LTMS and DMMO: Meeting the Dual Demands of Dredging and Protecting the Environment in the San Francisco Bay Area

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by
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ABSTRACT

The San Francisco LTMS is in its second year of full implementation, following 10 years of planning and development. Notable successes have marked the course of the LTMS to date. For example, the "mudlock" of the 1980s was broken with completion of the decades-delayed Port of Oakland 42-foot deepening project. Lessons learned from this experience, especially regarding stakeholder involvement, were put to good use, allowing rapid (3 year) approval of the Port's 50-foot deepening project. A more recent challenge has been working with the resource agencies to weave necessary protections for the myriad of threatened and endangered species in the region into the LTMS Management Plan in a way that allows (and even streamlines) ongoing dredging. The result: new Environmental Work Windows that eliminate any need for project-specific Endangered Species Act consultation for many projects. Finally, the nationally recognized interagency Dredged Material Management Office (DMMO) has significantly streamlined additional aspects of the permitting process. Its ongoing success is a strong testament that working in partnership is more efficient and effective – at facilitating dredging projects and protecting the environment – than when agencies focus only on their own narrower responsibilities. This paper presents a brief background of the LTMS, and discusses the Bay Area's Environmental Work Windows, and the DMMO, as key components of the overall success of the LTMS.

BACKGROUND

The Long Term Management Strategy for Dredged Material Placement in the San Francisco Bay Region (LTMS) is a partnership of the federal and California state agencies that regulate dredging and dredged material disposal in the area. These agencies include Region 9 of the U.S. Environmental Protection Agency (EPA), the San Francisco District of the U.S. Army Corps of Engineers (USACE), the San Francisco Bay Conservation and Development Commission (BCDC), the San Francisco Bay Regional Water Quality Control Board (RWQCB), and the State Lands Commission (SLC). By 1990, these agencies recognized a need to join together to comprehensively address the growing controversy surrounding dredging and disposal in the San Francisco Bay and Estuary, including at one point a physical blockade of the primary in-Bay disposal site by fishing boats and other small vessels. The agencies adopted a new approach recommended by Francinques and Mathis (1990) to tackle the job, and the LTMS planning effort began.

The overall goals of the LTMS, adopted in 1991, were to:

- Maintain in an economically and environmentally sound manner those channels necessary for navigation in San Francisco Bay and Estuary, and eliminate unnecessary dredging activities in the Bay and Estuary
- Conduct dredged material disposal in the most environmentally sound manner
- Maximize the use of dredged material as a resource
- Establish a cooperative permitting framework for dredging and dredged material disposal applications

The agencies then set about preparing a "Policy EIS/Programmatic EIR" to evaluate how to best go about meeting those overall goals. From the beginning, the EIS/EIR development process involved extensive coordination with stakeholder groups (the dredging and related maritime industries, fishing organizations, and environmental interests), each of which had a different – and strongly held – view of how dredging and disposal in the region should be handled.

Ultimately, the EIS/EIR (LTMS, 1998) selected what has come to be known as the "40/40/20 Plan" as the long term approach that, when implemented to the maximum extent practicable, would best balance all the competing views. This approach, which was also identified as the environmentally preferred alternative in the EIS/EIR, calls for a shift from the historic practice of disposing 80 percent or more of all dredged material in the Bay, to long term targets of 40 percent beneficial re-use and 40 percent ocean disposal, with only 20 percent of dredged material continuing to be disposed in the Bay.

This long-term vision did not fully satisfy any of the stakeholder groups. Ocean advocates wanted more beneficial re-use. Fishermen and Bay advocates wanted a faster transition from in-Bay disposal. Advocates for seasonal wetlands were concerned that restoration of tidal wetlands using dredged material would damage existing wetlands. And dredgers, of course, feared that the costs of both ocean disposal and beneficial re-use would be too high. But overall, the evaluation showed that the "40/40/20" targets represented the most beneficial re-use, and the least in-Bay disposal, that might reasonably be practicable for the region without necessarily causing other significant (offsetting) environmental impacts.

In any event, the agencies recognized that these targets were not achievable immediately, and would not become so until regional beneficial re-use sites could come on-line. Therefore the LTMS Management Plan (LTMS, 2001), which supplemented the Policy EIS/Programmatic EIR with specific implementation measures, included a multi-year "Transition Period" to allow time for re-use sites to be developed, and for dredging project proponents to plan for a new way of doing business. Maximum allowable in-Bay disposal volumes were initially cut by more than one-half; thereafter, the disposal volume target would be further reduced every three years (Figure 1). In response to stakeholder input, the LTMS agencies agreed to allow the dredging community to try meeting the transition targets voluntarily. If they are unsuccessful, the agencies will step in and institute firm regulatory limits. The DMMO is tasked with tracking and managing the targets. The first stage in the transition officially began in 2001, and so far the in-Bay target has not been exceeded.

SOME KEYS TO THE SUCCESS OF LTMS

The San Francisco LTMS is now in its second year of full implementation. Notable successes have marked the course of the LTMS to date. Among them: breaking the "mudlock" of the 1980s with completion of the decades-delayed Port of Oakland 42-foot deepening project, followed by rapid (3 year) approval of their 50-foot deepening project; designation of the environmentally superior Deep Ocean Disposal Site, which has already resulted in over 8 mcy being diverted from in-Bay disposal; restoration of hundreds of acres of tidal wetlands through beneficial re-use of over 2.5 mcy of dredged material, with sites for approximately 3,000 more acres (25 mcy) authorized and now in development; establishment of Environmental Work Windows that eliminate any need for project-specific Endangered Species Act consultation for many projects; and creation of the nationally-recognized interagency Dredged Material Management Office (DMMO), which has significantly streamlined the permitting process.

All of these successes have been facilitated by partnerships, both formal and informal. The LTMS itself is a formal partnership, functioning as the Regional Dredging Team for the area (NDT, 1998). The DMMO is another formal partnership, formed via a Memorandum of Understanding among the LTMS agencies (LTMS, 1996; rev. 1998). However, the resource agencies responsible for Endangered Species Act reviews - National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Game (CDFG) - are not official members of the LTMS. A key challenge has been to find a way to coordinate with these agencies in a way that complements, as opposed to undermines, the streamlining LTMS has worked so hard to develop. This was achieved via "programmatic" Section 7 consultation, which resulted in new Environmental Work Windows for dredging projects in the region. The following sections discuss the Environmental Work Windows, and the DMMO, as critical components of LTMS's ongoing success.

THE LTMS ENVIRONMENTAL WORK WINDOWS

San Francisco Bay/Estuary is the largest estuarine system on the west coast of the continental United States. It has been severely affected by habitat loss, fresh water diversion, and pollution (SFEP, 1993). It is therefore not surprising that it is home to a large number of threatened and endangered fish and wildlife species. At least some of these species are present, at varying locations in the system, any time during the year. Although routine navigation dredging and dredged material disposal are not thought to be among the major causes for so many species being in stress in San Francisco Bay, dredging projects must nonetheless generally avoid further impacts to them. This means consultation with the relevant resource agency.

However, the resource agencies do not have sufficient staff to consult in a timely manner on the dozens of dredging projects proposed each year in the region. Therefore LTMS engaged in "programmatic" formal consultation with them, as part of the EIS/EIR and Management Plan development processes. Consultation identified times and locations where sensitive species would generally not be present, such that work could proceed without the need for further project-specific consultation. The Environmental Work Windows are the green areas shown in Figures 2 and 3.

Two key aspects of the Environmental Work Windows are important to emphasize. First, there are different windows for disposal operations and for dredging operations. Of course, any project involves both operations. However, there are very real differences in risk of impact between disposal of clean material at established sites in the center of the Bay, versus work that may include disturbing contaminated sediments in and near shallow water habitats around the Bay margins. Separating the sets of windows allowed the agencies to focus attention on where impacts are most likely to occur. It also allowed an overall workable program to be included in the LTMS Management Plan. It is important that the established disposal sites be available at whatever time an individual dredging operation is allowed, based on its own particular dredging windows, to proceed.

Second, if a project cannot be conducted during the established work windows, this does not mean the project is simply prohibited. Rather, it means that project-specific consultation must occur, so that project-specific avoidance and/or mitigation measures can be developed. Project-specific consultation is required at times and locations shown in yellow on figures 2 and 3. Figure 4 depicts the basic process that must be followed for projects that must do work in these "yellow zones."

Many projects are able to meet the Environmental Work Windows without too much difficulty. For example, six of the eight maintenance dredging projects planned by the USACE for 2002 will occur within the windows, thus avoiding additional consultation. The other two maintenance dredging projects were approved for operation outside the windows, with only minor mitigation requirements, following consultation. However, greater difficulty may be experienced on some small private dredging projects, many of which occur in shallower water and nearer resources of concern. Also, one of the concerns being raised by applicants now is that dredge equipment availability is becoming more of a problem. If nothing else, more projects may have to consult if equipment is busy elsewhere during their window.

Still, the consultation process itself need not be too onerous. The programmatic windows are based primarily on avoidance. It is recognized that in some cases, depending on the mechanism of potential impact, technological or operational measures may be as satisfactory as windows alone at avoiding "take." Presently, such measures must be determined via consultation. But the NMFS, in particular, has made staff available to consult and has been willing to consider project-specific circumstances, or alternate ways to minimize impacts. The LTMS also recently formed a stakeholder's working group to look more closely into whether such alternate measures could allow the windows themselves to be modified in the future. Another approach, "batching" consultations, also promises to help make the consultation process go more smoothly. One dredging company recently brought about a dozen small projects forward for consultation at the same time. This allowed NMFS to evaluate all the company's work for the year at one time, and minimize the cumulative impacts of its multiple projects by identifying which areas and times were relatively more important to avoid than others. The LTMS agencies believe that other sets of projects can be "batched" as well, both streamlining this aspect of the permitting process and benefiting the environment.

The development of comprehensive Environmental Work Windows has been a major step forward for the San Francisco region. The windows protect sensitive species from impacts, and yet

substantially cut down on the workload (for agencies and applicants alike) that would otherwise attend consulting on virtually all Bay area projects. For projects that can meet the windows, no consultation is required at all; thus the windows provide an additional incentive for applicants to plan their projects in a way that minimizes impact. For others with legitimate difficulties meeting the windows, informal consultation may be sufficient and should not necessarily be feared.

THE DMMO

Even while the broader LTMS program was in its early planning stages, the agencies were able to address one of its overall goals by forming the interagency Dredged Material Management Office (DMMO) in 1995. Modeled in part after the successful Dredged Material Management Program in the Pacific Northwest, the San Francisco DMMO brought together the key regulators to "establish a cooperative permitting framework" for area dredging projects. Since then, the DMMO has done more to streamline the dredging application and permitting process than perhaps anywhere else in the nation.

Through DMMO the agencies implemented two key measures, which although outwardly simple have proven crucial to both real streamlining and to ongoing active participation of our maritime industry partners in the larger LTMS efforts. These measures are the "one-stop" permit application form, and regular pre-application meetings. The realization of these measures was greatly facilitated by input from stakeholders, especially the dredging-related industries.

The single application form used by projects coming before DMMO today is accepted by all of the DMMO agencies – federal and state – for their separate permitting processes. Although the form itself was, effectively, produced by combining in one place all the substantive requirements of the agencies' separate forms, its value goes far beyond simply saving the applicant some ink. First, all the agencies must deem the overall application "complete" before DMMO will begin reviewing it. A consensus that there is sufficient information for all agencies to begin evaluating the proposal increases predictability for the applicant (there should be little chance for "surprises" later). Second, the agencies' separate permit processing "clocks" (some of which are set rigidly by law) are aligned, based on when the application is deemed complete. All agencies therefore consider essentially the same project at the same time, again increasing predictability for the applicant. This also saves time, for everyone, by reducing both "serial re-evaluation" (where changes negotiated with one agency at the last minute necessitate revisiting the approval process with other agencies that have already acted) and "divide and conquer" strategies attempted by some applicants.

The simple commitment to have all the key agencies meet regularly to jointly review projects' sampling proposals and sediment test reports has also had multiple benefits. In their agreement forming the DMMO, the agencies established a set of specific operating principles; but perhaps of more importance, they also committed the staff to participate in the ongoing work and agreed that meetings generally would not proceed if all necessary agencies were not present. Applicants had consistently pushed for regular pre-application meetings at a minimum, even if no other streamlining progress could be made quickly, and an "enforced partnership" helped to assure them that initial good intentions would not backslide to the uncoordinated situation of the past. Although at first fearful to commit resources to "another set of meetings", the agencies have found that overall staff time spent on reviewing dredging projects often decreased. This is because the

USACE staff serves as the single point of contact for all applicants, allowing other agency staff to receive fewer direct inquiries throughout the process. In addition, the USACE staff sets meeting agendas in advance so that time need not be wasted reviewing documents for projects that are not yet ready to be considered. Also, the DMMO meetings themselves are open to applicants and the public. This is especially beneficial to applicants, who can discuss their proposal with all the regulatory agencies at once, again increasing predictability by reducing the likelihood of "surprises" later on.

Since its inception, DMMO has reviewed nearly 400 projects and made disposal suitability determinations on several million cubic yards of dredged material (DMMO, 2000; 2001; and 2002). The application process has been substantially streamlined, without any erosion of environmental protection standards. But success may also be measured by how internal and external partners view the office. Since the process is more open, the old public mistrust about how disposal decisions are made rarely surfaces. In fact, applicants sometimes ask to have their non-dredging projects handled under DMMO, because of its perceived credibility and relative efficiency. The agencies themselves are also tasking DMMO to do more and more, including data tracking, coordination of monitoring activities, and alternatives analysis. The DMMO is, in a very real sense, the day-to-day implementation arm of larger LTMS. As such, it will remain a key formal partnership for the San Francisco area, and a key means of coordination with our other regional stakeholders.

CONCLUSION

As noted, the LTMS has had a number of successes to date. As the program continues to develop, new challenges will undoubtedly arise. Some of the challenges being faced today include: availability of the resource agencies (particularly USFWS) for timely consultations; financing to support additional regional beneficial re-use opportunities; the flat or diminishing USACE budget for maintenance dredging, which may complicate LTMS's ability to continue meeting the in-Bay disposal volume targets in the long term; and policy issues associated with the proposed expansion of San Francisco International Airport (potentially over 100 million cy of combined dredging and filling in the Bay). For meeting these and future challenges, it is to be hoped that the LTMS agencies, the resource agencies, and our stakeholders in the dredging industry, the environmental groups, and the fishing community, all keep in mind this key lesson from the last several years: working together, as hard as it may be, is still easier, more effective, and more efficient at both facilitating dredging and protecting and enhancing environmental quality, than working against each other from polarized positions.

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Figure 1. Decreasing annual in-Bay dredged material disposal volume targets over time, during the LTMS "Transition Period." Implementation began in 2001, with an initial overall annual limit of approximately 3 million cy - less than half the pre-LTMS limits of 6.5 to 7.5 million cy per year. Every three years the annual limit will decrease further, until the final limit of about 1.5 million cy is reached. This approach is currently being implemented voluntarily by the dredgers. However, if they are unable to met the targets on average during any three-year period, the LTMS agencies will institute firm regulatory limits, and possibly project-specific disposal allocations.

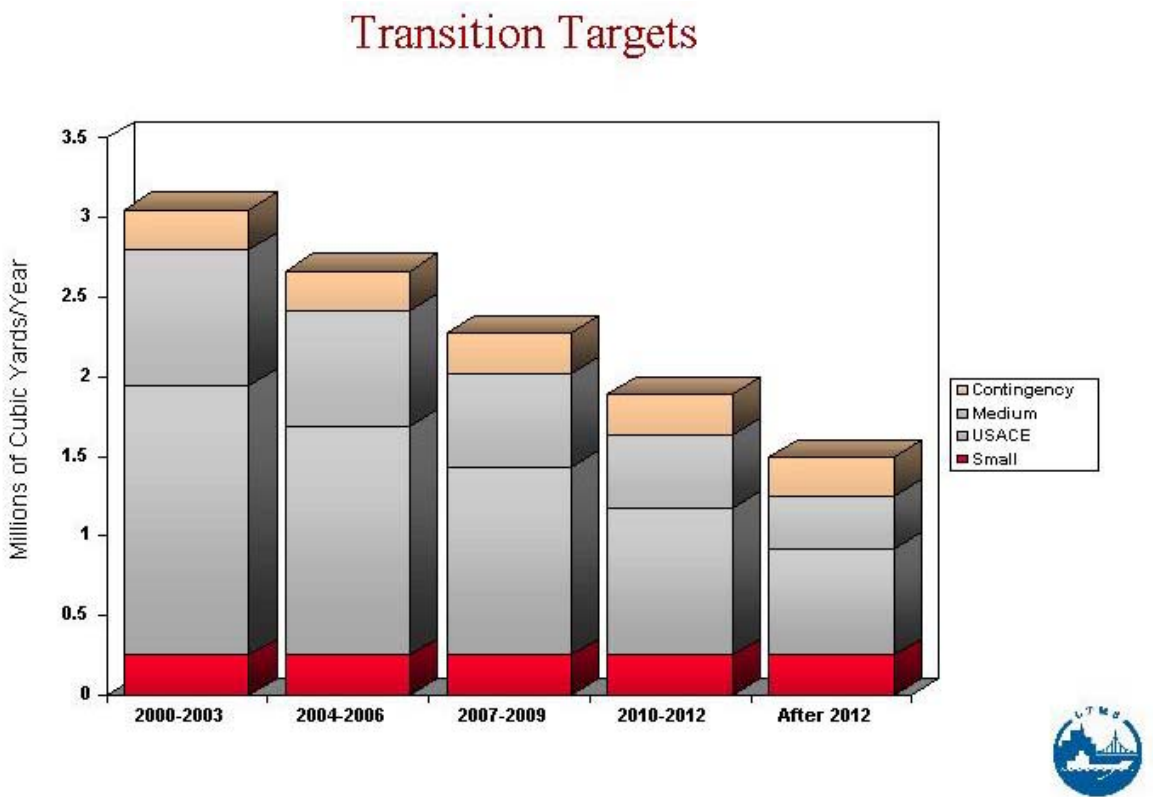

Figure 2. Environmental Work Windows for *DISPOSAL* operations in the San Francisco Bay region. Note that use of the established multi-user in-Bay disposal sites (SF-9, SF-10, and SF-11) does not require consultation at any time of year. Use of other disposal locations, including any proposed upland or wetland beneficial re-use sites, would require consultation. Compare to the *DREDGING* restrictions shown in Figure 3. (From LTMS, 2001.)

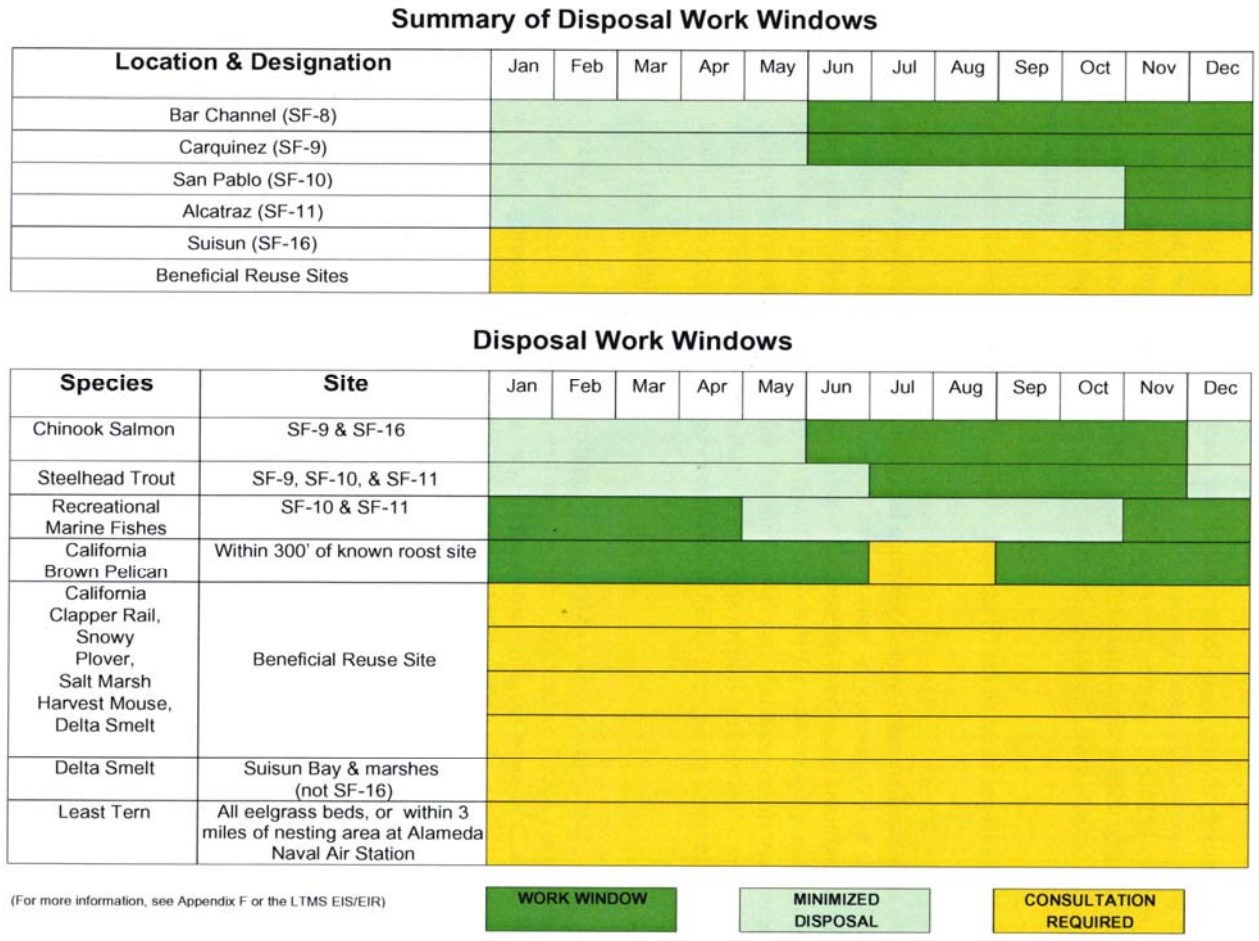

Figure 3. Environmental Work Windows for *DREDGING* operations in the San Francisco Bay region. Dredging generally has more potential for impact to special status species, especially when it occurs near shallow water habitats, than does disposal at the established sites in the middle of the Bay. Compare to the *DISPOSAL* restrictions shown in Figure 2. (From LTMS, 2001.)

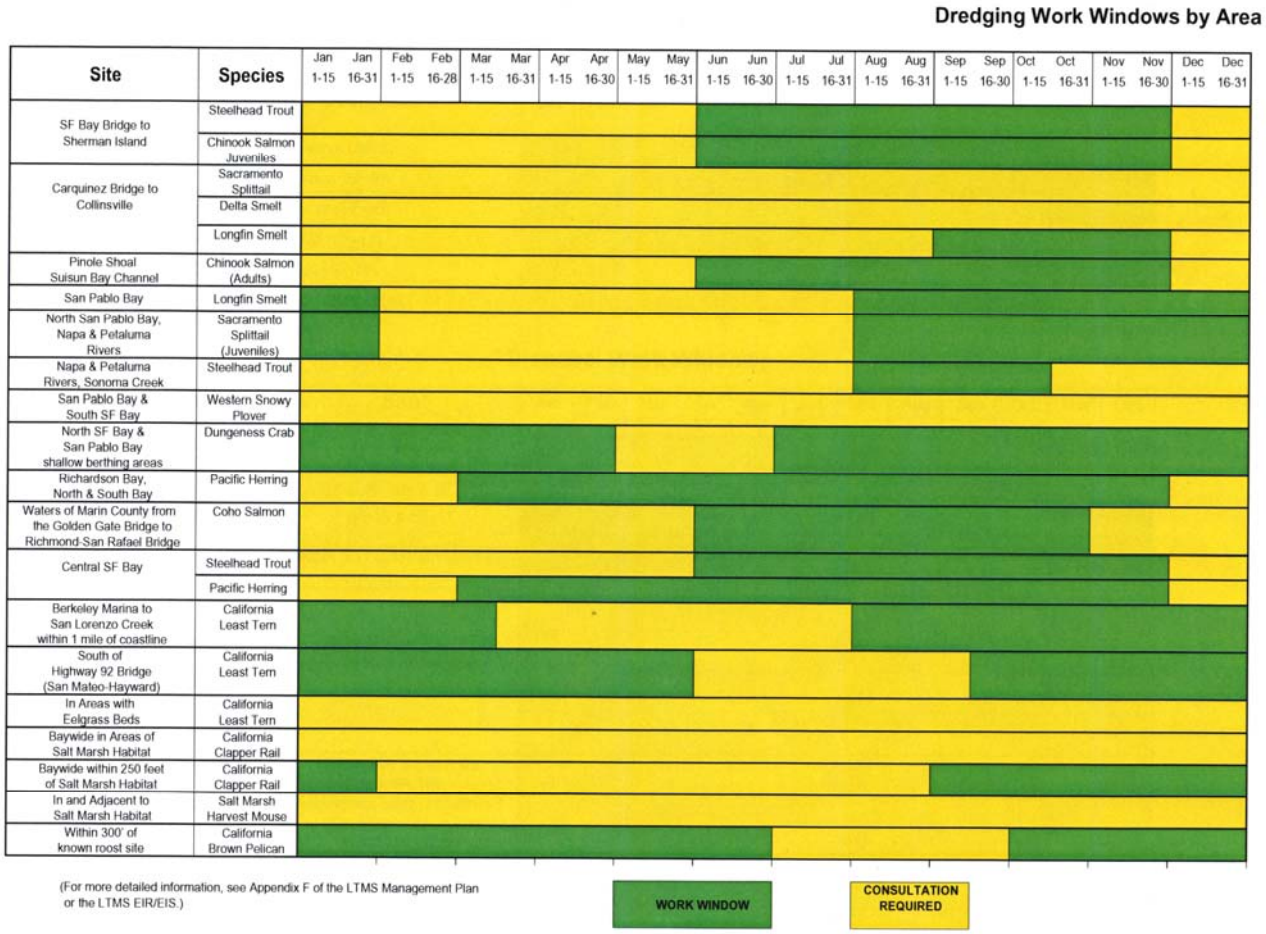

Figure 4. Flowchart of the Section 7 consultation process followed when a project in the San Francisco region cannot be done within the established Environmental Work Windows. Informal (versus formal) consultation, and "batch" consultation of multiple projects at once, can save significant time for project proponents.