

<p>3. HPA Implementation/Effectiveness Monitoring – This request will fund 1 full time field biologist to review recent Hydraulic Project Approvals (HPAs) to determine if proponents implemented provisions of the permit, and whether those provisions were effective in protecting marine and freshwater habitat. Additionally, an analysis of mitigation effectiveness will be conducted. Effectiveness monitoring of HPA permitted activity will be initiated in Puget Sound beginning July 2008, completing an adaptive management loop associated with the most important projects in the HPA program. This request expands the effectiveness monitoring program to two additional WDFW regions and increases the number of construction project types that are evaluated.</p>	<p>CMS Med Priority # 59</p>	<p>~\$175K (+indirect)</p>		<p>Budget item 3, HPA implementation/Effectiveness monitoring, is a key element to understanding Comprehensive Monitoring Strategy question # 6: “what are the overall impacts of human related activities on freshwater systems.”</p>
<p>DNR – Aquatic Lands Habitat Conservation Plan – Compliance Monitoring</p>	<p>CMS Essential Also CMS High & Med Priority # 22, 25, 41, 51</p>	<p>\$1,500K</p>	<p>GF-S; ALEA</p>	<p>Washington DNR’s Compliance Monitoring Plan takes the form of an environmental audit and focuses on ensuring first, that lease provisions stipulate the appropriate measures needed to avoid and minimize impacts to covered species and their habitats; and second, that the delineated measures are being carried out on the landscape. Approximately 73% of aquatic lands covered by the HCP are in the Puget Sound basin.</p>
<p>WCC - Effectiveness Monitoring of the Livestock Program. Assess the effectiveness of the Livestock Program, a program that funds the installation of best management practices to improve water quality and habitat on livestock farms.</p>	<p>CMS High Priority for SRFB projs. Also CMS Med Priority # 35, 53</p>	<p>~250k</p>	<p>GF-S</p>	<p>Effectiveness monitoring data were listed as “Poor” in the CMS, and current effectiveness monitoring does not measure farm-related best management practices. With increased emphasis on implementing best management practices for livestock operations to improve water quality. These practices are funded by the Conservation Commission’s Livestock Program. This proposal seeks to monitor the effectiveness of the Livestock Program by implementing the proposal developed by Plotnikoff 2006¹. The data are important for better accountability of funds and adaptive management.</p>
<p>WDA – Maintenance increase for pesticide monitoring in salmon bearing streams</p>	<p>Essential</p>	<p>\$128,697 new</p>	<p>MTCA</p>	<ol style="list-style-type: none"> 1. This request is a maintenance level adjustment to cover increased operational costs (e.g. laboratory analyses) and salary COLA increases for the on-going \$1.5M pesticide monitoring program in salmon-bearing streams. 2. This is part of WSDAs cooperative agreement with EPA for assessing pesticide effects on listed species under ESA. 3. Both the Columbia and Puget Sound basins are monitored. 4. Monitoring is conducted by Ecology through an IAG with WSDA
<p>ECY - Common Hydrography Data Set (Phase 1) – The State of Washington is currently using three different hydrography GIS data sets to make regulatory decisions (and to describe sample sites). The data are inconsistent resulting in sample-site disagreement and conflicting decisions on cross-agency environmental permit decisions. This proposal would fund the initial phase of the production of a consolidated regulatory data set for the state natural resource agencies to jointly use and maintain. Other agency costs to successfully complete this phase are \$995K (\$795 DNR and \$275 WDFW).</p>	<p>Medium Priority #75</p>	<p>\$891,385</p>	<p>Many</p>	<p>Ecology is looking for confirmation and commitment from other agencies regarding how they will fund their pieces (cost allocation vs. new request)?</p>

<p>WDFW – Implement Selective Fisheries – Future salmon fishing opportunities depend on our ability to focus harvest on hatchery produced fish. Traditional approaches to fishery management must change to reduce the risk to future production of our wild salmon resources, to promote recovery, and to ensure compliance with performance expectations or requirements of the Endangered Species Act. The most effective strategy for achieving hatchery stock oriented fisheries is expanded use of mark-selective fisheries. Expansion of these mark-selective fisheries will be implemented consistent with co-management responsibilities and requirements defined in <u>U.S. v Washington</u>. Our capability to produce accurate and precise estimates of the impact of fisheries on wild stocks, with the implementation of increased mark-selective fisheries, will be enhanced by applying newly developed genetic tools that provide a wild stock analogue to the hatchery-based stock coded-wire tag assessment system. Genetic tools also provide a means of evaluating performance of other stock assessment systems.</p>	<p>CMS Essential mass-marking, genetics lab, CWT prog.</p> <p>CMS Med Priority # 30, 36, 62</p>	<p>\$1,052K (+indirect)</p>	<p>GF-S</p>	<p>Monitoring is an element of this request. Selective fisheries aims to reduce the effects of fishing on listed salmon. This budget request addresses question 7 in the Comprehensive Monitoring Strategy: “What is the impact of harvest upon the recovery of wild salmon populations?”</p> <p>This request provides for on-water monitoring of the catch of hatchery salmon and release of wild salmon during mark selective fisheries. Data collected from this program will enable accurate and precise estimation of fishery impacts to evaluate the effectiveness of this management approach to meet the intended conservation and fishery objectives. In the absence of this monitoring activity, fishing opportunity on harvestable hatchery stocks will be lost and more un-harvested hatchery fish will stray into natural spawning areas contributing to conservation problems of wild salmon.</p>
<p>WDFW – Implement Hatchery Reform Actions – Significant modifications to hatchery programs are required to restore wild salmon and steelhead and maintain fishing opportunities. Wild salmon and steelhead are icons of Northwest culture, and salmon and steelhead fisheries provide important economic benefits to Washington State. Unfortunately, while hatchery programs now provide the majority of fishing opportunities, they have also been identified as a factor contributing to the decline of many of the salmon and steelhead listed under the ESA. To address this concern, the Congressionally-constituted Hatchery Scientific Review Group (HSRG) conducted a scientific, systematic review of hatchery programs. This request will implement priority recommendations of the HSRG to improve hatchery programs, maintain fishing opportunities, and help restore the productivity and diversity of 27 populations of salmon and steelhead.</p>	<p>CMS Essential mass-marking, genetics lab, CWT prog</p> <p>CMS Med Priority #36</p>	<p>\$1,137K (+indirect)</p>	<p>GF-S</p>	<p>Monitoring is an element of this request. Hatchery reform aims to align hatchery activities with the goal of recovering salmon, and addresses question 6 in the Comprehensive Monitoring Strategy: “What are the trends in effects of hatchery production on the survival and productivity of wild salmon populations within each ESU?”</p> <p>The initiative identifies desired long-term outcomes and a time series of benchmarks to guide WDFW in the development of improved strategies for the management of salmon and steelhead. The desired long-term outcome for hatchery programs is:</p> <p>“Hatchery programs are aligned to achieve our fishery and population conservation objectives:</p> <ul style="list-style-type: none"> - hatchery production is fully utilized in fisheries; - hatchery production is consistent with watershed-based population conservation objectives; - hatchery programs and facilities are managed consistent with the principles of hatchery reform; and - facilities are maintained, functional, efficient, compliant with legal obligations, and managed to the highest standards using the newest technology and most functional equipment.”

<p>WDFW – Science Support for the Puget Sound Partnership Action Plan – The Puget Sound Partnership (PSP) will establish its first action plan by Fall 2008, which will identify several areas where scientific information is needed to prioritize and evaluate conservation actions. Several important indicators identified for monitoring the health of Puget Sound are in need of additional resources and attention. This package consists of activities focusing on the health of living resources in Puget Sound, and is designed to provide scientific and technical assistance support for the Action Plan:</p> <p>1. Conduct systematic surveys of abundance of indicator species/species of concern in Puget Sound: While the Action Agenda has not yet been completed and specific indicators/performance measures not yet identified, biological resources will be critical to tracking performance of the Puget Sound Action Agenda. In addition, collection of baseline information will allow us to track the status and trends of ecologically important species into the future. At present no abundance monitoring exists for most of these species, which means that population declines often go unnoticed until the declines become severe. This package will assure the capacity is in place to provide abundance information on indicator species, and the ability to populate species and habitat abundance information for the Conservation Opportunity Framework project described below.</p> <p>2. Identify Greatest Future Conservation Threats and Protection Priorities: Washington State’s Biodiversity Conservation Strategy has provided a valuable tool, the Conservation Opportunity Framework (COF), which identifies terrestrial areas in the state of greatest species conservation value and highest risk of land-use conversion. The COF is also the foundation of Eco-regional Assessments (a partnership project between WDFW and The Nature Conservancy) and of the Governor’s Council on Biodiversity. Concurrently, The Puget Sound Nearshore Partnership is developing a Future Risk Assessment Projection that will predict where population and land-use impacts will occur in the Puget Sound basin for the years 2020 and 2050. This package proposes to expand the COF to include existing and new (see “Abundance Surveys” item above) information on aquatic, nearshore and marine species and habitats, and to overlay that information with the Future Risk Assessment Projection, creating a powerful tool that will predict the areas of greatest future conflict between biodiversity conservation needs and future population growth. This item proposes to expand the existing COF for population threats and to initiate an expanded scope that will include additional threats, including climate change, sea level rise, and pollution threats.</p>	<p>Not specifically addressed in CMS</p>	<p>\$970K (+indirect)</p>	<p>GF-S</p>	<p>This request is only loosely captured in the CMS because the Puget Sound Partnership is a new state agency. The monitoring in this request would inform watershed health using a broader definition than previously applied in the Comprehensive Monitoring Strategy.</p> <p>This request may address question 5 from the CMS: “In the context of other sources of natural and human-caused mortality, is predation by avian, marine mammals, or other aquatic species inhibiting the recovery of salmon within each ESU?” And question 17: “What are overall impacts of human related activities on freshwater habitat and landscape processes as they relate dot watershed health and salmon recovery?”</p>
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¹ Plotnikoff, R., D. Hallock, P. Pickett, D. Sargent. 2006. Preparing elements of a quality assurance monitoring plan to conduct water quality monitoring near dairies and CAFOs. Washington Department of Ecology. Olympia, WA 98504. 38 pp.