

Harbor Safety Committee

of the San Francisco Bay Region

*Mandated by the California Oil Spill
Prevention and Response Act of 1990*

HARBOR SAFETY COMMITTEE OF THE SF BAY REGION

Thursday, December 12, 2002

Bay Model, 2100 Bridge Road, Sausalito, CA

Grant Stewart of American Ship Management, Chair, called the public meeting to order at 10:10 and welcomed those in attendance. The secretariat confirmed the presence of a quorum. The following committee members or alternates were in attendance. **Len Cardoza**, Port of Oakland; **Tom Wilson**, Port of Richmond; **Stuart McRobbie**, SeaRiver Maritime; **Capt. Pete Bonebakker**, ConocoPhillips (alternate for Doug Lathrop); **Don Watters**, CSX Lines; **Scott Merritt**, Foss Maritime; **Michael Beatie**, Golden Gate Bridge District, Ferry Division; **Capt. Eric Dohm** (alternate for Capt. Larry Teague), San Francisco Bar Pilots; **Capt. Margaret Reasoner**, Crowley Maritime Services; **Joan Lundstrom**, Bay Conservation and Development Commission; **Denise Turner** (alternate for Capt. John Davey), Port of San Francisco; and **Kathryn Zagzebski**, Marine Mammal Center. Also present were U. S. Coast Guard representatives, **Capt. Jerry Swanson** and **Lt. Cmdr. John Caplis** (MSO); **Cmdr. David Kranking** (VTS); U. S. Army Corps of Engineers representatives, **Col. Mike McCormick** and **David Dwinell**; OSPR representative, **Al Storm**, OSPR; **Ken Leverich**, State Lands Commission; **Lt. Cmdr. Steve Thompson**, NOAA representative; and **Lynn Korwatch**, Marine Exchange and HSC Secretariat. In addition, more than twenty representatives of the interested public were present.

The Secretariat confirmed the presence of a quorum.

MOTION by **Grant Stewart**, seconded by **M. Beatie**, to “approve the minutes as written.” Motion passed without objection.

The Chair thanks the Army Corps of Engineers for allowing the HSC to meet at the Bay Model.

USCG COTP’S REPORT. (1) **J. Swanson** stated he anticipates signing the Port Security Charter within the next month. He reported that the majority of deep draft ships are complying with the 96-hour notice of arrival. Deep draft commercial ships that do not comply will be faced with a civil penalty. (2) USGC is awaiting the second round of the Port Security Grant Program announcement from the Secretary of Transportation. (3) **LCDR John Caplis** reported on port safety events for the period of November 1, 2002 through November 31, 2002. A written report is made a part of these minutes. Question: Would private security have special training? **LCDR John Caplis**: There is no criterion that I am aware of at this time, training does need to be addressed. (4) **CDR Jeff Seine** reported on port security. Security has been divided into four sub-committees - Afloat, Port Infrastructure, Law Enforcement, and Mitigation. The subcommittees will be meeting in the next couple of months to develop a Port Security Plan. (5) There is a Container Security Initiative in which customs agents are now starting to go overseas



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to conduct scanning and K-9 and personnel inspections before the containers leave foreign ports. Verification of a secure container will lead to expedited treatment once it arrives to the U.S. (6) The Maritime Security Act was passed. (7) There are also two-week Port Security reports available for maritime stakeholders in the Bay Area. (8) **CDR David Kranking** gave a recap of the November 9, 2002 storm events. An award acknowledgment announcement was made honoring the San Francisco Bar Pilots for their work with the Sea Marshals.

CLEARINGHOUSE REPORT, A. Steinbrugge. A written report with statistics for the month of October 2002 is made a part of these minutes. There were no calls to OSPR during the month of October for escort violations; there were no reports from the Pilots to report vessels arriving at the pilot station without escort paperwork. There have been two calls regarding escort violations to date in 2002; six calls in 2001 and five calls in 2000.

OSPR REPORT, A. Storm. (1) **A. Storm.** Reported more wildlife casualties due oil trapped between the decks of the LUCHENBACH released by the November 9, 2002 storm. In a one month period, November 11, 2002 through December 10, 2002, 99 oil birds were collected, 43 dead and 56 alive. Of the 56, 46 died or were euthanized, eight were released, and the remainders are in captivity.

NOAA REPORT, S. Thompson. No new to charts to report. Happy to report the Coast Pilot vol. 7 is now available.

COE REPORT, D. Dwinell. (1) Introduces Larry Graham the new O & M Dredging Project Manager. (2) The text of the COE Report is made a part of these minutes by attachment.

STATE LANDS COMMISSION REPORT, K. Leverich. (1) November was an uneventful month, with no spills reported until last night. Five to ten gallons were spilt and mostly recovered. Note to USCG security discussion - K. Leverich shared concerns regarding training for security guards and offered assistance developing protocol.

LNG Feasibility Study Update, Merv Stromberg. A feasibility study is underway. The City of Vallejo is conducting a safety and health study. The review is due January 8, 2002.

NAVIGATION WORK GROUP REPORT, E. Dohm. Nothing to report.

UNDERWATER ROCKS WORK GROUP REPORT, L. Cardoza. (1) The feasibility study shows an insignificant benefit to cost ratio. A structural alternative may be the National Ecosystem Restoration Program. The report of the Underwater Rocks Workgroup is incorporated into these minutes by attachment.

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FERRY OPERATORS WORK GROUP REPORT, M. Beatie. (1) Nothing to report.

HUMAN FACTORS WORK GROUP, D. Watters. Nothing to report.

PREVENTION THROUGH PEOPLE WORK GROUP, N Salcedo The group is meeting on a regular basis every two weeks. The 6th Draft is in the process of being transcribed. The next meeting will be on January 10, 2003 at 1:00.

TUG ESCORT WORK GROUP REPORT, J. Lundstrom. The group met 12-06-02. Completed their discussion - Chemical Tankers Calling in the Bay. This may be the final discussion of tug escorts for vessels carrying dangerous cargo. Committee finds no need for escort of chemical tankers. Written report to follow.

PORTS FUNDING WORKGROUP, S. Merritt. Met 12/06/02 reviewed work to date and discussed how to implement a funding scheme.

PORTS REPORT, A. Steinbrugge. Installation of a side-looking current meter on the Benicia Bridge, separate from the NOAA experimental project that is still on track for January, should be completed in the next couple of months. The Oakland Current sensor has been retrieved and we are working to deploy a new Oakland current sensor in January.

OLD BUSINESS. None

NEW BUSINESS. M. Beatie suggests making the Bay Model the Harbor Safety Committee's regular meeting place. L. Korwatch announced the MTS meeting – 12/19/02 at 10:00, the open to the public MTS security meeting 01/14/03 at the Port of Oakland, and Capt. Brown will be speaking at CAL Maritime 01/23/03 at 13:30.

The next meeting of the HSC will be held at 1000 hours at the Port of Richmond on January 9, 2003 at 10:00.

Meeting adjourned 11:55.

Respectfully submitted,



Captain Lynn Korwatch
Executive Secretary

USCG Marine Safety Office San Francisco Bay
Port Operations Statistics
For 1 to 30 November 2002

PORT SAFETY:	TOTAL
• SOLAS Interventions/COTP Orders:	04
• Propulsion Casualties:	00
• Steering Casualties:	00
• Collisions/Allisions:	00
• Groundings/Sinkings:	03
POLLUTION RESPONSE:	MSO
Total oil pollution incidents within San Francisco Bay for the month:	25
▪ Source Identification; Discharges and Potential Discharges from:	
Deep Draft Vessels	00
Facilities (includes all non-vessel)	02
Military/Public Vessels	00
Commercial Fishing Vessels	06
Other Commercial Vessels	00
Non-Commercial Vessels (e.g. pleasure craft)	04
Unknown Source (as of the end of the month)	13
▪ Spill Volume:	
Unconfirmed	12
No Spill, Potential Needing Action	00
Spills < 10 gallons	13
Spills 10 to 100 gallons	00
Spills 100 to 1000 gallons	00
Spills > 1000 gallons	00

Significant Cases:

07 Nov – 08 Dec: A 700 ft dry dock broke free of its moorings at pier 70 in San Francisco, grounding on Yerba Buena Island. Salvage of dry dock took approx. one month with MSO monitoring progress. Dry dock re-floated and moored successfully at pier 96 in San Francisco.

13 Nov: M/V EDFU arrived in port with crew that INS determined as a flight risk. Issued COTP order directing vessel to provide adequate security when moored to prevent the stowaways from leaving until vessel departs.

22 Nov: M/V SKOWHEGAN arrived in port with crew that INS determined a risk to the port. Issued COTP Order directing vessel to provide adequate security when moored to prevent the stowaways from leaving until vessel departs.

26 Nov: M/V JUPITER arrived in port with seven stowaways aboard. COTP order issued ordering the vessel to provide adequate security when moored to prevent the stowaways from leaving until vessel departs.

18 Nov: M/V GOLDEN NORI had an inoperable EPIRB. COTP order issued to repair or replace EPIRB prior to departing San Francisco Bay. Vessel replaced EPIRB 19Nov02, COTP order rescinded.

16 Nov & 25 Nov: Mitigation of two barge issues – one purposefully grounded in the mud outside Benicia Marina on 16 Nov after taking on water en route to Richmond. The other sank in Anchorage 8 on 25 Nov en route San Francisco. Leak problems on both barges were resolved and both successfully re-floated and towed to berth in Richmond and San Francisco respectively.

San Francisco Bay Clearinghouse Report For November 2002

San Francisco Bay Region Totals

			2001
Tanker arrivals to San Francisco Bay	64		71
Tank ship movements & escorted barge movements	295		302
Tank ship movements	173	58.64%	216
Escorted tank ship movements	76	25.76%	97
Unescorted tank ship movements	97	32.88%	119
Tank barge movements	122	41.36%	86
Escorted tank barge movements	65	22.03%	47
Unescorted tank barge movements	57	19.32%	39
Percentages above are percent of total tank ship movements & escorted barge movements for each item.			
Escorts reported to OSPR	0		0

Movements by Zone	Zone 1	%	Zone 2	%	Zone 4	%	Zone 6	%	Total	%
Total movements	173		278		0		145		596	
Unescorted movements	85	49.13%	145	52.16%	0	0.00%	71	48.97%	301	50.50%
Tank ships	60	34.68%	94	33.81%	0	0.00%	42	28.97%	196	32.89%
Tank barges	25	14.45%	51	18.35%	0	0.00%	29	20.00%	105	17.62%
Escorted movements	88	50.87%	133	47.84%	0	0.00%	74	51.03%	295	49.50%
Tank ships	55	31.79%	73	26.26%	0	0.00%	38	26.21%	166	27.85%
Tank barges	33	19.08%	60	21.58%	0	0.00%	36	24.83%	129	21.64%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.

San Francisco Bay Clearinghouse Report For 2002

San Francisco Bay Region Totals

			<u>2001</u>
Tanker arrivals to San Francisco Bay	717		710
Tank ship movements & escorted barge movements	3,020		3,501
Tank ship movements	2,013	66.66%	2,376
Escorted tank ship movements	1,004	33.25%	1,110
Unescorted tank ship movements	1,009	33.41%	1,266
Tank barge movements	1,007	33.34%	1,125
Escorted tank barge movements	550	18.21%	609
Unescorted tank barge movements	457	15.13%	516
Percentages above are percent of total tank ship movements & escorted barge movements for each item.			
Escorts reported to OSPR	2		6

<u>Movements by Zone</u>	<u>Zone 1</u>	<u>%</u>	<u>Zone 2</u>	<u>%</u>	<u>Zone 4</u>	<u>%</u>	<u>Zone 6</u>	<u>%</u>	<u>Total</u>	<u>%</u>
Total movements	1,939		2,952		0		1,559		6,450	
Unescorted movements	904	46.62%	1,446	48.98%	0	0.00%	734	47.08%	3,084	47.81%
Tank ships	668	34.45%	1,040	35.23%	0	0.00%	480	30.79%	2,188	33.92%
Tank barges	236	12.17%	406	13.75%	0	0.00%	254	16.29%	896	13.89%
Escorted movements	1,035	53.38%	1,506	51.02%	0	0.00%	825	52.92%	3,366	52.19%
Tank ships	699	36.05%	1,005	34.04%	0	0.00%	505	32.39%	2,209	34.25%
Tank barges	336	17.33%	501	16.97%	0	0.00%	320	20.53%	1,157	17.94%

Notes:

1. Information is only noted for zones where escorts are required.
2. All percentages are percent of total movements for the zone.
3. Every movement is counted in each zone transited during the movement.
4. Total movements is the total of all unescorted movements and all escorted movements.

**Harbor Safety Committee
Of the San Francisco Bay Region**

**Report of the
U.S. Army Corps of Engineers, San Francisco District**

December 12, 2002

1. CORPS 2002 O&M DREDGING PROGRAM

a. *Richmond Inner* – Corps has awarded contract to Dutra - Project is approximately 50 % complete. Material is going to the ocean. Corps has permission to dredge until December 15, 2002 into the herring window. Contractor needs until December 31, 2002 to complete the project. Contractor has two scows that have been damaged and are out for repair. Corps put in a request to the California Department of Fish and Game to allow us to work until December 31, 2002, however, this request was denied. .

b. *Oakland (Inner & Outer)* – Dredging was completed but survey shows numerous high spots. This project shut down November 30, 2002 do to the herring window. Corps is working with the California Department of Fish and Game to do the cleanup during the herring window. Contractor has suggested baring the material down. This work must be completed by December 15, 2002.

c. *San Rafael* – This is a congressional addition to the Corps budget – In-Bay/Winter Island Disposal. Contractor continues to work on this project. Project was scheduled to be completed by the end of December. However, contractor has asked for an extension to the end of March. The Corps is evaluating this request. The Corps has permission to dredge through this time frame using an environmental bucket and a silt curtain. Contractor is on standby because dredge is blocked by private vessels and docks that have encroached into the Federal channel. Office of Counsel and sponsor are working to resolve this situation.

d. *Petaluma* – This is a congressional addition to the Corps budget – Upland Disposal. Dredging started on November 11, 2002. Project is approximately 45% complete. Project is scheduled to complete by end of December. Contractor has discovered tow sunken boats at the side of the channel. At present rate it looks like we will not have any decant water which should allow the project to complete on time.

2. CORPS 2003 O&M DREDGING PROGRAM

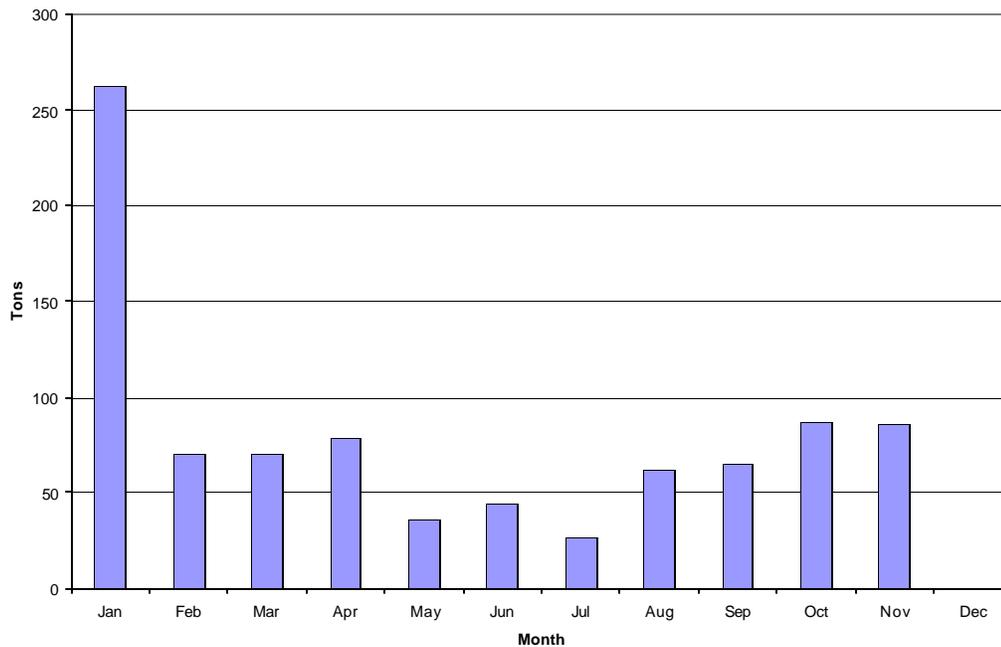
The Corps is waiting for the 2003 budget to be passed and signed so we can determine what we can do on this years dredging program. We are working under a continuing resolution authority. However, Colonel McCormick has initiated an O & M Dredging Process Improvement Team to improve the District's performance on O & M Dredging.

- a. **Main Ship Channel** – Expect to start dredging in early June 2003. Government dredge *Essayons* is scheduled to perform the work.
- b. **Richmond Outer and Southampton** – Expect to start dredging in late June 2003. Government dredge *Essayons* is scheduled to perform the work.
- c. **Richmond Inner** – Expect to start dredging first part of June. Material is scheduled to go to the ocean.
- d. **Oakland (Inner & Outer)** – Expect to start dredging the first part of August. Material is scheduled to go to the ocean.
- e. **Suisun Bay Channel/Pinole Shoal/New York Slough - Yaquina** dredged potential problem areas in Suisun Bay Channel from October 1st to 8th this year (i.e. FY 2003). The areas of concern were Bulls Head and Point Edith. The material was disposed of in bay at SF-16. Expect to start dredging approximately mid July. Plan to dredge high spots. Corps is working with Department of Water Resources to take the material to Sherman Island. This is dependent on extra money in the budget to cover the additional costs. However, if the funding is not available the Corps may use the government dredge *Essayon* to perform the work.
- f. **Redwood City** – Not scheduled for dredging this year, but Corps is working with Port and Pilots to address problem areas of channel. One solution may be to do advanced maintenance in the problem areas of the channel.

3. DEBRIS REMOVAL

The total tonnage of debris collected on the San Francisco Bay for October 2002 was 87 tons. The total tonnage of debris collected on the San Francisco Bay for November was 85.5 tons. These are both up from the 74.5 tons collected in the month of September.

Debris Removal 2002



4. UNDERWAY OR UPCOMING HARBOR IMPROVEMENTS

a. **Oakland 50-ft** - Corps is waiting to see how much money will be in this year's budget.

However, construction is continuing. Corps plans to modify contract to keep construction going until budget is passed. This is being done under the continuing resolution authority.

The second construction contract was awarded to Dutra and the contractor has started work. The second contract covers the Inner Harbor Turning Basin Phase I A-2. This contract covers some demolition, marine construction and a little dredging. The Corps has received approximately 8.4 million dollars for 2002. This project is going well. The Contractor is on schedule and within budget for the contract that is underway.

b. **S.F. Rock Removal Feasibility Study** – Status Unchanged

The Corps has completed Risk Model that gives the probability of an accident occurring. We are working on the Cost Benefit (BC) ratio that is scheduled to be presented to Corps Headquarters in January. At present the Risk Model shows the risk to be small. It is difficult to capture the catastrophic nature of an accident if it should

happen based on the way the BC is required to be calculated. The District is working with headquarters to see if there is another way of looking at the data.

c. **Avon Turning Basin** – Status Unchanged

Corps does have concerns that we could lose the money for this project and the opportunity to complete this project.

The Corps expects to sign a Pre-construction Engineering Design (PED) cost sharing agreement with Contra Costa County on this project. However, we understand that Contra Costa County has given up on the oil companies and will work to form an assessment district to obtain the funds. Forming an assessment district may take some time. Funding will allow this project to start moving forward.

Congress added \$250,000 this FY to prepare a General Reevaluation Report (GRR) and evaluate the feasibility of constructing a Turning Basin at Avon. This Basin is part of the un-constructed Phase III, John F. Baldwin Ship Channel project. To initiate this study the COE has prepared a Study Plan and has submitted a draft 75/25 cost sharing agreement to Contra Costa County, for their consideration.

5. EMERGENCY DREDGING

None in FY 2002 or FY 2003, however, Redwood City Harbor has requested emergency dredging, which is currently being evaluated.

Note: The last quarterly survey of Suisun's Bulls Head Reach area looked good.

6. CORPS' BUDGET

Most FY 2002 projects are underway or complete and we are now waiting to see what funds will be in the FY 2003 budget. We will know the actual numbers when the FY 2003 budget is passed and signed. However we are starting work on our annual projects under our continuing resolution authority. Budget may not be passed by Congress until January or February.

7. OTHER WORK

Status Unchanged – Study is ongoing.

The San Francisco District is looking at a feasibility study to deepen the JFB Ship Channel to Stockton. This would be only 1 or 2 feet. Reconnaissance Study was performed a couple of years ago. Division has given ok to proceed with study. The Corps signed the Pre-construction Engineering Design agreement with the Port of Stockton on July 11, 2002. This started the Phase 1 study on salinity and economics.

This study is expected to take approximately 10 months. Department of Water Resources is performing the study and the Corps has already provided some of the funds.

Status Unchanged – Work is continuing.

The San Francisco District has taken over the Sacramento River Deep Water Ship Channel Deepening Project from the Sacramento District. This project is looking at deepening the channel from 30 feet to 35 feet. Corps has developed a Project Management Plan (PMP). We were scheduled to sign a concurrence on PMP in September, but that did not happen. It is being rescheduled. We will be doing a Limited Reevaluation Report (LRR) that focuses on economics and updating the environmental documentation. We have initiated this project. The studies should take approximately 18 months.

Memorandum

Date: December 12, 2002

To: Harbor Safety Committee, San Francisco Bay Region

From: Len Cardoza

Subject: Underwater Rocks Work Group Report

Summary: The Underwater Rocks Work Group held a meeting on November 19, 2002 at the California State Lands Commission offices, Hercules, CA. The purpose of the meeting was the status of the Corps of Engineers (CoE) Feasibility Study (FS) for the project. Attendees for the Rocks Work Group included representatives from the Corps of Engineers (CoE), FS consultant team members, California State Lands Commission (CSLC), Bay Conservation and Development Commission (BCDC), San Francisco Bay Marine Exchange, and Port of Oakland.

Status of Contracts. The Corps of Engineers provided the following progress reports on status of studies required for the FS.

- Risk Assessment Model. As previously reported, ABS, The consultant, submitted the Draft Report to the Corps of Engineers on 28 August 2002. The report states that the predicted frequency of a tanker grounding at one of the submerged rocks (controlling depths of 33-36 feet MLLW) located northwest of Alcatraz Island (Harding, Shag, and Arch) was once every 658 years. The predicted frequency of a tanker grounding at Blossom Rock, southeast of Alcatraz Island, was once every 654 years. The report states that the predicted frequency of a non-tanker (primarily a containership) grounding at one of the northwest rocks was once every 161 years. The predicted frequency of a non-tanker grounding at Blossom Rock was once every 1603 years. The significantly lower frequency for non-tanker groundings at Blossom Rock is due to the lower depth of the submerged hazard (40 feet). The amount of oil outflow is dependent on the size and type of the vessel and the speed at which it strikes the rock, ranging up to 8 million gallons. The Risk Model Report computed the probability of failure of a well-maintained vessel. Attendees pointed out that there are a number of vessels calling at San Francisco Bay's ports and terminals that have been identified as having a number of operational and equipment difficulties. The CoE will investigate if this observation will impact risk analysis.
- Benthic Survey. Complete. Final Report is posted on the CoE web site.
- Oil Spill Model. As previously reported, the Contract Option was exercised to include stochastic runs (based on random variables) and Economic Impact Analysis for a 2nd spill site at Blossom Rock. Comments on the draft report have been submitted and a final report is expected within the next two months. The executive summary for the voluminous report will be published on the CoE web site. A listing of the contributing reports follows:
 1. Preliminary Report, Oil Spill Type & Volume Analysis (all rocks), Feb 2002
 2. Draft Final Report, Bio-Economic Oil Spill Modeling - Shag and Blossom Rocks July 2002
 3. Final Report, Bio-Economic Oil Spill Modeling - Shag Rock, May 2002
 4. Final Report, Response Cost Modeling - Shag Rock, May 2002
 5. Final Report, Socioeconomic Cost Modeling - Shag Rock, May 2002
 6. Final Report, Socioeconomic Cost Modeling - Blossom Rock, July 2002
 7. Draft Report, Response Cost Modeling - Blossom Rock, July 2002
- Geotechnical Analysis. As previously reported, the CoE was not able to come to an agreement with the consultant team on cost and scope of work. The CoE is proceeding with a literature search based on previous geotechnical investigations in the area. This approach will control costs and provide sufficient level of detail for the feasibility study. The information will be used to refine the scope of work for additional geotechnical analysis during the design phase of the project.
- Marine Geophysical Investigation. Complete. The report has been posted on CoE web site.

- Cultural Resource Survey. Complete. The report has been posted on the CoE web site.
- San Francisco District, Corps of Engineers web site. www.spn.usace.army.mil/ Click on publications/studies for reports referenced above.

Benefit to Cost Ratio. As previously reported, the results of the Risk Assessment Model, discussed above, are being incorporated with the spill damages. This will result in the probability of an accident, and the cost of cleanup / remediation, over the 50 year design life of the project (project benefits). Project benefits are currently estimated at \$12.48 million of *savings* by avoiding a spill at the three northwestern rocks (Harding, Shag, and Arch). Project costs include the construction cost estimates to lower the rocks, together with mitigation of environmental impacts. Construction costs for the lowering of Harding rock are currently estimated at \$32 million. This results in a benefit/cost ratio of .39 for Harding Rock alone. Construction costs to lower all three of the northwesterly rocks are estimated at \$221 million, providing a benefit/cost ratio of 0.056. This is significantly below the 1:1 ratio generally used as the minimum for Corps of Engineers civil works projects. The Corps of Engineers project team continues to review all input into the Benefit to Cost Ratio. Preliminary analysis indicates that costs of construction may be understated due to the particular challenges of working in Central San Francisco Bay (high sediment loads, significant depths, adverse currents, high winds). Preliminary analysis also indicates that the benefits may be understated (savings of costs associated with cleanup).

F-3 Conference. : The Read-ahead documentation for the F-3 Conference was distributed to the Committee members for review and discussion. The evaluated structural alternative involves lowering the 3 Northern rocks (Harding, Shag and Arch). Noting the apparently inadequate benefit-to-cost ratio described above, the central policy question to be addressed at the F-3 Conference is as follows: *Can the study consider the feasibility of the structural alternative under the Federal objective for National Ecosystem Restoration (NER) since the lowering of the rocks would reduce the risk of a catastrophic loss of species and habitat from an oil spill created by grounding on one of the three rocks.* If the structural alternative goes forward as a NER project, meeting attendees strongly recommended early consultation with Federal / State resource / regulatory agencies. As previously reported, this is the first conference with the CoE leadership above District level, also referred to as the Feasibility Scoping Meeting. The conference will focus on the present project area conditions, and the economic analysis / risk assessment for the project, together with preliminary alternatives analysis.

Status of EIS/R. The consultant, GAIA, received additional information on the proposed construction methods required in order to evaluate the potential environmental impacts of each alternative. This will lead to the 1st admin draft EIS/R.

Project Alternatives. As previously reported, The CoE prepared a listing of preliminary alternatives, as part of the plan formulation process for the F-3 Conference. They include Structural Measures (Rock Lowering Alternatives and Channel/Lane Rerouting Alternatives) and Non-Structural Alternatives (Enhanced Tug Escort, Clean-up Response, and Aids to Navigation). The plan formulation process also includes a discussion of construction techniques and disposal of rock rubble; environmental comparisons; and the no action (without project) alternative necessary to complete the NEPA/CEQA process.

Project Schedule. The preliminary benefit to cost ratio results will have a significant impact on the schedule. Policy decisions anticipated as a result of the F-3 Milestone conference will result in a revised study schedule.

Meetings. The next Underwater Rocks Work Group meeting is tentatively scheduled **January 14, 2003, 1000hr - 1200hr (CSLC Offices, Hercules, CA).**