

California State Coastal Commission  
631 Howard Street  
San Francisco, CA 94105

September 14, 1979

Attn: Tom Mikkleson

Public 707 944-2443

Appeal No. 227-79 (O. E. Griffin and Associates), Monetary Estimates  
for Anadromous Fisheries Value of Garcia River

Our best available estimates of value for the fisheries resources of the  
Garcia River are as follows:

1. Sport-Take - Silver Salmon

- a. River - In 1970 the effort expended by sport fishermen for  
silver salmon in the Garcia River was 600 angler days. Their  
monetary expenditure per angler day was \$20, so their total  
expenditure was \$12,000.
- b. Ocean - The total number of salmon caught by Mendocino County sport  
fisherman from rivers in 1970 was 3,800. If it is assumed that  
the catch in the Garcia River is directly related to effort, then  
230 salmon were caught by sport fishermen from the Garcia River.

Generally, for every one salmon caught in the river four are  
caught in the ocean so that the total ocean catch of salmon that  
originated from the Garcia River by sport fishermen was 920.  
About one angler day of effort is needed to catch a salmon in the  
ocean. At \$20 per day the total amount spent by sport fishermen  
to catch salmon in the ocean from the Garcia River was \$18,000.

The total amount of money spent by sport fishermen to catch  
salmon from the Garcia River in both the river and ocean in  
1970 was approximately \$30,400.

2. Sport-Take - Steelhead

In 1970 sport fishermen spent 2,200 angler days fishing for steelhead  
on the Garcia River (steelhead are not caught in the ocean). They  
spent \$22 per day so that their total monetary expenditure was  
\$48,400.

### 3. Commercial Take - Silver Salmon

About 85% of the salmon caught by fishermen, both sport and commercial, are taken by commercial fishermen. In 1970 sport fishermen caught 1,150 silver salmon that came from the Garcia River. This would mean that the contribution of silver salmon from the Garcia River to the commercial take was about 7,670 fish. These fish average 7 1/2 lbs dress weight and their value dockside is \$2.11 per pound. The total worth of silver salmon from the Garcia River to commercial fishermen in 1970 was around \$121,380.

The total dollar value of the anadromous fish from the Garcia River is roughly \$200,000 per year.

The remaining fish and wildlife resource values of the Garcia River/Hunters Lagoon are not so easily quantified and assigned a dollar value. Estimates as to the value of marsh acreage have been made by J. G. Gosselink, E. P. Odus and R. M. Pope for wetlands along the South Atlantic and Gulf Coasts. These estimates are based on marsh productivity as expressed in kcal/acre and on an energy/money conversion factor derived from our Gross National Product and National Energy Consumption. Their general finding was that an acre of marsh in 1973 was worth approximately \$4,150. Limited research on the productivity of wetland vegetation on the west coast suggests that this technique may be applicable to the marshes on the Mendocino County coast. The marshes of Brush Creek, Hunters Lagoon, and Garcia River total 111 acres and are assigned a dollar value by the above mentioned method of about \$461,000.

It has come to our attention that this information is needed by the State Coastal Commissioners to assess the adequacy of the bond required of the applicant to cover liability in the event of a major oil spill. In the event of such an occurrence the initial loss of aquatic life and water-associated birds would probably be quite heavy due to the physical and toxic effects of the crude oil. The amount of money set aside (viz., 5 million dollars) is undoubtedly sufficient to compensate local landowners for damage that may result and provide the men and equipment to cleanup and remove most contaminated soil and vegetation. Water-associated birds could suffer very heavy losses if the spill were to coincide with a migration period when they heavily utilize these wetlands. The loss of these and other fish and wildlife could not be compensated. Our major concerns would not be with vegetative habitat elements which could be replanted or regenerate in a relatively short time but, rather, with the potential long-term toxic effects of contaminated sediments on benthic aquatic environments. The state-of-the-art for oil spill cleanup is inadequate to address these problems and no amount of money will alleviate this situation.

In summation, no adequate method of deriving dollar values for fish and wildlife resources have been developed. The estimates given in this memo are based on assumptions and data which may not be directly applicable to this situation and in all probability grossly underestimate the values of the Garcia River/Hunters Lagoon wetland complex.

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JACK WHITE

E. V. Toffoli  
Regional Manager  
Region 3