A FIRST LOOK BACK AT THE SAN FRANCISCO ESTUARY PROJECT

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I. INTRODUCTION

This paper presents an initial retrospective look at the San Francisco Estuary Project (SFEP) from the standpoint of the senior author, who was involved in the project as a consulting environmental analyst, facilitator of land use policies and goals for wetlands monitoring, and in an ongoing role in a project to strengthen watershed-based planning in the Estuary region.[2] While much of the paper is descriptive, we offer several observation and pose questions which we believe merit further examination in a full-fledged review of the SFEP.

The San Francisco Bay area is regarded by many analysts as the birthplace of coastal zone management. The Bay Conservation and Development Commission (BCDC), given its start by a coalition of active citizens and committed legislators, was created in 1969 to "stop Bay fill" and increase public access to the shoreline. But BCDC had neither the geographic jurisdiction or the management authority to capture the full range of issues confroint the Estuary. Thus, the San Francisco Estuary Project, to a large extent, represents a "second cycle" of coastal zone management that take into account not only management of the Bay edge, but also the full range of issues associated with both the Bay and Delta.

Section II of this short paper describes the Setting; Section III presents Program Initiation, and Section VI addresses Program Adoption. Then, Section V describes prospects for Program Implementation and Section VI presents Conclusions and Questions for Further Investigation.

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[2] In addition to the research findings and observations of the authors, we have relied heavily on two documents in preparation of this article: the *Public Draft of the Comprehensive Conservation and Management Plan* (August, 1992) and *The State of the Estuary: A Report on Conditions and Problems in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (June 1992).

II. THE SETTING

One of the most ecologically productive, most stressed, and most politically active regions in North America, the San Francisco Bay/Delta estuary region embraces San Francisco Bay (including Suisun Marsh) and the Sacramento-San Joaquin Delta. It covers approximately 1631 square miles and is surrounded by twelve counties.

In many ways, the estuary supports the seven-and-a-half million people who live in these counties. It provides enough water to maintain 600,000 manufacturing jobs, 45,000 shipping jobs, and 51,000 agriculture jobs. Through its great beauty and recreational opportunities, the estuary allows the $3.9 billion/year tourism industry to thrive. And it sustains the commercial and sport fishing industries as well as more than the two hundred hunting clubs in the Bay and Delta.[3] However, the estuary's importance is not specific to the twelve surrounding counties alone: it also provides fresh drinking water for twenty million Californians, two-thirds of the state's population.[4]

The estuary provides habitat for a great deal of wildlife. Draining over forty percent of California's land, it is a wintering habitat for half of the birds migrating through the Pacific Flyway. More than one-hundred-and-thirty species of fish find a home there.[5]

Although BCDC has been very effective in controlling bay fill and ensuring that water-dependent uses have sufficient shoreline land, there are five other major classes of issues that are, to a large extent, still unresolved.

- Intensified land use
- Decline of Biological Resources
- Freshwater Diversion and Altered Flow Regime
- Increased Pollutants
- Dredging and Waterway Modification

Each of these issues helped motivate Program Initiation, and is described in more detail in the following section.

PROGRAM INITIATION

The San Francisco Estuary Project (SFEP) was created in 1987 as part of the National Estuary Program. The NEP, in turn, was modeled after a sort of template created by the Chesapeake Bay Proram, an ambitious (and well-funded) initiative spearheaded by EPA to reverse decline of a national estuarine treasure.

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[3] San Francisco Estuary Project, *Public Draft of the Comprehensive Conservation and Management Plan,* August 1992, p.2.

[4] San Francisco Estuary Project, *The State of the Estuary: A Report on Conditions and Problems in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary,* June 1992, pp.S1-S2.

[5] San Francisco Estuary Project, *Public Draft of the Comprehensive Conservation and Management Plan,* August 1992, p.1.

As mandated by Section 320 of the Clean Water Act, the SFEP must create a Comprehensive Conservation and Management Plan which "must contain recommended actions to restore and maintain water quality, maintain a balanced indigenous population of shellfish, fish, and wildlife, allow recreational activities in the Estuary, and protect the beneficial uses of the Estuary."[6]

Sponsorship of the Project has been shared the US EPA and the State of California, represented by the State Water Resources Control Board, the San Francisco Bay Regional Water Quality Control Board, and the Central Valley Regional Water Quality Control Board."

The inception of the program in 1987 occurred while George Deukmejian, a conservative Republican, was governor. Governor Deukmejian was generally regarded as hosile towards new environmental initiatives. (After running on a platform of disbanding the California Coastal Commission, he was certainly not enthusiastic towards new government programs.)[7] Thus, the initial program initiation encountered some reassurance that the SFEP would not second guess the state's own review of water allocation. required skillful consensus building on the part of EPA staff in the San Francisco office, along with their counterparts in the state water

The Project has brought together many diverse stakeholders: over a five year period, more than one hunded representatives of industry, federal, state, and local government, environmental groups, and agriculture took part in the creation of the plan.[8]

In 1987, the Program's first year, SFEP staff and stakeholders identified five issues critical to the health of the estuary. These are the issues which the CCMP attempts to resolve, and they are as follows:

- Intensified land use
- Decline of Biological Resources
- Freshwater Diversion and Altered Flow Regime
- Increased Pollutants
- Dredging and Waterway Modification

Land Use

The impacts of land use change on the The Bay/Delta estuary was date back to the gold rush of 1848 and continue to the present. The concern up until the beginning of the twentieth century, as hydraulic mining had become so widespread as to add "over one billion cubic yards of clay and silt into the Suisun,

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[6] Ibid., p.3.

[7] His successor, moderate Republican Pete Wilson, was regarded as a friend of the environment, but has yet to weigh in a definitive manner on the SFEP.

[8] Ibid., p.4.

San Pablo, and Central Bays."[9] Subsequent impact included conversion of wetland habitats to urban and agricultural uses. Today more than one-half of the estuary basin's historical uplands are now towns and cities."[10]

The *State of the Estuary* report goes on to describe this conversion:

> Human development of the estuary basin has resulted in the loss or conversion of more than 500,000 acres of tidal wetlands. In the Delta, 97 percent of the 345,000 acres of historic freshwater wetlands have been converted to other uses, mostly farms. In the Bay area, 83 percent of the approximately 200,000 acres of historic tidal salt and brackish wetlands have been converted to other wetland types, particularly salt ponds, and to non-wetland uses. Development also has adversely affected non-tidal wetlands, particularly riparian forest and seasonal wetlands. Although wetlands loss has slowed substanially since the early 1970s, it continues.[11]

Forecasts prepared by the Association of Bay Area Governments (ABAG) suggest that by 2005, there will be an additional one million people living in the twelve counties surrounding the estuary, urbanizing about 725 additional square miles of agricultural, range, and forest land.[12] Two classes of direct impacts associated with this intensified land use are loss or modification of wetland habitats and stream environment zones. An important class of indirect impacts is increased runoff of nonpoint sources of pollution.

Decline of Biological Resources

As a result of habitat change and other human-induced causes, the estuary's ability to support a diverse ecosystem with large populations of economically important species has declined. The shellfish industry is gone, as are the commercial striped bass and shad fisheries. Naturally reproducing populations of important recreational fish, such as Chinook salmon and striped bass, have been in decline for decades. The Winter run chinook salmon has been proposed for listing as endangered or threatened species by state or local authoritiees. The commercial salmon industry now depends on fish hatcheries for much of its catch. Eighty-nine wildlife species whose populatins are dwindling or monitored are disgnated by federal or state agencies as being in need of special protection; about two-thirds of these species are associated with wetlands." 92

Freshwater Diversion and Altered Flow Regime

Freshwater inflow is a major determinant of environmental conditions in the Estuary. The volume and timing of freshwater inflow affect the Estuary's circulation and water quality; conditions for wildlife; production and survival of

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[9] *State of the Estuary,* p.29.
[10] Ibid., p.92.
[11] Ibid., p.110.
[12] Ibid., p.33.

phytoplankton, and all life stages; and survival of aquatic species such as salmon, striped bass, longfin smelt, California bay shrimp, and starry flounder. The issue of freshwater diversion and altered flow regimes joins the San Francisco Estuary with the pressing need to reform California's labyrinthine water policy. Because the distribution and allocation of water affects every California, this issue that been the most difficult and controversial for the SFEP.

The rivers and streams of the Sacramento and San Joaquin watersheds carry about 40% of the state's freshwater, making the Sacramento-San Joaquin Delta the vital link between most of the state's supply and its demand for irrigation and municipal and industrial water. A vast network water projects controls water flows throughout the State. The two largest systems are the Central Valley Project and the State Water Project, but there are more than 7000 diversions. They cumulatively reduce the annual volume of fresh water entering the Bay by more that half during dry and critically dry years.

With the state's population expected to increase to close to 40 million people, still more demands will be placed on the Estuary. Currently planned water diversions by both local authorities and the State Water project will increase diversions in the Estuary by 1.1 million feet.

Pollutants

Today conventional pollutants--such as nitrogen and phosphorus compuands-- are considered to pose little threat to the estuary ecosystem. Virtually all Publicly Owned Treatment Works (POTWs) in the Bay area have secondary treatment. However, four classes of pollutants--inorganic chemicals, organic chemicals, biological pollutants, and suspended sediments and other pollutants--all remain a cause for concern.

Each year, some 5,000 - 40,000 tons of toxic pollutants enter the estuary. The bulk of these chemicals are carried in runoff from urban areas and farms. Effluent from municipal and industrial outfalls, dredging, atmospheric deposition, spills, and other sources contribute the remainder. Although programs are in place to regulate the discharge of these pollutants, large quantities of toxic pollutants continue toenter the estuary.

Compared to background levels attributable to natural sources, pollutants occur at elevated levels in the estuary's waters, sidements and biota. Concentrations in sediments and biota are generally highest in harbors, marinas, and industrial waterways. Bioassays of the estuary's water, sediments, and biota indicate that existing pollutant concentraitons cause toxic effects. Bioassays of urban runof, farm drainage, and municipal and industrial effluent also indicate evidence of toxicity.

Trace elements with the highest concentrations in sediments are copoer, lead, chromium, and zinc. Organic chemicals that may pose the greatest risks to estuarine organisms include PCBs and pesticides such as Malathion. Such presistent pollutants may cause sublethal effects in some speciees. PCBs, for example, appear to impair reproduction in starry flounder; PCBs and DDE in the eggs of black crowned night heron interfere with hatching success.

Dredging and Waterway Modification

While San Francisco Bay, and especially the Port of Oakland, is a center of waterborne commerice, most of SF Bay and Delta is naturally shallow and dredging is required to enable the safe passage of vessels. The annual influx of some six million cubic yards of sediment into the estuary each year necessitates periodic dredging to maintain navigation channels, harbors, marinas, and other dredged areas. Dredging has been conducted for more than 120 years, primarily by the Army Corps of Engineers, the Navy, prots, and others who need access to the water.

Dredging and dredged material disposal affect the estuary and its resources in several ways. Dredging removes benthic organisms and may alter currents. Deepening of channels in the upper reaches of the estuary may increase salinity intrusion there. Dredged material disposal influences the composition of benthic communities, increases concentrations of suspended sediments, and may alter the behavior and physiology of fish and other animals. Most of these impacts are generally localized, but others, such as the redistribution of pollutants bound to sediments, may be widespread. Although some impacts of dredging and dredged material disposal are fairly well understood, there is an incomplete body of information about the fate of dredged material disposed in the estuary and of the impacts associated with the redistribution and release of toxic pollutants.

Studies undertaken by the Corps of Engineers and others forecast that between 1995 and 2045, an annual average of 8 million cubic yards of sediments is expected to be dredged in the Estuary. In an effort parallel to the SFEP (and involving many of the same players), a Long Term Management Strategy (LTMS) for dredging and dredged maerial disposal is being developed. The strategy will feature a mix of disposal, reuse, and may include emphasize beneficial reuse as well as ocean disposal and in bay disposal at nondisbursive sites.

PROGRAM DESIGN AND PREPARATION

The institutions responsible for identifying and responding to these five broad problem areas has the following management structure: at the top is the Sponsoring Agency Committee (SAC), which "directs the Project's overall policy." Below the SAC is the main decision-making entity, the Management Committee, which "approves Project activities and budgets and oversees development of the CCMP." Advising the Management Committee are the Technical Advisory Committee and the Public Advisory Committee.

In addition to these main committees, eight issue-specific subcommittees were also formed: 1) Biological Resources; 2) Wetlands; 3) Flows; 4) Dredging/Waterway Modification; 5) Pollutants and Quality Assurance; 6) Land Use; 7) Research Enhancement; and 8) Planning.

The SFEP work program took place in three broad phases. The first was issue definition (and redefinition). This phase was fairly short, and was followed by a lengthy Characterization phase, which last well into 1991. Next came the

Policy Development phase, which began in mid 1991 and continues now into early 1993.

While the Subcomittees were very active during the Characterization phase. Before discussions began, the committees voted on a set of groundrules to govern their conduct. In fact the "center of gravity" for policy deliberations was the Management Committee.

Issue Definition and Redefinition

The five management issues listed above were defined thorugh the interaction of SFEP staff based at EPA and other key participants in the committee structure. As work continued into the characterization and policy development stages, the issues were reframed slightly. Utlimately the CCMP addresses the following issues:

- Aquatic Resources
- Wildlife
- Wetlands
- Water Use
- Pollution Prevention and Reduction
- Dredging and Waterway Modification
- Land Use.

Characterization Phase

Much of the first three years of the Estuary Project were devoted to a Characterization Phase, which involved contracting for a series of technical reports known as "Status and Trends Report". For most issues, these reports, known as STRs were a compilation of existing information. Although little original research was conducted to assemble most of these reports, they often represented the most comprehensive look a the subjects they addressed.

STRs were produced on Dredging and Waterway Modification, Pollutants, Wetlands, Aquatic Resources, and Land Use and Population. Typically, 12 to 18 months was required to draft and revise each report. A subcommittee, braodly representative of the key stakeholders involved in the SFEP, met to provide guidance and--in many cases--substantial critiques of the technical reports.

For two issues--land use change and flows-- more novel approaches were used that went beyond a compilation of existing information. To investigate the effects of land use change on the Estuary, the SFEP staff chose a team lead by researchers at UC Berkeley's Center for Environmental Design Research. The resulting study, *The Effects of Land Use Change and Intensification on the San Francisco Estuary* used a geographic information system (GIS), to play out future growth scenarios were played out and to estimate the impacts on wetlands, streams, and water quality on a region-wide basis.

The land use scenario developed from the General Plans of the Bay-Delta Region's twelve counties shows that the total area planned as urban use outside existing incorporated cities is 331,530 acres, an increase of 37 percent. Results are expressed

according to 14 receiving water segments and the associated 34 watersheds. The study showed that direct impacts on wetlands and stream environment zones occur in every watershed containing these resources. Over 39,500 acres of wetlands may be potentially impacted. Moreover 377,000 acres of stream environment in the 12-county study area, 28,000 acres are also subject to impacts of urbanization.

The construction of land use scenarios for the Estuary region has presented, for the first time, an opportunity to examine the cumulative contribution of nonpoint source urban runoff to the levels of pollutants in the Bay and Delta. (For a complete discussion of the methods, findings, and policy implication of this study, see McCreary et al., 1992)

To illuminate the technical aspects of the flows issues, the SFEP staff retained the services of Professor Jerry Schubel, Dean of Marine Sciences at New York University at Stony Brook. He convened a series of four Technical Workshops on Salinity, Flows, and Living REsources involving approximately thirty scientists and policy makers. The Workshops were designed to delineate areas of scientific agreement and disagreement, an dto ealute th response of estuarine biotaa to various coinditions of salinity and flow. The meetings produced near-agreement on 10 management principals, importance of the 2 parts per thousand isohaline as a key indicator for management.

Some of the STRs (such as wetlands) went quite a distance in suggesting policy options, as did the study on Land Use Change. Others, such as Pollutants, were more narrowly confined to the technical issues.

Policy Development and Consensus Builing

When the Characterization phase was winding down, an interagency team worked intensively between June and November, 1991 to prepare "working draft CCMP which was presented to the management Committee in November 1991." Subcommittee input at this stage was fairly minimal.

The CCMP presents programs to address each of the seven management issues. Each element of the CCMP uses the following format

Table 1: Structure of the Substative Elements of the CCMP for the San Francisco Estuary Project

Plan Section	Scope
Problem Statement	Summary of finding based on STR; 2-3 paragraphs
Existing Management Structure	
Recommended Approach	
Actions	Who: (which agency or group)
	What
	When (which year)

In theory at least, the STRs and associated technical reports enabled all 100 participants in the SFEP to work from the same body of facts from which to work from. The STRs summarized existing information and also identified Gaps in

knowledge (known as "giks".) which are acknowledged in the CCMP in an appendix.

From January through July 1992, the Management Committee worked through the draft CCMP[13] word-for-word using a facilitated consensus process. Typically, SFEP staff first prepared a "strawman" document, while was then subject to debate in a plenary session guided by a two person team of facilitators.[14]

The pattern was usually to introduce language at one meeting, then take all or part of the subsequent meeting to work through and refine the language. In practice, though this was an arduous process of wordsmithing, MAC members were committed to the process, and worked through each section of the report to create the second draft CCMP, printed in August 1992.[15]

A slightly different process was used to draft the policies for Land Use Intensification. To prepare these policies, SFEP staff retained CONCUR to facilitate a dialouge with a smaller working group over a three month period.[16] The working group, composed of representatives of interest groups most concerned with land use, was charged with drafting a Land Use Program to present to the full MC. Participants included such organizations as the Building Industry Association, ABAG, local government, the Greenbelt Alliance, and the Citizens to Complete the Refuge.

The Working Group began with a staff draft, revised it in a workshop session, and then responded to comments on a second draft document before meeting again. The working group continued in this fashion through a second meeting. By the time the MC saw the Land Use Program, the document was effectively in its fifth draft, and had virtually unanimous support from the Working Group. This more intensive consensus building process enabled participants to make tradeoffs across issues and enabled more detailed discussion of the merits of each action than would have been possible in a plenary sesison of the MC with 40-50 participants. Thus, with fairly minor revisions, the MC approved the Land Program unanimously.

An excerpt is shown below, which illustrates the CCMP format in more detail. Cornelia please type in the text of LU-3.1 from pages 102 and 103 under the table heading below:

Table 2: A Detailed Excerpt from the SFEP Comprehensive Conservation and Management Program

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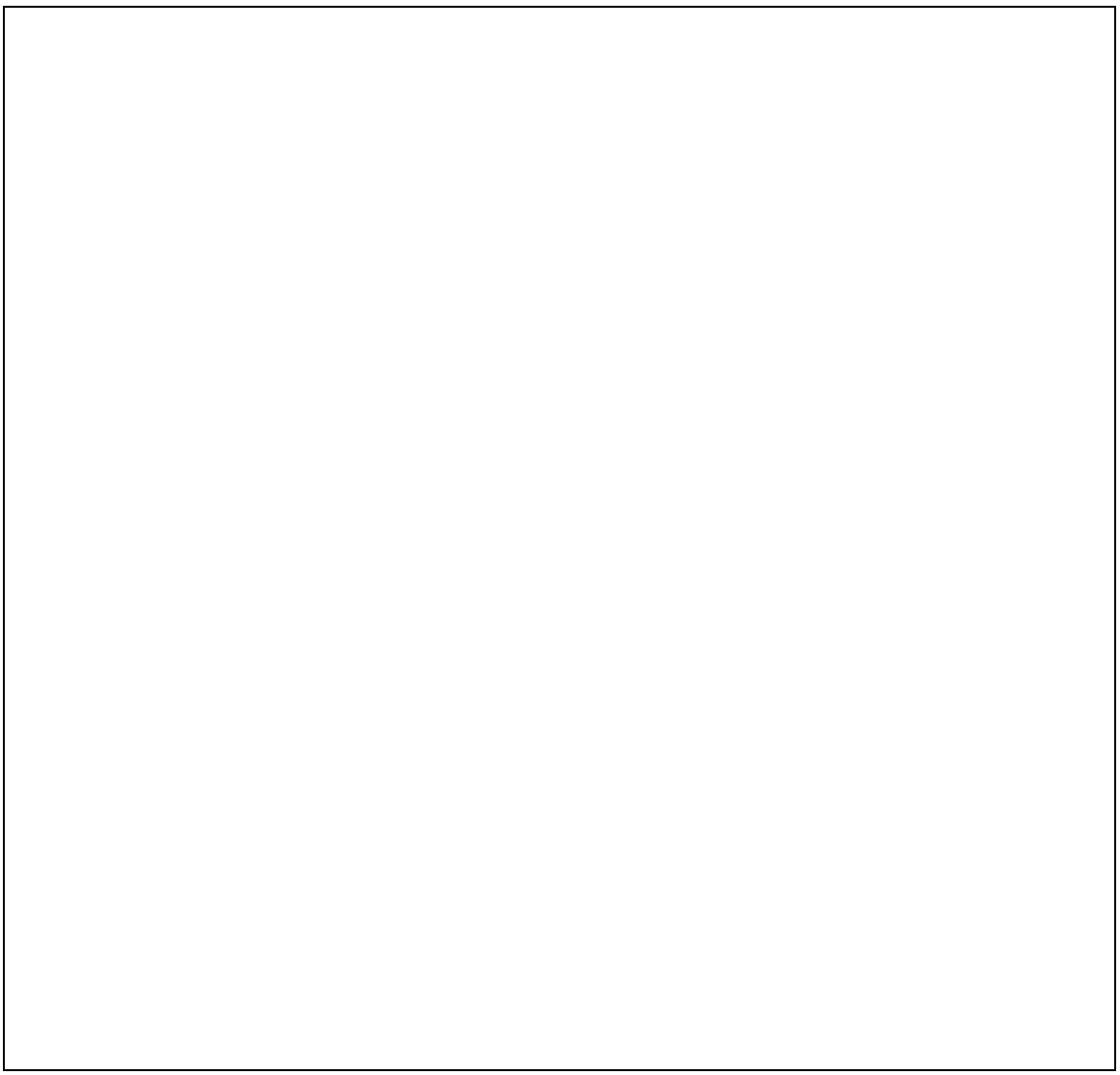
[13] Ibid., p.6.

[14] The team was Geoff Ball and Marilyn Snider.

[15] This process included voting on each change ot the CCMP. To vote, you ranked your feelings on a scale of 1-6, 1-5 being a scale of strongly agree to strongly disagree and six being an assertion that more discussion was needed. Where full consensus could not be reached, dissenting participants issued a minority report.

[16] This work was completed by Scott McCreary and his partner John Gamman.



Ultimately, while the Land Use, Dredging, and Pollutants sections were adopted in full there were two minority reports. The first, prepared on the subject of *Aquatic Resources* was submitted by the Sierra Club, the Save San Francisco Bay Association, the Marin Audubon Society, and the Citizens Committee to Complete the Refuge/Golden Gate Audubon Society. The green coalition sought to insert strong language to convey the urgency of implementing

flow standards to ensure that adequate freshwater coursed through the ecoystem in the spring and early summer months.

The second minority report was the *Wetlands Minority Report*, submitted by the Bay Planning Coalition, the Building Industry Association of Northern California, the California Farm Bureau Federation, and the Sacramento Metropolitan Chamber of Commerce. This coaliton of farm and development interests, which was joined by local government in voting on the Wetlands Element, supported many of the specific wetland policies but felt that the CCMP did not do enough to recognize the interests (and imputed rights) of landowners. Both minority reports are included as appendices to the CCMP.

The CCMP was also transmitted to the Governor's representatives and the US EPA administrator's representatives. Concurrently, the CCMP went public. There were several initiatives to inform the public of the CCMP's contents. First, nine (***twelve?)*** public meetings were held throughout the Bay area. Two or three members of the Management Committee presided over each hearing, introducing the CCMP and fielding questions from people in attendance. The meetings were recorded and the comments were compiled into a list of recommendations.

Copies of the document were also distributed to many different individuals and groups throughout the Bay area. Anyone could request a copy of it at no cost. Staff in SFEP Public Outreach division culled suggestions from public letters and faxes and consolidated them into a list of recommendations.

PROGRAM ADOPTION

Program adoption is still pending. The Management Committee will have its final meeting on March 31, 1993. *At that time, it is expected to adopt the Aquatic Resources portion of the CCMP.?*
After the Management Committee adopts the final CCMP, "it will be sent to the Project's Sponsoring Agency Committee (SAC) for concurrence. The SAC will then forward the Plan to the Governor of California and the Administrator of the US Environmental Protection Agency. Formal implementation of the Plan may commence upon approval by the US EPA Administrator [*the EPA has 120 days to respond*[17]] and concurrence by the Governor."[18]

PROGRAM IMPLEMENTATION

The Draft CCMP presented an array of five institutional arrangemetns for implementation, each with a different "Implentation Oversight Entity". Most of these options involve the interaction of the following four kinds of committes (Cornelia--please put in bullet format)

- o Implementation Committee
- o Senior Policy Committee
- o Friends of the San Francisco Estuary (Friends)/Public

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[17] Kathryn Ankrum. Interview, February 24, 1993.
[18] *Public Draft of the CCMP,* August 1992, p.x.

Advisory Comittee
- o San Francisco Estuarine Institute/Technical Advisory Committee

Several options exist, and the MAC is slated to make its final choice on March 31, 1993. SFEP staff envisions that that at running the implementation plan will be and Executive Council responsible for broad policy. Reporting to the Council will be an Implementation Committee which does hands-on implementation. Two subcommittees will report to the Implementation Committee: the San Francisco Estuarine Institute and the Public Review/Friends Committee.[19]

The Estuarine Institute "would be responsible for coordinating research and a comprehensive monitoring program for the Estuary. Information generted from the monitoring would be used to evaluate the success of CCMP activities. It would also be responsible for coordinating research to fill the identified data gaps. Its Board of Directors would serve as a Technical Advisory Committee to the Implementation Committee."[20]

The Public Review/Friends Committee " . . . would be directly responsible for implementing the public involvement and education activities of the CCMP. Its Board of Directors would be composed of public, non-governmental organizations (including representatives from the environmental, recreational, and regulated communities), as well as locally elected officials."[21]

Beyond the organizational hierarchy, the CCMP, consistent with the findings of the Regulatory Analysis, acknowledged that there will in fact be numerous agencies responsible for implementation. An Appendix to the CCMP presents a series of matrices in which the Actions are arrayed against a list of responsible agencies.

In practice, two organizations that are likely to play a major role are the San Francisco Regional Water Quality Control Board, the San Francisco Estuarine Institute. Funding for implementation may be forthcoming under legislation to amend the Clean Water Act, sponsored by Congressional Representative Nancy Pelosi of San Francisco. (Cornelia please find out if a bill has been introduced, and if so, what is the bill number.)

timeline: march 31st will adopt currently unfinished portions: the implementation portion and the aquatic resources portion, including flows

There are no preliminary signals from Wilson admin re: acceptance; he's not on a timeline, but EPA has 120 days once it gets the CCMP

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[19] Ankrum.

[20] *Draft CCMP*, August 1992, p. 128.

[21] Ibid., p. 127.

In advance of a clear signal on CCMP implemenation, at least three important changes in the environmental policy landscape are already clear.

o First, the Aquatic Habitat Institute will be recast as the San Francisco Estuarine Institute, with a broader geographic scope and a mandate to move beyond a narrow focus on pollutants to involvement in the full range of issues that characterize the Estuary Project.

o The Delta Commission has already been formed to exercise a region-wide perspective over land use change and its impacts

o The Miller Bradley bill, which was deliberated concurrent with the drafting of the CCMP (and actually in advance of the Actions on Flows), will markedly change the "environmental entitlement" of California's scarce water supplies..

On a more modest scale, a series of action plan demonstration projects will promote improved watershed management throughout the Estuary region.

CONCLUSION OBSERVATIONS AND QUESTIONS FOR FURTHER EXAMINATION

CONCLUDING OBSERVATIONS

As stated at the outset, this paper is only the initial retrospective look at the Estuary Project. In many respects, its full implications are still unfolding. However a number of preliminary conclusions can be drawn:

o The project succeeded in its goal of bringing together a diverse group of stakeholders over a sustained period of time, and giving them first hand exposure to consensus styles of decision making. There is some question, however, as to whether the interaction was designed as effectively as it might have been. For example,

o The SFEP succeeded in reframing the public perception issues confronting the Estuary. No longer do most environmental analysts focus on the narrower (but sill important) questions of preventing Bay fill and ensuring adequate public access to the Bay edge that motivated creation of BCDC.

o The SFEP followed a logical sequence of steps from framing issues, through technical characterization of those issues, to developing and seeking consensus on policy options. However, the fate of these policy recommendations hinges to a large extent on political will.

o The Status and Trends Reports, on balance, represent a solid synthseis of available technical information. (The extent of peer review varied, however, with the reports.) The STRs and associated study of Land Use and the Regulatory system created a sound technical foundation for subsquent drafting of policies.

QUESTIONS FOR FURTHER INVESTIGATION

Most policies, however, lack specific thresholds or targets that could either be supported by scientific evidence or used as yardsticks to guage the effectiveness of implementation.

o The roles for the TAC, MAC, and other committees were more effective than others. On the one hand, the committes provided a forum for interest groups with a special stake in an issue to voice their concerns. However, the subcommittes met mostly as the Status and Trends reports were being produced; they did not continue their work into the drafting of policies. Instead, drafting of policies (with the exemption of those for Land Use and Flows) was heavily staff-driven. (Staff in this case were both SFEP staff housed at EPA and those based at the San Francisco Regional Water Quality Control Board.

Thus, there may have been an unintentional blurring of the fact finding and policy setting stages in development of the CCMP. A more useful approach may have been to give the subcomittees less influence on the langauge of the STRs, and then convene them to draft policies.The TAC provided useful Technical Input to the drafting of the Status and Trends Reports, and helped maintain a level of quality assurance. However, individual subcomittees probably had too much involvement in the drafting of Status and Trends Reports, which resulted in extensive "second guessing" of contractors--particularly with regard to the Dredging and Pollutants studies.

o The consensus building effort of the MAC, while fairly successful, missed important opportunities for joint gains due to the serial nature in which policies were discussed. Through an arduous processing of "word smithing" language of the CCMP in plenary sessions of 40-50 MAC members, there was fairly minimal opportunity for discussion of linkage between issues or tradeoffs among issues. This is reflected to some extent in the need felt by some MAC members to issue minority reports.

Drafting the land use policies, on the other hand, took place largely in intensive subcommittee discussions with represntative of the full range of interests on the MAC. Participants included such diverse groups as the Greenbelt Alliance, Marin Audubon, Citizens to Complete the Refuge, the City of Fairfield, and the Building Industry Association. The net result was to produce langague that, with minor adjustment in the plenary sessions,

o Political support from top leaders for the SFEP has been a mixed story. While then Congressional representative Barbara Boxer and Nancy Pelosi have been very supportive, Governor George Deukmejian was skeptical and his successor Pete Wilson, has been noncomittal. Unlike the circumstances of some other urban estuaries (notably Chesapeake Bay, where the Governors of Maryland and Virginia and the Mayor of DC signed a joint compact), a clear signal from the top has been missing.

o While the SFEP was proceeding, and especially while the CCMP was being drafted, the California political arena was awash with concurrent environmental

initiatives. Much discussion has been devoted to regional growth management, regional biodiversity, and seeking consensus on reform of Califoprnia Water policy. The State Lands Commission has aggressively backed creation of a Delta Commission, whose members first met in January, 1993. Meanwhile, in Congressof In addition, the debate over the Central Valley Project reform in the Miller-Bradly bill (get no.) Many of the participants in these activities were the same players active on the MC or on the various subcommittees of the SFEP. Thus, while it is clear that the SFEP fostered a climate of information sharing and collaboration, it becomes difficult to sort outcomes of the SFEP from the results of concurrent environmental initaitives.

Questions for Further Investigation

1) How might the role of the

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Always put the year right after the author.

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Cornelia

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2) Under **Table 2: A Detailed Excerpt from the SFEP Comprehensive Conservation and Management Program** please type in the text of LU-3.1 from pages 102 and 103 3) Change format to 10 point type.
4) Convert dots in Program Implementation to solid bullets
4) Type in the new information from handwritten draft under Conclusions and Questions to be Addressed