

4.10 MARINE TRAFFIC AND TRANSPORTATION

4.10.1 Impact Criteria and Methodology

Marine transportation resulting from the project have been compared to ongoing marine activity in the San Francisco Bay Area, including recreational, fishing, and commercial shipping traffic.

Marin County does not have established significance criteria for impacts to marine transportation. The project would result in a significant impact on marine transportation if its implementation would result in:

- Injury or death;
- Property damage;
- Spillage of oil;
- Displacement of vessels in local harbors; or
- Interference with recreational or commercial traffic sufficient to cause a delay of over one hour.

The number of barge trips per year is calculated in Table 4.10-1.

**Table 4.10-1
Dredging Volumes & Barge Activity**

Alternative	Wet Sediment Barge Loads	Years to Accomplish	Average Barge Trips per Year
Riparian Alternative	1,897	9	210
Estuarine Alternative	1,906	9	212

4.10.2 Riparian Alternative

Under this Alternative, there would be 1,420,700 cubic yards of wet sediment disposed by barge. Assuming that each barge holds approximately 3,000 cubic yards of sediment in a slurry of 1:3 ratio of sediment to water, this would require approximately 1,900 barge operations. Because it would take an estimated 9 years to accomplish dredging for this alternative, there would be an average of 210 barge trips per year. It is possible that barge traffic would vary from year to year, depending on which project elements are being excavated, but no more detailed scheduling information is available at this point.

Less than Significant Impacts***Impact on Commercial Navigation***

The additional number of tug barge operations represents an increase of approximately 0.98 percent over the existing number of annual tug/tow operations in and through San Francisco Bay (i.e., there were 21,478 tug/tow operations in 2000).

However, the dredging operation would likely occur in the period from July through October. During this period, there were 6,879 tug/tow operations in San Francisco Bay (US Coast Guard 2001) in 2000. The dredge operations associated with Bolinas Lagoon would represent an increase of approximately 3.0 percent during this period.

Annual operations have grown at approximately 3.4 percent per year between 1990 and 2000 in San Francisco Bay, which is slightly greater than the increase represented by the Bolinas Lagoon dredging operations.

The operations from the proposed dredging operation represent a minimal increase in the number of operations during this period and, thus, is likely to have little impact on commercial navigation.

Impact on Recreational and Commercial Boating

The impact on recreational and commercial boating is also minimal due to the small increase in the number of operations. In addition, dredging operations will occur 24 hours per day. Night operations will have no affect on recreational boating activities and most commercial fishing activity.

Since most recreational boating takes place on weekends (63% of all activity), scheduling maintenance during Saturday or Sunday could further mitigate any impact on recreational boating.

4.10.3 Estuarine Alternative

Impacts from the Estuarine Alternative would be approximately the same as those from the Riparian Alternative. There would be a minimal increase in barge traffic over the course of the project, which would still be less than the annual expected increase in regional traffic volumes.

4.10.4 No Action

There would be no marine transportation impacts from the No Action Alternative.