are at 'high risk' throughout much of the Columbia River basin, particularly in the Snake River, the Mid-Columbia and the Upper Columbia regions (Luzier et al. 2011). The main threats affecting these RMUs include restricted mainstem and tributary passage, stream and floodplain degradation and "small population" effects. Lower Columbia PL RMU is at relatively lower risk; however, restricted tributary passage and degraded water quality are on-going threats in this area (Luzier et al. 2011).

Coastal Oregon – Pacific Lamprey RMU in this region is at relatively lower risk than those of the Columbia River basin. The most serious threat in this region is stream and floodplain degradation.

California - Conservation planning has been initiated in California using similar methods employed in Washington, Oregon and Idaho. Preliminary results indicate that the majority of the PL RMU is at relatively high risk in the California region (Luzier et al. 2011). The threats identified most often in the California region include stream and floodplain degradation, degraded water quality, dewatering and reduced stream flows, and restricted tributary passage.

IV. GOAL

The goal of this Agreement is to strive for long-term persistence of PL and support traditional tribal cultural use of PL throughout their historic range in the United States. Geographic areas that currently support moderate to healthy abundance of PL will be maintained, while depressed areas will be managed to increase abundance. Extirpated areas may be reestablished where ecologically and economically feasible. The cooperators envision a future where threats to PL are either eliminated or reduced to the greatest extent possible, and their role in stream ecology and maintaining ecological balance is restored.

V. OBJECTIVES

The following objectives either pertain to conservation actions across the United States portion of PL range, or are more applicable to RMUs. These objectives, or others, will be refined as Regional Implementation Plans are developed.

Objectives 1-5 pertain to concerns and activities which will help guide conservation activities within RMUs as well as across the United States portion of PL range. Objectives 6-8 provide guidance for development of Regional Implementation Plans which contain specific conservation strategies and actions within RMUs.

Objective 1: Evaluate PL population structure

Continue genetic analyses on PL throughout the United States range, which should help to inform the delineation of RMUs as needed.

Objective 2: Identify global issues that are impacting PL

Several issues likely impact PL that are poorly understood or where information is difficult to obtain. These include the changing marine environment and climate, disease, impact of dams on downstream migration of juveniles, non-native species and predation. In order to further understand their effects on PL, research, monitoring and evaluation will be coordinated through the Agreement parties and conducted with Landscape Conservation Cooperatives, National Fish Habitat Partnerships and others.

Objective 3: Public outreach

Develop and implement a public outreach effort specifically addressing PL conservation. Outreach may focus on PL biology, unique life history and habitat needs, cultural importance and how salmonid restoration activities can be modified to benefit PL.

Objective 4: Data sharing

Continue to build and maintain PL databases and GIS layers (to be maintained by FWS) so that information can readily be shared between and among partners. This objective requires commitment by the parties to support state, federal, and tribal staff for attending annual regional database update meetings.

Objective 5: Coordination

Maximize effectiveness of PL conservation efforts by coordinating signatory agency efforts toward achieving a common goal. These goals and objectives will be reached by implementing specific management actions detailed in the Regional Implementation Plans and in existing and future conservation agreements/strategies and management plans developed between the signatory agencies and other federal, state, local and nongovernmental agencies.

Objective 6: Identify and characterize PL for the RMUs

Identify historic and present distributions of PL in each RMU and monitor them to detect changes in distribution and status as conservation actions are implemented.

Objective 7: Identify, secure and enhance watershed conditions contained in the RMUs

Protect areas with healthy habitat conditions and strive to improve watershed conditions and migratory corridors where needed. These efforts will focus on threats that are not being addressed through restoration efforts for other species (e.g., salmon and bull trout recovery plans). To focus efforts, cooperators will:

- a. Identify habitat conditions necessary to support all life stages of PL.
- b. Identify and protect areas that have habitat conditions needed to support PL life stages.
- c. Identify and prioritize threats to PL in RMUs.
- d. Implement targeted lamprey restoration projects to address prioritized threats. For example safe and effective passage at mainstem and tributary anthropogenic barriers, restore lamprey spawning and rearing habitat, and considering lamprey life stages during in-stream work (e.g., providing adequate time for ammocoetes to vacate the substrate when streams are dewatered).
- e. Develop protocols for monitoring habitat status, PL status, and restoration effectiveness.

Objective 8: Restore PL of the RMUs

Secure and if necessary enhance PL RMUs and the corresponding conservation management groups.

- a. Identify unoccupied and sparsely occupied watersheds where PL can be restored to their historic range and levels. Regional restoration goals and implementation approaches will be developed to help meet this objective.
- b. Implement translocation and artificial production experiments to adaptively learn which techniques and approaches are viable tools for populating extirpated areas and advancing PL conservation through establishing self-sustaining RMUs.

Upon signing, the signatories agree to pool their resources where possible, in terms of personnel and operational funding, and to seek additional funding to implement conservation activities to the extent that progress toward conservation objectives is measurable and documented. They also agree to the extent practicable to implement those conservation actions detailed in the Initiative. The Initiative will be evaluated annually, and modified as necessary to address newly identified conservation issues and to ensure program effectiveness. The Assessment and Template for Conservation document will be updated every five years, and results will be used to update the Agreement, which will also be revised at five year intervals until it is no longer deemed necessary.

VI. OTHER SPECIES INVOLVED

The primary focus of this Agreement is the conservation and enhancement of PL and the watersheds in Alaska, Washington, Oregon, Idaho, and California upon which they depend; however, other native species occurring within or adjacent to PL habitat should also benefit. Since the strategy focuses on ecosystem health, the Agreement will potentially ameliorate threats facing many of these species. The important role of Pacific lamprey in the food-web (directly as prey at all life stages, and as a source of marine-derived nutrients that fuel relatively sterile tributary ecosystems) would suggest benefits to a broad array of species; anadromous salmonids, resident fish, aquatic and terrestrial based wildlife, aquatic and semi-aquatic vegetation, riparian zones and upland vegetation.

VII. AUTHORITY

1. This Agreement is subject to and is intended to be consistent with all applicable federal, tribal and state laws and interstate compacts. The signatory parties hereto enter into this Conservation Agreement under federal, state and tribal law, as applicable.
2. All parties to this Agreement recognize that they each have specific statutory or non-statutory responsibilities that cannot be delegated, particularly with respect to the management and conservation of wildlife, its habitat and the management, development and allocation of water resources. Nothing in this Agreement or the associated Initiative is intended to abrogate any of the parties' respective responsibilities.
3. This instrument in no way restricts the parties involved from participating in similar activities with other public or private agencies, organizations or individuals.
4. All parties to this Agreement do not waive any immunity provided by federal, state, local or tribal laws by entering into this Agreement, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this Agreement.
5. The _____ Tribe(s) maintains jurisdictional authority relative to species, habitat and land use management on tribal trust lands.
6. Modifications to this Agreement must be mutually agreed upon by all signatories to the Agreement. Such changes shall be executed as an addendum to the original Agreement.

VIII. CONSERVATION ACTIONS

The Initiative (Conservation Agreement, Assessment and Template for Conservation Measures, and Regional Implementation Plans) clearly outlines the actions to be implemented for the conservation of PL over the next five years. These actions will be administered, monitored and tracked through the activities outlined below.

Coordinating Conservation Activities

1. Administration of the Agreement will be conducted by the Pacific Lamprey Conservation Team (Conservation Team). The team may include technical and legal advisors and other members as selected by the signatories. A charter will be developed by the parties to define the roles, responsibilities, and membership for the Conservation Team.
2. The designated team leader may rotate annually among the representatives from the USFWS, five state agencies and tribes involved.
3. Authority of the Conservation Team shall be limited to making recommendations for the conservation of PL to the administrators of the signatory and supporting entities.
4. The Conservation Team will meet at least annually to develop range-wide priorities, review the annual conservation work plans developed for each RMU, coordinate tasks and agency resources to most effectively implement the work plan, and review and revise the Initiative as needed. Updates to the PL databases and GIS will also occur on an annual basis. An annual report tracking progress will be written.
5. The Initiative has produced a range-wide status assessment (Assessment and Template for Conservation Measures; Luzier et al. 2011) and it will be updated during the last year of this five-year Agreement period by the Conservation Team. It will include updated information on the current distribution, population size, short term trend and threats to PL. This information will be used to evaluate the foreseeable risks and general population health of existing RMUs. Through the Assessment update process the information guiding the Tribal Pacific Lamprey Restoration Plan for the Columbia River, the U.S. Army Corps of Engineers 10-Year Passage Plan and other existing lamprey plans and actions (from other agencies and Tribes), will be updated. The revised Assessment will also discuss progress towards meeting objectives in the Conservation Initiative. Based on the revised assessment the Conservation Team will make recommendations on the need for extending the Agreement and revisions to the Initiative.
6. Conservation Team meetings will be open to the public. Meeting decision summaries and progress reports will be available to the Conservation Team and other interested parties.

Implementing a Conservation Schedule

1. The Assessment and Template for Conservation Measures will be updated at five-year intervals. The need to extend the Agreement for another five-year cycle will be driven by results summarized in that document.
2. Conservation actions and information will be shared annually at Conservation Team meetings. Activities to be conducted during the next five years are listed in

the Initiative. The Initiative is a flexible document and will be revised as necessary.

3. Each signatory to the Agreement will coordinate, implement and monitor conservation actions they and their cooperators are responsible for. Accomplishments will be reviewed at Conservation Team meetings to establish progress toward Initiative goals and objectives that will be summarized in the subsequent five-year status assessment.

Funding Conservation Actions

1. Funding for the Agreement will be provided by a variety of sources. Federal, State and local sources may and are encouraged to provide or secure funding to initiate procedures and tasks of the Agreement and Initiative.
2. It is understood that all public funds required for and expended in accordance with this Agreement are subject to approval by the appropriate local, state or Federal appropriations. This instrument is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this instrument will be handled in accordance with applicable laws, regulations, and procedures, including those for Government procurement and printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority. This instrument does not provide such authority. Specifically, this instrument does not establish authority for noncompetitive awards to the cooperator of any contract or other agreement. Any contract or agreement for training or other services must fully comply with all applicable requirements for competition.

Conservation Progress Assessment

The Conservation Team will provide a five-year status assessment to the signatory agencies. Copies will be made available to cooperators and interested parties upon request. Annual progress toward achieving Initiative goals will be compiled from Conservation Team meetings, and all new relevant information will be incorporated into the PL databases and GIS annually.

IX. DURATION OF AGREEMENT

The term of this Agreement shall be five years. Prior to the end of each five-year period, an analysis of actions implemented for the species will be conducted by the Conservation Team and incorporated in the Assessment and Template for Conservation Measures. If all signatories agree that continued progress would benefit conservation of PL, this Agreement may be extended for an additional five years. Any party may withdraw from this Agreement with sixty days written notice to the other parties.

X. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE

Signing this Agreement is covered under authorities outlined in section VI listed above. We anticipate that any survey, collection or non-land disturbing research activities conducted through this Agreement will not entail significant Federal actions under NEPA and will be given a categorical exclusion designation. However, each signatory agency

holds the responsibility to review planned actions for their area of concern to ensure conformance with existing land use plans and to insure NEPA compliance.

XI. FEDERAL AGENCY COMPLIANCE

1. During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on non-discrimination and will not discriminate against any person because of race, color, religion, sex or national origin.
2. No member or delegate to Congress or resident Commissioner shall be admitted to any share or part of this Agreement, or to any benefit that may arise there from, but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.

XII. Signatories

To be determine.

Signature block by agency and tribe.

XIII. Supporting organizations

To be determined

XIV. Literature cited

To be filled in later.



Pacific Lamprey

March 2012

Conservation Initiative



Credit: USFWS

Pacific Lamprey in Decline

Pacific Lamprey are a native anadromous species that like salmon historically returned to spawn in large numbers into watersheds along the West Coast of the United States, but populations have declined in abundance and become restricted in distribution throughout Washington, Oregon, Idaho, and California. Threats to Pacific Lamprey occur in much of the range of the species and include restricted mainstem and tributary passage, reduced flows and dewatering of streams, stream and floodplain degradation, degraded water quality, and changing marine and climate conditions. The U.S. Fish and Wildlife Service recognizes the need for a comprehensive plan to conserve and restore Pacific Lamprey in collaboration with Native American tribes, Federal, State, and local agencies, and other entities. The Pacific Lamprey Conservation Initiative is the U.S. Fish and Wildlife Service's strategy to improve the status of Pacific Lamprey throughout their range by helping implement research and conservation actions.

Conservation Initiative Approach

The approach of the Pacific Lamprey Conservation Initiative is a three part process: an Assessment and Template for Conservation Measures (Assessment); a Conservation Agreement; and Regional Implementation Plans. The Assessment was completed in October 2011. The next steps in the Conservation Initiative are to work with partners to:

- Develop a Conservation Agreement;
- Convene the Pacific Lamprey Summit III;
- Develop regional plans for implementing conservation actions.

Assessment

The Assessment tracks the current knowledge of Pacific Lamprey habitat requirements; abundance; historic and current distribution; describes threats and factors for decline; and identifies conservation actions and research, monitoring, and evaluation needs. To systematically characterize the conservation risk of Pacific Lamprey across its range, an assessment was conducted with a diagnostic tool adapted from NatureServe by using existing demographic and threat information. This information was collected through a series of regional meetings attended by our partners. Individual watersheds were analyzed to rank the relative risk to extirpation, and these risks were summarized by region. Pacific Lamprey populations are declining in abundance and becoming restricted in distribution throughout Washington, Oregon, Idaho, and California due to key threats such as mainstem and tributary obstacles to passage, reduced flows and dewatering, stream and floodplain degradation, and water quality. The majority of watersheds are at relatively high risk, with very few that are relatively secure.

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Or Visit: <http://www.fws.gov/pacific/Fisheries/sphabcon/Lamprey/index.cfm>

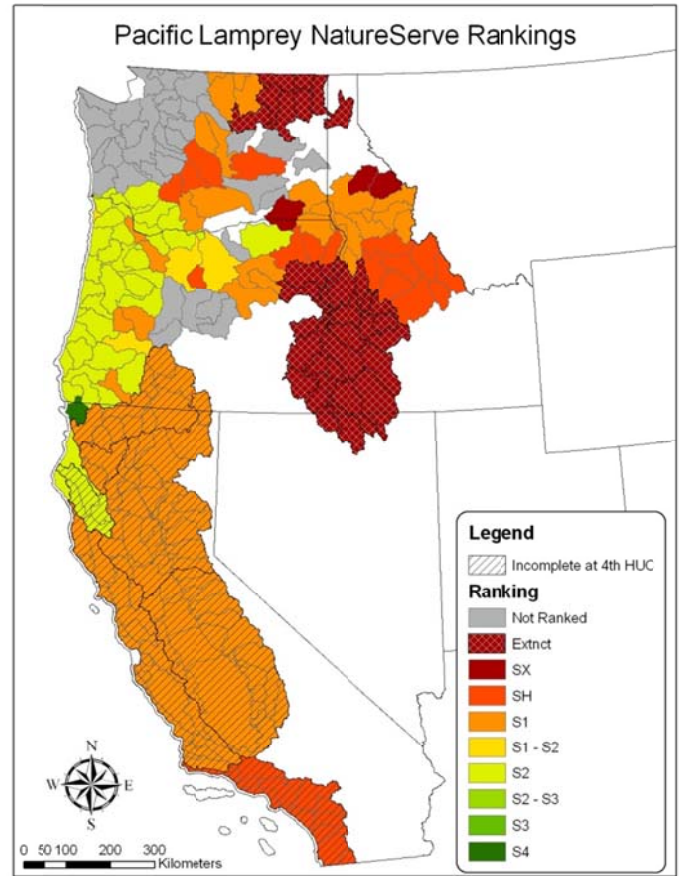


Conservation Agreement

The Conservation Agreement (Agreement) is a voluntary commitment by the parties to collaborate on efforts that reduce or eliminate threats to Pacific Lamprey to the greatest extent possible. The goal of this Agreement is to achieve long term persistence and support traditional tribal cultural use of Pacific Lamprey throughout their range. This Agreement will provide a mechanism for the involved parties to collaborate and pool available resources to expeditiously and effectively implement conservation actions.

Regional Implementation Plans

Through the Agreement conservation will be advanced by the development of Regional Implementation Plans which will prioritize and implement conservation actions and evaluate their effectiveness. The Regional Implementation Plans will build upon existing restoration plans that include conservation actions such as: modifying fish ladders and entranceways at dams, constructing lamprey passage structures at tributary barriers, restoring lamprey habitat, and consideration of lamprey during in-stream work. However, gaps in addressing threats to Pacific Lamprey remain and the Regional Implementation plans will identify additional conservation actions to address these gaps.



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Pacific Lamprey Summit III

The Pacific Lamprey Summit III will build upon the progress made at the first two Summits, which identified the importance of Pacific Lamprey and called for implementing conservation actions. The Summit will recognize the importance of Pacific Lamprey by partners' commitment to the Conservation Agreement and answer the call for restoration actions through the development of Regional Implementation Plans. The Summit will be held in Portland, Oregon on June 20th and 21st, 2012.



Juvenile Pacific Lamprey

Credit: USFWS

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