



## 2008-2009 SANTA CLARA COUNTY CIVIL GRAND JURY REPORT

### SANTA CLARA VALLEY WATER DISTRICT – PART 3

#### ALVISO SLOUGH RESTORATION PROJECT \$22M RESTORES BOATING BUT THREATENS THE ENVIRONMENT

##### **Issue**

Should the Santa Clara Valley Water District (District) spend \$22M to dredge the Alviso Slough, when there is a cost-effective, more environmentally sound, alternative under way that ultimately achieves the same objectives?

##### **Project Description**

Alviso Slough (Slough) is the final stretch of the Guadalupe River prior to its entering San Francisco Bay. The community of Alviso is located on the east bank of the Slough, which was used at one time for recreational boating and commerce. Both are now precluded, due to a narrowing of the Slough's channel width from silting and the growth of vegetation within the channel. The Alviso Slough Restoration Project (Slough Project) proposes to open the slough and restore boating and recreational activities.

The District Board of Directors (BOD) initiated the project in response to requests from the Alviso community, which felt the District had neglected to manage the slough and its vegetation, while building flood control projects in other areas of San Jose.

##### **Objectives**

The objectives of the Slough Project, as defined by the District in its Draft Environmental Impact Report (DEIR), are to:

Objective 1: Restore Alviso Slough's channel width and habitat to prior to 1983 conditions;

Objective 2: Improve the community's ability to pursue navigation, public access, and aesthetics, to allow for the expansion of boating and other recreational and/or tourism opportunities;

Objective 3: Maintain one percent flood protection in the Alviso Slough;

Objective 4: Reduce mosquito nuisance;

Objective 5: Promote the integration of the Alviso Slough Restoration Project with the South Bay Salt Pond (SBSP) Restoration, including the SBSP Phase 1 Action at Pond A8 [Described below], to re-establish the saltwater connection to the Lower Guadalupe River.

## **Status**

In 2004, the District Board of Directors (BOD) approved the investigation and planning stages of the Slough Project. The total projected cost was \$2.5M to remove seven acres of vegetation and root mass to a depth of four feet from Alviso Slough, starting at the Gold Street Bridge going north to the County Marina.

The DEIR was published in mid-2008. Comments from the public and agencies have been received in response to the DEIR. The project is expected to return to the BOD sometime in 2009 for final approval based on any modifications resulting from addressing comments.

Six alternatives are proposed in the DEIR for the Slough Project, including the required "No Project" alternative. The other five alternatives involve varying amounts of vegetation removal and dredging. (See Appendix A and B for details).

By the time the DEIR was published in 2008, Alternative 5 was the recommended alternative. The estimated cost had increased from \$2.5M to \$22M plus \$3.6M in annual maintenance. The specified 25 acres of vegetation and root mass removal nearly quadrupled the original seven acres. The stated reason for the increase was to accommodate the pre-1982 width and depth objective.

Note that District DEIR section heading and chart titles were misleading in that they all indicate that Alternative 5 was to remove 15.3 acres of vegetation, but the detailed narrative and specifications and derived costs are based on removal of 25 acres.

No estimates have been provided for Alternative 1, which had the smallest amount of vegetation removal at 2.3 acres. But it involves less than 10% of the vegetation removal for Alternative 5 and no dredging. It would only improve access to the South Bay Yacht Club for small boats and not extend as far as the County Marina. Over \$2.5M has been spent to date on just the investigation. (See Appendix I).

## **Environmental Impact**

Excerpts from comments received from the public and agencies in response to the DEIR are in Appendix C. Key issues cited by many result from removal of vegetation, widening and deepening the Slough, and lowering the Pond A8 Weir:

- The Slough Project may degrade significantly the current 100-year-flood protection that the Lower Guadalupe River Project provides.
- There are property rights issues with the National Wildlife Refuge System Administrative Act.
- There is potential for significant damage to vegetation, fish and wildlife.
- There is significant potential to increase mercury pollution.
- The San Francisco Bay Regional Water Quality Board states that the current mitigation measures are insufficient for the Board to issue a permit for the project.
- Department of Fish and Wildlife regards changes in mercury levels as unacceptable and that this must be addressed in the Final Environmental Impact Report.
- There are continued environmental disturbances from the ongoing maintenance that would be required to keep the channel open.

## **Environmental Enhancement**

The core mission of the District is to provide water and flood control to Santa Clara County. Because of the nature of its projects, the District is often required by regulating agencies such as the Environmental Protection Agency (EPA) to mitigate environmental damage on a scale of 2-3 times the environmental impact resulting from a project.

The District will occasionally do more than the required mitigation and will undertake projects it calls “Environmental Enhancements.” Board Policy number E-3.2 says the purpose of Environmental Enhancements is “to improve watersheds, streams, and the natural resources therein.”

### **Alviso Environmental Enhancement Projects and the Role of Mercury**

The District describes seven Environmental Enhancement Projects in the 2008/2009 Capital Improvement Program. Three are in the Alviso area, the Slough Project, the Gold Street Education Center (addressed in Part 4 of this series of Grand Jury reports), and the Pond A8 Applied Study.

Pond A8 is a former salt pond that runs along the west border of the Slough Project. (See map in Appendix F.) The Pond A8 Applied Study is being done with the California State Coastal Conservancy with the goal of understanding the distribution of mercury within Alviso Slough as related to tidal movement.

The Guadalupe Watershed has an abundant amount of highly toxic mercury due to intensive mining at its upper reaches during the early 20<sup>th</sup> Century at about the same time that South Bay salt ponds were being created. It is believed that large amounts of mercury have settled in the sediment of Alviso Slough from that activity. A primary concern with the Slough Project is that increased activity from the project and resulting changes in water flows may release significant amounts of mercury into the Bay and nearby ponds, and eventually into the food chain.

### **Objective 1 – Width, Depth, Vegetation**

The objectives to return to pre-1983 channel width and depth and to remove vegetation were largely set by the Alviso community, based on their belief that the narrowing of the channel accelerated after the floods of 1982-83.

Channel widths in 1983 were estimated to be double the current widths based on photographs. The community recollection was that in 1982 there was no vegetation in the channel and the depth under the docks was 12 feet. Alternative 5 most closely fit the community's objective.

The current predominant vegetation is known to be fresh-water based and is consistent with the narrowing of the channel. As long as the present Slough low level of salinity remains, the vegetation would need to be removed annually.

To achieve Alternative 5, the project will use mechanical dredging and vegetation removal. Approximately 200,000, cubic yards of possibly toxic sediment would be removed, plus 25 acres of vegetation across a 0.6 mile stretch. They expect to dredge an additional 10 feet below the existing level. Disposal sites are still under investigation, but mercury contamination limits options. It will take 300 days to truck sediment and vegetation to Zanker Road and Newby Island land fills. (See Appendix A).

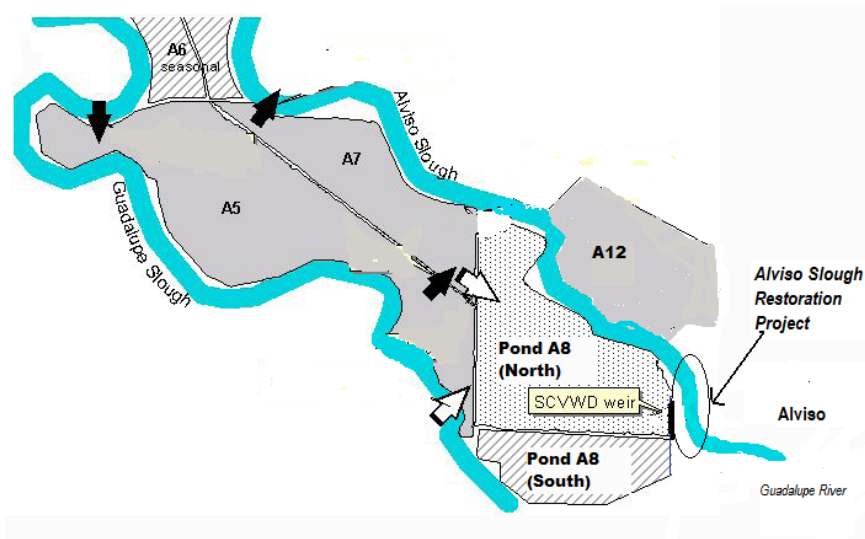
### **Objectives 2 and 4**

The Slough Project is very strongly supported by the Alviso community. Their desire for the Slough Project is not surprising, given that Objective 2 is to achieve enhanced boating and other recreational opportunities that existed in the slough in earlier times. The District is legally permitted to provide recreational enhancements as an adjunct to projects while pursuing its primary mission of flood control and water supply, but these should not be the main project objective. Objective 4, mosquito control, is not a district mission at all, and should not be an objective.

### Objective 3 – Flood Control

Many Alviso residents support the Slough Project in the belief that it will enhance flood control for their community. But as described below, removal of vegetation and sediment will increase susceptibility to flooding and will require additional efforts to prevent future flooding of Alviso.

The Slough project will adversely impact the flood control design of the District's Lower Guadalupe River Project (LGRP). In a 100-year-flood event, the Guadalupe is estimated to flow at 18,350 cfs (cubic feet per second). Alviso Slough is estimated to have a conveyance capacity of only 11,000 cfs. To handle the excess flow of 7,350 cfs, the LGRP reconfigured the left bank levee of the Slough (looking downstream from the Union Pacific Railroad bridge) to act as a weir, a small dam, (Weir) allowing high flows in the Guadalupe River to enter Pond A8.



Removal of vegetation from the Slough will cause more water to be retained in the Slough and less will go over the Weir into Pond A8. The Slough past the Marina cannot handle that level of water. Additional flows would weaken downstream levees, and result in spill-over into Pond A12, which in turn would flood Alviso.

To address the flooding issue, for Alternatives 1-5, the District proposed to lower the Weir created by the LGRP, causing more water to move into Pond A8 and the adjoining ponds A5, A6, and A7. Ponds A5-A8 are owned by the US Fish and Wildlife Service (USFWS) and is part of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge). USFWS expressed serious concern about the impact to wildlife and habitat from increased mercury brought in by Guadalupe waters.

Another complication is that the LGRP Weir was an existing easement when the Refuge acquired the ponds in 2003. Altering the Weir may be a violation of that easement.

## Objective 5

Objective 5 is to “promote the integration of the Alviso Slough Restoration Project with the South Bay Salt Pond (SBSP) Restoration, including the SBSP Phase 1 Action at Pond A8 to re-establish the saltwater connection to the Lower Guadalupe River.”

The SBSP will achieve the same result as that sought by the Slough Project but will accomplish it in a far more prudent manner.

The South Bay Salt Pond (SBSP) Restoration project is headed by the California State Coastal Conservancy. Its primary objective is to restore historic wetlands on 15,100 acres of former Cargill salt-harvesting ponds in the South Bay. A second objective is to maintain or improve existing flood protection in the South Bay area which is critical due to the belief that the Cargill Salt Ponds, while not built to FEMA standards, provide tidal flood protection. The US Army Corps of Engineers and the District are partners in the South Bay Salt Pond Restoration Project.

Ponds A5-A8 are among the first ponds to be addressed by the SBSP (Phase 1). The SBSP has a measured and careful approach to re-introducing tidal action to the ponds to avoid negative environmental impact. A key part of the plan is to be able to reverse an initiative if problems are discovered.

Phase 1 Action at Pond A8 will connect Pond A8 and the Slough with a 20-40 foot wide “notch” controlled by locks. In combination with other gates on Ponds A5 and A7, a limited amount of tidal action will be created in the Slough resulting in “scouring” action and increased salinity in the Slough, largely in the area of the Slough Project.

The SBSP project is currently under environmental review and has not yet been approved. If it is approved, Objectives 1 and 5 may be achievable over the long term without the Slough Project.

“With successful implementation of the SBSP Phase 1 Action over the long term, tidal scour in Alviso Slough would likely increase the current channel width by 50 to 90 feet in the vicinity of the SBYC [South Bay Yacht Club] and would deepen the channel depth. These predicted changes would be self-sustaining as long as the tidal exchange between Pond A8 and Alviso Slough continued [provided by SBSP]. The No Action Alternative combined with a successful SBSP Phase 1 Action would benefit recreation and improve navigation over time, and would not require the District to implement maintenance or mitigation measures, as required by all other alternatives. The No Action Alternative – with or without the Phase 1 Action would not restore the slough to pre-1983 conditions. Successful implementation of the SBSP Phase 1 Action would increase the possibility of full tidal restoration at Pond A8. Over the long term (perhaps 10 years or more), the larger SBSP Restoration Project would further improve navigation along Alviso Slough, possibly eventually restoring the area to pre-1983 conditions.” [DEIR pg 2-19]

The primary advantage offered by the Slough Project is to accelerate recreational benefits:

“Timely coordination of the SBSP Restoration Program and the Alviso Slough Restoration Project could maximize the public recreation benefits of both projects. The SBSP Restoration Project could provide sustainability for a larger slough channel over the long term, and avoid the need for vegetation removal and/or dredging as well as accompanying maintenance activities. Conversely, the Alviso Slough Restoration Project could accomplish in the very near term a portion of the channel widening the SBSP Restoration Project could (if approved) accomplish over a much longer period of time.” [DEIR-2-2]

The hasty Slough Project approach conflicts with the measured and careful SBSP approach. The cost of dredging and vegetation removal and disposal is significant not only in the dollars involved but in the risks of significant environmental damage.

## **Conclusions**

(See Appendix D for the project history.)

- In 2002 a simple vegetation removal project was proposed to improve channel maintenance at less than \$1M. By 2008, it ballooned into a monstrous \$22M project, whose main purpose is actually recreational, not environmental.
- The Slough Project is not an “environmental enhancement” and, in fact, has the potential to do significant environmental damage. Worse, it carries increased risk of mercury contamination and flooding.
- A budget of \$2.5M was set in 2004 for the entire project, including vegetation removal, dredging, and redesign and construction of the Weir, with completion scheduled for 2009. To date no dredging has been done, and no vegetation has been removed. Yet the \$2.5M has been spent.
- Despite District engineering analysis that removal of vegetation can increase flood risk and attempts by the district to communicate this to Alviso citizens, the Alviso community continues to hold the belief that the vegetation removal from the Project will reduce flood risk.
- There is a lack of trust of the District based on a long history of many issues and broken promises. It further appears that even Board members are distrustful of District staff.

- The District campaigns heavily about its commitment to the environment, but it seriously compromised that role by its proposal to move the mercury laden waters of the Guadalupe into the neighboring Wildlife Refuge. Its claim of partnerships with agencies such as the Shoreline Project, and other environmental protection agencies, especially the South Bay Salt Pond Restoration Project, is severely compromised by its aggressive approach to modifying the Slough.
- Objectives 2 and 4, which concern boating and mosquito control, are not within the District's mission. Objective 3 (maintain 100-year-flood control) is actually jeopardized by the project. Objectives 1 and 5 are better met by choosing Alternative 6 (No Project) and allowing the South Bay Salt Pond Project to achieve the objectives with lower environmental risk.
- The restoration to pre-1983 conditions for boating and recreational purposes is based on the wishes of a very small portion of Santa Clara County. While desirable for the Alviso community, the goals are not in the best interests of the County, and perhaps even San Francisco Bay. 1983 is an arbitrary target date and has no relationship to the original natural state of the Slough.
- It is disturbing that the District would spend \$2.5M and five years pursuing such a project, particularly when the District's own partners have alternate plans that would cost less and provide a greater long-term solution that is compatible with the plans needed for the entire South Bay.

The District should return to its basic mission and core competencies of flood protection and water supply, rather than bogus environmental enhancements that probably belong to city and County Parks and Recreation departments. Flood protection projects needing funding such as Canoas Creek, Upper Llagas, and San Francisquito Creek should not be sacrificed for the sake of non-essential projects such as this. The District should however, seek creative solutions to avoid further downstream impacts to communities such as Alviso.

## **Findings and Recommendations**

Findings have been reviewed with the subject agency.

### **Finding 1a**

Environmental Enhancement projects are selected at the discretion of the Board. Board End policy E-3.2 "to improve watersheds, streams, and the natural resources therein." The Alviso Slough Restoration Project is not an Environmental Enhancement project because it clearly does not improve watersheds, streams, and the natural resources therein.



## **Finding 1b**

The Alviso Slough Restoration Project is intended to restore to artificial pre-1983 conditions and as such, is not an appropriate project for the District.

## **Recommendation 1**

Environmental Enhancements should have a known budget and long-term plan that are reviewed annually. This should be done in connection with flood control or water supply projects and included in their planning.

## **Finding 2a**

Under the recommended Alternative 5 they expect to dredge approximately 10 feet below the existing level. Approximately 200,000 cubic yards of sediment would be removed, plus 25 acres of vegetation across a 0.6 mile stretch. It will take 300 days of trucking to landfills.

## **Finding 2b**

Heavy metal, particularly mercury, contamination would occur due to the nature of the proposed work and result in damage to the environment. State and Federal protected endangered species would be impacted by the environmental changes brought about upon completion of the project.

## **Finding 2c**

Deepening and widening the channel would make some boating feasible. However, it will be severely limited and access to and from the Bay may be limited to high tide.

## **Finding 2d**

The Alviso Slough Restoration Project proposes major changes in the drainage channel that could alter the present geometry of the tidal prism which in turn could expose the area to tidal flooding.

## **Finding 2e**

The South Bay Salt Pond Restoration Program, will slowly bring in salt water and use natural "scouring" to restore the slough to something closer to its original state. No dredging is involved in this project. It will take more time to achieve the Slough project objectives but with minimal environmental risk.

## **Recommendation 2**

The District should demonstrate to the public that proposed Environmental Enhancements actually enhance the environment.

## **Finding 3a**

The District has already spent \$2.5M for the initial planning that was originally budgeted for the full project.

## **Finding 3b**

Alviso Slough Restoration Project costs are estimated to be over \$22 million, which would be followed by yearly maintenance costs of around \$3.6 million for many decades.

## **Recommendation 3**

When a project is sent to staff for planning and investigation, a maximum budget should be set and staff instructed to return if it appears the budget will be exceeded by more than 10% or its schedule will be delayed more than six months, or its scope changes significantly.

## **Finding 4a**

In general, Board policy is to give higher priority to projects where there is potential for major loss of property or life. Major property loss has occurred and has potential to recur in several unfunded flood projects such as the Upper Llagas, Canoas Creek, Ross Creek, San Francisquito Creek.

## **Recommendation 4a**

The District should provide a comprehensive plan covering flood control, water supply, environmental enhancement, and ongoing operations,. This plan should cover funding and prioritization between these areas.

## **Finding 4b**

The Upper Llagas Project, initially approved in 1954, is the oldest and most under-funded project in the district, and may still face a funding shortfall. Morgan Hill and San Martin have had repetitive flooding and damage since 1954.

### **Recommendation 4b**

The SCVWD should cease funding the Alviso Slough Restoration Project and instead ensure that areas with obvious potential flood damage are addressed first.

### **Finding 4c**

The District has just completed the Lower Guadalupe project providing fluvial flood protection for Alviso and other areas of San Jose at a cost of \$83M.

### **Recommendation 4c**

No recommendation.

### **Finding 5**

The Alviso Slough Restoration Project is supported largely by the Alviso community and related government agencies, such as the City of San Jose and Santa Clara County, who will not be paying for it.

### **Recommendation 5**

The Board should establish a policy to ensure that politics and local interests do not interfere with project prioritization.

## Appendix A

### Construction Description Summary from DEIR

	Alt.1	Alt.2	Alt.3	Alt.4	Alt. 5	Alt. 6
<b>Vegetation Removal</b>						
Vegetation Removal, acres	2.6	7	3.7	6.2	25	0
Vegetation removed, c.y.	8,320	22,400	11,840	19,840	80,000	0
Construction Duration – Veg. Removal Only (working days)	<10 days	<10 days	<10 days	<10 days	<10 days	0
Haul trips to Disposal Facility – Veg. Only (round trips)	694	1,867	987	1,654	6,667	0
Hauling Duration – Veg. Only (working days, assuming 80 trips per day)	9 Days	24 Days	13 Days	21 days	84 days	0
<b>Dredging</b>						
Dredging, acres	0	0	3.7	6.2	9.7	0
Dredging Depth , feet	0	0	8	16	10	0
Sediment Removed (wet), c.y.	0	0	48,000	160,000	157,000	0
Sediment Removed (dry), c.y.	0	0	60,000	200,000	200,000	
Construction Duration – Dredging Only (working days)	n/a	n/a	42 days (9 weeks)	140 days (28 wks)	137 days (28 wks)	0
Haul trips to Disposal Facility	0	0	5,000	16,667	16,667	0
Hauling Duration (working days, assuming 80 trips per day)	n/a	n/a	73 days (15 wks)	219 days (44 wks)	219 days (44 wks)	0
<b>All Alternatives</b>						
Total Estimated Construction Duration (working days)	19	34	83	229	229	0
Total Estimated Construction Duration (months)	1	1	4	11.5	11.5	0
Staging/Stockpiling Area (veg. + sediment), acres	1	2	5	5	9	0

Notes:

1. c.y. = cubic yard.
2. Vegetation removal results in ~3200c.y. per acre
3. Construction duration assumes 0.5 acre per day vegetation removal per Aquamog, and 230c.y. dredged material per Aquamog.
4. Hauling duration assumes an average of 80 round-trips per day (80 for vegetation plus 80 for sediment), 5 days a week, using 12c.y. haul trucks. The hauling duration for sediment also assumes that sediment cannot be hauled offsite until it has completed a 10 day drying period.
5. Hauling of vegetation to Zanker Road Landfill will overlap with hauling of sediment to Newby Island Landfill.
6. Staging areas for drying sediment are assumed to be 2 feet high and a maximum of 6 feet high for stockpiling of sediment. Vegetation stockpiling is assumed to be up to 9 feet high initially then less as it dries.
7. Duration of Alternatives 4 and 5 require at minimum 2 years because all vegetation removal + dredging cannot be completed in a single allowable construction window to avoid species breeding seasons, etc., and could take as many as 3 or 4 years.

## APPENDIX B

### Summary Description of Alternatives from DEIR

<b>Project Elements</b>	<b>Alt. 1 Vegetation and Root Mass Removal (2.6 acres)</b>	<b>Alt. 2 Vegetation and Root Mass Removal (7.0 acres)</b>	<b>Alt. 3 Vegetation and Root Mass Removal and Dredge to 8foot Depth (3.7 acres)</b>	<b>Alt. 4 Vegetation and Root Mass Removal and Dredge to 16-foot Depth (6.2 acres)</b>	<b>Alt. 5 Vegetation/ Root Mass Removal (15.3 acres) and Dredge to 10- foot Depth (9.7 acres)</b>	<b>Alt. 6 No Projects<sup>3</sup></b>
Vegetation removed, c.y.	8,320	22,400	11,840	19,840	80,000	0
Sediment Removed (wet), c.y.	0	0	48,000	160,000	157,000	0
Length of slough affected by project work (feet)	1,400	3,400	2,300	2,200	3,300	0
Current average width of slough between Gold Street and County Marina (feet) <sup>1</sup>	50	50	50	50	50	50
Resultant average width of slough between Gold Street and County Marina (feet) <sup>2</sup>	80 <sup>3</sup>	130	100	110	160	50 <sup>3</sup>

Notes: <sup>1</sup> Average width of slough before and after implementation of alternatives was determined based on approximately 10 equidistant transects between Gold Street and the County Marina. The current average width of open water between Gold Street and County Marina was field measured on February 1, 2007. <sup>2</sup> The resultant width of the slough after construction does not imply adequate depth for all boats at all tides. The widths do not include changes associated with the SBSP Phase 1 actions (see footnote 3) <sup>3</sup> The Alternative 1 and No Project values of 80 and 50, respectively, do not consider the SBSP Phase 1 actions. The SBSP Phase 1 notch at Pond A8 is predicted to increase the average width of slough between Gold Street and County Marina by 50 to 90 feet, or to an estimated slough width of 100-140 feet, and resultant average width of 120 feet. Such action could potentially increase the resultant widths of Alternatives 1 and 6 as shown in the table. The other alternatives are predicted to attain a channel width as shown in table with or without the SBSP Phase 1 action.

## APPENDIX C

### Extracts from Public Comments Made in Response to Draft Environmental Impact Report

#### Audubon Society

- Sensitive Species: Breeding of salt marsh Common Yellow Throat & Alameda Song Sparrow if any construction work shifts outside of September 1<sup>st</sup>. to February 28<sup>th</sup>. construction window.

#### Citizens Committee to Complete the Refuge

- Lowering the levee weirs allows flood waters to escape the slough channel onto the Refuge location known as Pond A-8, through it, onto Refuge Ponds A- 5, A- 7 and possibly A –6.
- SCVWD cannot have the right to alter the weir at will. The Refuge acquired ponds ... in 2003, and current weir was an existing easement and condition that had been negotiated by the District (SCVWD) with the prior landowner. The DEIR proposes to alter those conditions in all but the no project alternative. Thus, any alteration of the weir involving impact on the Refuge must reassess District rights to do so and US FWS responsibility under NWRSA.
- The project effects downstream topping of levees A-12 and A-11. A potential outcome mitigated by lowering the weir, would also introduce greater flow of flood waters onto Refuge Lands and increase the potential of harm to wildlife and habitats. Thus, with or without lowering the weir, Alternatives 1 through 5 involve the NWRSA,( National Wildlife Refuge System Administrative Act. 1966)
- Adverse biological impact introduced by the altered hydrological and pollutant (Hg) conditions to the Refuge.
- The project also has adverse effects on the South Bay Salt pond Restoration Project (SBSRP).
- The South Bay Shoreline Study a project that will have a major impact on the Alviso Project has been omitted in the report.
- “District staff has stated that this is not a flood control project. But such statements are contradicted by actions proposed by Alternatives 1-5. Each proposes action that creates new flood dangers that must be mitigated in new flood control actions. Making matters worse, the proposed flood control actions dramatically increase Project costs and divert funds that could be used otherwise e.g. for watershed projects that may be alternatives that reduce flood potential without aggravating existing flood conditions.” (Citizens Committee to Complete the Refuge.)

## APPENDIX C - continued

### California Regional Water Quality Control Board, San Francisco Bay Region

- ASRP Project is not a Restoration Project. The Saltwater Pond Restoration Project returns shoreline to its original condition before the salt ponds were installed and back to salt water marshes and tidal flats
- Widening and deepening only one portion of the slough introduces unstable conditions in the current dimensions of the slough.
- Alteration of channel needs follow up maintenance work yearly. The Water Board considers the impacts resulting from the project to be essentially permanent.
- Threat to fish & wildlife. Steelhead cannot get out of Pond A-8, once the fish gets in.
- There will be a marked increase in sediments due to disturbances. Increased turbidity which screens may not adequately control. Other concerns are, mercury Hg contamination, reduction in water quality, habitat disturbance and conversion of wetland/ marsh habitat to open water.
- *Proposed mitigation measures is currently inadequate to support issuance of permits for this Project by the Water Board.*

### Department of Fish & Game

- Vegetation and root removal shall result in only a one foot deepening of the slough bottom.” This assumption is false according to DF&G findings. This work will lower the existing grade of the slough bottom by 4feet.
- Lowering the level of Pond A-8 involved too much collateral damages to the surrounding slough environment, to the downstream localities and other ponds.
- Dredging could bring bio-accumulative effects, which could be transferred up the food chain to terrestrial species.
- Many Special Status and Federal Threatened species are endangered.
- Four federal and state threatened and protected species of fish are involved.
  - Chinook Salmon ( Species of Special concern CA.))
  - Central CA Coast Steelhead ( Federally Threatened Species. )
  - Green Sturgeon ( Federally Threatened Species. )
  - Long fin Smelt ( State of CA.)
- All alternatives 1 thru 5 impacted these 4 species of threatened aquatic wildlife. The threats will result due to elimination of food sources, increases in turbidity, disturbed habitat which are all permanent impacts from the proposed project.

## APPENDIX C – continued

- Some of the other wildlife threatened are:
  - Salt Marsh Wandering Shrew.
  - Salt Marsh Harvest Mouse ( Federal endangered Species.)
  - California Black Rails ( State threatened and protected species.)
  - California Clapper Rails ( State & Federal endangered and protected species.)
  
- There is an omission in the DEIR regarding mercury. It did not discuss the potential for conveyance of mercury nor other pollutants including trash onto the Refuge during storm events. 'When acquiring Pond A8 and nearby former salt ponds, the Refuge recognized that there were know of, historical deposits of mercury within pond boundaries. That status became a factor of significant importance in restoration planning and implementation. Given that fact, Refuge planning must include avoidance of any increase in mercury deposition. The DEIR discussion of mercury pollution (p. 3.2-5) states that discharge of mercury into the watershed is episodic i.e. mostly occurring during high-flow storm events. It does not correlate such events \with a lowered weir nor the impact of altered input onto the Refuge. It is anticipated that implementation the Guadalupe River Watershed TMDL [Total Maximum Daily Load] will eventually reduce the watershed dispersion of mercury to insignificant levels. It is expected that that outcome is some years in the future, possibly decades. Thus the intervening years have the potential for significant mercury deposition onto the Refuge during high-water storm events. It is a concern that the DEIR, in discussing methyl mercury production and bioaccumulation (pp 3.221, 3.2-22), *can conclude as a summary of all Alternatives that the Project would have "Less than Significant" impacts on this pollutant issue.* In the same section the DEIR acknowledges that bringing deeper sediments to the surface could increase the reactive mercury in those sediments and that "It is not known for certain that this increase in reactive mercury would result in an increase in the methylation rate." With such an unknown, a less than significant impact is fully inappropriate. We can only conclude that Alternatives 1-5 will increase the extent of mercury pollution possible on the Refuge, through a lowered weir, and possibly downstream of the Project site. Doing so would increase risks to the food web and impacted species above and beyond risk levels that already exist. This is an unacceptable change and must be addressed in the FEIR.



## APPENDIX C - continued

### Shoreline Watch for San Jose

- **Suspension and Mobilization of Contaminated Sediment:** The document acknowledges that dredging would expose potentially mercury-contaminated deep sediments, but the District would not expect those sediments to be transported out of the immediate Project area. DFG requests additional information as to how this conclusion was drawn. DFG respectfully points out that even if those exposed sediments do not get transported out of the immediate area, there may still be substantial impacts to aquatic species present in the area, the bioaccumulation effects of which could be transferred up the food chain to terrestrial species.

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### San Francisco Bay National Wildlife Refuge Complex

- *Habitat mitigation.* We suggest coordinating with the South Bay Salt Pond Restoration Project for potential mitigation areas in the South Bay.
- *Impacts to Refuge Infrastructure and Ponds.* We are concerned about the project's indirect impacts to refuge-managed ponds along Alviso Slough during flood events. Removal of marsh vegetation could result in levee erosion. The widening and deepening of the Slough by the project could have unanticipated consequences to lands and levees downstream of the Slough by forcing higher volumes of water down the remaining narrower portions of the Slough. **Levees along the ponds could potentially overtop refuge levees causing flooding of the Alviso community.** The combined effects of the planned A8 restoration project and this project should be thoroughly evaluated prior to construction.
- *Lowering of A8 Weir.* We do not support the lowering of the weir on A8 as increased flood waters spilling into pond A8 will cause increased contaminants levels, particularly in regard to mercury. We are also not clear what property rights exist that allow the lowering of this weir and the increased flooding that would likely result.

## APPENDIX D

### Short Chronology of Alviso Slough Restoration Project

Some time in 2002	An apparent inequity in the LGRP plan is noted by the Director representing Alviso: The banks of the Guadalupe above the UPRR were being developed with 35 foot wide overflow banks that improved flow capacity and maintenance; whereas below the UPRR, the river banks did not have such improvements. In response, the District staff proposed removal under of 60% of the vegetation (4 out of 7 acres) at a cost of less than \$1M using a similar approach to that of the upstream portions and would provide improved maintenance.
November 2002	As the LGRP was reaching the final stages of approval, the BOD requested staff to make recommendations for environmental enhancements related to the LGRP. Among the recommendations was an “Alviso Slough Vegetation and Sediment Removal Project – Recreational Features”.
Nov 19, 2002- July 8, 2003	Over several meetings, the Board continues to support a project incorporating both the Pond A-8 pilot study and vegetation removal of 7 acres of vegetation (from the root) from the railroad bridge to the Marina. Cost estimates were under \$1M.
Feb 2003	California purchases Cargill Salt Ponds
July 8, 2003	ASRP presentation to the BOD to remove 7 acres between the Yacht club and the Marina. BOD did not approve but directed staff to conduct further analysis and return to BOD w recommendations.
Dec. 16, 2003	First meeting of the Alviso Water Task Force (AWTF), a small group of Alviso citizens organized with the help of the District in late 2003 after a series of community presentations by the District. Meeting minutes indicate that a District Director stated that “non-native vegetation is a flooding risk and needs to be removed as soon as possible.”
Jan. 20, 2004	BOD directed staff to “prepare a project that included the following: Phase 1, removal of 7 acres of vegetation and root mass to a depth of four feet on both banks of the Alviso Slough from the Gold Street Bridge to the County Marina; and then in the following year a long term project related to bringing in salt water.” Direction from the BOD was to not connect the Slough with Pond A8 but to integrate with the SBSP Estimated cost: \$500K-\$900K.
Jan. 28, 2004	District report to the AWTF regarding vegetation removal for flood protection explains that removal of 7 acres of vegetation does not improve flood protection and increases the probability of flooding from Pond A12 into Alviso.

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**APPENDIX D - Continued**

**Short Chronology of Alviso Slough Restoration Project**

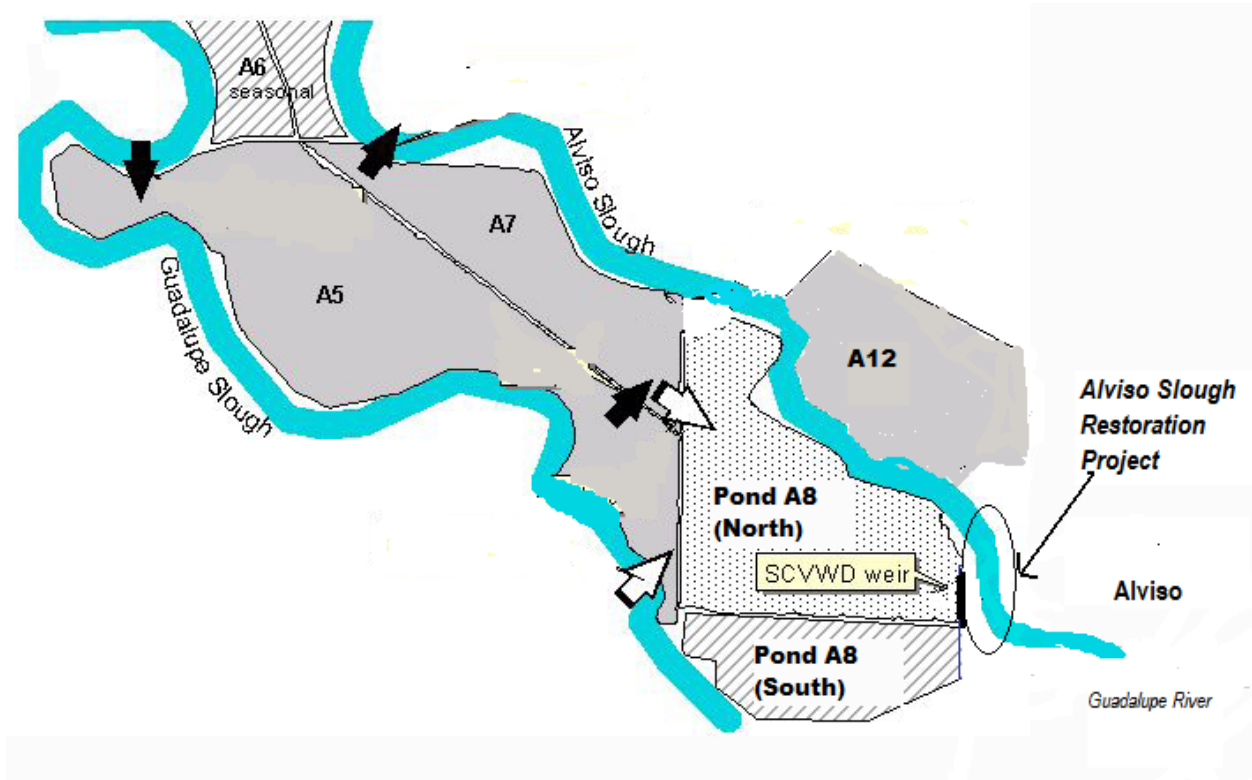
Feb 2004	South Bay Salt Pond Restoration project goals and objectives approved by stakeholders, a 28 member forum including a Board Director from the Santa Clara Valley Water District (District 3) and three Alviso representatives.
Oct. 15, 2004	Project Plan (Draft) “design for the modification of the weir to Pond A8, if required.” Objectives included boating, removal of seven acres of vegetation to a depth of 4 feet, widening the Slough to pre-1982 conditions, including Weir modification, project schedule to completion in FY09 for a total cost of \$2,566,000.
2006	EDAW, consultant hired by District to help prepare the EIR, notes South Baylands Mercury Project of which District is a partners to study effects of scour on mercury.
July 16, 2008	BOD public hearing held in Alviso on the DEIR. Many community comments are in favor of Alternative 5 and their desire for flood control. Alternatives 1-5 range from \$1.9M to \$22.2M and would be funded by the Watershed and Stream Stewardship Fund.
Oct. 14, 2008	Final 2008-2009 Capital Improvement Program document reports that only planning activities will have been accomplished by mid 2009 and \$2,555M will have been spent.

# APPENDIX E



# APPENDIX F

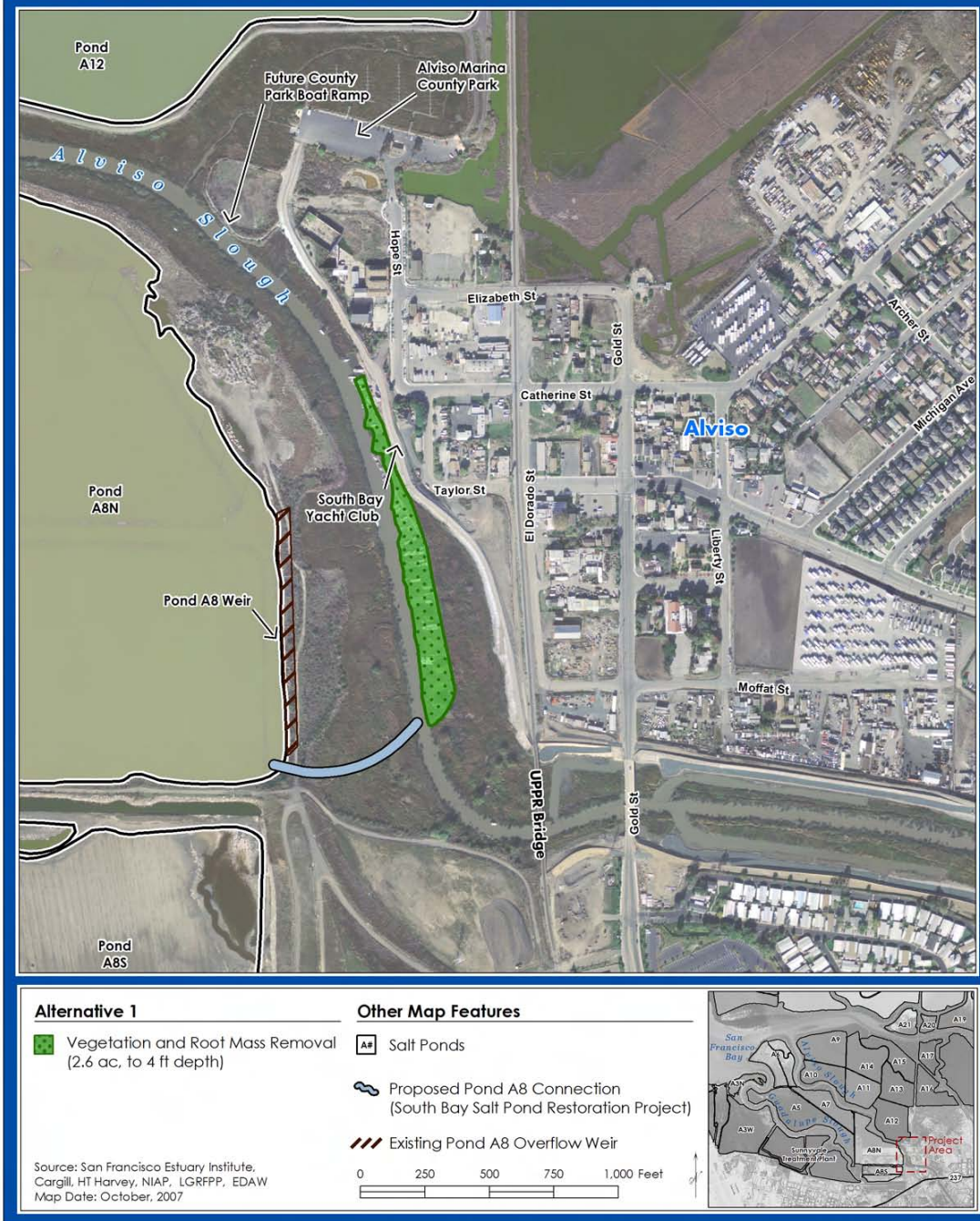
## South Bay Salt Pond Restoration From A7 Operations Plan 2008



# APPENDIX G

## Alviso Slough Restoration Project

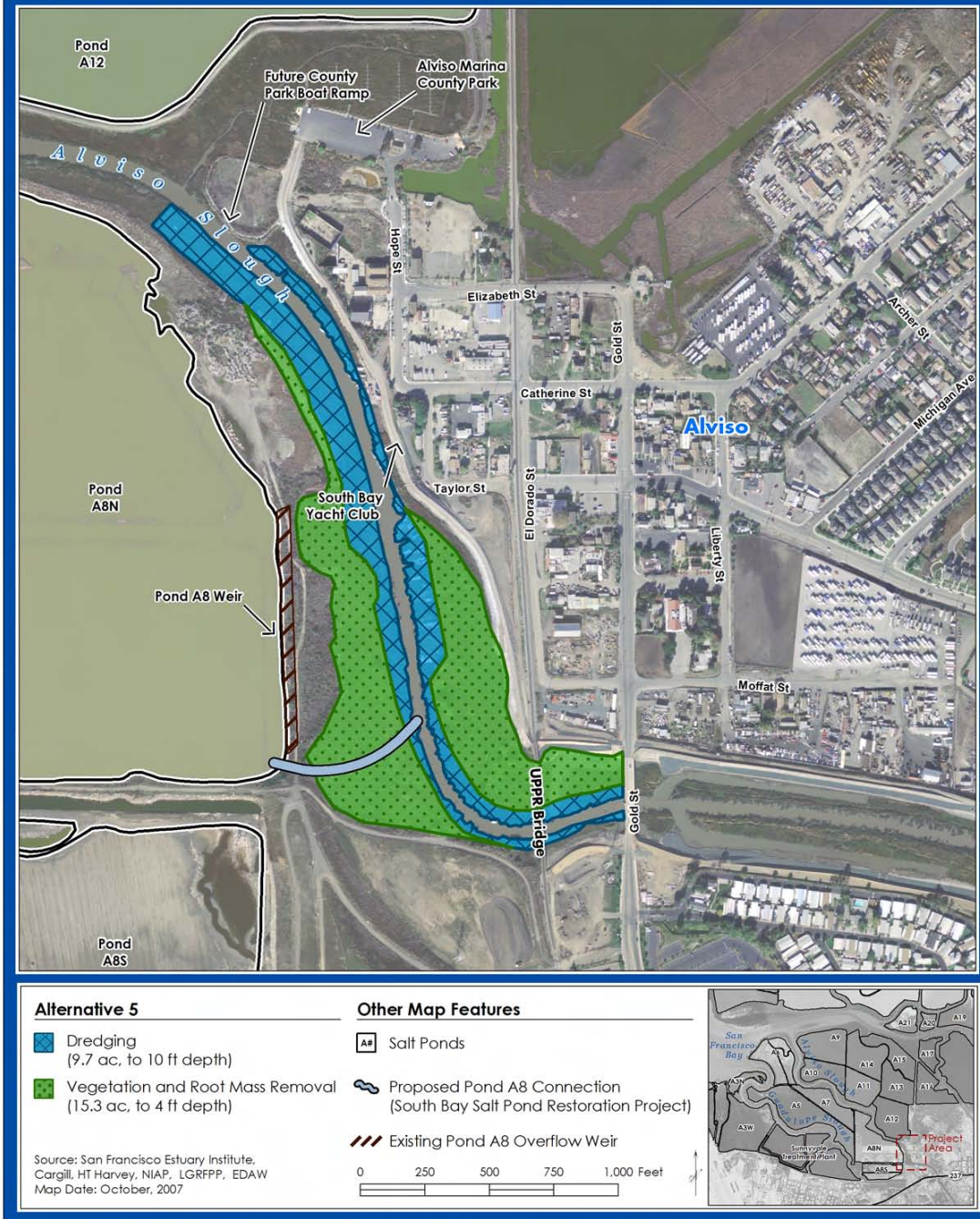
Figure 2-2:  
Alternative 1



# APPENDIX H

## Alviso Slough Restoration Project

Figure 2-6:  
Alternative 5

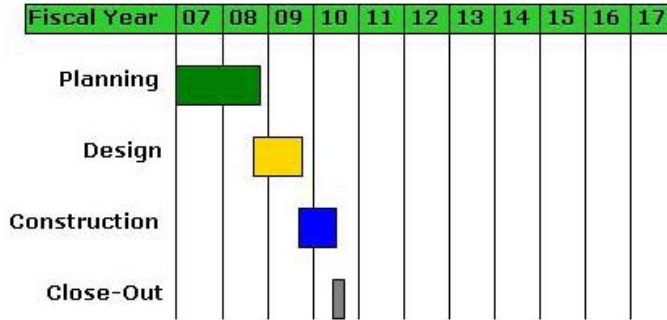


# APPENDIX I

## Project and Expenditure Schedule

As Reported in the 2007/2008 Capital Improvement Program:

**PROJECT SCHEDULE**  
November 2004 to February 2010



**EXPENDITURE SCHEDULE**  
(in thousands \$)

Project	Actuals Thru FY06	Planned Expenditures							Total
		FY07	FY08	FY09	FY10	FY11	FY12	Future	
Alviso Slough Restoration	1,669	431	484	1,603	135	0	0	0	4,322
with inflation	1,669	431	484	1,904	143	0	0	0	4,631

Actuals include project expenditures and encumbrances.

As Reported in the 2008-2009 Capital Improvement Program:

**SCHEDULE & STATUS**  
November 2004 to August 2008

(Planning Phase Only)

Phase	Cost	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Plan	2,549	█										
Design	-											
Construct	-											
Closeout	-											
	2,549											

**EXPENDITURE SCHEDULE**  
(in thousands \$)

Project	Actuals Thru FY07	Planned Expenditures							Total
		FY08	FY09	FY10	FY11	FY12	FY13	Future	
Alviso Slough Restoration	2,139	260	150	0	0	0	0	0	2,549
with inflation	2,139	260	156	0	0	0	0	0	2,555

Actuals include project expenditures, and encumbrances.



This report was **PASSED** and **ADOPTED** with a concurrence of at least 12 grand jurors on this 20th day of April, 2009.

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Don Kawashima  
Foreperson

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June Nishimoto  
Foreperson pro tem