CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation
November 20, 2008

In-stream Flow Assessments

File No.:08-124
Project Manager: Valerie Termini

RECOMMENDED ACTION: Authorization to grant up to $1 million dollars to the United States Geological Survey (USGS), the Pacific States Marine Fisheries Commission (PSMFC), and Humboldt State University (HSU) to complete four in-stream flow analyses in three coastal rivers in California. The data from these assessments will be used by the Department of Fish and Game to develop stream flow recommendations for use by the State Water Resources Control Board.

LOCATION: Statewide

STRATEGIC PLAN OBJECTIVE: Governance, Physical Processes and Habitat Structure

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EXHIBITS

Exhibit 1: Project Locations and Site Maps

Exhibit 2: Priority Streams List for in-stream Flow Assessment

Exhibit 3: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the Ocean Protection Council (OPC) adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"The Ocean Protection Council hereby approves the disbursement of an amount not to exceed $1,000,000 to complete four in-stream flow analyses for three coastal rivers. The data from these assessments will be used by the Department of Fish and Game to develop stream flow recommendations for use by the State Water Resources Control Board. Disbursements may be made under this authorization to the United States Geological Survey (USGS), the Pacific States Marine Fisheries Commission (PSFMC), and Humboldt State University, (HSU).

This authorization is subject to the condition that, prior to disbursement of funds, each grantee of funds under this authorization shall submit the following for the review and approval of the Secretary to the Council:

1. A detailed work plan, including schedule and budget.
2. The names and qualifications of any contractors the grantee(s) intends to retain to carry out the project.
3. Documentation that the grantee(s) has obtained all permits and approvals necessary to implement the project.

Staff further recommends that the Council adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

1. The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act.
2. The proposed is consistent with the Ocean Protection Council's project funding guidelines."

PROJECT SUMMARY:

The proposed project will provide funds to complete four in-stream flow analyses[1] (collectively "the project") for coastal rivers in California for salmonid recovery. Pursuant to this authorization, the Secretary to the Council expects to enter into agreements with 1) HSU to analyze two reaches of the Shasta River (Siskiyou County), 2) PSMFC to analyze the Big Sur River (Monterey County), and 3) USGS to analyze the Santa Maria River (Santa Barbara County). Each analysis will be completed under the direction and oversight of OPC and the Department of Fish and Game (DFG) staff. The studies will be used by DFG to develop in-stream flow recommendations for the State Water Resources Control Board, Water Rights Division (Water Board) to assist it in exercising its water rights authority (i.e., when considering new applications for water diversions or when evaluating permits or impacts to fish and wildlife resources) pursuant to PRC §10004.

The primary objective of the project is to provide the Water Board with flow recommendations as to what the minimum amount of water flow is needed to ensure salmonid survival. In previous situations, where stream flow has been altered based on these types of analyses, salmonid populations have increased. The four studies will consider the benefits of increasing stream flow at critical times of the year for various life-stages of salmonids with the goal of increasing overall populations by providing additional habitat while maintaining cold, fresh water.

PROJECT DESCRIPTION:

Project Background:

The decline of salmonids throughout California has been attributed to many factors, including: barriers, habitat alteration, water quality and quantity, land use practices, and over harvest,

[1]In-stream flow is the amount of water needed in a stream to adequately provide for downstream uses occurring within the stream channel. These users cover some or all of the following uses that extend beyond the need for human drinking water: aquatic habitat, recreation, wetlands, navigation, hydropower, riparian vegetation, and water quality, including waste assimilation. Flow is measured in volume of water per unit of time, usually cubic feet per second (cfs). This gauges the amount of water flowing past a point in the river at a given time.

among others. However, input received at OPC public meetings on salmonid issues and from numerous experts, suggests that degradation and loss of freshwater habitat is one of the leading causes of the decline of salmonids throughout the state. Water diversions can result in significant loss of physical river habitat and altered hydrology regimes. Quantitative habitat-based in-stream flow investigations are needed in many salmonid-supporting rivers to identify the stream flow that is needed to protect habitat and support the critical life stages[2] of salmonids.

Many of the rivers throughout California that historically supported large runs of salmon and steelhead currently have insufficient water flow to support anadromous fish. Historically, the Water Board has not been provided the data to determine the flows needed to support salmonids. Without knowing how much water is needed, the Water Board cannot effectively use its regulatory authority to increase stream flow.

The proposed studies will be used by DFG and the Water Board to help ensure that water flows within streams are maintained at levels which are adequate for long-term protection, maintenance, and proper stewardship of fish and wildlife resources. Pursuant to Public Resources Code (PRC) §10001, DFG is charged with identifying and listing "those streams and watercourses throughout the state for which minimum flow levels need to be established in order to assure the continued viability of stream-related fish and wildlife resources." Water Code section 1257.5 requires the Water Board to consider stream flow requirements when acting on applications to appropriate water.

In 2007, the California Coastkeeper Alliance (CCKA) sued DFG for failure to conduct stream flow analyses that are needed to maintain healthy populations of fish and other aquatic life. Accurate flow information is critical to sound Water Board decisions on water rights for streams and rivers. CCKA settled the suit with DFG in April 2008. The settlement agreement states that DFG will initiate or continue ongoing flow studies to the extent that funding is available.

PRC §10004 indicates that DFG must initiate studies to develop stream flow requirements for streams or watercourses in each fiscal year for which funds are appropriated. To staff's knowledge, DFG has not received any appropriations recently from the legislature for completing In-stream flow analyses.

As the CCKA court case demonstrates, DFG has not been able to provide the state Water Boards with the necessary data to protect fish and wildlife dependant on water flow in the rivers. OPC staff believes that funding these projects is vitally important to California's economic interest, so that the watersheds support not only healthy populations of fish and aquatic life, but also support California's rich history of fishing, and environmental stewardship.

In the Water Board's Strategic Plan, it is stated in Action 3.3.1, that "the State Water Board will work with the DFG and other watershed partners to (a) develop by September 2008 a preliminary list of priority California rivers for minimum water flow objectives development (taking into consideration the streams affected by the North Coast In-stream Flow Policy), and (b) initiate the development of one minimum stream flow proposal that will be brought before the State Water Board for consideration by December 2010 and up to two additional proposals

[2] Critical salmonid life stages include: egg to fry stage, rearing juveniles, and spawning adults

by 2012".[3] A list of twenty-two critical streams was completed by DFG and the Water Board in August 2008 (exhibit 2). The list was compiled and ranked based on input from DFG staff, the State Water Board, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. In developing the ranking, staff considered criteria such as; 1) presence of anadromous species, 2) likelihood that DFG flow recommendations would provide a high level of improvement, 3) availability of recent flow studies or other relevant data, and 4) the possibility of partners/willing landowners.

The rivers that will be analyzed for this project were chosen because of their high resource value for anadromous species recovery and because they were among 22 rivers statewide that were identified as needing in-stream flow analyses, as listed above.

Project Details and Scope of Work:

This project will produce detailed flow analyses for three rivers:

- The Shasta River
    - Canyon reach
    - Tributary: Little Shasta River
- The Big Sur River
- The Santa Maria River

These analyses will be given to DFG and used to complete a report providing in-stream flow recommendations. Theses recommendation will then be transmitted to the Water Board which will implement the recommendations to regulate the timing and flow of water in each of these rivers (see exhibit 3). The goal is to provide increases in water flow at critical times throughout the year to benefit endangered species of salmon and steelhead.

This project will be modeled after analyses conducted on the Trinity River, which provides an excellent example of how manipulation of water flow can benefit salmonid populations. Here, a host of state, federal, and tribal agencies initiated scientifically based analyses to aid in developing in-stream flow recommendations. The recommendations were used by the Water Board to increase the Trinity River water allocations downstream of Lewiston Dam. After the recommendations were approved and water flow increased, an increase in the populations of hatchery produced steelhead was noted. DFG states that the mean average of steelhead hatchery returns to the Trinity River from the years 1977 - 1995 were 1,183 individuals per year. After flows increased in the year 2000, returning steelhead numbers increased dramatically. From the years 2002 - 2007 the average annual number of steelhead returns was 8,841 individuals.[4]

The methods for determining flow will vary for each river (see below for details). The field work for each river will take approximately 1-2 years to complete and each grantee will provide the in-stream flow analysis to the OPC and DFG within 6 months of the data collection. Draft flow recommendations will be subject to a public review and comment process, which typically takes approximately 120 days following completion of the recommendations. DFG will then

[3] State Water Board *Strategic Plan Update: 2008-2012*. Page 24.
[4] Presentation given by Wade Sinnen, Associate Biologist Trinity River Project, DFG - North Coast District.

transmit the final flow recommendations to the Water Board, an action they are require to do by law.

1) The Shasta River, North Coast

HSU will develop two in-stream flow analyses for two reaches of the Shasta River. The first will take place on the mainstem of the Shasta River (Shasta River Canyon reach) and the second in-stream flow analysis will take place on a tributary watershed (Little Shasta River), both of which provide critical coho salmon rearing habitat.

HSU will coordinate with the appropriate entities to conduct outreach workshops, identify representative reaches of the river that can provide habitat for the various lifestages of salmonids, develop unimpaired and regulated hydrographs and thermographs, develop habitat flow relationships, and provide in-stream flow analysis and basin wide integration. HSU will base its analysis on protocols that DFG has determined to be the best methods to quantify habitat and flow in the Shasta River Basin. HSU will also use aerial photography, hydraulic modeling, and habitat mapping to develop annual hydrographs for different water-year types that will sustain inter-annual flow variability while meeting salmonid life history needs. These in-stream flow analysis, and subsequent flow recommendations, will allow the Water Board to explicitly consider downstream, cumulative effects of water permitting throughout the Shasta River Basin. This proposed investigation will be aided by long-term USGS stream flow gauging in the canyon and DFG's biological monitoring already underway.

In-stream flow analyses in the Shasta River are crucial because water rights have been fully adjudicated throughout the entire river. The current adjudications do not provide water for the purpose of securing and maintaining fish habitat, contrary to the California Endangered Species Act and California Fish and Game Code §1602. Excellent rearing habitat has been documented in both the Shasta River Canyon and in the Little Shasta River; however, once the irrigation season begins, this critical rearing habitat is lost. New recommendations could lead to increased habitat for these species.

DFG, in conjunction with the Shasta Valley Resource Conservation District (RCD), has developed a watershed-wide permitting program to bring agricultural diverters into compliance with the California Endangered Species Act and §1602 of the Fish and Game Code. This permitting program has identified the availability of rearing habitat as a limiting factor in coho recovery. The proposed project will assess these areas of critical importance to rearing coho salmon and what type of flow is needed to increase their populations. In addition, the analyses may serve as a prototype that the Water Board could use for water permitting in other tributaries of the Shasta River Basin and elsewhere.

2) The Big Sur River, Central Coast

The Big Sur River is a priority for in-stream flow analysis because as a riverine estuary it plays an important role in the rearing life cycle of California steelhead. Estuaries provide a rich source of food as downstream migrating smolts prepare to enter salt water and also allow smolts to acclimate to the dramatic change in salinity between fresh and salt water. The Big Sur River remains in a mostly pristine state and contains prime steelhead habitat, yet, this habitat is at risk from pending water diversion applications requesting a large portion of available flow and illegal

unpermitted diversions. It is important that flow recommendations for the Big Sur River be developed with an understanding of the affects of those flows on the estuary and critical steelhead life stages. Furthermore, assessment of the Big Sur River Estuary is necessary to complete the in-stream flow work in the mainstem river and to better understand how estuary conditions are influenced by the flows entering the estuary.

PSMFC will complete the in-stream flow analysis for the Big Sur River. The field work will either be conducted over the course of a single year or two, based on when funding is available. Either approach has its benefits: a single year would provide good data on a steelhead year class while performing the analyses over two years will provide data on population variability. PSFMC field work will include; bathymetric mapping (using semi-permanent transects), velocity pattern measurements, tidal effect tracking, water quality sampling and fish population estimation using either seines and mark-recapture (with non-permanent dye marking) or expanded direct observation snorkel counts.

Another important component of the analysis will examine the impact of the Torre wildfire of 2008 on the Big Sur estuary. Impacts from the wildfires could include changes in water chemistry from the addition of ash, accelerated sedimentation, salinity from differing runoff rates, water retention in burned areas, and aquatic and riparian vegetation related to these listed factors. All of these changes can directly or indirectly affect the suitability of the Big Sur estuary to support steelhead. Further, the project will seek to understand what impact water flow has on creating or destroying steelhead habitat in the Big Sur River. This project builds on and incorporates earlier in-stream flow data collected in the Big Sur River during the mid-1990s by DFG.

PSMFC will complete a proposed estuarine analysis including mapping to track potential changes in water volume, and water quality monitoring to assess seasonal or annual changes in major water quality parameters. Water level monitoring will also be conducted to track effects of inflows, tides, and sand-barrier closure and breaching on estuary volume. Additionally, PSMFC will also conduct fish sampling using direct observation and seining to assess use of the estuary by steelhead and other species.

The Big Sur River work depends on approval of an additional grant that PSFMC currently has submitted to the DFG Fisheries Restoration Grant Program. Final approval of this grant by DFG is expected in late November 2008.

3) The Santa Maria River, South Coast

USGS will complete a stream flow analysis for the entire Santa Maria River in Santa Barbara County, which begins at the confluence of the Cuyama and Sisquoc Rivers, approximately 25 miles upstream from the Pacific Ocean. The Twitchell Reservoir on the Cuyama River blocks all winter and spring flows into Santa Maria River, resulting in no maintenance flows for downstream resources as well as limited opportunity for steelhead to migrate to and from the ocean.

This analysis will investigate the water flow required for adult steelhead passage from the ocean into upstream spawning and rearing habitats, a critical component of the steelhead life history,

and to upstream habitat near and in the Los Padres National Forest. It is anticipated that USGS will use rainfall runoff simulations and review of annual hydrographs in the analyses. Additional analysis will include an investigation of the frequency of water flow events to evaluate the potential passage opportunities based upon annual runoff and releases from Twitchell Reservoir.

Another component will include an analysis of the estuarine habitat of the Santa Maria River including mapping to track potential changes in water volume, and water quality monitoring to assess seasonal or annual changes in major water quality parameters. USGS will monitor water level to track the effects of inflows, tides, and sand-barrier closure and breaching on estuary volume. Fish sampling using direct observation and seining will be conducted to assess use of the estuary by steelhead and other species.

Due to the fact that the Santa Maria River does not currently maintain an adult population of steelhead, adult habitat suitability criteria will be compiled from available data from similar rivers. Populations of resident rainbow trout exist in the Cuyama and Sisquoc Rivers and can be used to document habitat suitability criteria that will be applicable to juvenile steelhead. Habitat use data will be collected during several seasons (e.g., spring and summer) in reaches identified during year one of the project.

It is envisioned that the stream flow data from the Santa Maria River will be incorporated into the construction and calibration of hydraulic and habitat simulation models. The models will then be used to identify flow recommendations considering all important elements such as hydrology, biology, geomorphology, water quality and connectivity.

PROJECT GRANTEE(S):
It is proposed that the four in-stream flow studies be completed by: Humboldt State University (in the North Coast) for the Shasta River, PSFMC (in the Central Coast) for the Big Sur River, and USGS (in the South Coast) for the Santa Maria River.

Humboldt State University
HSU has the necessary experience, regional and scientific knowledge and availability to conduct these analyses on the Shasta River. HSU is well versed in the Shasta River's long and varied history with salmonid conservation projects. Further, HSU will be leveraging and building on an existing contract between Cal Trout and McBain/Trush, Inc. HSU will leverage the current contract between DFG and Cal Trout/McBain and Trush, Inc. which is to evaluate various flow study methodologies applicable to the Shasta River basin, conduct outreach with landowners and other stakeholders in the Shasta River basin, and recommend a robust methodological approach to DFG for flow study implementation at three different locations in the Shasta River watershed. The stream flow analysis for the Shasta River will build on this work and will recommend a robust methodological approach to DFG for flow study implementation at two reaches of the Shasta River watershed.

Pacific States Marine Fisheries Commission
PSMFC is an interstate commission created by Congress in 1947. PSMFC supports policies and actions to conserve, develop, and manage fishery resources in California, Oregon, Washington,

Idaho and Alaska. Its purpose is to promote the better utilization of fisheries (marine, shell, and anadromous) and to develop a joint program of protection and prevention of physical waste of such fisheries. PSMFC accomplishes this through coordinating research activities, monitoring fishing activities, and facilitating a wide variety of projects. PSFMC will conduct the analysis for the estuary component of the Big Sur River. PSMFC will also complete the stream flow analysis for the mainstem section of the Big Sur River, pending approval from DFG Fisheries Restoration Grant Program. If PSMFC is awarded this grant, it will be in a unique position to carry out the work that pertains to the estuary portion of the river, as the commission will already have staff and the necessary data readily available.

United States Geological Survey
USGS has a diverse team of scientists that will be necessary (biologists, hydraulic engineers, geomorphologists) to complete an in-stream flow analysis and who are trained in hydraulic and geomorphic data analysis specific to the Santa Maria River. USGS also has a background in anadromous fish assessment and habitat types, particularly in coastal California Rivers. In addition, USGS is familiar with the Santa Maria watershed and has the capacity to conduct an in-stream flow analysis for the entire river in a relatively short period of time.

All four studies will be conducted in close coordination with OPC and DFG staff will provide coordination and oversight for each stream flow analysis. As the designated trustee for California's fish and wildlife, DFG has special expertise regarding salmon, steelhead and other fish that rely upon river-related ecosystems and adequate flows of water.

SITE DESCRIPTION:

The four projects will take place in various locations throughout the state including; 1) the Big Sur River (Monterey County), 2) two reaches of the Shasta River (Siskiyou County), and 3) the Santa Maria River (Santa Barbara County). Maps are attached as Exhibit 1.

The Shasta River
The Shasta River is a tributary of the Klamath River, approximately 40 mi (64 km) long, in northern California. It drains a basin called the Shasta Valley on the west and north sides of Mount Shasta in the Cascade Range.

-The Little Shasta River
The Little Shasta River is a 50 square mile watershed upstream of Shasta Canyon. These reaches once sustained coho salmon, chinook salmon, and steelhead runs. The sinuous mainstem in the valley bottom (11.8 mi long) is capable of providing high quality and abundant juvenile/smolt rearing habitat if it receives adequate in-stream flows. The steeper lowland, and even steeper headwater, mainstem segments (5.6 and 10.1 miles long respectively) once provided good steelhead and coho juvenile rearing habitat, as well as adult spawning habitat.

-Shasta Canyon
The Shasta River Canyon environment tends to be steep, bedrock constrained, hot and dry. The stream has no significant tributaries or springs in this reach and measures 7.75 miles long. Chinook, coho, and steelhead use this reach for transit, spawning and rearing.

Approximately 50% of the coho spawning in the Shasta spawn here, and if able to find suitable edge habitat are able to rear here until water temperatures and/or dropping river levels force them to seek suitable habitat in the Klamath River.[5] All anadromous salmonids, both adults and juveniles in the Shasta River must pass through the lower Shasta River Canyon (7.8 miles long) before leaving/entering the Klamath River.

The Big Sur River

The Big Sur River, which is one of the largest of coastal drainages south of San Francisco Bay is a 60 square mile (150 km^2) watershed located in the Central Coast of California. The Big Sur River's headwaters are in the mountains, and the river flows roughly northwest before emptying into the ocean, where there is a natural sandbar that has created a lagoon. Tributaries of the river include Pfeiffer-Redwood Creek, Juan Higuera Creek, Post Creek and Pheneger Creek. Precipitation increases with altitude at Big Sur and the higher elevations can receive over 50 inches (1.3 m) per year, about 10 inches (250 mm) higher than lower areas. The average yearly runoff on the river is 65,000 acre feet (80,000,000 m^3). There are some diversions on the river and its tributaries for drinking water to supply nearby homes and resorts, but there are no major dams or reservoirs.

The Santa Maria River

The Santa Maria River is located on the South - Central Coast of California. The river is formed at the confluence of the Sisquoc River and Cuyama River, about 20 miles from the coast. The river defines part of the border between Santa Barbara County and San Luis Obispo County, California. It empties into the Pacific Ocean. There are no lakes or dams on the Santa Maria River, although Twitchell Reservoir is formed by a dam on the Cuyama River. During much of the year, the Santa Maria River has very little water, but it can swell greatly during a winter storm.

PROJECT HISTORY

OPC staff held two public meetings on actions the council could take to protect future generations of salmonids. The most important problems hindering future salmon recovery identified at these meetings were habitat alteration and water diversions. The proposed project will help DFG develop the necessary information to provide the Water Board so that they may make decisions about regulating water flow in these rivers for the benefit of salmonids.

PROJECT FINANCING

Ocean Protection Council	$1,000,000
DFG (in-kind contribution)	$46,200
DFG Fisheries Restoration Grant	$501,041(*anticipated)*
McBain and Trush, Inc/Cal Trout (leveraged)	$139,000 + *in kind*
Total Project Cost	**$1,686,241**

[5] Shasta Valley RCD, Incidental Take Permit. March 29, 2005. Page 67.

The anticipated source of funds will be the fiscal year 2007/2008 appropriation from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). Proposition 84 authorizes the use of these funds for purposes consistent the California Ocean Protection Trust Fund (Pub. Res. Code § 75060(g); *see also* Pub. Res. Code § 75074).

This project is appropriate for prioritization under the selection criteria set forth in Section 75060(g). Section 75060(g) provides that the Council will give priority to projects which will develop the scientific data necessary to improve state efforts to protect and conserve ocean resources. Developing the data necessary to better manage the in-stream flows throughout the state will improve state efforts to conserve ocean resources such as anadromous fish. This project will develop in-stream flow recommendations for three rivers in various regions of the state. DFG has identified these rivers with high resource value and 'critical' habitat for salmonid survival throughout the state.

It is anticipated that the OPC contribution to each in-stream flow analysis will be as follows:

HSU:	Shasta River	$300,000
PSMFC:	Big Sur River	$100,000
USGS:	Santa Maria River	$600,000

Each of the in-stream flow projects outlined in this proposal costs approximately $500,000 - 600,000. The OPC's funds will build on existing and future work of DFG, the grantees, and others and to complete the analyses. The Shasta River element ($300K) builds on existing efforts of DFG, Humboldt State University, and the University of California Davis and an independent consultant. Total project cost for the entire Big Sur River in-stream flow analysis is $601,041. OPC's contribution of $100,000 will fund the estuary portion of the overall Big Sur assessment. The Santa Maria River analysis ($600K) will be entirely funded by OPC. DFG will contribute staff time to work with the grantees on each analysis in the amount of $46,200.00 per year for three years for on-the-ground coordination and oversight.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

This project is consistent the Ocean Protection Act, Division 26.5 of the Public Resources Code, in the following respects:

Section 35650(b)(2)(F) of the Public Resources Code authorizes grants to nonprofit organizations for projects that "improve management, conservation, and protection of coastal waters and ocean ecosystems." This project will provide the necessary data to the Water Board to improve water management in the Shasta River, the Big Sur River, and the Santa Maria River for the benefit of salmonids.

Under Section 35650(b)(2)(G), the OPC may undertake projects to "provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources." Broadly, completion of this project will result in scientific data on the relationship between water flow and habitat availability for salmonids throughout the aforementioned rivers. These data will specifically include habitat mapping, water temperature, timing of flow, and insight into the habitat requirements for the various life stages of salmonids.

The proposed project is also consistent with the goals of §35615 because it will encourage coordination of activities of state agencies, (the Water Board and DFG) and will help establish policies to coordinate the collection of scientific data related to the ocean and coastal resources. The project will foster collaborative partnerships between state and federal agencies and help promote sustainable salmonid runs in the future. Further, the data and information generated by this project will inform regional management decisions and potentially state and federal efforts on what types of stream flow are needed for the healthy management of salmonids.

CONSISTENCY WITH OPC'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Goal A (Governance) Objective 2: "Maximize the effectiveness of state agency efforts to protect and conserve ocean resources." Completion of this project will require that state and federal agencies work together to develop tools that will ultimately improve stream flow for salmonids throughout the state. Identifying the necessary stream flow requirements in particular watersheds will enhance salmonid populations.

Goal D (Physical Processes and Habitat Structure) Objective 1: "Restore and maintain valuable ocean and coastal habitats and resources." Completion of this project will support the recovery of salmonids and the data gathered will be used by multiple state agencies to develop adequate stream flow measurements for critical salmonid rivers.

CONSISTENCY WITH OPC'S 2007/2008 FUNDING PRIORITIES

The project is consistent with the Ocean and Coastal Ecosystems section, focusing on salmon statewide. As that document states, priority will be given to innovative projects that will:

- Contribute to improved management, enforcement, and understanding of river ecosystems in California

Further, this project also meets the strategic grants section in the funding priorities. Specifically, it states that priority will be given to projects that:

- Improve management approaches and techniques for coastal and ocean resources
- Improve coordination or data sharing among local, state or regional entities
- Produce results that can be applied to other areas or regions

CONSISTENCY WITH OPC'S PROJECT FUNDING GUIDELINES:

The project is consistent with the OPC's Project Funding Guidelines, adopted June 14, 2007, in the following respects:

Required Criteria

1. **Directly relate to the ocean and coast**: The in-stream flow recommendations will take place in the Big Sur River, Santa Maria River, and tributaries to the Shasta River. These rivers drain to the ocean and have potential to support large populations of anadromous fish.
2. **Support of the Public:** See Exhibit 4.

3. **Greater-than-local interest:** The chosen rivers have the potential to support large populations of salmonids due to the relatively pristine state of the habitat. Increased salmonid populations would be beneficial not just to fishermen, but to tribes, and to the benefit of the surrounding habitat and species that live within the riparian area.

Additional Criteria

5. **Leverage:** See the "Project Financing" section above.
6. **Timeliness or Urgency:** As exhibit 2documents, the list of the coastal streams that are of high resource value was just recently released this past August. With salmonid populations at an all time low, it is urgent that the state act quickly to help reverse this downward population trend.
7. **Innovation:** Regulating stream flow in California for the benefit of anadromous fish as well as for existing human uses is a relatively new approach to recovering salmonid populations throughout the state.
8. **Coordination:** This project will rely on the cooperation of DFG, USGS, HSU and the PSFMC. The information that is collected will be used by many other state and federal agencies.

COMPLIANCE WITH CEQA:

The proposed project is categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the council.