Exhibit C.1.c
Replacement Public Comment
March 2002

PACIFIC COAST FEDERATION of FISHERMEN'S ASSOCIATIONS

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4 January 2002

Mr. Rodney R. McInnis
Acting Regional Director – Southwest Region
National Marine Fisheries Service
501 West Ocean Boulevard, Suite 4200
Long Beach, CA 90802-4213

RE: Threats to Essential Fish Habitat in San Francisco Bay Estuary
Threats to San Francisco Bay Estuary-Dependent ESA-Listed Species

Dear Mr. McInnis:

The Pacific Coast Federation of Fishermen's Associations and the Institute for Fisheries Resources write you out of our deep sense of urgency regarding the fate of the San Francisco Bay estuary. San Francisco Bay is considered the most important estuary on the west coast of North and South America. For the commercial fisheries (as well as recreational fishing) along the central and northern California coast this estuary is essential to the economic well being of our industry. The Bay is the gateway from the Sierra streams to the Pacific for one of the west coast's largest Chinook salmon populations. It is home to the largest herring fishery south of British Columbia and our nation's last remaining urban commercial fishery. The Bay, it is believed, had been the largest nursery area for Dungeness crab along the entire Pacific Coast, and, before World War II, the site of a major oyster and shrimp fishery. It also provides spawning and/or nursery habitat for several species of sole.

But serious indicators of stress are evident, and action needs to be taken before our valuable heritage meets the critical magic numbers. Salmon migrating from the Delta to the Bay estuary are actually losing weight (and strength) in the estuary (instead of gaining weight as they should) before going to sea – a clear indicator of stress on the Bay ecosystem. Dungeness crab populations are at one-tenth the levels they were in the 1950's, as much of their nursery in the Bay has been destroyed. Only remnant populations of native oysters are still found in the Bay and the remaining oyster reefs may soon disappear. And, much of the herring spawn is lost on creosote pilings due to the lack of adequate amounts of eelgrass habitat.

The Bay is threatened on many fronts. Unless the major problems are confronted, this estuary, its fish and shellfish populations, and the livelihoods and communities of those dependent on its resources will be destroyed. NMFS has clear legal authority under the Magnuson-Stevens Act to protect essential fish habitat (EFH), which includes that utilized by salmon and groundfish in San Francisco Bay, and under the Endangered Species Act (ESA) to protect and recover listed fish stocks, including winter and spring-run Chinook salmon utilizing the San Francisco Bay estuary. The most significant and imminent threats to this estuary and its resources include:

1. An Increase in the Amount of Freshwater Diversions. Over half of the fresh water that historically flowed into San Francisco Bay is now diverted from upstream Sacramento/San Joaquin Rivers and tributaries. Despite unacceptable water quality/ quantity levels (1987 staff report, State Water Resources Control Board, of 1.6 million acre feet deficit of freshwater inflow to the estuary), various proposals from CALFED still substantially increase diversions to new reservoirs and storage facilities without serious consideration of other sources of water, such as desalinization of ocean water, that would mitigate impacts to the Bay ecosystem. Pacific herring, which use the Bay for spawning, are saline sensitive. Increased diversions will negatively impact their spawning, and the overall health and biological productivity of the estuary dependent on adequate mixing of freshwater with seawater. The so-called "environmental water" CALFED currently proposes for fish, wildlife and ecosystem fixes is more likely never to reach the Bay at all.

2. Proposed Expansion of San Francisco International Airport. Present plans at San Francisco International Airport will expand 1,000 to 1,400 acres of new fill in the Bay, the largest fill proposed since passage of the Petris-McAteer Act in 1965. The massive reconfiguration of the proposed fill would directly change flow patterns in the Bay, and impact wetland and Bay habitats, particularly eelgrass beds used by fish.

3. Port Dredging and Dredge Spoil Disposal. Current plans call for increased dredging at ports within San Francisco Bay (e.g., Port of Oakland), to accommodate the newest classes of container ships, tankers, cruise ships and military vessels. Proposed dredging includes areas of known contaminated sediments. Resuspension of contaminants into the water column, near fish habitat (e.g., eelgrass beds, oyster reefs), threatens degradation of critical or remnant habitats. And, despite the designation of a deepwater dredge disposal site under the Long Term Management Strategy (LTMS), the LTMS currently allows high levels of dredge spoil disposal in the Bay, also degrading fish habitats and water quality.

4. Increased Marine Traffic. Our concern regarding dredging and dredge spoil disposal rises with implementation of the national Marine Transportation System initiative (MTS), which pledges to double infrastructure for marine transportation at coastal and river ports. MTS will likely increase new dredging and select inexpensive locations for dredge spoil disposal, channel deepening, and pier construction within San Francisco Bay. Increased marine shipping traffic in itself raises the pressure of marine bioinvasions from ships and their ballast water, pollution from bilge water and spills, anchor and prop scour, noise and wave generation, and water circulation alterations. Additionally, wakes from increased vessel traffic wear on nearshore and shoreline habitats, affecting habitats of concern -- shallow subtidal, deep subtidal, eelgrass, mudflat, sand shoals, rock reefs and salt

marshes. Moreover, additional traffic and larger vessels will likely require removal of the Bay Rock Reefs near the entrance of San Francisco Bay, that have served as important habitat to various fish species.

5. Sand Mining. Sand mining operations are currently permitted for 1.5-2 million cubic yards of sand removal per year in San Francisco Bay. Sand mining businesses are currently applying for new permits for up to double the current volume. Much mining already occurs in essential fish habitat (EFH).

6. Bay Bridge Retrofit/Reconstruction. The East Span Bay Bridge Seismic Retrofit will damage or destroy five acres of eelgrass without plans for mitigation to replace valuable fishery habitat in-kind or on-site.

7. San Luis Drain. The San Luis Drain, designed to convey agricultural waste water with high levels of selenium and pesticide runoff from the west side of the San Joaquin Valley to a proposed discharge site in the Delta, is another threat. Under certain proposed scenarios, significant increases in contaminant levels may result. Selenium in high levels, in addition to being toxic to birds, can also be poisonous to fish.

8. New or Expanded Power Plant Construction/Operation Around Bay. The recent electricity shortage in the state has created a push for new or accelerated power plant construction and expansion in the Bay Area. San Francisco's Portrero Power Plant is currently seeking approval for a new unit requiring over 450 million gallons per day to be drawn from the Central Bay, heated to at least 20 degrees above ambient, and then returned to the Bay. The impingement, entrainment and thermal changes would adversely impact many species of fish and invertebrates, especially juvenile Dungeness crab. Four more power plants have been proposed for the Bay Area, possibly with different cooling systems, but still with potential to cause significant adverse impacts. In the Delta, several power plants are currently seeking expansion, with permits to discharge water at temperatures as high as 86 degrees F.

9. Ongoing Pollution. While the Clean Water Act has measurably improved our nation's waters, including San Francisco Bay, still our expanding population has caused municipal discharges and storm water runoff to grow. Now, there is a great need to focus on effective control of non-point source pollution. Cumulative sediment and chemical buildup from mining and the agricultural industries has seriously impaired water quality in the Delta, Central Valley tributaries and the Bay for several decades . The growth of organic farming and Integrated Pest Management (IPM) systems have not yet brought about the desired chemical reductions to the Delta and Bay.

10. Bioinvasions San Francisco Bay is one of the single most "invaded" waterways in the world, due to high foreign vessel traffic and introductions of non-native aquatic plants and animals from ship's ballast water. Increased survivorship of many invaders is likely due in part to the declining health of the estuary. A great deal of effort has been put into research on the invaders, and some measures have been enacted to prevent introduction through discharges of ship's ballast water. However, exclusion is really only the first step to an

effective pest management program. A strategic plan needs to be developed for early detection and control or eradication of unwanted invasive organisms.

We believe several different habitats in the Bay are at high risk: tidal wetlands, remnant oyster reefs and eelgrass beds. Eelgrass beds face the greatest threat. The last survey of eelgrass in the Bay, in 1989, delimited only 316 acres. Now we believe the total acreage is much less. The beds in San Francisco Bay are patchy compared to those found in other estuaries of Northern California, and appear stressed. Eelgrass in San Francisco Bay reproduces sexually (seeds) and cannot be effectively mitigated in the Bay through vegetative propagation. Eelgrass habitat can be regenerated only with careful habitat modification (either by dredging or fill to achieve an appropriate depth for eelgrass).

Like many marine plants, its narrow light requirement range limits its depth range (intertidal and shallow subtidal), and fluctuations in sediment turbidity can, within a short period of time seriously impair light penetration. Fine-grained sediments affect turbidity more than coarse-grained sediments. Dredging and disposal activities generate turbidity and redistribe fine-grained sediments to other areas of the Bay, thereby reducing light penetration and eelgrass growth. Contamination, which may result from disturbance of sediments by dredging or from source or non-point source pollution, is not well understood as a limiting factor for eelgrass in the Bay, but herbicides, copper and nickel present in the waters of the Bay adversely affect growth and production of eelgrass plants.

Because of the importance of San Francisco Bay and the magnitude and myriad of threats facing the estuary, PCFFA and IFR, on behalf of the working fishing men and women they represent, respectfully request a meeting with you and other National Marine Fisheries Service staff at the earliest possible date, preferably before the end of this month. We cannot wait.

NMFS clearly has the mandate and legal authority to act. The Magnuson-Stevens Act charges your agency with identifying and protecting essential fish habitat (EFH). NMFS (through the Pacific Fishery Management Council) has authority (Fishery Management Plans) over salmon and groundfish species that use habitat within San Francisco Bay. NMFS also is responsible for the protection and recovery of ESA-listed salmon stocks, including winter and spring-run Chinook salmon and steelhead trout, all which migrate though and use habitat within San Francisco Bay.

We would like to meet with you, your legal team and members of your staff working on San Francisco Bay issues, review NMFS documents pertaining to protections for the Bay and its fishery resources, and review NMFS plans and proposals for protecting the Bay. We also would like to obtain a list of all agencies, regional, state or federal, that NMFS partners with in efforts to protect the Bay or that share legal responsibility for certain aspects of Bay protection. It is not our intent to point fingers or assign blame. Looking forward, we want to know specifically what is being done, and understand what still needs to be done. Moreover, we want to contribute to the solutions. We, a non-governmental organization representing people dependent on Bay fishery resources, can and will assist NMFS and any of other agency in fulfilling the mission of protecting this great estuary.

We look forward to hearing from you soon. We'd be pleased to host the meeting here in our San Francisco offices, for convenience to your staff from across the state, as well as accommodate staff from agencies nearby in Sacramento or the Bay Area.

Sincerely,

P. Parravano

Pietro Parravano
President

cc: Mr. Robert Hight, Director, California Department of Fish & Game
Mr. Tom Hannigan, Director, California Department of Water Resources
Mr. Jeff Morales, Director, California Department of Transportation
Mr. Paul Thayer, Executive Director, California State Lands Commission
Mr. Wayne White, Acting Director, California Region, U.S. Fish & Wildlife Service
Mr. Kirk Rogers, Acting Director, Pacific Region, U.S. Bureau of Reclamation
Mr. Wayne Nastri, Region 9 Administrator, U.S. Environmental Protection Agency
Lt. Col. Timothy O'Rourke, San Francisco District, U.S. Army Corps of Engineers
Ms. Loretta Barsamian, San Francisco Bay Regional Water Quality Control Board
Mr. Will Travis, Executive Director, Bay Conservation & Development Commission
Dr. Donald McIsaac, Executive Director, Pacific Fishery Management Council
Mr. Robert Treanor, Executive Director, California Fish & Game Commission
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