This is not a final federal agency product. Rather, it is a pre-decisional document prepared by the Action Agencies that reflects present understandings of currently available information and analyses, and of the progression of discussions with the sovereigns in the collaborative process. Revisions and refinements are to be expected based on further discussions with the sovereigns over new and modified proposed federal actions upon which the action agencies will ultimately consult. Finally, the information in this product does not constitute an analysis of whether the identified measures would or would not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Furthermore, this document does not in any way interpret or apply the regulatory definitions of the statutory phrases "jeopardize the continued existence of" and "destruction or adverse modification."

Harvest Proposed Action Summary

Predator Management Action Objective for All ESUs: Reduce mortality from predators of ESA-listed juvenile and adult fish.

Harvest Strategy 1: Fishery Conservation Effectiveness Programs

Performance Standards: Accurate harvest rates on natural spawners

Funding Source(s): Bonneville Power Administration, Other Action Agencies as appropriate

Rationale: Management of fisheries to meet multiple conservation objectives associated with ESA, in the context of changing fishery methods, seasonal structures and legal obligations, is complex and needs technical advancements to provide necessary precision.

What's New: Action Agencies will assist in the development of a plan to add passive integrated transponder (PIT) tag detections in mainstem Columbia fisheries.

Action: PIT Tag Monitoring in Columbia basin Fisheries

The Action Agencies support increased in-season monitoring of catch, encounters and escapement of fish within Columbia basin fisheries. We support the deployment of PIT tag detectors for fisheries sampling and the expanded deployment of PIT detectors in terminal areas.

Harvest Strategy 2: Potential Alternative/Terminal Fishing Locations

Performance Standards: Accurate harvest rates on natural spawners; percentage reduction in impacts to natural spawners

Funding Source(s): Bonneville Power Administration

Rationale: Fisheries can be located in areas and during time periods that minimize the harvest of non-target stocks, subject to various constraints

What's New: 2007 begin implementation of the Colville selective fisheries project (BPA 200724900)

Action: Development and testing of selective fishing gear

The Action Agencies support the Confederated Colville Tribe project to evaluate various fish trap designs in both tributary and mainstem Columbia River fisheries with implementation starting in 2007.

Harvest Strategy 3: Develop Fishing Techniques to Enable Fisheries to Target non-listed Fish While Reducing Harvest-related Mortality on ESA Listed Species

Performance Standards: Accurate harvest rates on natural spawners

Funding Source(s): Bonneville Power Administration – Direct Program.

Rationale: Achieving greater gear selectivity in both commercial and recreational fisheries has the potential to increase numerical catch while reducing impacts to ESA listed stocks

What's New: 2007 begin implementation of the Colville selective fisheries project (BPA 200724900.

Action: Development and testing of selective fishing gear

The Action Agencies support the Confederated Colville Tribe project to evaluate various fish trap designs in both tributary and mainstem Columbia River fisheries with implementation starting in 2007.

This is not a final federal agency product. Rather, it is a pre-decisional document prepared by the Action Agencies that reflects present understandings of currently available information and analyses, and of the progression of discussions with the sovereigns in the collaborative process. Revisions and refinements are to be expected based on further discussions with the sovereigns over new and modified proposed federal actions upon which the action agencies will ultimately consult. Finally, the information in this product does not constitute an analysis of whether the identified measures would or would not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Furthermore, this document does not in any way interpret or apply the regulatory definitions of the statutory phrases "jeopardize the continued existence of" and "destruction or adverse modification."

Harvest Proposed Action

1.1 Harvest Strategies and Substrategies

Both existing and future harvest reform measures have the potential for immediate and long-term benefits to listed ESUs, including enabling continued tribal and non-tribal harvest of stronger stocks. The Action Agencies' harvest strategies seek to improve adult life-stage survival through measures that will directly or indirectly reduce the take of listed species in the near-term and will advance harvest reforms, for application over the longer term.

The FCRPS BiOp remand process offered harvest managers and the Action Agencies an opportunity to discuss and propose actions to benefit listed ESUs. The Action Agencies proposed consideration of harvest alternatives that reduced harvest impacts on the natural spawning component of listed Upper Columbia spring Chinook and Snake River spring/summer Chinook to boost their status through improvement in adult life-stage survival. The process did not yield agreement on harvest reforms that would produce further reduction of impacts upon these listed ESUs. The *US v. Oregon* parties indicated that within their own court ordered proceedings reform in the management of fall Chinook was occurring through the development of abundance-based management for those ESUs affected during those specific fisheries (fall Chinook and summer steelhead).

The collaboration process did produce proposals to change fishery monitoring and data systems to improve the degree of resolution required to monitor the status of listed populations during the prosecution of fisheries. The harvest managers did acknowledge that the existing harvest monitoring and evaluation program could be improved upon to decrease error and uncertainty in the measurement of harvest rates. While these activities do not directly reduce impacts to listed ESUs, they do provide managers and researchers more accurate information on the status of natural populations and provide a higher level of certainty that fishery conservation objectives are being attained.

The Action Agencies continue to support programs aimed at reducing impacts to listed stocks. As a first step and not exclusive to our support of selective fishing projects described below, the Action Agencies support increased in-season monitoring of catch, encounters and escapement of fish within the Columbia basin. In the context of listed fish, even low levels of mortality can affect the prospects for survival and recovery, accurate and precise estimates of incidental mortalities are essential for determining the extent to which selective fisheries can accomplish their intended purposes. Specifically we support the deployment of PIT tag detectors for fisheries sampling and the expanded deployment of PIT tag detectors in terminal areas. We are working with managers to determine the specific quantity of detectors and modification of

sampling protocols to incorporate this additional data collection. This information could be helpful in decreasing the uncertainty in measurement of adult survival through the FCRPS.

Harvest Strategy 1: Fishery Conservation Effectiveness Programs

Harvest reductions produce immediate increases in spawning escapement, thereby reducing the near-term risks of extinction..

Under this strategy, the Action Agencies would pursue opportunities to ensure harvest strategies are effective in meeting conservation objective for reducing harvest impacts on listed species consistent with the 2001 BiOp. . These opportunities may include advances in stock identification methods, monitoring, run-size forecasts and in-season management to reduce uncertainty in harvest impacts to listed fish – thus, ensuring the intended increased abundance to the spawning grounds and biological benefits are achieved.. Other opportunities may include the use of conservation easements on catch – agreements that reimburse commercial harvesters for reducing their catch with appropriate pass-through measures to provide additional quantifiable adult life-stage improvement for listed stocks. The Action Agencies acknowledge that the development and implementation of this strategy will require collaboration with harvest managers and constituent fishery groups to ensure economic, social and cultural issues are addressed. .

Harvest Strategy 2: Potential Alternative/Terminal Fishing Locations

Fisheries can be located in areas and during time periods that minimize the harvest of non-target stocks to the extent possible, subject to various constraints. Terminal fisheries can in some cases provide alternative harvest opportunities to mixed stock fisheries. Under this strategy, the Action Agencies would address potential alternative/terminal fishing locations and seasonal time periods where targeted fish can be accessed with minimal impacts to listed salmon and steelhead. Existing off-channel sites in the lower Columbia would be continued and enhanced and new locations and strategies would be developed by the fishery managers.. The Action Agencies support the Colville Tribe proposal Evaluation of Live Capture Selective Fishing Gear within the Northwest Power and Conservation Council's solicitation process. This project is consistent with this strategy in that it proposes to place selective gear in the Okanogan River where the percentage of known origin fish is high and will aim to remove non-localized stocks to improve TRT life-stage viability criteria.

Harvest Strategy 3: Develop Fishing Techniques to Enable Fisheries to Target Non-listed Fish While Reducing Harvest-related Mortality on ESA-listed Fish

The most likely and immediate source of relief from tight harvest restrictions lies in achieving greater catch selectivity, either through use of more selective fishing gear or by expanding fishing opportunities in known-stock, terminal areas (All-H Paper, Vol. 2, pg. 38, 39, 48), or by specific time, area, and gear management in the mainstem. Accurate and precise estimates of incidental mortalities will be essential for determining the extent to which selective fisheries can accomplish their intended purposes. The Colville proposal described above is consistent with

this harvest strategy. An expansion of time, area, and gear selective techniques and strategies would also be a key component of this strategy.

1.2 Biological benefits resulting from the Harvest Proposed Action

The Action Agencies will support, consistent with the Harvest strategy the development of live-capture selective fishing to assist in advancing the protection of weak, ESA-listed stocks and other natural-origin salmon. This is manifest in the support for the Colville Tribe sponsored project proposal "Evaluation of Live-Capture Selective Fishing Gear, (BPA 200724900). This project also addresses two other objectives; the ability to reduce the proportion of hatchery-origin salmon in a natural spawning population and the ability to collect local broodstock for artificial propagation programs.

This study will evaluate various fish trap designs in both tributary (Okanogan) and mainstem Columbia River fisheries. The purpose of this action is to enable to development and deployment of selective fishing gear and methods so some level of fishing can continue even when listed fish are present.

The potential for new live-capture selective fisheries gear to provide both increased harvest and increased survival of depressed stocks can be significant. Conservation and harvest benefits increase considerably with lower catch/release mortalities and higher composition of externally marked fish in the fishery. The Colville Tribe proposal describes the potential of up to over 95% reduction in harvest impacts to listed species resulting from the implementation of selective gear and methods. The potential reduction in ESA impacts would be for application to fisheries that impact ESA fish.

In addition, the Action Agencies will also assist in the development of a plan to add passive integrated transponder (PIT) tag detections in mainstem Columbia fisheries. The potential benefit of this monitoring is providing an independent assessment of harvest impacts and stock composition in mainstem fisheries.