

## 10.0 SOCIO-ECONOMIC RESOURCES

There are two resources addressed in this section: Mineral Resources consisting of Salt Production (Section 11.1) and Bay Shrimp harvest (Section 11.2).

### 10.1 Mineral Resources-Salt Production

#### 10.1.1 Affected Environment

Cargill Salt Corporation began consolidation of its salt production at its Newark facilities. This decision to consolidate operations provides an opportunity to restore the evaporative ponds and surrounding levy system as a wetland, open-space wildlife preserve.

For more than four years, state and federal agencies worked with Minneapolis based agribusiness Cargill, Incorporated to buy thousands of acres of land and saltmaking rights in San Francisco's South Bay and Napa. The property was available because Cargill planned to focus salt production on 11,000 acres near its Newark plant site. The agencies pursued acquisition because restoration of this land presents an historic opportunity to:

- Increase the Bay's tidal wetlands by nearly 50 percent;
- Preserve open space;
- Improve water quality;
- Act as natural flood control;
- Prevent shoreline erosion;
- Provide critical habitat for endangered species; and
- Create opportunities for public access and environmental research and education in one of the most urbanized regions in the country.

The following table provides the background changes in Cargill's employment and salt production. These factors are pre-existing conditions in the project area.

Table 10-1  
Employment and Production Changes Resulting from Consolidation of Cargill Salt Production

Factor	Before Consolidation	After Consolidation
Number of Employees	<ul style="list-style-type: none"><li>• 200 Full-Time Equivalent</li><li>• 40 Seasonal</li></ul>	No Change
Tons of Salt Produced	1.3 million tons/year capacity	650 thousand tons/year

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### 10.2 Commercial Harvest of Bay Shrimp

#### 10.2.1 Affected Environment

The commercial fishery for bay shrimp in San Francisco Bay began in the early 1860s. By 1871, Chinese immigrants established fishing camps along the shores of the bay and exported large quantities of dried shrimp meal (dried heads and shells) to China. At the height of the fishery in the 1890s, as many as 26 fishing camps operated up to 50 nets each in San Francisco Bay with daily landings of 400 to 8,000 pounds of shrimp, and annual landings exceeding five million pounds. Studies were required by the California Fish and Game Commission between 1897 and 1911 to address concerns that many

young fish, particularly striped bass, were killed in the shrimp nets. The results of these studies prompted a May to August season closure and a prohibition of Chinese shrimp nets in 1911. The legislature modified this decision in 1915 allowing Chinese shrimp nets to be used in south San Francisco Bay. About this time, beam trawl nets began to be used by commercial shrimp harvesters in northern San Francisco Bay and San Pablo Bay. Annual landings gradually increased over the next two decades and peaked at 3.4 million pounds in 1935. Following this period, landings steadily declined in response to a decline in demand for fresh and dried shrimp as food. By the early 1960s, average annual landings declined to 1,500 pounds, and in 1964 no shrimp were landed.

Since 1985, annual landings of bay shrimp have averaged 120,000 pounds and have ranged from 75,000 to 150,000 pounds. In 1999, 11 boats participated in the bay shrimp fishery; only three fished exclusively in south San Francisco Bay. However, the total weight of bay shrimp landed was almost twice as high in the south San Francisco Bay versus north San Francisco Bay due to higher catch per boat, and higher catch per hour trawled. Primary fishing locations are Alviso Slough and Redwood Creek in south San Francisco Bay. Fishing generally occurs in waters less than 20 feet deep in channels of the estuary's shallow reaches.

The absolute abundance of bay shrimp has not been estimated nor has the impact of commercial fishing on these populations. However, annual abundance indices of bay shrimp indicate that abundance can vary widely from year to year. Annual abundance indices of adult California and blacktail bay shrimp varied by more than a factor of 10 from 1980 to 1996. Studies indicate that the abundance of California bay shrimp increases with increased river inflow to the estuary, probably because of the increased low-salinity habitat which is favorable for the rearing of juveniles. In contrast, abundance of blacktail bay shrimp increased during years of low river inflow, although not to levels capable of replacing California bay shrimp in abundance.

The current lack of catch limits, closed seasons or restricted areas is based upon the assumption that limited demand for bay shrimp maintains effort at levels far below the level that would threaten long-term sustainability of the fishery. Data is not available to test this assumption. (DFG 2001)

In addition to the forgoing bay shrimp catches are impacted by the introduction since 1992 of the Asian Mitten Crab. Mitten crabs caught in large numbers in bay shrimp nets damage the shrimp catch. Mitten crabs are an invasive, migratory (into fresh water) species of crab that burrow into the shoreline between mean high and low tides. They have been known to burrow deep into levees and are cause for concern over the integrity of levees.

Current catch levels for bay shrimp will not be significantly affected by the proposed action in this Initial Stewardship Plan or the construction activities that will take place in initiating the proposed action at the start of the stewardship.

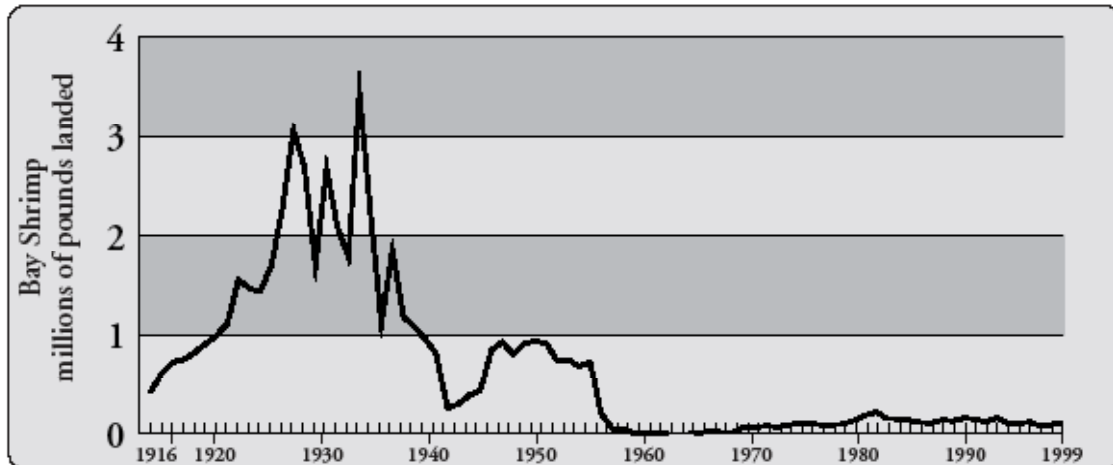


Figure 10-1  
 Commercial Landings 1916-1999, Bay Shrimp Data  
 Source: DFG Catch Bulletins, log books, and commercial landing receipts.

It is not known the extent to which increased salinity in outfalls from ponds will affect the migration of to fresh water or brackish water of juvenile Mitten Crabs, thus affecting the presence of Mitten Crabs in bay shrimp catches.

An evaluation was performed to determine if the altered salinity profiles in the sloughs during the Initial Stewardship Period would adversely impact the bay shrimp. The results of this evaluation indicate that salinity changes associated with the circulation are predicted to be relatively small and localized and are, therefore, not expected to adversely impact the long-term quality or quantity of habitat available to the bay shrimp. Any local decreases in habitat quality are predicted to be of short duration and limited to the first few months following the initial release of pond water. The evaluations upon which these conclusions are based are described in Section 6, and Appendix

### 10.3 Criteria for Determining Significance of Effects

As above: Social and economic effects are not considered significant effects under CEQA unless a chain of cause and effect can be established between the social or economic effect and an adverse effect on the physical environment. According to CEQA and the *CEQA Guidelines*, the following standards may be considered in determining whether the project would cause a significant socioeconomic impact:

- Would the project disrupt or adversely affect property of cultural significance to a community or ethnic or social group?
- Would the project induce substantial growth or concentration of population?
- Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?
- Would the project displace a large number of people?
- Would the project disrupt or divide the physical arrangement of an established community?
- Would the project conflict with established recreational, educational, religious, or scientific uses of the area?

- Would the project convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land?
- Would the project interfere with emergency response plans or emergency evacuation plans?

#### **10.4 Impacts and Mitigation Measures**

Employing the forgoing criteria it is determined that there are no significant environmental effects of the proposed project. This is true for the no project/no action option as well as the pond maintenance, the ISP and all measures and options under the ISP. All actions will provide benefit to the habitat and harvest of bay shrimp through the preservation of habitat and water flows through which the bay shrimp migrate.

Physical changes caused by the project are constrained to those construction elements designed to maintain the evaporative ponds as wetland, open space, and recreational use. Construction will be short-term and is considered to have no impact on the economic or social characteristics of the surrounding community and, subsequently, no impact on the environment as a result of changes in the socio-economic characteristics of the project area.

All elements of the alternative actions require coordination of operation and maintenance easements of utility services in the project areas. This coordination is not dissimilar from existing easement rights Cargill Salt maintains with utility providers. These utilities consist of power lines, a sewer connector line, and a rail line.

There are no mitigation measures proposed.

**Significance:**            Less than significant.