San Francisco Bay Area Seaport Plan: A Study of Its Development and Implementation

DENNIS R. FAY

ABSTRACT

The purpose of this paper is to describe the process by which the San Francisco Bay Area Seaport Plan was developed, to compare it with other regional port plans, and to evaluate recent and impending implementation actions. The plan was prepared to serve the needs of the Metropolitan Transportation Commission; the Bay Conservation and Development Commission (BCDC), which is responsible for managing the development of the bay and its shoreline; and the Bay Area ports. The basic goal of the plan is to help resolve the inherent conflict between port development and maintenance of environmental quality. Policies were developed to achieve this goal and are the means by which the plan is implemented. Development of the plan required both a technical studies phase and a policy formulation phase, which collectively spanned an 8-year period. The policies are the result of extensive deliberation by a divergent group of opposing interests. This plan has several elements common to other regional port plans, including federal participation, which proved to be important and the first instance of cooperation in facilities planning among traditional adversaries. Unlike other regional port plans, however, it has a reasonable chance of being implemented, because BCDC uses the plan policies as its detailed criteria for judging permit applications. Since the plan was completed in 1982, several port development proposals have been or are about to be considered. These proposals demonstrate that the basic plan precepts can be implemented.

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SETTING AND BACKGROUND

The bay region's nine counties include some 7,000 miles² (18,000 km²) of land inhabited by 5.2 million people. The major topographical features of the region are San Francisco Bay and the hills and valleys surrounding the bay. Because a majority of the land is occupied by hills, transportation facilities have been concentrated in the narrow plain around the bay and in the adjacent valleys. The largest and most important single feature of the region is San Francisco Bay, covering almost 435 miles² (1,130 km²) and affecting climate, land use, and transportation.
FIGURE 1 San Francisco Bay Area ports (1).

FIGURE 2 San Francisco Bay deepwater channels (1).
The San Francisco Bay Plan, BCDC's comprehensive plan for the bay, identifies ports as one of the important water-oriented uses in the region and calls for a regional port development plan. BCDC's concern with the bay and the development of its shoreline is largely one of environmental protection and can best be expressed by the following statement from the Bay Plan (p.1):

"The Bay must be protected from needless and gradual destruction. The Bay should no longer be treated as ordinary real estate, available to be filled with sand or dirt to create new land. Rather, the Bay should be regarded as the most valuable natural asset of the entire Bay region, a body of water that benefits not only the residents of the Bay Area but of all California and indeed the nation."

BCDC will use the Seaport Plan to review permit applications from port developers, to review federal actions affecting the bay, and to review environmental documents.

To assist with the development and implementation of the Seaport Plan, MTC and BCDC formed the Seaport Planning Advisory Committee, composed of 17 members representing government, the ports, and development and environmental interest groups. Many of the committee members are policymakers for their respective organizations. In fact, the work of the committee is viewed as a major importance to BCDC that its chairman serves on the committee. In addition, each port has generally appointed either its port director or a port commissioner. The committee met over a period of 8 years and completed the plan in May 1982. The Seaport Plan, with some revisions, was adopted by the MTC and BCDC in the fall of 1982.

**PLAN DEVELOPMENT**

The plan development process took approximately 8 years, in part because of the level of funding available for technical studies, in part because of the need to achieve a consensus among diverse interest groups, and in part because there was no previous plan to start from. At the beginning of the planning project, the ports were resistant to the idea of a regional port plan and of regional agencies "interfering" in their affairs. By the end of the project, the port community as a group had endorsed the Seaport Plan and all but one of the six Bay Area ports had voted in favor of the plan. Even the one port that voted against the plan concurred with 99 percent of the document, but voted no because of one provision affecting its lands. Of the 15 members of the committee present and voting on plan adoption, there was only one negative vote and some dissent on individual provisions. When the plan came to a vote before MTC and BCDC, it was unanimously adopted by both commissions.

Many factors influenced this outcome of virtual unanimity on the plan:

- Technical studies that sought to answer the questions brought to the process by the various participants;
- A strong commitment at both MTC and BCDC to the development of a regional port development plan;
- A mechanism to enforce the plan through BCDC's permit authority;
- The ports' desire to protect themselves through the planning process;
- The involvement of the environmental community and the influence of time, including the changes that it brings.

The technical studies consumed a majority of the 8-year period of plan development (3). These studies were intended to answer the following key questions:

- What is the projected growth in waterborne cargo for the San Francisco Bay Area?
- How many new marine terminals will be required to serve the projected cargo?
- Where can the new marine terminals be located?
- What improvements are necessary to the channels, roads, and rails?
- What are the impacts and costs of the required new facilities?
- What methods exist to mitigate the adverse impacts of marine terminal development?

Beyond these questions, other concerns arose as the process proceeded. One such question was voiced by the ports: Why do our statistics show a greater growth rate of containerized cargo than those derived from U.S. Army Corps of Engineers' data? This question was answered during the development of the waterborne cargo forecasts (4). The answer lay in the units used to compile the statistics—revenue tons by the ports and short tons by the Corps. This may appear to be a minor matter, but it did uncover an important factor that needed to be accounted for in developing estimates of demand for new container terminals. This factor was quantified and included in the computations. Although it is only speculation, it seems probable that the result was to increase the ports' acceptance of the demand estimates used in the plan. In fact, the process of developing the forecasts on which these estimates are based is a good example of the approach to the technical studies. The stated goal of the forecasting effort was to strive for a consensus among the affected parties.

The commitment at MTC and BCDC to the development of the plan was also a significant factor affecting the outcome. The commitment took the form of financial support, persistence, a desire to develop a plan that was acceptable to the participants of the process, and a clear focus on the goal of the plan. During the first several years of the study these factors were particularly important. Initially, the Bay Area ports clung to the idea that MTC and BCDC would abandon the study effort if they gave limited support and proceeded with their own studies. As explained later in this paper, the ports conducted studies in the late 1970s, but these studies did not alter the direction or level of effort of the MTC-BCDC studies, primarily because the port studies did not deal with the issue of the trade-off between port development and environmental protection. The persistent focus on this primary goal continued to drive the MTC-BCDC studies. Gradually, the ports began to realize that MTC and BCDC fully intended to develop a port plan. At the moment when this realization was ripe, the U.S. Maritime Administration agreed to participate in the funding of the MTC-BCDC project, after years of funding studies by the Bay Area ports. This was one of three significant turning points in the development of the plan. The ports began taking the planning process much more seriously following this event.
No plan has much meaning if it cannot be implemented. BCDC's permit authority over shoreline development gives the Seaport Plan this ingredient and provided an important incentive for the participants to take the planning process seriously. The importance of this incentive was particularly evident when the Seaport Planning Advisory Committee spent several months midway through the process preparing a short paper that would define the nature of the upcoming plan and its uses. The critical importance of the permit process was clear in the detailed questions posed during the development of this paper. Considerable discussion centered on how BCDC would exercise its permit authority and how this would affect future port development. Although MTC has a significant authority over transportation funding, this authority does not directly affect terminal development as does BCDC's authority. The completion of this paper was the second significant turning point in the planning project. The ports came to fully understand exactly what assurances BCDC expected from the Seaport Plan. Many concerns only vaguely referred to previously were now on the table. The ports did not agree with all the proposals, but the paper passed a vote of the committee and became the general policy format for the plan. The ports began to focus their attention on the parts of the technical studies they now knew would affect them most. This early introduction of the general plan policies also allowed the ports an extended period of time to fully understand them and to see the advantage of certain policies as well as the initially perceived disadvantages.

The desire of the Bay Area ports to protect themselves through the planning process also aided in attaining a successful outcome. The ports, of course, had the incentive of BCDC's permit authority; but they could have opted to seek a legislative remedy. At the beginning, they were naturally suspicious of the two regional agencies' intentions, but these suspicions appear to have faded with time. Their continued involvement was important and, whatever their motives, is to the port community's credit.

An essential purpose of the Seaport Plan is to strike a balance between port development and environmental protection. One of the most critical factors affecting San Francisco Bay is fill, and ports require fill for virtually all types of marine terminal development. The environmental activist group, Save San Francisco Bay Association, expressed its concerns bay filling, retention of water surface area and volume, and the overall effects of channel dredging. This association was represented on the Seaport Planning Advisory Committee, and provided an important balance in the deliberations.

Time brought several beneficial changes to the process. The committee's ability to work together improved as the years progressed. Time also introduced several new port managers who were more sympathetic to regional cooperation. In this context, it seems probable that a higher level of funding, perhaps in a spiraling process, might actually have resulted in an inferior outcome. The third significant turning point began with a change of management at the port of Oakland. In the late 1970s the then executive director of BCDC resigned and was quickly offered the position of chief engineer at the port of Oakland. He deliberately distanced himself from the regional port planning process for several years, although he firmly believed in regional cooperation and had, as executive director of BCDC, been the first to call for a regional port plan. When the serious negotiations on the plan began in early 1982, he once again became active in the process and helped to a very considerable degree in bringing the negotiations to a successful completion.

KEY PROVISIONS OF THE PLAN

The Seaport Plan focuses on marine terminals but also contains findings and policies covering both deepwater channels and ground access. The various provisions of the plan are intended:

• To encourage cooperation among the Bay Area ports with regard to their development,
• To foster cooperation between the ports and their parent cities,
• To provide increased predictability to the ports with regard to BCDC permits,
• To steer port development to those sites with the least potential for adverse environmental impacts while still providing reasonable terminal development,
• To decrease the pressures for bay fill resulting from actions by the ports and their parent cities,
• To provide a regional context for evaluating the environmental impacts of individual port projects, and
• To provide a clear statement of the actions that will be taken by BCDC and MTC in implementing the plan.

Although there are policies covering a range of issues, the Seaport Plan has two key provisions: (a) only needed development should proceed, and (b) terminals should be located at the sites considered to be the best by the plan and these sites should be protected for marine terminal use.

The first of these key provisions is in direct response to the concerns of the environmental community, BCDC, and others that terminals were being built more out of fear than after careful thought, and that these terminals represented unnecessary environmental damage and wasted public investment in facilities. These concerns, however, represent only part of the complex equation. The plan also recognizes that increased waterborne trade is an important economic benefit to the Bay Area. Although this point might be argued by some, the Seaport Planning Advisory Committee found ample backup in BCDC's Bay Plan and the history of Bay Area development to support this contention. To balance these two concerns, the committee agreed to measure the need for new terminals by using mutually acceptable forecasts, and the concerned parties agreed to abide by the decisions made using them with regard to BCDC permits.

The need criterion, however, provides only part of the assurance desired by BCDC and the environmental community. The ports of the Bay Area still compete with each other and with other West Coast ports for cargo and the ocean carriers that transport this cargo. This competition is generally in the public interest because it helps keep shipping costs down, may generate new shipping business, and keeps the Bay Area ports sensitive to changes in shipping technology and the needs of the shipper. Nevertheless, such competition may have undesirable side effects. Terminals may still be permitted and constructed and go unused or be underused, which in turn may result in unnecessary expenditure of public funds and unnecessary bay fill. Recognizing this problem, the Seaport Plan...
The second key provision has two parts. The first is to steer port development to the best sites. The result of the extensive site-screening process was a list of sites that are considered the best. The plan calls for these sites to first be used before any other sites, including the second-rated sites, are considered. It does, however, provide for reconsideration of other sites if it can be shown that development at some other location can occur with impacts equal to or less than those of the selected sites. The plan also requires a thorough review of the alternatives once all the best sites are used. This provision is important because it implies that development does not automatically move to the second-rated sites whenever all the best ones are used; other alternatives may be preferable for accommodating future cargo.

The plan also provides that the sites chosen for marine terminal development be protected for that use (Figure 3). To this end, the Seaport Plan recognizes that these sites cannot be fully protected without the cooperation of the ports and local government, and calls on local government and the ports to protect the sites. This is particularly important because there are many competing uses for the bay shoreline and because the alternatives are vastly increased amounts of bay fill at other sites or potential loss of Bay Area cargo to other Pacific Coast ports. With the increasing need of local government for revenue sources, the temptation to seek the quickest, highest tax revenue from valuable waterfront lands will increase. This will increase the pressure to put property to other uses than marine terminals, which provide a longer-term benefit to the local and regional economy. Protecting port lands will probably be one of the most important and troublesome issues in implementing the plan.

COMPARISON WITH OTHER REGIONAL PORT PLANNING STUDIES

There have been 16 regional port planning studies (Table 1) throughout the United States in the last 10 years (5). These studies vary with regard to geographic area, sponsor, funding, study scope and process, and implementation. From a process and policy perspective, the most interesting comparisons with the San Francisco Bay Area Seaport Plan center on federal involvement, study process, and implementation.

A common element to all regional port studies, including the San Francisco Bay Area Seaport Plan, has been funding and management involvement by the U.S. Maritime Administration (MARAD). MARAD involvement has been an ingredient of these studies, not because federal regulations require such studies but because ports and local governments have requested federal financial support. This federal involvement has helped develop consistency in planning techniques, such as forecasting and capacity estimating, and has provided MARAD with inventory data that it can use to fulfill its national defense preparedness responsibilities. Consistency in forecasting is particularly important. Regions often compete for the same cargo, and regional waterborne cargo forecasts typically make liberal assumptions about the capture rates for a region. Thus, these individual regional forecasts, if summed, would add to cargo flows much greater than U.S. trade as a whole could justify. MARAD involvement helps to bring this consideration to the attention of the planners and to some extent reduce the chances that unrealizable forecasts will be prepared. Inflated forecasts can result in wasted investment of public funds in marine terminals and infrastructure, and unnecessary environmental damage. Unfortunately, cutbacks in MARAD research and development funds have eliminated federal funding participation in regional port planning studies. Important local and national benefits are derived from federal involvement in these studies, and it is hoped that federal interest will be renewed. In fact, no regional port planning studies have been initiated recently. It is not clear whether the lack of federal participation is a factor or not.

Although the details of the planning process vary from study to study, there is a common aspect to the process in many cases. These regional planning endeavors have been "the first time that normally adversary groups have communicated for a common goal" (5,p.339). Taken as a broad statement about all port activities, this is not precisely accurate. Ports have actively cooperated with each other in setting and enforcing tariffs and promoting navigation projects. Nevertheless, before the regional planning studies, ports had never cooperated with regard to planning their terminal facilities because they compete with one another.

In the San Francisco Bay Area, the ports began working together when MTC and BCDC initiated port planning in the early 1970s. Even though the Bay Area ports were all represented on the committee formed to provide guidance to MTC and BCDC, they revived a dormant port organization and started cooperative planning in defense against the regional agencies interfering in their affairs. In fact, they completed a study in 1976 (see Table 1). This study, however, did not satisfy the requirements of the laws and policies under which MTC and BCDC were pursuing regional port planning. The regional agencies continued to move forward with their planning, and after several further attempts to do planning in the late 1970s, the ports finally accepted the fact that MTC and BCDC would ultimately produce a plan and that they should begin to seriously work with the regional agencies to structure the plan to their best possible advantage. The pivotal action that coalesced this change in the port's approach was MARAD's agreement to participate in the funding of the MTC-BCDC port planning project.

During the planning process, the ports learned to work not only with one another but with the members of the MTC-BCDC Seaport Planning Advisory Committee, which included representatives from government agencies, from an environmental interest group, and from development interests. The working relationship was not always comfortable for all parties, and divisions among the ports and among committee members existed. Nevertheless, the Bay Area ports did begin talking to each other and have continued to cooperate on limited areas of common interest, such as marketing materials.

With regard to implementation, more will be said in the next section, but it is worth noting two important differences in the San Francisco Bay Area Seaport Plan from other regional port plans. First, through the policies in the plan and BCDC's permit authority, this plan can be enforced to an extent not available to other regional port plans. Any shoreline development will require a BCDC permit and will be reviewed for consistency with the Seaport Plan. This review helps assure that port development will be consistent with the plan and helps assure that other shoreline uses will not preempt future port development at the sites reserved for port use. Second, BCDC and MTC have agreed to continue to use the Seaport Planning Advisory Committee to provide
FIGURE 3 Port areas to be protected (1).

- Port priority use areas
- Military installations (available for port use only if and when the military no longer needs them; the military, and particularly the Navy, has no plans to release any of the properties cited in the Seaport Plan and shown on this map.)
advice on proposed port projects. Typically, the groups formed to prepare regional port plans disbanded following completion of the plan, either because the sponsoring agencies terminate the group or because of friction among the members, such as fear that the large port will dominate. This will not be the case in the Bay Area and has not been the case in Washington State, where the planning committee continues to provide peer review of proposed projects.

RECENT AND IMPENDING IMPLEMENTATION ACTIONS

Since completion of the Seaport Plan in 1982, three marine terminal developments have been authorized, three projects are being or will shortly be considered, and one unconstructed project will require an extension of its BCDC permit. Of these, three provide good examples of the policy and process issues discussed earlier. They are the port master plan for Encinal Terminals, Alameda; the Alameda Gateway Project; and the Pier 50 ship repair facility, port of San Francisco.

The Encinal Terminals port master plan was approved by BCDC in late 1983 and was the first permit to be issued under the Seaport Plan. The plan consists of expansion of an existing container terminal, redevelopment of an old marine terminal facility into a container terminal, and various other improvements, including a marina expansion and commercial development. This project was first reviewed by MTC and BCDC during the public comment period on the draft environmental impact report and then underwent extensive review during the deliberations that led to issuance of a development permit by BCDC. During the permit proceedings, two issues surfaced.

The first issue pertains to scope and schedule for the project and can be best expressed with the following question: Is it reasonable to issue a permit for the entire master plan when construction on some parts of the plan will not start for many years? This is important because there are a limited number of terminals that may be permitted according to the forecasts of need in the Seaport Plan. If one port receives permits for several terminals, no other port may be able to receive a permit for a considerable time, until the demand forecasts show that more new terminals are needed. To avoid a monopoly on permits for new terminals by a single port, the Seaport Plan requires a development schedule that contains milestones that must be met. These milestones must be consistent with the guidelines provided by the Seaport Plan. If the applicant is unable to meet that schedule, the permit is to be revoked and the terminal capacity represented by that permit can then be made available to other ports.

Encinal Terminals prepared a schedule in which construction would not begin for 4 years. This was excessive, based on the Seaport Plan’s guidelines. In addition, the other ports in the Bay Area objected to the proposed schedule. After much discussion and testimony at the public hearing on the project, BCDC made the following finding (5, p.13):

To allow four years to the commencement of construction would allow the applicant to control the capacity represented by this authorization for that entire period of time without any firm indication being demonstrated that the terminals would actually be built. The Commission finds this period to be excessive.

A compromise was then reached with the applicant that involved a 2-year period till commencement of construction and milestones with regard to financing, both of which are consistent with Seaport Plan policies. It is significant that the outcome of this debate over the first permit to be issued under the Seaport Plan was to reaffirm the basic precepts and findings of the plan.

The second issue relates to the adversary role the ports have with one another. As stated in the foregoing, the other ports objected to the schedule originally proposed by Encinal Terminals. This was only a part of their concern with the master plan, and their testimony before BCDC came very close to a recommendation to deny the permit, but stopped short of this. Clearly, as competitors, their own self-interest must prevail, and they could only be expected to cooperate to a point where that self-interest was not threatened.

The Alameda Gateway Project and the port of San Francisco ship repair proposal had significant policy implications—primarily that of protecting marine terminal sites. These proposals were the first example in which the Seaport Planning Advisory Committee functioned as an aid to implementing the plan.

Encinal Gateway Project is a commercial and water-related industry project proposed for shoreline lands designated for marine terminal use in the city of Alameda. When the Seaport Plan was developed, certain military lands were designated for marine terminal use, should the military ever release the property. Although city and regional land use plans showed the site as having military ownership, it does not, although it is surrounded by military lands. Thus, there was an oversight in the plan, but this oversight has raised an issue of protecting lands designated for marine terminal use; Would loss of this shoreline land compromise potential marine terminal use of backland areas and adjacent shoreline areas? MTC and BCDC staff reviewed the project and concluded that it would not diminish the potential for marine terminal development on adjacent military lands, should the military release them. The Seaport Committee discussed this project at its meeting in August 1984; thoroughly debated the staff recommendations; took testimony from the project proponent, the Mayor of Alameda, the port of Oakland, and an Alameda citizen opposed to the project; and voted to recommend to MTC and BCDC that the marine terminal designation be deleted. Again, the basic precepts of the plan were affirmed.
The dynamics of the committee are important with regard to this project and the San Francisco project. Of the nine committee members present at the August meeting, five were new, including the chair. Therefore, a review of the plan’s policies was necessary before project proposals were discussed. More important, though, the new members deferred to the members who had seen the plan through its development. In fact, several of the new members abstained during the voting.

The port of San Francisco ship repair proposal involved a questionable interim use at an existing pier designated for marine terminal development. The port planned to lease a major portion of the pier for ship repair and installation of a drydock. The lease was to be for 5 years with 5-year options thereafter. Substantial investment was to be required by the lessee to make the pier suitable for its uses and to anchor the floating drydock. This project was also discussed at the August 1984 meeting, and the Seaport committee was faced with the following question: Is this truly an interim use or is it likely that the ship repair facility will become permanent, foreclosing future marine terminal use and development? This was an extensively debated question. Those speaking for the ship repair project were the port of San Francisco (a member of the committee) and the prospective lessee. Those speaking against included a member of the committee, a former port of San Francisco commissioner who is also a former committee member, and another ship repair firm in San Francisco. Interestingly, the committee member speaking against the project is the Mayor of San Francisco’s appointee to MTC, who had participated in the development of the plan. Despite the Mayor’s support of this project, this committee member believed that it was not in keeping with the Seaport Plan. Again, the views of those committee members who participated in the plan development dominated, and a motion to recommend that BCDC deny the permit was passed. This motion was not dead, however. The port of San Francisco has requested that the chair of the committee call a meeting to reconsider this vote, claiming that they have new information. The meeting will be December 5, 1984.

CONCLUSIONS

The following can be concluded with regard to the process of developing and implementing the Seaport Plan:

Implementation authority is essential. Developing a plan without such authority will be frustrating and the plan will collect dust, once completed. This authority must be tempered, however, with a desire to resolve disagreements so that a near consensus can be reached. The legitimate interests of all parties must be recognized.

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REFERENCES


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