WATER EMERGENCY TRANSPORTATION AUTHORITY

WETA

**Members of the Board**

Charlene Haught Johnson, Chair
Anthony J. Intintoli, Jr., Vice Chair
Gerald Bellows
Beverly Johnson
John O'Rourke

**MEETING AGENDA FOR THE**
**WETA BOARD OF DIRECTORS**

*Thursday, June 2, 2011 at 1:00 P.M.*
**San Francisco Bay Area**
**Water Emergency Transportation Authority**
9 Pier, Suite 111
San Francisco

***The full agenda packet is available for download at www.watertransit.org.***

**AGENDA**

This information will be made available in alternative formats upon request. To request an agenda in an alternative format, please contact the Board Secretary at least five (5) working days prior to the meeting to ensure availability.

**PUBLIC COMMENTS** The Water Emergency Transportation Authority welcomes comments from the public. Speakers' cards and a sign-up sheet are available. Please forward completed speaker cards and any reports/handouts to the Board Secretary.

Non-Agenda Items: A 15 minute period of public comment for non-agenda items will be held at the end of the meeting. Please indicate on your speaker card that you wish to speak on a non-agenda item. No action can be taken on any matter raised during the public comment period. Speakers will be allotted no more than three (3) minutes to speak and will be heard in the order of sign-up.

Agenda Items: Speakers on individual agenda items will be called in order of sign-up after the discussion of each agenda item and will be allotted no more than three (3) minutes to speak. You are encouraged to submit public comments in writing to be distributed to all Directors.

1. CALL TO ORDER – BOARD CHAIR — ***Information***
2. ROLL CALL/PLEDGE OF ALLEGIANCE — ***Information***
3. REPORT OF BOARD CHAIR — ***Information***
4. REPORTS OF DIRECTORS — ***Information***
5. REPORTS OF STAFF — ***Information***
   a. Executive Director's Report
   b. Legislative Update

6. CONSENT CALENDAR — ***Action***
   a. Minutes May 5, 2011
   b. Approve Amendment to the Harbor Bay Maritime Operating Agreement for the Provision of Alameda Harbor Bay Ferry Service
   c. Approve Amendment to the Blue and Gold Fleet Operating Agreement for the Provision of Alameda/Oakland Ferry Service

7. EMERGENCY REPAIRS TO MARINE FACILITIES AT THE HARBOR BAY FERRY TERMINAL — ***Information/Action***

8. AUTHORIZE FILING APPLICATIONS WITH THE METROPOLITAN TRANSPORTATION COMMISSION FOR FY 2011/12 REGIONAL MEASURE 1 AND REGIONAL MEASURE 2 OPERATING AND CAPITAL FUNDS TO SUPPORT VALLEJO BAYLINK FERRY SERVICE — ***Action***

9. APPROVE AMENDMENT WITH GHIRARDELLI ASSOCIATES TO PROVIDE ADDITIONAL CONSTRUCTION MANAGEMENT SERVICES FOR THE SOUTH SAN FRANCISCO FERRY TERMINAL PROJECT — ***Action***

10. APPROVE AMENDMENT WITH NOSSAMAN, LLP FOR THE PROVISION OF LEGAL SERVICES — ***Action***

11. APPROVE AMENDED AND RESTATED AGREEMENT WITH NEXTBUS FOR REAL TIME FERRY INFORMATION SYSTEM — ***Action***

12. ADOPT MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM FOR THE CENTRAL BAY OPERATIONS AND MAINTENANCE FACILITY PROJECT — ***Action***

13. APPROVE TERM SHEET FOR THE TRANSFER OF PORT OF OAKLAND FERRY SERVICE ASSETS AND PROVISION OF LANDING AND MOORING RIGHTS AT THE OAKLAND CLAY STREET FERRY TERMINAL AND AUTHORIZE RELATED ACTIONS — ***Action***

14. HOVERCRAFT FEASIBILITY STUDY REPORT AND DISCUSSION — ***Information***

15. RECESS INTO CLOSED SESSION

   a. CONFERENCE WITH REAL PROPERTY NEGOTIATORS — ***Action***
   Property: City of Berkeley ferry terminal related property — ***To Be Determined***
   Agency Negotiators: Nina Rannells and John Sindzinski, San Francisco Bay Area Water Emergency Transportation Authority
   Negotiating Parties: City of Berkeley
   Under Negotiation: Terms and conditions to the cooperative agreement/lease with the City of Berkeley for Berkeley service

   b. CONFERENCE WITH REAL PROPERTY NEGOTIATORS — ***Action***
   Property: City of Vallejo ferry terminal related property/assets — ***To Be Determined***
   Agency Negotiators: Nina Rannells, San Francisco Bay Area Water Emergency Transportation Authority
   Negotiating Parties: City of Vallejo
   Under Negotiation: Terms and conditions to the transfer of property/assets with the City of Vallejo for the Vallejo Baylink Service

16. REPORT OF ACTIVITY IN CLOSED SESSION — ***Action***
    Chair will report any action taken in closed session that is subject to reporting at this time. Action may be taken on matters discussed in closed session. — ***To Be Determined***

17. OPEN TIME FOR PUBLIC COMMENTS FOR NON-AGENDA ITEMS

ADJOURNMENT

Water Emergency Transportation Authority (WETA) meetings are wheelchair accessible. Upon request WETA will provide written agenda materials in appropriate alternative formats to individuals with disabilities. Please send a written request to contactus@watertransit.org or call (415) 291-3377 at least five (5) days before the meeting.

**Participation in a meeting may be available at one or more locations remote from the primary location of the meeting. See the header of this Agenda for possible teleconference locations. In such event, the teleconference location or locations will be fully accessible to members of the public. Members of the public who attend the meeting at a teleconference location will be able to hear the meeting and testify in accordance with applicable law and WETA policies**.

Under Cal. Gov't. Code sec. 84308, Directors are reminded that they must disclose on the record of the proceeding any contributions received from any party or participant in the proceeding in the amount of more than $250 within the preceding 12 months. Further, no Director shall make, participate in making, or in any way attempt to influence the decision in the proceeding if the Director has willfully or knowingly received a contribution in an amount of more than $250 within the preceding 12 months from a party or such party's agent, or from any participant or his or her agent, provided, however, that the Director knows or has reason to know that the participant has a financial interest in the decision. For further information, Directors are referred to Government Code section 84308 and to applicable regulations.

WATER EMERGENCY TRANSPORTATION AUTHORITY

WETA

**M E M O R A N D U M**

TO: WETA Board Members

FROM: Nina Rannells, Executive Director

DATE: June 2, 2011

RE: Executive Director's Report

## PROJECT UPDATES

**Service Transition Implementation** – The Transition Plan guides the consolidation of the Vallejo, Alameda/Oakland and Harbor Bay ferry services under WETA, and presents a five year financial outlook of WETA operating and expansion activities. The WETA Board of Directors adopted the final Transition Plan on June 18, 2009, in compliance with Senate Bills 976 and 1093 requirements.

All escrow requirements for the Alameda Transition were completed in April and the Alameda services were transferred to WETA on April 29, 2011. On March 8, the Vallejo City Council unanimously approved the terms and conditions for the transfer of the Baylink service from the City to WETA. WETA legal counsels completed the first draft of the Transition Agreement on April 13 and the City is currently completing its review. Staff anticipates being in a position to bring forward a final Vallejo service transition agreement for Board consideration in July 2011.

**Emergency Water Transportation System Management Plan (EWTSMP)** - This plan sets a framework for WETA coordination of emergency response and recovery efforts using passenger ferries and will provide a detailed definition of WETA's roles and responsibilities for incident planning, response, recovery and restoration of normal operations. The WETA Board of Directors adopted the final Emergency Water Transportation System Management Plan on June 18, 2009, in compliance with the requirements of Senate Bills 976 and 1093. Preparation of the EWTSMP and the Emergency Operations Plan (agency's internal plan) are complete.

**Vessels** - Two 149-passenger vessels, *Gemini* and *Pisces*, and two 199-passenger vessels, *Scorpio* and *Taurus*, have been constructed by Nichols Brothers Boat Builders and Kvichak Marine Industries for use in WETA services and to expand WETA's emergency response capabilities. One of these vessels is currently chartered to the City of Vallejo for utilization in the Vallejo Baylink service.

**South San Francisco Ferry Service** - This service will provide access to biotech and other jobs in South San Francisco for East Bay commuters and expand the geographic reach of emergency ferry transportation response capabilities on the San Francisco Bay.

Construction of the project is proceeding according to design. At this time the expected completion date of the project is December 2011. The topping slab was installed on the terminal in mid-May and the concrete float was completed and is due to be towed to the project site in June. The guide piles to fix the float in place are scheduled for installation in early June. Work will soon begin on installing the canopy on the terminal as well as the ramping system on the float itself. Staff continues to work with local transit providers and employers in the vicinity of the project site to determine connecting bus and shuttle service levels and schedules.

**Berkeley Ferry Service** – This service will provide an alternative transportation link between Berkeley and downtown San Francisco. Conceptual design and environmental studies work has been underway for several years to date. Since BCDC staff's tentative and unwritten approval of the landside plan, including the reconfiguration of the existing restaurant parking lot, work has restarted on the environmental document. One significant new challenge to the project has emerged in that the City staff has indicated reluctance to take the lead or provide assistance in rewriting the lease with the current tenant so that the parking lot reconfiguration plan can be implemented.

**Treasure Island Service** – This project, implemented by the Treasure Island Development Authority (TIDA), the Mayor's Office of Economic and Workforce Development and the prospective developer, will institute new ferry service between Treasure Island and downtown San Francisco.

Staff recently met with TIDA to review operating and budgeting scenarios for future Treasure Island ferry service. TIDA and WETA staff are working to prepare a draft Memorandum of Understanding (MOU) outlining each agencies roles and responsibilities for moving forward with the project. The MOU will be subject to review and approval by the WETA Board. TIDA's EIR was recently approved by the San Francisco Planning Commission and was approved by the County Board of Supervisors. Since then, the Sierra club and others have filed a lawsuit under CEQA against the project. No work can proceed with either the development or the related ferry terminal until that legal challenge is resolved.

**Downtown San Francisco Ferry Berthing Expansion** - This project will expand berthing capacity at the Downtown San Francisco Ferry Terminal in order to support new ferry services to San Francisco as set forth in WETA's Implementation and Operations Plan. The proposed project would also include landside improvements needed to accommodate expected increases in ridership and to support emergency response capabilities if a catastrophic event occurs.

On May 16, a 45-day period for public and agency comments concerning the scope of the Draft EIR/EIS being prepared for the project was completed. All scoping comments received will be documented and considered as the project team begins preparation of a Draft EIR/EIS, expected to be released for public review in early 2012

**Pier 9 Berthing Facility** - This project will construct two layover berths for mooring and access to ferry vessels on Pier 9 alongside the northern pier apron and adjacent to the WETA Administrative Offices. The contractor has begun building the two floats and is scheduled to install the guide piles in early June. At this time the project is about 2 weeks behind schedule and will not be available to WETA until mid-July. This project remains on schedule for completion this summer.

**Central Bay Operations and Maintenance Facility** - This project will develop an operations and maintenance facility at Alameda Point to serve as the base for WETA's existing and future central bay ferry fleet. The proposed project would provide running maintenance services such as fueling, engine oil changes, concession supply, and light repair work for WETA vessels and serve as WETA's Operations Control Center for day-to-day management and oversight of service, crew, and facilities. In the event of a regional disaster, the facility would function as an Emergency Operations Center, serving passengers and sustaining water transit service for emergency response and recovery.

On May 2, a 30-day public and agency review comment period concerning the CEQA Initial Study and Mitigated Negative Declaration prepared for project was completed. There were no public or agency comments received during the comment period. The Board will consider adoption of the Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting Plan for this project as an Action Item on this month's Board agenda. The FTA has assumed the lead agency role for approval of the Project under NEPA, which is anticipated to occur at a later date and is not subject to action by WETA.

**Hercules Environmental Review/Conceptual Design** -This project is currently on hold awaiting clarification from the City as to its plans and ability to build the multimodal transportation center that is a necessary precondition to any ferry terminal. In early March WETA staff met with City staff to discuss the City's phasing plans for building the adjacent multi-modal station. Based upon this discussion, it appears that in the event that sufficient funds are available to move this project forward, the work required to be done on the multi-modal facility prior to ferry terminal construction will not be completed until FY 2014/15 at the earliest.

**Antioch, Martinez, Redwood City, and Richmond Conceptual Design/Environmental Review** – This project involves completing conceptual design and environmental review documents for potential future ferry services in Antioch, Martinez, Redwood City and Richmond. All four projects are underway with conceptual design, data collection and stakeholder outreach. In April, WETA staff met with BCDC and the East Bay Regional Park District regarding the proposed terminal in the City of Martinez. After receiving initial feedback from these agencies, staff has directed the design team to proceed with data collection to further inform the design process. WETA staff is also initiating consultation with BCDC for the Redwood City and Richmond terminals.

**Ridership Forecast Model Update** – This project will update the existing ridership forecast model developed by WETA in 2002 to generate new ridership forecast projections based on the most recent transportation and demographic data available from AGAG, MTC and local land use jurisdictions.

WETA has completed calibration and validation of the updated WETA ferry ridership forecast model. Staff is coordinating with its consultant for this project, Cambridge Systematics, to begin production of future year model runs which will provide updated ridership forecast projections for various project alternatives in the coming weeks.

**Clipper Fare Media Implementation –** WETA is coordinating with MTC to implement Clipper fare media on the future South San Francisco ferry service and its existing Alameda/Oakland and Alameda Harbor Bay ferry services. MTC, on behalf of WETA, has submitted a Change Notice to Cubic Transportation Systems, the Clipper contractor, requesting a proposal to implement Clipper on WETA services. Staff has initiated a preliminary evaluation of the site prep work that will be required to install the Clipper fare collection equipment at its affected terminals and facilities.

## UPDATE ON RELEVANT PROJECTS IMPLEMENTED BY OTHER AGENCIES

**Vallejo Station** - Vallejo Station is a compact, transit-oriented mixed-use project in the City of Vallejo that includes two major transit elements – a bus transfer facility that will consolidate local, regional and commuter bus services and a 1,200 space parking garage for ferry patrons and the general public.

Parking structure construction has been split into two phases. Construction of Phase A, which began in June 2010, is approximately 65% complete and the final deck structure cement pour is scheduled for May 9. Challenges created by contaminated soils found on site, the high water table, and unusually wet weather in December 2010 have been major challenges for the project. Streetscape work should commence by early June and the project will be completed by the end of the year. Phase B of the Parking Structure is in the final design stage with the construction start date being dependent on the relocation of the post office property and full funding for this phase. The Bus Transfer Facility is anticipated to be completed by June.

**Mare Island Ferry Maintenance Facility** – This project will construct a new ferry maintenance facility located at Building 165 on Mare Island in Vallejo in three phases. Phase 1 constructs a 48,000 gallon fuel storage and delivery system. Phase 2 includes construction of a system of modular floats and piers, demolition of Building 855, and construction of a new warehouse/shop in its place. Phase 3 will renovate Building 165 into a permanent office and shop space.

Winzler & Kelly has completed the 95% design packages for both Phase 1 and Phase 2 of this project. Winzler & Kelly expects to have all bidding documents ready for the City to advertise the project for construction by July 31; shortly after the scheduled California Transportation Commission vote to allocate $4.2 million in STIP funds to the project. City of Vallejo staff and project consultants are working to complete all project requirements and secure project permits in the next few months. The project timeline requires all construction documents, permits, leases, environmental and right-of-way requirements to be completed to support construction contract execution before November.

The Facilities Agreement between the City of Vallejo and Lennar Mare Island is being reviewed by the parties and is considered to be greater than 95% complete. Until the agreement is final Lennar will not sign the BCDC permit amendment application. Legal staffs for both parties are working to clear the remaining obstacles and prepare the document for the respective board approvals. Work continues by Lennar to seek relief for movement of the "Artship" which currently sits directly on the waterfront parcel where Phase 2 of the project will be built. City staff is carefully monitoring the status of the "Artship" as are the US Navy and the permitting agencies.

## OPERATIONS

Alameda/Oakland Ferry Service ("AOFS"): On May 14, WETA launched a summer weekend and holiday schedule providing 9 round trips per day between Alameda, Oakland, the S.F. Ferry Building, Pier 41, and Angel Island State Park. Weekday and weekend service to AT&T Park for S.F. Giants games continues through September 28.

Alameda Harbor Bay Ferry ("AHBF"): On Sunday, May 22, the high winds and surf caused the failure of two Harbor Bay terminal float piles. AHBF service was suspended for three days while staff developed and implemented initial emergency repairs and developed plans for the permanent repair. The AHBF service resumed on Thursday, May 26.

## OUTREACH, PUBLIC INFORMATION, AND MARKETING EFFORTS

On May 12, Keith Stahnke participated in the MTC Trans Response Steering Committee meeting.

On May 18, WETA staff provided a technical tour to Women's Transportation Seminar participants of the WETA ferry system, including a ride on the Alameda/Oakland service and a presentation regarding WETA's program of projects.

On May 19 and 20, Nina Rannells attended the Women's Transportation Seminar's Annual Conference in San Francisco.

On May 26, WETA staff held a pre-proposal conference for the RFP to operate the water transit system.

## OTHER ACTIVITIES / ITEMS

**America's Cup** – The City of San Francisco will host the 34th America's Cup race and related events in 2012 and 2013. WETA staff is participating on the City's interagency task force for event transportation in order to support transportation planning and identify the role that WETA's ferry system might play in supporting this event.

## ADMINISTRATION

**April Financial Statements** - Attached are the monthly financial statements for FY 2010/11 through April 2011, including the Statement of Revenues and Expenses and the Capital Budget vs. Expenditures reports.

# San Francisco Bay Area Water Emergency Transportation Authority
## FY2010/11 Statement of Revenues and Expenses
## April 2011

| | Current Month | Prior Year Actual | 2010/11 Budget | 2010/11 Actual | % of Year Elapsed 83% / % of Budget |
|---|---|---|---|---|---|
| **Operating Revenues** | | | | | |
| **Operating Assistance** | | | | | |
| RM 2 Planning | 323,807 | 3,974,266 | 4,950,000 | 3,084,029 | 62.3% |
| SUASI | - | 26,198 | - | - | 0% |
| **Total Operating Assistance** | 323,807 | 4,000,464 | 4,950,000 | 3,084,029 | 62.3% |
| **Other Revenues** | | | | | |
| Interest Income | 1,071 | 13,050 | 15,000 | 7,119 | 47.5% |
| Other | - | 7,900 | - | - | 0.0% |
| **Total Other Revenues** | 1,071 | 20,950 | 15,000 | 7,119 | 47.5% |
| **Total Operating Revenues** | 324,878 | 4,021,413 | 4,965,000 | 3,091,149 | 62.3% |
| **Total Capital Revenues** | 964,621 | 17,675,940 | 28,622,995 | 10,502,711 | 36.7% |
| **Total Revenues** | 1,289,499 | 21,697,353 | 33,587,995 | 13,593,860 | 40.5% |
| | | | | | |
| **Operating Expenses** | | | | | |
| **Operations** | | | | | |
| Wages and Fringe Benefits | 122,140 | 1,472,036 | 1,613,000 | 1,199,228 | 74.3% |
| Services | 174,754 | 2,144,939 | 2,798,000 | 1,552,668 | 55.5% |
| Materials and Supplies | 1,179 | 25,071 | 87,000 | 22,059 | 25.4% |
| Utilities | 1,068 | 11,322 | 19,000 | 9,042 | 47.6% |
| Insurance | - | 28,973 | 37,000 | 28,222 | 76.3% |
| Miscellaneous | 467 | 38,597 | 103,000 | 31,741 | 30.8% |
| Leases and Rentals | 24,198 | 279,526 | 293,000 | 241,069 | 82.3% |
| **Total Operations** | 323,807 | 4,000,464 | 4,950,000 | 3,084,029 | 62.3% |
| **Total Operating Expenses** | 323,807 | 4,000,464 | 4,950,000 | 3,084,029 | 62.3% |
| **Total Capital Expenses** | 964,621 | 17,675,940 | 28,622,995 | 10,502,711 | 36.7% |
| **Total Expenses** | 1,288,428 | 21,676,404 | 33,572,995 | 13,586,741 | 40.5% |
| **Excess Revenues (Loss)** | 1,071 | 20,950 | 15,000 | 7,119 | |

# San Francisco Bay Area Water Emergency Transportation Authority
## FY2010/11 Statement of Revenues and Expenses
## April 2011

| Project Description | Current Month | Project Budget | Prior Year Actual | 2010/11 Budget | 2010/11 Actual | Future Year | % of Project |
|---|---|---|---|---|---|---|---|
| **Expenses** | | | | | | | |
| 2 Spare Vessels | 89,956 | 17,000,000 | 16,764,811 | 235,189 | 89,956 | - | 99% |
| SSF Vessels | 1,169 | 20,500,000 | 19,504,841 | 995,159 | 31,942 | - | 95% |
| SSF Mitigation Study | - | 275,000 | 42,459 | 52,541 | - | 180,000 | 15% |
| SSF Terminal Construction | 699,960 | 26,000,000 | 1,420,414 | 15,985,586 | 8,615,487 | 8,594,000 | 39% |
| Berkeley Environ/Conceptual Design | 11,096 | 1,954,700 | 1,566,858 | 303,842 | 102,664 | 84,000 | 85% |
| Berkeley Terminal Design | - | 3,200,000 | | 1,500,000 | - | 1,700,000 | 0% |
| Hercules Environ/Conceptual Design | (4,723) | 1,080,000 | 981,684 | 98,316 | 8,248 | - | 92% |
| Pier 9 Mooring/Floats | 10,526 | 3,150,000 | 329,867 | 2,820,133 | 520,329 | - | 27% |
| Environmental Studies/Conceptual Design | 15,520 | 3,250,000 | 56,000 | 2,120,000 | 122,090 | 1,074,000 | 5% |
| Central Bay Ops/Maintenance Facility | 8,775 | 2,600,000 | 128,770 | 962,230 | 198,288 | 1,509,000 | 13% |
| Maintenance Barge, Floats & Ramps | 90,000 | 5,000,000 | - | 1,250,000 | 90,000 | 3,750,000 | 2% |
| S.F. Berthing - Environ/Conceptual Design | 42,342 | 3,300,000 | - | 2,300,000 | 723,708 | 1,000,000 | 22% |
| **Total Capital Expenses** | 964,621 | 87,309,700 | 40,795,705 | 28,622,995 | 10,502,711 | 17,891,000 | |
| **Revenues** | | | | | | | |
| RM 2 | 134,797 | 33,281,735 | 31,410,679 | 1,690,975 | 921,202 | 180,081 | 97% |
| San Mateo County Sales Tax | 169,342 | 15,000,000 | 410,919 | 10,892,865 | 1,979,301 | 3,696,216 | 16% |
| Federal | 360,613 | 15,047,533 | 6,574,895 | 4,393,658 | 4,803,783 | 4,078,980 | 76% |
| Proposition 1B | 299,869 | 23,980,432 | 2,399,211 | 11,645,497 | 2,798,425 | 9,935,724 | 22% |
| **Total Capital Revenues** | 964,621 | 87,309,700 | 40,795,705 | 28,622,995 | 10,502,711 | 17,891,000 | |

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**Peter Friedmann**
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DATE: May 27, 2011

TO: WETA Board Members

FROM: Peter Friedmann
Tel: 202-783-3333 Fax: 202-783-4422 OurManInDC@federalrelations.com

SUBJECT: Report to the Board: Many Moving Parts – Below the Surface

Publically, very little is getting done on Capitol Hill, at least on the surface. Fortunately, there is more going on than would appear on the surface or from reading the newspapers. This is because many of the spending decisions in this "no earmark" environment have shifted from Capitol Hill, down to the Federal Agencies. In addition, because of the reluctance to impose new taxes or fees, combined with the bipartisan drive to reduce federal spending generally, there is simply less money to be spent.

- First, the Federal Highway Administration is in the process of distributing $68 million in Ferry Boat Discretionary (FBD) funds. In previous years, the FBD was fully "earmarked". In other words, Members of Congress inserted specific projects into appropriations bills which, cumulatively, allocated the entire $68 million. After much debate Congress this year finally did pass a budget, which specifically prohibited earmarks. So instead of going to our Bay Area Delegation for earmarks, WETA (and all other ferry agencies around the country) must apply directly to FHWA in a competitive grant process.

- Second, efforts are underway by the Public Ferry Coalition, of which WETA is a founding member, to expand federal support of ferry boats in the future. The objective is to increase the FBD from the current $68 million to $200 million per year. On one hand this would be a substantial increase, a tripling, of current federal funding support of ferries. On the other hand, in the current budget environment there is resistance to any increases in federal programs. But on the third hand, we can argue it is a very modest amount to cover all ferry systems.

- Third, the United States Ferry Investment Act of 2011 has been introduced in the House and Senate, to increase federal support for ferries. We are working with the bill's sponsors, Senator Murray and Congressman Larsen, and the Bar Area Delegation to assure that WETA will get its fair share of any new ferry funding program. Congressman Garamendi and Congresswomen Pelosi, Lee and Speier have been vigorous supporters of WETA and will be instrumental in the success of this initiative.

- Fourth, there is bipartisan recognition of the need for infrastructure. It could result, this year, in introduction of the 6-year Transportation Authorization bill. This is overdue, for all transportation infrastructure is in desperate need of repair, maintenance and expansion. The question is: how does one pay for it? Highway tax revenues are declining as people drive less and as cars become more fuel

efficient. The highway gas tax has remained unchanged since 1992. There is not enough money in the Highway Trust Fund to pay for needed infrastructure.

Ferry systems, as well as all other transportation modes requiring federal support (highways, transit, etc) are confronted by a political log jam here in DC. Both the White House and Congress agree on two things. First, we need additional spending on transportation infrastructure in a new Transportation Authorization bill. Second, neither the White House nor Congress is willing to stick their neck out to support any new taxes or fees to pay for such infrastructure.

Who will provide the leadership? We are seeing some hopeful signs. A few Members of Congress are openly advocating gas or diesel tax increase to pay for infrastructure. At some point the log jam will break. The question is, when?

Respectfully submitted,

Peter Friedmann

**AGENDA ITEM 6a**
**MEETING: June 2, 2011**

# SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY

## MINUTES OF THE BOARD OF DIRECTORS MEETING

***(May 5, 2011)***

The Board of Directors of the San Francisco Bay Area Water Emergency Transportation Authority met in regular session at the WETA offices at Pier 9, Suite 111, San Francisco, CA.

### 1. ROLL CALL AND CALL TO ORDER

Chair Charlene Haught Johnson called the meeting to order at 1:05 p.m. Directors present were Vice Chair Anthony Intintoli, Director Jerry Bellows and Director John O'Rourke. Director Beverly Johnson arrived at 1:10 p.m. Chair Johnson led the Pledge of Allegiance.

### 2. REPORT OF BOARD CHAIR

Chair Johnson reported that she had received several offers of support following the previous month's Community Advisory Committee meeting and was pleased by the enthusiastic response. Chair Johnson also noted that she looked forward to receiving public input on the naming process for the ferry system via a solicitation on www.watertransit.org.

Public Comment

Gary Leach of the City of Vallejo said that the name Baylink should be used and that no more appropriate name would be found.

### 3. REPORT OF DIRECTORS

None.

### 4. REPORTS OF STAFF

Executive Director Nina Rannells referred the Board to her written report and offered several additional updates. She noted that the Alameda ferry services had successfully transitioned to WETA on April 29, and that as part of the transition WETA had inherited a new employee, Ernest Sanchez. She said that work on the Vallejo transition continued and that she hoped to bring the transition agreement to the Board at the June meeting along with Vallejo's budget and related items. Ms. Rannells added that if the system transfer progresses in a similar way to the Alameda transition that the transfer could be finalized in late summer or early fall.

Ms. Rannells added that the City of San Francisco had invited WETA to participate in the development of the America's Cup People Plan that is being developed to identify and address transportation issues surrounding the America's Cup and that WETA was engaged in active dialogue with the City regarding the event.

Ms. Rannells said that she wished to keep her report brief due the size of the agenda and specifically noted the excitement generated by the item to release an RFP for system operations. She closed noting that there was no legislative update.

### 5. CONSENT CALENDAR

Director Bellows made a motion to approve the minutes from the April 7, 2011 Board of Directors meeting. Director O'Rourke seconded the motion and the item carried unanimously.

**6. RECESS INTO CLOSED SESSION AND REPORT ON CLOSED SESSION**

Chair Johnson noted that item 16 would be taken out of order and called the meeting into closed session at 1:15 p.m. Upon reopening of the meeting at 1:50 p.m. she reported that no action had been taken.

**7. AUTHORIZE THE RELEASE OF REQUEST FOR PROPOSALS FOR WATER TRANSIT SYSTEM OPERATION AND MAINTENANCE**

Chair Johnson noted that due to public interest in this item that it would be moved out of order.

Ms. Rannells presented the item requesting Board authorization for the release of a Request for Proposals for Water Transit System Operation and Maintenance. She reminded the Board that a draft version of the RFP was issued and circulated for industry review in January and that comments had been received from operators, potential consultants and labor. She said that WETA had been in active discussions to consider these comments for incorporation into the final RFP.

Ms. Rannells noted that the RFP covered operations for the Alameda/Oakland service, the South San Francisco service anticipated to begin in early 2012, and operation of the Vallejo service once transition to WETA was complete and after the current Vallejo contract expired in June 2012.

Ms. Rannells reviewed the scope of the RFP as well as the selection criteria, adding that in accordance with California Labor Code Sections 1070-1074, a 10% scoring bonus will be awarded to proposers who agree to retain current employees. She noted that the initial period of the contract was for five years with five additional one year renewal options for a total of up to ten years.

Ms. Rannells noted a letter sent to the Board the previous night from the Inlandboatman's Union (IBU) with a request for additional labor language added to the RFP. She added that WETA had spent several months working with union representatives in developing language for the RFP with the intent of protecting existing workers and ensuring that they are offered the opportunity to continue their work regardless of the operator selected.

Public Comment

Robert Irminger of the IBU and Blue & Gold Fleet thanked the WETA Board for taking labor requests seriously and for incorporating some of suggested language into the RFP. Mr. Irminger said one concern that remained was the need for inclusion of language that would protect the hiring hall. He said that in the days following the 1989 Loma Prieta earthquake, vessels from Seattle and Los Angeles were brought in to assist and that it was because of the union's hiring hall that experienced and skilled labor was ready and able to operate those vessels. He noted that emergency response was one of the reasons WETA was created and that the hiring hall would be essential to providing qualified labor during the next disaster. Mr. Irminger said the hiring hall provided flexibility and had always worked very well and that the inclusion of language preserving the hiring hall in the RFP was his primary concern.

Public Comment

Tim Paulson, Executive Director of the San Francisco Labor Council, noted that the AFL/CIO represented over 100 unions in San Francisco including many that work on the waterfront. He said that he wanted to see the hiring hall language inserted, adding that the hiring hall works, is important in ensuring trained workers are available, and had been a tradition on the San Francisco waterfront for many years. On behalf of the 100,000 men and women in the labor community of San Francisco, Mr. Paulson urged that language protecting the hiring hall be inserted into the RFP.

Public Comment
Fred Pecker of International Longshore and Warehouse Union (ILWU) Local 6, speaking on behalf of the Northern California District Council, addressed the rich maritime tradition of the hiring hall. He said that since labor first organized on the waterfront that the hall had been a way of ensuring fair hiring practices and making sure that workers were skilled and qualified for the job classifications to which they are assigned. He said that the hall was a dignified part of the historic and social fabric of the Bay Area. Mr. Pecker urged the Board to consider insertion of the language to protect the hiring hall.

Public Comment
Mike Villeggiante of the ILWU Local 10 said that he was quite concerned over the possibility that the language protecting the hiring hall would not be included in the RFP. He said that dispatch halls had a long and important history supplying skilled day labor to the shipping and maritime industries in San Francisco. He said the halls were important to businesses because they provide flexibility in accommodating peaks and valleys in labor requirements. He invited anyone who had questions or needed assistance to contact him directly.

Public Comment
Chuck Billington, ILWU and Chair of the IBU, said that he was the author of three schools and that every person who comes into the IBU is required to go through his basic training school. He said that the IBU offers the best of the best, and referred to an article written about his school in the current issue of Bay Crossings. He said that hiring through the hall was the only way to get the best that can be.

Public Comment
Capt. Ray Shipway of Masters, Mates & Pilots added his support to the inclusion of the IBU's language protecting the hiring hall into the RFP, saying that the language was necessary and would be especially important in responding to disasters such as the Loma Prieta earthquake.

Ms. Rannells responded that the IBU had suggested the inclusion of language specific to the IBU hiring hall in comments several weeks earlier, and that WETA had excluded that particular portion. She said that WETA had worked very hard on all of the labor provisions to ensure that the language would not dictate to proposers which unions they would be required hire and instead focused on language that would protect existing workers.

Ms. Rannells noted that a logical progression existed where the operator would be in a situation where they would be required to go through the hiring hall. She stated that it was important for WETA to be careful as the issuer of the RFP not to overstep its bounds and dictate to proposers which specific unions would provide specific jobs and that this is why the IBU's hiring hall language had been pulled. She suggested that perhaps other language that was not specific to IBU but which encouraged the use of hiring halls in general could be included.

Director O' Rourke said that he believed very strongly in the sanctity of the hiring hall and that it is essential for providing the skilled, qualified and competent workforce that the service could rely on to operate WETA's boats. He proposed WETA adopt language consistent with the recommended substitute language that would read: "If an insufficient number of senior deckhand or deckhand employees are available or willing to accept the offers to hire pursuant to this requirement, contractor must secure such employees for senior deckhand and deckhand positions from the represented employees' union hiring hall if applicable and in accordance with the rules and regulations governing that hall."

Director O' Rourke said that he thought the amended language would suffice in both honoring the rule of the list and the hiring hall as well as assuring competent and skilled labor for vessel operations.

Vice Chair Intintoli asked for an explanation of "the rule of the list". Director O'Rourke qualified his response in regards to the building trades with which he was familiar, but said that a member who signs an "out of work" list is assigned a number, and that as his or her number moves up on the list that person becomes assured of being next in line for an available job. Vice Chair Intintoli suggested that it assured some equity and order to the process and Director O'Rourke agreed.

Director Johnson said that she didn't think that such a requirement should be part of the RFP and that those hiring processes should be left to the unions. Director O'Rourke and Vice Chair Intintoli responded that they were simply clarifying the general process of a hiring hall and that this was not something included in WETA's RFP.

Chair Johnson solicited the audience for any additional comments.

Public Comment
Mr. Villeggiante pointed out that there were variations on the process and that his union worked on a rotary dispatch rule which equalized opportunities to each available worker. He invited any interested parties to contact him with any questions regarding the process or for a tour of his hiring hall.

Ms. Rannells acknowledged that there were a variety of processes and clarified that union hiring practices were beyond the scope of language in WETA's RFP.

Director O'Rourke made a motion to approve the item with the amended language inserted. Director Bellows seconded the motion and the item carried unanimously.

**8. OVERVIEW OF FY 2010/11 FINANCIAL AUDIT SCOPE AND PROCESS**

Ms. Rannells presented this informational item in preparation of an annual financial audit report by an independent auditor consistent with California Government Code Section 66540.54. She noted Maze & Associates would perform the audit through its ongoing agreement with the Association of Bay Area Governments and introduced Cory Biggs of Maze & Associates.

Mr. Biggs said that the scope of the audit work would be changing substantially as WETA moves into service operations. He noted that Maze & Associates was also the auditor for the City of Alameda, which would be helpful in terms of the firm already having familiarity with the Alameda Oakland Ferry Service. He noted that he was specifically interested in working on farebox revenue controls and looking at bond and Measure B issues. He emphasized the importance of having clear, two-way communication with the Board and encouraged the Board to bring any concerns or questions to him directly.

**9. APPROVE FISCAL YEAR 2011/12 BUDGET**

Ms. Rannells presented this item requesting that the Board approve by motion the proposed Fiscal Year 2011/12 Operating and Capital Budget.

Ms. Rannells referred to the budget attachment and presented an overview. She noted that Vallejo was not included in the budget as it did not make sense for WETA to include a budget for a service that it does not yet operate but that a proposed budget for the Vallejo service would be brought to the Board for adoption along with the Vallejo transfer agreement at a future meeting.

Vice Chair Intintoli asked that in the event that WETA did take over Vallejo service in the coming year if there would be marketing funds available. Ms. Rannells said that Vallejo did have some marketing in their budget, which WETA would adopt at the time of transfer, and that WETA has also included marketing in its overall budget.

Ms. Rannells pointed out that some items were subject to change based on the proposals WETA would receive in response to the system operations RFP, although it was not certain to what extent these would have any impact. She added that escalating fuel costs have had an impact on the Alameda ferry services, and will impact the Vallejo budget to an even greater degree due to the long distance and vessel speed required for the service. Ms. Rannells said that the budget used a projected fuel price of $4 a gallon. She said that while fuel prices had increased sufficiently to consider instituting a fuel surcharge to the service fare, her recommendation would be to first complete the service transitions. Once this work is completed, and a new service operator is selected, staff will be in a better position to assess the impact of fuel prices on the system budget and consider options for addressing the situation.

Public Comment

Mr. Leach said he understood why Vallejo's operating budget was not yet included in WETA's budget but that he did not understand why funding for the FY 2011/12 Vallejo maintenance dredging was not included.

Ms. Rannells explained that it made no sense for WETA to budget funds for the FY 2011/12 Vallejo maintenance dredging when WETA did not yet have a transition agreement or operate the service. She added that funding for maintenance dredging would be included with the Vallejo budget along with the Vallejo transfer agreement when that was completed and presented to the Board.

Mr. Leach asked if there is still sufficient time to apply for capital funding for the maintenance dredging project. Finance and Grants Manager Lynne Yu said that the federal application process was already underway and that WETA was aware of the timeline for contract award and the short dredging window.

Director Bellows asked if there was any information regarding a rumor that a large biotech company was looking at the planned Central Bay Maintenance Facility site. Ms. Rannells said that discussions with the City of Alameda and BCDC were well underway and that she was not familiar with that rumor. Director Johnson also said that she had not heard such a rumor but that she would check with city staff.

Director O'Rourke made a motion to approve the item. Vice Chair Intintoli seconded the motion and the item carried unanimously.

**10. AUTHORIZE FILING AN APPLICATION WITH THE METROPOLITAN TRANSPORTATION COMMISSION FOR FY 2011/12 REGIONAL MEASURE 1 BRIDGE TOLL REVENUE FUNDS TO SUPPORT THE ALAMEDA FERRY SERVICES**

Ms. Yu presented this item requesting that the Board authorize the filing of an application with the Metropolitan Transportation Commission for a total of $1,884,800 FY 2011/12 Regional Measure 1 Bridge Toll revenue funds, including five percent unrestricted State funds and two percent bridge toll reserve funds and authorize the Executive Director to execute the associated agreements.

Vice Chair Intintoli made a motion to approve the item. Director O'Rourke seconded the motion and the item carried unanimously.

**11. AUTHORIZE FILING APPLICATIONS WITH THE METROPOLITAN TRANSPORTATION COMMISSION FOR $6,243,000 FY 2011/12 REGIONAL MEASURE 2 OPERATING FUNDS**

Ms. Yu presented this item requesting that the Board authorize filing applications with the Metropolitan Transportation Commission for a total of $6,243,000 FY 2011/12 Regional Measure 2 operating funds and authorize the Executive Director to execute the associated agreements.

Director Bellows made a motion to approve the item. Director O'Rourke seconded the motion and the item carried unanimously.

**12. APPROVE AMENDMENT NO. 10 TO THE AGREEMENT WITH THE ASSOCIATION OF BAY AREA GOVERNMENTS FOR THE PROVISION OF ACCOUNTING SUPPORT SERVICES**

Ms. Yu presented this item requesting that the Board approve Amendment No. 10 to the agreement with the Association of Bay Area Governments (ABAG) in the amount of $100,000 for the provision of accounting support services for FY 2011/12 and authorize the Executive Director to execute the amendment. Ms. Yu gave an overview of the services provided by ABAG.

Ms. Rannells said that she continued to think that using ABAG to provide these services to WETA is the right solution but added that having Ms. Yu at WETA provided her with a great level of confidence that what ABAG does for WETA is right and correct. She said that with Ms. Yu as the brains behind the system, she feels that $100,000 for ABAG's services was very reasonable.

Vice Chair Intintoli made a motion to approve the item. Director Johnson seconded the motion and the item carried unanimously.

**13. APPROVE AMENDMENT NO. 1 TO THE AGREEMENT WITH BROAD & GUSMAN, LLP FOR THE PROVISION OF STATE LEGISLATIVE REPRESENTATION**

Public Affairs Manager Leamon Abrams presented this item requesting that the Board approve Amendment No. 1 to the agreement with Broad & Gusman, LLP to extend the term of their contract for FY 2011/12 in an amount not to exceed $66,000, and authorize the Executive Director to execute the amendment.

Vice Chair Intintoli asked if WETA maintained a specific list of tasks for Mr. Broad, such as looking at potential solutions to issues including the simultaneous end dates for Board member terms, which was only two years away. He also suggested scheduling a Board retreat to address this along with other issues.

Ms. Rannells said that while the Board had not adopted a specific legislative program, staff was in regular contact with Mr. Broad to address issues as they came up. Vice Chair Intintoli said that a list would also provide more specific criteria for future contract amendments.

Ms. Rannells asked the Board if a committee should be formed to examine the issue of Board member terms. Vice Chair Intintoli asked if it could be discussed in closed session. WETA legal counsel Stanley Taylor III of Nossaman, LLP said that it could not.

Director O'Rourke asked Ms. Rannells to present these points to Mr. Broad and have him come back with a work program. Ms. Rannells agreed that this could create a more structured approach. Chair Johnson added that she did not disagree with this idea.

Vice Chair Intintoli made a motion to approve the item. Director Bellows seconded the motion and the item carried unanimously.

**14. APPROVE AMENDMENT NO. 10 TO THE AGREEMENT WITH LINDSAY, HART, NEIL & WEIGLER, LLP FOR THE PROVISION OF FEDERAL LEGISLATIVE REPRESENTATION**

Mr. Abrams presented this item requesting Board approval of Amendment No. 10 to the agreement with Lindsay, Hart, Neil & Weigler, to extend the term of their contract through FY 2011/12 for an amount of $160,000 and to authorize the Executive Director to execute the amendment.

Director O'Rourke made a motion to approve the item. Director Bellows seconded the motion and the item carried unanimously.

**15. ADOPT WETA LOCAL HAZARD MITIGATION PLAN (LHMP)**

Planner/Analyst Chad Mason presented this item recommending that the Board adopt the Association of Bay Area Governments (ABAG) Local Hazard Mitigation Plan and the WETA jurisdictional annex. Mr. Mason presented an overview of the item, noting that ABAG has taken the lead in preparing a multijurisdictional LHMP for the San Francisco Bay Area in order to assist local governments in meeting the LHMP requirement. He added that local agencies such as WETA were required to adopt a LHMP in order to maintain eligibility for disaster assistance funds.

Director O'Rourke made a motion to approve the item. Director Bellows seconded the motion and the item carried unanimously.

**16. ADJOURNMENT**

All business having concluded, the meeting was adjourned at 3:00 p.m.

Respectfully Submitted,

Board Secretary

**AGENDA ITEM 6b**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**Ernest Sanchez, Manager, Transportation Services**

**SUBJECT:** **Approve Amendment of the Harbor Bay Maritime Operating Agreement for the Provision of Alameda Harbor Bay Ferry Service**

***Recommendation***
Approve Amendment No. 9 to the Sixth Amended and Restated Operating Agreement with Harbor Bay Maritime for provision of Alameda Harbor Bay Ferry service, and authorize the Executive Director to execute the Amendment.

***Background/Discussion***
California Senate Bill 976, as amended by Senate Bill 1093, authorized the Authority to consolidate ferry services operated by the cities of Alameda and Vallejo under Authority management. Pursuant to this legislation, the City of Alameda (City) transferred the Alameda Harbor Bay Ferry (AHBF) service to the Authority on April 29, 2011. The transfer included City assignment of the Harbor Bay Maritime operating agreement for this service (Agreement) to the Authority. The assigned contract expires on June 30, 2011.

On May 6, 2011, the Authority released the Request for Proposals for Water Transit System Operation and Maintenance (RFP). The RFP anticipates award of a new operating agreement for AHBF service to the successful proposer in Fall 2011.

Staff recommends Board approval of an amendment to the Harbor Bay Maritime operating agreement for AHBF service (Amendment) to ensure continued and uninterrupted AHBF operation and to provide for a smooth transfer of ferry operations in accordance with the RFP timeline.

The proposed Amendment would extend the Agreement term on a month-to-month basis for a maximum of six months ending no later than December 31, 2011. The Authority may terminate the Agreement at any time to facilitate consolidation of Authority operations under one operator. If the Authority terminates the Agreement prior to December 31, the Authority will pay an early termination fee of $5,000 per month to cover Harbor Bay Maritime's committed costs for vessel docking. The Amendment would cover operating agreement expenses for one half of the fiscal year and would be for an amount not to exceed $519,250.

***Fiscal Impact***
Funds to support the Amendment are included in the Authority's FY 2011/2012 operating budget.

***END***

**AGENDA ITEM 6c**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**Ernest Sanchez, Manager, Transportation Services**

**SUBJECT:** **Approve Amendment of the Blue & Gold Fleet Operating Agreement for the Provision of Alameda/Oakland Ferry Service**

***Recommendation***
Approve the Amendment No. 14 to the Alameda/Oakland Ferry Service Agreement with Blue & Gold Fleet for provision of Alameda/Oakland ferry service and authorize the Executive Director to execute the Amendment.

***Background/Discussion***
California Senate Bill 976, as amended by Senate Bill 1093, authorized the Authority to consolidate ferry services operated by the cities of Alameda and Vallejo under Authority management. Pursuant to this legislation, the City of Alameda (City) transferred the Alameda/Oakland Ferry Service (AOFS) to the Authority on April 29, 2011. The transfer included City assignment of the Blue & Gold Fleet operating agreement for this service (Agreement) to the Authority. The assigned contract expires on June 30, 2011.

On May 6, 2011, the Authority released the Request for Proposals for Water Transit System Operation and Maintenance (RFP). The RFP anticipates award of a new operating agreement for AOFS service to the successful proposer in Fall 2011.

Staff recommends Board approval of an amendment to the Blue & Gold Fleet operating agreement for AOFS service (Amendment) to ensure continued and uninterrupted AOFS operation and to provide for a smooth transfer of ferry operations in accordance with the RFP timeline.

The proposed Amendment would extend the Agreement term on a month-to-month basis for a maximum of six months ending no later than December 31, 2011. The Authority may terminate the Agreement at any time to facilitate consolidation of Authority operations under one operator. The amendment would cover operating agreement expenses for one half of the fiscal year, and would be for an amount not to exceed $2,113,900.

***Fiscal Impact***
Funds to support the contract amendment are included in the Authority's FY 2011/2012 operating budget.

***END***

**AGENDA ITEM 7**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**Keith Stahnke, Manager, Operations**

**SUBJECT:** **Emergency Repairs to Marine Facilities at the Harbor Bay Ferry Terminal**

***Recommendation***
This is an informational item, with the option for the Board to ratify actions taken by the Executive Director to authorize contracts for emergency repairs of the Harbor Bay marine facilities.

***Background/Discussion***
A piling failure at the Harbor Bay Ferry Terminal over the May 21/22 weekend resulted in damage to the facility and suspension of the Harbor Bay Ferry service on Monday, May 23. In response to this situation, staff developed a two-step emergency repair plan to stabilize the float to prevent additional damage and allow resumption of service as quickly as possible.

The first phase of repairs involved installation of 24" temporary piles to secure and stabilize the Harbor Bay float. This work was conducted by Vortex Marine Construction under contract with WETA at a cost of $50,000. Prior to selecting Vortex Marine Construction to do this work, staff contacted three marine construction firms for repair proposals with the following results:

- Manson Construction was asked to submit a proposal but declined due to other work;
- Marine Express proposed a temporary stabilization of the float using anchors for approximately $10,000. While this solution would help to stabilize the float and avoid further damage, it would not be sufficient enough to allow service to resume until permanent repairs were made; and
- Vortex Marine Construction proposed an emergency repair that involved installation of temporary 24" piles, at a cost of $50,000 that would serve to stabilize the float enough to avoid further damage and allow for the quick resumption of service.

Staff determined that the Vortex Marine Construction proposal was the best immediate option. While this repair allowed for service to be restored quickly, this stabilization repair is temporary and a permanent repair is required.

The scope of work for the permanent emergency repair includes:

- Engineering, services and drawings for the replacement of the failed piling mooring system; and
- Removal of the two temporary pilings and welded deck collars, installation of two steel pilings with anti-corrosive coatings, reinstallation of welded deck collars and wear pads, and cleaning and painting as necessary. The contractor will be

expected to schedule work to avoid interruption of the Harbor Bay commuter ferry service operation.

Staff is in the process of soliciting proposals from various marine construction firms to construct the permanent repair and anticipates awarding a contract for this work during the week of May 31. The final repair work is estimated to cost between $125,000 and $200,000 and will take two to three weeks to complete. Staff will provide an update on this work at the Board meeting on June 2.

All work described has been performed on an emergency basis under the emergency authority of the Executive Director. Under WETA's Administrative Code, procurement may be completed outside of the normal procedures where necessary "for the immediate preservation of the public health, welfare or safety or protection of [WETA] property." Staff has consulted with WETA legal counsel, and believes that the emergency actions taken in order to address this situation meet the requirements of the Administrative Code.

This item has been prepared as an informational item to report on the emergency repairs required at Harbor Bay and the actions taken by staff and the Executive Director to address the situation. The Board may choose to ratify the actions of the Executive Director, specifically award of contracts to complete the temporary and permanent emergency repairs, at its discretion.

***Fiscal Impact***

The total cost of emergency repairs to the Harbor Bay landing is estimated to be in the range of $175,000 to $250,000. Staff will utilize Alameda ferry service reserves, as needed, to pay for these repairs.

**AGENDA ITEM 8**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**Lynne Yu, Manager, Finance & Grants**

**SUBJECT:** **Authorize Filing Applications with the Metropolitan Transportation Commission for FY 2011/12 Regional Measure 1 and Regional Measure 2 Operating and Capital Funds to Support Vallejo Baylink Ferry Service**

***Recommendation***
Staff recommends that the Board of Directors approve the following actions relative to securing operating and capital funds to support the Vallejo Baylink ferry service in FY 2011/12:

1. Authorize filing applications with the Metropolitan Transportation Commission (MTC) for a total of $7.3 million FY 2011/12 Regional Measure 1 (RM1) and Regional Measure 2 (RM2) operating and capital funds;

2. Approve, by resolution, direct MTC allocation of first quarter FY 2011/12 RM1 and RM2 operating funds to the City of Vallejo to support Vallejo Baylink ferry service

***Background***
In November 1989, voters approved Regional Measure 1 (RM1), authorizing a toll increase on all state owned bridges in the Bay Area. Five percent (RM1-5%) of the revenue derived from this toll increase was made available for allocation by MTC for ferry transit operations and bicycle related planning and two percent (RM1-2%) of the revenue from the toll increase is to be programmed and allocated solely for the capital costs associated with the design, construction, and acquisition of rapid water transit systems. MTC has historically allocated these funds to the City of Vallejo to support annual ferry operating and capital expenses.

In 2004, voters approved Regional Measure 2 (RM2), authorizing an additional toll increase on the state owned bridges in the Bay Area. This program included up to $2.74 million annual operating funds for expanded Vallejo Baylink ferry services and $12.56 million for WTA/WETA services.

***Discussion***
Senate Bill 976 stipulates that all RM1 and RM2 funds for ferries are to be allocated WETA as of January 1, 2008, in order to support operation of our regional ferry system. Since 2008, the WETA Board has supported MTC allocation of a share of these funds directly to the City of Vallejo to support Vallejo Baylink ferry operations until the service transition to WETA is completed. While staff anticipates having a final transition agreement for Board consideration in the next month or so, we do not anticipate completing all service transfer activities until Fall of this year. In order to ensure a smooth and efficient flow of funds to

support the city-managed service in FY 2011/12, MTC will allow direct allocation of first quarter FY 2011/12 RM1 and RM2 operating funds to the City of Vallejo, provided WETA concurrence with this action. ***Attachment 1*** to this report is the City of Vallejo request for FY 2011/12 operating funds. The remaining FY 2011/12 operating funds and RM1 capital funds will be allocated directly to WETA by MTC for use to support transitioned service and/or for pass-through to the City of Vallejo, depending upon the status of the service transition efforts.

FY 2011/12 RM1 and RM2 Operating Funds

The FY2011/12 Vallejo Baylink ferry service operating budget is just over $13 million, funded with $6 million passenger fares, $1.26 million RM1 operating funds and $5.8 million RM2 funds. Despite service reductions developed over the past year and planned for implementation beginning in August 2011, FY 2011/12 expenditures are approximately $1 million higher than FY 2010/11, largely due to recent increases in fuel prices. The RM2 funds required to support the system include $2,740,500 annual operating funds historically directed to Vallejo and $3,055,700 additional RM2 funds. This item authorizes application for RM 1 and RM2 operating funds to support the Vallejo Baylink services in FY 2011/12, and direct MTC allocation of first quarter funds to the City of Vallejo until services are transferred to WETA.

FY 2011/12 RM1 Capital Funds - Dredging

The Vallejo ferry basin requires dredging every three years to remove silt build-up that would otherwise keep ferries from operating in this area. Dredge work is required to take place in FY 2011/12 during the August through October dredge window. Given the uncertainty of the timing of the final transition, and the critical nature of the dredging work, WETA and City staff have agreed that the best way to ensure that this project moves forward this year is to have the City advertise and complete the dredging work while WETA secures project funds. This item supports WETA application for $209,000 RM1 funds to provide the local match to $836,000 in federal FTA funds for this project. Staff is in the process of developing a grant funding Pass-Through Agreement between the City of Vallejo and WETA that we will bring forward next month for Board approval.

***Fiscal Impact***

This item supports securing Regional Measure 1 and Regional Measure 2 operating and capital funds required to support the continued operations of the Vallejo Baylink ferry service in FY 2011/12.

***END***

Attachment A


# CITY OF VALLEJO

DEPARTMENT OF PUBLIC WORKS
Transportation Division

555 SANTA CLARA STREET • P.O. BOX 3068 • VALLEJO • CALIFORNIA • 94590-5934 • (707) 648-4315
FAX (707) 648-4691


May 25, 2011

Nina Rannells
Water Emergency Transportation Authority
Executive Director
Pier 9, Suite 111, The Embarcadero
San Francisco, CA 94111

SUBJECT: Request for WETA's concurrence on City of Vallejo's Bridge Toll RM2 and RM1 allocation request for Operating Funds for FY 11/12

Dear Ms. Rannells:

Per our recent discussions this letter is to request WETA Board's authorization for MTC to continue allocating Bridge Toll RM2 and RM1 funds for operation of the Baylink Ferry Service until the transfer of this service has been consummated in FY 2011/12. On May 10, 2011, the City submitted the RM2 allocation request to MTC for the amount of $5,733,200 for this next fiscal year. However the RM1 apportionment to the region is delayed. The projected amount of $1.256 Million of RM1 funds will be requested as soon as the call for project is released by MTC. These amounts are consistent with the budget projections provided to WETA staff for the continued operation of the Baylink Ferry assuming the implementation of the modified service levels on August 1, 2011 as approved by the Vallejo City Council on April 12, 2011.

Attached is a summary spreadsheet that compares FY 2010/11 with the proposed FY 2011/12 operating budget for the Baylink Service. As can be seen even though the total cost savings assumed as a result of modified service levels totals $2M these savings are being offset by the discontinued use of FTA 5307 funds for preventative maintenance ($1M), loss of fare revenue assumed by this reduction in service ($455K), and the increase in fuel costs ($1.2M). This results in a net increase in the operating budget of approximately $800K. Please note that if we optimistically assumed no loss of ridership from these service reductions this increase would be lowered to $348K.

In addition, per our March 28, 2011 letter the funds allocated to date for the City's transition expenses assumed that we would be substantially complete with the Transfer Agreement by this time. Since it appears that our negotiations and document preparation required for this agreement will extend into the next fiscal year, the City

hereby requests that another $63,000 for FY 2011/12 be approved to complete this transition. This additional funding assumes that the transfer will occur no later than October 1, 2011. (See attached spreadsheet for more detail)

Sincerely,

GARY LEACH
Assistant Public Works Director

cc: Mayor and City Council
Deborah Lauchner, Finance Director
Charlene Haught Johnson, WETA Board Chair
Anthony J. Intintoli, Jr., WETA Board Vice Chair
Phil Batchelor, City Manager
Craig Whittom, Assistant City Manager
Alix Bockleman, MTC

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**City of Vallejo**
**Local Transporation Fund #420**
**Ferry Operations**
**FY 11-12 Proposed Budget**

| | FY 09-10 Actual | FY 10-11 Mid-Year Proposed | FY 11-12 Proposed | Variance | Notes |
|---|---|---|---|---|---|
| **Beginning Working Capital** | - | - | - | | |
| **Revenues** | | | | | |
| Fares | 6,196,867 | 6,489,000 | 6,489,000 | - | |
| Estimated Fare revenue loss based on Reduction of Service | | | (455,000) | (455,000) | Loss of revenues due to Service Reduction |
| Federal | - | 1,000,000 | | (1,000,000) | Discontinued use of FTA 5307 to fund Preventive Maintenance |
| Bridge Toll - Regional Measure 1 | 1,356,401 | 1,256,800 | 1,256,800 | | |
| Bridge Toll - Regional Measure 2 - Operating Assistance | 2,740,500 | 2,740,500 | 2,740,500 | | |
| **Bridge Toll - Regional Measure 2 - Supplemental** | **1,667,538** | **2,190,000** | **2,992,700** | | |
| Bridge Toll - Regional Measure 2 - WETA Transit Costs | | | | | |
| Leases, advertising, and others | 34,944 | 21,000 | 21,000 | | |
| **Total, Operating Revenues** | **11,996,250** | **13,697,300** | **13,045,000** | (1,455,000) | |
| **Expenditures** | | | | | |
| Operating Contracts | 6,026,119 | 6,443,756 | 6,646,000 | (202,244) | 3% increase in expenses |
| Fuel | 3,305,686 | 4,425,574 | 5,654,000 | (1,228,426) | Projected Fuel increased by 28% |
| Gross, Savings on Reduction of Service | | | (838,000) | 838,000 | Reduction of Ferry Service |
| WETA transition costs | | | | - | |
| Advertising | | 100,000 | 100,000 | - | |
| Services & supplies | 301,266 | 295,000 | 312,000 | (17,000) | |
| Management oversight | 126,512 | 131,400 | 135,000 | (3,600) | |
| Allocated general administration costs | 570,530 | 658,160 | 558,000 | 100,160 | Vacancy Savings |
| Route 200 transfer cost from Bus | 1,497,951 | 1,466,000 | 296,000 | 1,170,000 | Reduction of Route 200 Service |
| Ticket Office transfer cost from Bus | 168,186 | 177,000 | 182,000 | (5,000) | |
| **Total, Operating Expenditures** | **11,996,250** | **13,696,890** | **13,045,000** | 651,890 | |
| **Annual Operating Results** | - | - | - | **(803,000)** | |
| **Ending Working Capital, Supplemental RM-2** | - | - | - | | |
| **Fuel** | | | | | |
| Annual Consumption | 1,418,431 | 1,413,763 | 1,413,763 | | |
| Average Annual Price per Gallon | $2.33 | $3.13 | $4.00 | | |
| | | | 28% | | |

# WETA Transition Costs
## As of May 18, 2011

| | Legal Fees | Fast Ferry Mgmt | Admin Support | | Total |
|---|---|---|---|---|---|
| | | | Gray-Bowen | Crystal Odum-Ford | |
| **FY 10-11 Budget, Beginning Balance** | **$155,400.00** | **$45,440.00** | **$100,000.00** | **$11,160.00** | **$312,000.00** |
| **FY 10-11 Actual Expenses** | | | | | |
| Burke, Williams & Sorensen, LLP | $78,304.42 | | | | $78,304.42 |
| Fast Ferry Management | | $32,765.65 | | | $32,765.65 |
| Crystal Odum-Ford | | | | $11,160.00 | $11,160.00 |
| Gray-Bowen | | | $82,892.64 | | $82,892.64 |
| **Total, Expenses** | **$78,304.42** | **$32,765.65** | **$82,892.64** | **$11,160.00** | **$205,122.71** |
| **Outstanding Commitments** | | | | | |
| Gray-Bowen & Company, Inc. | | | $0.00 | | $0.00 |
| Fast Ferry Management | | $6,000.00 | | | $6,000.00 |
| Burke, Williams & Sorensen, LLP | $55,409.25 | | | | $55,409.25 |
| **Total, Encumbrances** | **$55,409.25** | **$6,000.00** | **$0.00** | **$0.00** | **$61,409.25** |
| **FY 10-11 Budget, Ending Balance** | **$21,686.33** | **$6,674.35** | **$17,107.36** | **$0.00** | **$45,468.04** |
| **FY 11-12 Budget, Request** | **$60,000.00** | **$20,000.00** | **($17,107.36)** | **$0.00** | **$62,892.64** |

I:\My Documents\Transportation\WETA\WETA Transition\[WETA Transition Costs Summary 5-17-11_1.xlsx]Summary
5/25/2011 15:50

**AGENDA ITEM 9**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**John Sindzinski, Manager, Planning & Development**

**SUBJECT:** **Approve Amendment with Ghirardelli Associates to Provide Additional Construction Management Services for the South San Francisco Ferry Terminal Project**

***Recommendation***
Approve Amendment No. 2 to Agreement #07-009 with Ghirardelli Associates in the amount of $600,000 for additional construction management services required to complete the South San Francisco ferry terminal project and authorize the Executive Director to execute the amendment.

**Background**
In September 2007, WTA executed Agreement #07-009 with Ghirardelli Associates for $500,000 to provide construction management services for the South San Francisco ferry terminal project. The scope of work for this agreement included developing multiple Requests for Proposals (RFPs), proposal evaluations, and contractor management through construction and ultimate closeout of the South San Francisco Ferry Terminal project.

Ghirardelli Associates has provided expertise in developing RFPs for three separate contracts associated with construction of the project. In 2009, Ghirardelli Associates provided extensive construction management services relating to the contract award and ultimate closeout of the dredging and demolition work completed under this first construction contract for the project. In early 2010, Ghirardelli Associates assisted WETA in administering the procurement and contract award of the final two construction packages for the project, construction of the float/gangway and terminal/viewing terrace.

In May 2010, the Board authorized Amendment No.1 to the Agreement with Ghirardelli Associates increasing the contract amount to $900,000 to provide additional construction management services for the South San Francisco ferry terminal project, including the final two construction packages, at the direction of the WETA Project Manager. Additionally, the agreement was amended to extend the term to December 31, 2012.

***Discussion***
Presently, Ghirardelli Associates is managing and overseeing work for the final two South San Francisco ferry terminal construction contracts, totaling just under $20 million and scheduled for completion by late 2011. As WETA's construction manager and "Owner's Representative," Ghirardelli Associates is responsible for overseeing each contractor's performance and adherence to schedule and technical specifications. This

work includes monitoring on-site work daily, inspecting and confirming the quality and amounts of materials used by the contractor, ensuring that contractors diligently follow worker safety protocols, administering the collection of and responses to Requests for Information, Certified Payroll review and undertaking a thorough review of contractor's invoices for payment.

Ghirardelli Associates has demonstrated excellence in every aspect of its work providing construction management services for the South San Francisco ferry terminal project. As the Owner's Representative, Ghirardelli Associates has successfully managed the challenging task of coordinating the efforts of two construction contractor teams based out of separate locations with the project architect and engineer teams contracted by WETA to review the design work submitted by the contractors. Additionally, the Ghirardelli team has been effective in evaluating potential value engineering opportunities for the design-build contracts, facilitating responses to Requests for Information, and negotiating contract change orders on behalf of WETA.

Inspection services provided by Ghirardelli Associates have ensured that WETA maintains strong control over the performance of each contractor team. In addition to on-site inspection services at the Oyster Point Marina in South San Francisco, the Ghirardelli team has mobilized inspectors to multiple fabrication sites to inspect and assure the quality and durability of materials and components being used for construction. For instance, inspectors have monitored the construction of the float in Richmond, CA; pre-casting of the topping slab for the pier in Antioch, CA; and fabrication of the fixed ramping system for the float in Oregon.

The services provided by Ghirardelli Associates to manage the multiple parties of the project team and to inspect the quality of construction fabrication at numerous geographically disperse sites has required resources that were not budgeted for in their agreement, as currently amended. In order to ensure that WETA has sufficient support and construction management resources to last through the completion and closeout of the final two construction contracts and maintain its strong control over the performance of each contractor team, staff recommends approval of Amendment No. 2 to Agreement #07-009 with Ghirardelli Associates to increase the contract amount by $600,000 to $1,500,000. The amended total contract value for construction management services represents approximately 7% of the terminal construction contact cost, which is significantly less than the 10% industry standard for construction management services.

***Fiscal Impact***

This project is funded with Federal, San Mateo County Sales Tax and State Proposition 1B funds. Sufficient funds are available within the project budget to finance these additional services.

***END***

**AGENDA ITEM 10**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**

**SUBJECT:** **Approve Amendment with Nossaman, LLP for the Provision of Legal Services**

***Recommendation***
Approve Amendment No. 15, in the amount of $650,000, to the agreement with Nossaman, LLP for the provision of legal services in FY 2011/12 and authorize the Executive Director to execute the amendment.

***Background***
The Authority's enabling statute requires the employment of general counsel to manage its legal affairs. In August 2004, the San Francisco Bay Area Water Transit Authority authorized Nossaman, LLP to serve as its general counsel and established a process for bringing forward annual budget amendments to cover services anticipated each fiscal year. In January 2008, this contract transferred to the San Francisco Bay Area Water Emergency Transportation Authority upon its creation. Annual legal expenses have ranged from $140,000 in FY 2004/05 to $1,100,000 in FY 2010/11, based upon the volume and complexity of legal issues facing the agency.

In addition to general agency and Board oversight, Nossaman LLP provides legal advice and support in a wide range of specialty areas including contract development, procurement process and document development, employment law and policy development, insurance requirements and real property transactions and provides research on special subjects as required.

***Discussion***
In considering WETA's work program for FY 2011/12, we have developed a legal budget totaling $650,000 to support up-coming work activities. Staff anticipates that these funds would be spent to support activities in approximately the following amounts:

| | |
|---|---|
| General | $200,000 |
| Capital Program | $150,000 |
| Transition Activities | $300,000 |
| Total | $650,000 |

These major work activities and associated legal support activities are described further below.

General Oversight
This includes counsel for such ongoing items as general agency and Board governance, meeting attendance, legislative review, personnel matters and research of special subjects of interest or concern. Consistent with prior years, staff anticipates these general services to cost approximately $200,000.

Capital Program Support
WETA's capital program in FY 2011/12 focuses on concluding the SSF Terminal construction, continuing environmental and design work associated with new facilities and planned future services and general refurbishment of existing terminal and vessel assets. As we move

forward with these projects, Nossaman will provide support services in a number of areas such as procurement process and proposal development, contract development and review of any protests or project issues. The legal work associated with these activities is estimated to be $150,000 in FY 2011/12.

Service Transition Activities

While significant work was done in FY 2010/11 to complete the transfer of Alameda/Oakland services and assets, reach a tentative agreement with the City of Vallejo, and issue an RFP for consolidation of service operations under one contractor, work will continue in FY 2011/12 to close out the Vallejo transition and complete the procurement of a new service operator. Legal work associated with these activities is anticipated to be approximately $300,000.

***Fiscal Impact***

This contract amendment would commit the Authority to an amount up to $650,000 for legal services for FY 2011/12, to be funded with approximately $500,000 operating and $150,000 capital funds.

***END***

**AGENDA ITEM 11**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**Keith Stahnke, Manager, Operations**

**SUBJECT:** **Approve Amended and Restated Agreement with NextBus for Real Time Ferry Information System**

***Recommendation***
Approve Amended and Restated Agreement #11-003 with NextBus for the provision of real time ferry information systems and authorize the Executive Director to execute the agreement in an amount not to exceed $140,000.

***Background/Discussion***
In March 2005, the San Francisco Bay Area Water Transit Authority (WTA) awarded a contract to NextBus for real-time signage equipment, installation services and operating costs for a period of five (5) years from installation. In January 2008, this contract, which expires in August 2011, transferred to the San Francisco Bay Area Water Emergency Transportation Authority upon its creation.

The NextBus system is proprietary and provides real time arrival and departure information on websites and through smartphone transit applications. The system provides:

- Real time departure information and service messages to customers at the ferry terminals;
- Support for administration of transit services, such as monitoring schedule adherence, through reports; and
- Route and schedule information.

NextBus is currently providing real time information on WETA's Alameda Oakland and Harbor Bay ferry services and for the Vallejo Baylink ferry service. Through this agreement, NextBus real-time information would be provided for the new South San Francisco ferry service once initiated. With real time information being provided on WETA controlled signage, staff has worked with local ferry system operators and NextBus to ensure that the information is as accurate as possible.

NextBus has provided WTA and WETA will excellent professional services in fulfilling the original scope of work and undertaking additional work authorized by subsequent contract amendments to the existing agreement. Both San Francisco MUNI and AC Transit use their systems, as does the Emeryville shuttle.

Consistent with WETA Administrative code 502.2 - Use of Non-Competitive Procedures (E) and (F), staff has determined that continuing with NextBus is appropriate as the investment in hardware and technology would be lost if the system was discontinued or replaced by another vendor. In order to continue provision of NextBus ferry transit service information, staff proposes to enter into an agreement for an additional five (5) years at cost of about $28,000 per year.

***Fiscal Impact***

This contract is for $28,000 annually for a period of five years. Sufficient funds are included in the FY 2011/12 operating budget to cover the first-year expenses. The balance of contract funds will be budgeted in future years as required.

***END***

**AGENDA ITEM 12**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**John Sindzinski, Manager, Planning & Development**

**SUBJECT:** **Adopt Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Central Bay Operations and Maintenance Facility Project**

***Recommendation***
Adopt the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program for the Central Bay Operations and Maintenance Facility Project.

***Background***
WETA is proposing to construct the Central Bay Operations and Maintenance Facility Project at Alameda Point in the City of Alameda, CA. The Project would provide a new dedicated facility that would serve as the base for WETA's central San Francisco Bay ferry fleet, Operations Control Center (OCC), and Emergency Operations Center (EOC). The facility would support running maintenance services such as fueling, engine oil changes, spare parts storage, concession supply, and light repair work for WETA's central San Francisco Bay ferry fleet, as well as berthing slips for up to 11 vessels. As WETA's OCC, the facility would be the centralized location for WETA operations, including day-to-day management and oversight of services, crews, and facilities. In the event of a regional disaster, the facility would function as an Emergency Operations Center serving passengers and sustaining water transit service for emergency response and recovery.

Pursuant to state and federal regulations, the Central Bay Operations and Maintenance Facility Project must be approved under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA) as a federally-financed project. Pending approval of the Project under CEQA and NEPA, WETA could move forward with final design and, ultimately, construction of the project in 2012.

***Discussion***
WETA has assumed the lead agency role for approving the Central Bay Operations and Maintenance Facility Project under CEQA and has conducted an Initial Study and prepared a Mitigated Negative Declaration for the Project, which is available for review at WETA's administrative office located at Pier 9. The Initial Study identified potentially significant effects; however, the implementation of mitigation measures identified in the Initial Study and Mitigated Negative Declaration (IS/MND) would reduce potentially significant effects to less-than-significant levels.

On April 1, 2011, WETA submitted the IS/MND for the Central Bay Operations and Maintenance Facility to the State Clearinghouse (SCH #2011042005) and circulated a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) to interested parties and to property owners within 300 feet of the project site. In addition, WETA posted multiple copies of the NOI at the project site, recorded the NOI at the Alameda County Clerk-Recorder's Office, and posted the NOI and the entire CEQA IS/MND document on its website. A 30-day public and agency review period was held from April 1, 2011 through May 2, 2011. No public or agency comments were received on the IS/MND during the public review period.

Based on the proposed Mitigated Negative Declaration together with the absence of any public or agency comments received, staff has determined that there is no substantial evidence that the project will have a significant impact on the environment. Pursuant to CEQA guidelines, WETA has prepared a Mitigation Monitoring and Reporting Program for all measures required in the Project to mitigate or avoid significant environmental impacts. The Program identifies responsible monitoring parties and monitoring milestones for each mitigation measure. Among the mitigation measures that WETA will commit to implementing as part of the Project include modification of the construction schedule to control construction-related air quality impacts, adherence to specific work windows for conducting in-water pile driving and dredging work to avoid impacts on special-status species and aquatic resources, and development of a traffic control plan to minimize construction-related traffic impacts. A copy of the Mitigation Monitoring and Reporting Program is provided in ***Attachment A*** and includes a full list of all mitigation measures included in the Project.

Staff recommends that the Board adopt both the Mitigated Negative Declaration and the Mitigation Monitoring and Report Program for the Central Bay Operations and Maintenance Facility. Pending action by the Board to adopt the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program, a Notice of Determination will be filed with the Office and Planning and Research and the Alameda County Clerk's office initiating a 30-day statute of limitations on court challenges to the approval of the Project under CEQA.

The Federal Transit Administration has assumed the lead agency role for approval of the Project under NEPA, which is anticipated to occur at a later date and is not subject to any action by WETA.

***Fiscal Impact***
There is no direct fiscal impact as a result of this action.

***END***

# Final Initial Study/Mitigated Negative Declaration Mitigation Monitoring and Reporting Program for the

# San Francisco Bay Area Water Emergency Transportation Authority Central Bay Operations and Maintenance Facility

*Prepared for:*

San Francisco Bay Area Water Emergency Transportation Authority
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Contact: Mike Gougherty
415/364-3189

*Prepared by:*

ICF International
75 E. Santa Clara Street, Suite 300
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Contact: Dustin Joseph
408/216-2818

May 2011

ICF International. 2011. Mitigation Monitoring and Reporting Program. WETA Central Bay Operations and Maintenance Facility. May. (SCH #2011042005.) (ICF 00789.08.) San Francisco, CA. Prepared for: San Francisco Bay Area Water Emergency Transportation Authority.

# Contents

# Tables



# Acronyms and Abbreviations

| | |
|---|---|
| BAAQMD | Bay Area Air Quality Management District |
| CDFG | California Department of Fish and Game |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| City | City of Alameda |
| MLD | Most Likely Descendant |
| MMRP | mitigation monitoring and reporting program |
| MND | Mitigated Negative Declaration |
| NMFS | National Marine Fisheries Service |
| NTU | Nephelometric Turbidity Unit |
| RWQCB | San Francisco Regional Water Quality Control Board |
| SPL | sound pressure level |
| SWPPP | Stormwater Pollution Prevention Plan |
| USFWS | U.S. Fish and Wildlife Serice |
| WETA | San Francisco Bay Area Water Emergency Transportation Authority |

# Mitigation Monitoring and Reporting Program

# Introduction

The San Francisco Bay Area Water Emergency Transportation Authority (WETA), as Lead Agency under the California Environmental Quality Act (CEQA) and State CEQA Guidelines, has prepared a Mitigated Negative Declaration (MND) for the WETA Central Bay Operations and Maintenance Facility (proposed project) (SCH #2011042005). When a lead agency makes findings on significant effects identified in an MND, it must also adopt a program for reporting or monitoring mitigation measures that were adopted or made conditions of project approval (Public Resources Code [PRC] Section 21081.6[a]; State CEQA Guidelines Sections 15091[d], 15097). The purpose of the mitigation monitoring and reporting program (MMRP) is to ensure that the required mitigation measures identified in the MND are implemented as part of the overall project implementation. This document represents the MMRP prepared by WETA for the proposed project.

The following table (Table 1-1) summarizes the mitigation measures for each issue area identified in the MND for the proposed project. The table identifies each mitigation measure; the timing of implementation; the agency or party responsible for implementing the mitigation; and the agency or party responsible for ensuring that the monitoring is performed. The full text of each mitigation measures follows. In addition, the table includes columns for compliance verification; the columns will be completed by the responsible agency or party to document monitoring compliance. Where an impact was identified to be less than significant, no mitigation measures were required.

This MMRP has been prepared by WETA, with technical assistance from ICF International, an environmental consulting firm. Questions should be directed to Mike Gougherty, WETA Project Manager.

Contact Information:

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Email: gougherty@watertransit.org

**Table 1. Summary of Mitigation Measures**

| Mitigation Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Compliance Verification (Initials/Date) |
|---|---|---|---|---|
| **Aesthetics** | | | | |
| **AES-1:** Apply Minimum Lighting Standards | During construction<br>During operation | WETA | WETA | |
| **Agricultural and Forestry Resources** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |
| **Air Quality** | | | | |
| **AQ-1:** Implement Bay Area Air Quality Management District (BAAQMD) Basic Control Measures to Control Construction-Related Fugitive Dust | During construction | WETA and construction contractor | WETA, with BAAQMD and construction contractor | |
| **AQ-2:** Implement BAAQMD Basic Control Measures to Control Construction-Related $NO_X$ Emissions | During construction | WETA and construction contractor | WETA, with BAAQMD and construction contractor | |
| **AQ-3:** Modify the Construction Schedule to Ensure Daily $NO_X$ Emissions Do Not Exceed 54 Pounds | During construction | WETA and construction contractor | WETA, with BAAQMD and construction contractor | |
| **Biological Resources** | | | | |
| **BIO-1:** Minimize Harassment to Marine Mammals during Dredging and Pile Driving Activities | During construction<br>During operation | Construction contractor | WETA, with National Marine Fisheries Service (NMFS) | |
| **BIO-2:** Use Recommended Access Channel and Boat Speeds from the Draft Alameda National Wildlife Refuge Comprehensive Conservation Plan to avoid Disruption to Seal Haul-Outs and Bird Nesting and Roosting. | During construction<br>During operation | Construction contractor | WETA, with U.S. Fish and Wildlife Service (USFWS) | |

| Mitigation Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Compliance Verification (Initials/Date) |
|---|---|---|---|---|
| **BIO-3:** Coordinate with Appropriate Federal and State Agencies to Reduce Impact on Special-Status and Common Fish Species during In-Water Work | During construction | WETA | WETA, with NMFS and California Department of Fish and Game (CDFG) | |
| **BIO-4:** Avoid and Minimize Impacts on Nesting Migratory Birds Including Raptors | Prior to construction<br>During construction | Construction contractor | WETA, with CDFG and USFWS | |
| **BIO-5:** Survey for Native Oysters and Relocate (if necessary) | Prior to construction | WETA | WETA, with NMFS | |
| **Cultural Resources** | | | | |
| **CUL-1:** Procedures for Unanticipated Discoveries | During construction | WETA and construction contractor | WETA and construction contractor | |
| **CUL-2:** Comply with State Laws Relating to Disposition of Human Remains | During construction | WETA and construction contractor | WETA and construction contractor | |
| **Geology and Soils** | | | | |
| **GEO-1:** Stop Work If Buried Paleontological Resources Are Discovered | During construction | Construction contractor | WETA and construction contractor | |
| **Greenhouse Gas Emissions** | | | | |
| **GHG-1:** Implement the BAAQMD's Best Management Practices for GHG Emissions (Optional) | During construction | WETA and construction contractor | WETA and construction contractor | |
| **Hazards and Hazardous Materials** | | | | |
| **HAZ-1:** Prepare and Implement a Hazardous Materials Spill Prevention Control and Countermeasure Plan during Construction | Prior to Construction<br>During construction | WETA and construction contractor | WETA and construction contractor | |

| Mitigation Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Compliance Verification (Initials/Date) |
|---|---|---|---|---|
| **Hydrology and Water Quality** | | | | |
| **HYD-1:** Preparation and Implementation of Project Stormwater Pollution Prevention Plan (SWPPP) | Prior to construction<br>During construction | Construction contractor | WETA and construction contractor | |
| **HYD-2:** Monitor for Turbidity during Dredging Activities | During construction<br>During operation | Construction contractor | WETA, with construction contractor and Regional Water Quality Control Board (RWQCB) | |
| **HYD-3:** Implement RWQCB Provision C.3 for Control of Stormwater and BMPs for Operational Protection of Water Quality | During construction<br>During operation | WETA and construction Contractor | WETA, with construction contractor and RWQCB | |
| **HWQ-4:** Provide Tidal Flood Wall (or other Improvements) to Address Tidal Flooding After 2050 | During operation | WETA and construction contractor | WETA | |
| **Land Use and Planning** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |
| **Noise** | | | | |
| **N-1:** Limit When Maintenance Dredging Occurs | During operation | WETA and construction contractor | WETA, with construction contractor | |
| **Population and Housing** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |
| **Public Services** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |
| **Recreation** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |

| Mitigation Measure | Timing | Implementation Responsibility | Monitoring Responsibility | Compliance Verification (Initials/Date) |
|---|---|---|---|---|
| **Transportation/Traffic** | | | | |
| **TRA-1:** Develop and Implement a Traffic Control Plan | Prior to construction<br>During construction | Construction contractor | WETA, with City of Alameda | |
| **Utilities and Service Systems** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |
| **Mandatory Findings of Significance** | | | | |
| No Mitigation Measures | N/A | N/A | N/A | -- |

# Mitigation Measures

## Aesthetics

**Mitigation Measure AES-1: Apply Minimum Lighting Standards**

The project proponent will ensure that the following measures are incorporated into the design and construction of all project elements.

- Nighttime lighting will be used only where it is required for security or safety.
- If nighttime lighting is required, it will be focused onsite and will be directed downward; fixtures that project upward or horizontally will not be used.
- Any project lighting will include glare-minimizing fixtures, and the height of poles or mountings will be reduced to limit the potential for backscatter into the nighttime sky and incidental spillover of light.
- The design of exterior light fixtures will incorporate shielding to prevent fugitive glare.
- Luminaire mounts will have nonglare finishes.
- Luminaire lamps will provide good color rendering and natural light qualities. Low- and high-pressure sodium fixtures that are not color-corrected will not be used. Luminaire intensity will be the minimum necessary for safety.
- Lighting will be equipped with time-clock switches to ensure that illumination is restricted to nighttime hours.

## Air Quality

**Mitigation Measure AQ-1: Implement BAAQMD Basic Control Measures to Control Construction-Related Fugitive Dust**

The project applicant will implement the following BAAQMD-recommended basic control measures to reduce particulate matter emissions from onshore construction activities.

- All unpaved exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Post a publicly visible sign with the telephone number and contact person at the Lead Agency regarding dust complaints. This person will respond and take corrective action

within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

**Mitigation Measure AQ-2: Implement BAAQMD Basic Control Measures to Control Construction-Related NOX Emissions**

The project applicant will implement the following BAAQMD-recommended basic control measures to reduce NOX emissions from construction equipment.

- Idling times will be minimized by shutting off equipment when it is not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.

**Mitigation Measure AQ-3: Modify the Construction Schedule to Ensure Daily NOX Emissions Do Not Exceed 54 Pounds**

The project applicant will implement the construction schedule outlined in Appendix A to ensure daily NOX emissions do not exceed 54 pounds per day. Any proposed deviation from the construction schedule outlined in Appendix A shall be reviewed by WETA prior to implementation to ensure phasing and use of in-water and on-shore equipment will not result in significant NOX emissions.

# Biological Resources

**Mitigation Measure BIO-1: Minimize Harassment to Marine Mammals during Dredging and Pile Driving Activities**

- During the project permitting phase, NMFS will be consulted to determine if an Incidental Harassment Authorization would be needed for dredging or pile driving activities.
- Work would occur only during daylight hours (7 a.m. to 7 p.m.) so that marine mammals are visible at all times during dredging and pile driving activities.
- A qualified biological monitor would visually survey the area 1 day prior to the start of dredging or pile driving activities to establish a baseline.
- A safe zone would be enforced during dredging and pile driving operations. A marine mammal monitor would survey the area prior to the startup of dredging or pile driving equipment.
- Installation would not begin until no marine mammals are sighted within a designated "safe zone" for at least 15 minutes prior to the initiation of the activity.
- For dredging or pile driving activities, the proposed safety zone would be a radius of 1,000 feet from the dredging or pile driving location or distance at which the noise would be below 180 dB.

- Once activities begin, work would continue until completed. Between pile driving of different piles, the monitor would again confirm that the safety zone is clear of marine mammals.
- The construction contractor would establish daily "soft-start" or "ramp-up" procedures for pile-driving activities. This technique would be used at the beginning of each piling installation to allow any marine mammal that may be in the area to leave before pile driving activities reach full energy. The contractor would provide an initial three strikes at reduced energy (40%), followed by a 1-minute waiting period, then subsequent 3-strike sets.

**Mitigation Measure BIO-2: Use Recommended Access Channel and Boat Speeds from the Draft Alameda National Wildlife Refuge Comprehensive Conservation Plan to avoid Disruption to Seal Haul-Outs and Bird Nesting and Roosting.**

The draft Conservation Plan for the Alameda National Wildlife Refuge includes a recommended 500-foot access corridor for all vessel traffic and a maximum 5 mile per hour speed limit to keep vessels well away from the shoreline of the main portion of the Refuge as well as from Breakwater Island, in order to protect bird species and marine mammals from disruption. All construction and maintenance vessels and all ferry boats shall utilize this access corridor and shall, under all non-emergency situations, not approach any closer than 750 feet to the shorelines of the proposed Refuge and Breakwater Island.

**Mitigation Measure BIO-3: Coordinate with Appropriate Federal and State Agencies to Reduce Impact on Special-Status and Common Fish Species during In-Water Work**

WETA will consult with NMFS and DFG to implement measures to reduce impacts associated with in-water work activities to special-status fish species. These measures could include but are not limited to the following:

- In-water work activities will occur outside the peak juvenile outmigration periods for special-status fish species whenever possible. June 1 to November 30 (the dredging window in the Central Bay) would avoid high migratory periods.
- Using bubble curtains to attenuate pile driving sounds.
- A vibratory hammer will be used when feasible.
- Monitoring sound attenuation.

As a performance standard, the selected measures will represent the best available technology that is economically achievable, and will achieve maximum feasible reduction in underwater sound pressure levels (SPLs) and/or related impacts on special-status fish species.

**Mitigation Measure BIO-4: Avoid and Minimize Impacts on Nesting Migratory Birds Including Raptors**

- Preconstruction bird surveys will be conducted by a qualified biologist no more than 1 week prior to the start of construction for activities occurring during the breeding season (February 1 to August 31).
- If active raptor nests are found within 500 feet of where work is to occur, or active passerine nests are found within 100 feet of where work is to occur, a non-disturbance buffer will be established at a distance sufficient to minimize nest/roost disturbance based on the nest

location, topography, cover, species' sensitivity to disturbance, and the intensity/type of potential disturbance. The buffer size would be determined in cooperation with the CDFG and the USFWS.

- If rescheduling of work around active nests/roosts is infeasible, a qualified biologist will monitor nests for signs of disturbance. If it is determined that project activities are resulting in nest/roost disturbance, work will cease immediately and the CDFG and the USFWS will be contacted.

**Mitigation Measure BIO-5: Survey for Native Oysters and Relocate (if necessary)**

WETA will conduct a pre-construction diving survey to determine if native oysters are present in the study area. If found within or immediately adjacent to the construction footprint, WETA would request guidance from NMFS (or other applicable agency) as to the need and or feasibility to move affected beds.

# Cultural Resources

**Mitigation Measure CR-1: Procedures for Unanticipated Discoveries**

Per Section 106 of the NHPA, if artifacts are discovered during excavation activities, WETA shall obtain the review and recommendation of a qualified archaeologist. Recommendations may include evaluation, preservation in place, archaeological test excavation and/or archaeological data recovery, and a draft and final report documenting such activities.

**Mitigation Measure CR-2: Comply with State Laws Relating to Disposition of Human Remains**

The treatment of human remains discovered during excavation activities shall comply with applicable state laws. In the event that human remains are discovered, the County Coroner shall be notified immediately. If the remains are determined to be Native American, the Coroner shall be responsible for notifying the NAHC, who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec.5097.98). The archaeological consultant, WETA, and MLD shall make all reasonable efforts to develop an agreement for the dignified treatment of human remains (State CEQA Guidelines. Sec. 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains.

# Geology and Soils

**Mitigation Measure GEO-1: Stop Work If Buried Paleontological Resources Are Discovered**

If paleontological resources are encountered during project construction, excavation within 50 feet of the suspected resource(s) will be immediately suspended, the City of Alameda (City) will be immediately notified, and a qualified paleontologist will be retained to determine the significance of the find using the criteria set forth in State CEQA Guidelines Section 15064.5. If the find is determined to be significant, the City and project proponent, in consultation with the qualified paleontologist, will seek to avoid damaging effects on the resource whenever feasible. If avoidance is not feasible, the qualified paleontologist will prepare a salvage plan for mitigating

the effect of the project on the qualities that make the resource unique. The qualified paleontologist shall complete the plan in accordance with the State CEQA Guidelines and submit it to the City for review and approval.

# Greenhouse Gas Emissions

**Mitigation Measure GHG-1: Implement the BAAQMD's Best Management Practices for GHG Emissions (Optional)**

The project applicant will implement, to the extent feasible, the following BMPs mentioned in the BAAQMD CEQA Guidelines:

- Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15% of the construction fleet.
- Use local building materials of at least 10%.
- Recycle at least 50% of construction waste or demolition materials.

# Hazards and Hazardous Materials

**Mitigation Measure HAZ-1: Prepare and Implement a Hazardous Materials Spill Prevention Control and Countermeasure Plan during Construction**

As part of compliance with the NPDES General Construction Permit, a Hazardous Material Spill Prevention Control and Countermeasure Plan will be prepared for the use of construction equipment for the proposed Project and will minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction of the Project. This plan will describe storage procedures and construction site housekeeping practices and identify the parties responsible for monitoring and spill response. The measures and monitoring procedures required under the General Construction Permit will minimize the potential for the release of hazardous materials to the environment. WETA will review and approve the Hazardous Materials Spill Prevention Control and Countermeasure Plan before allowing construction to begin. WETA will routinely inspect active portions of the project area to verify that the BMPs specified in the plan are properly implemented and maintained, and will immediately notify the contractor if there is a noncompliance issue that will require compliance.

The federal reportable spill quantity for petroleum products, as defined in the EPA's CFR (40 CFR 110) is any oil spill that: (1) violates applicable water quality standards; (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline; or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the contractor's superintendent will immediately notify the Alameda County Department of Environmental Health and the DTSC, which have spill response and cleanup ordinances to govern emergency spill response. A written description of reportable releases will be submitted to the San Francisco Regional Water Quality Control Board (RWQCB). This submittal will include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form.

If a reportable spill has occurred, and results determine that project activities have adversely affected surface or groundwater quality in excess of water quality standards, a detailed analysis shall be performed by a Registered Environmental Assessor to identify the likely cause of contamination. This analysis will conform to ASTM standards and will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, WETA and its contractors will select and implement measures to control contamination, with a performance standard that water quality will be returned to baseline conditions. These measures will be subject to approval by the Alameda County Department of Environmental Health and DTSC.

# Hydrology and Water Quality

**Mitigation Measure HYD-1: Preparation and Implementation of Project SWPPP**

The project construction contractor will prepare and implement a SWPPP to protect water quality during construction. The San Francisco Bay RWQCB, the primary agency responsible for protecting water quality within the project area, is responsible for reviewing and ensuring compliance with the SWPPP. The SWPPP will include a description of BMPs to be applied to minimize the discharge of pollutants from the site during construction. These construction BMPs will include, but will not be limited to, the following:

- Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures.
- Develop spill response and containment procedures for construction.
- Identify all storm drains and catch basins near the construction site and ensure all workers are aware of their locations to prevent pollutants from entering.
- Protect all storm drains and catch basin inlets.
- Develop an erosion control and sediment control plan for wind and rain.
- Refuel vehicles and equipment away from San Francisco Bay to prevent runoff and to contain spills.
- Minimize the potential for contamination of San Francisco Bay by maintaining spill containment and clean up equipment onsite, and by properly labeling and disposing of hazardous waste.
- Inspect site regularly to ensure that all BMPs are intact and maintain as needed.
- Conduct daily site cleanings as needed.
- Maintain written records of inspections, spills, BMP-related maintenance activities, corrective actions, and visual observations of offsite discharge of sediment or other pollutants, as required by the RWQCB.

**Mitigation Measure HYD-2: Monitor for Turbidity during Dredging Activities**

The San Francisco RWQCB makes certain exceptions for dredging activities, and the typical Basin Plan standards for turbidity may not apply in the mixing zone of the dredging activities. However, outside of the mixing zone, which could be more than 500 feet, WETA or its contractor

would need to monitor and ensure Basin Plan standards for turbidity are met. Basin Plan standards are as follows:

- Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
- Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%.
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 1%.

The specific monitoring schedule including any additional timing information and quality assurance shall be determined by WETA in collaboration with the San Francisco RWQCB.

**Mitigation Measure HYD-3: Implement RWQCB Provision C.3 for Control of Stormwater and BMPs for Operational Protection of Water Quality**

Under Provision C.3, WETA will develop a compliance plan to ensure runoff is adequately collected and treated prior to discharge, and that peak flows and flow durations match pre-project conditions. BMPs included in the compliance plan may require operational maintenance such as cleaning and sweeping to ensure that the fuel storage vaults and fueling areas are kept clean and stormwater runoff does not collect contaminants such as urea and diesel stored at the site. The final compliance plan shall be approved by the San Francisco RWQCB.

**Mitigation Measure HYD-4: Provide Tidal Flood Wall (or other Improvements) to Address Tidal Flooding After 2050**

If the facility is still in operation after 2050, it may be subject to tidal flooding during extreme tide events. As necessary to address potential flooding after 2050, WETA shall install a flood wall or earthen berm to protect land-side facilities (including the outdoor fuel storage tanks) that provides sufficient freeboard to protect the facility from the damage in the event of a 100-year high tide. Based on current estimates, this improvement is not estimated to be required until sometime after 2050.

# Noise

**Mitigation Measures N-1: Limit When Maintenance Dredging Occurs**

WETA will limit maintenance dredging to the hours between 7 a.m. and 7 p.m. on weekdays and 8 a.m. to 5 p.m. on Saturdays per the City of Alameda Municipal Code, Chapter 4.10.

# Transportation and Traffic

**Mitigation Measure TRA-1: Develop and Implement a Traffic Control Plan**

The construction contractor will mitigate the proposed project's construction-related traffic impacts by developing and implementing a Traffic Control Plan as part of the overall Construction Management Plan, in accordance with City of Alameda policies. The Traffic Control Plan will be implemented throughout the course of project construction, and will include the following elements:

- Communication plan to notify transit providers, emergency service providers, residences, and businesses located in the project vicinity of the construction plans.
- Identify roadway segments or intersections that are at, or approaching, LOS that exceeds local standards, and provide for construction-generated traffic to avoid these locations at the peak periods, either by traveling different routes or by traveling at non-peak times of day.
- Restrict delivery of construction materials to between the hours of 8 a.m. and 3 p.m. to avoid more congested morning and evening hours.
- Require that written notification be provided to contractors regarding appropriate routes to and from the construction site, and the weight and speed limits on local roads used to access the construction site.
- Provide for adequate parking for construction trucks, equipment, and construction workers within the designated staging areas throughout the construction period.
- Specify that a sign be posted at all active construction areas giving the name and telephone number or e-mail address of the City of Alameda staff person designated to receive complaints regarding construction traffic.

**AGENDA ITEM 13**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**

**SUBJECT:** **Approve Term Sheet for the Transfer of Port of Oakland Ferry Service Assets and Provision of Landing and Mooring Rights at the Oakland Clay Street Ferry Terminal and Authorize Related Actions**

***Recommendation***

Approve the Term Sheet between the Port of Oakland ("Port") and the San Francisco Bay Area Water Emergency Transportation Authority ("Authority") for the transfer of the Port of Oakland's interest in certain ferry vessels and waterside facilities used in the Alameda/Oakland Ferry Service ("AOFS") and provision of landing and mooring rights at the Oakland Clay Street Ferry Terminal ("Term Sheet"); and authorize the Executive Director to: i) negotiate a Ferry Asset Transfer and Landing and Mooring Rights Agreement between the Port and Authority that reflects the terms and conditions of the Term Sheet described herein, ii) make such modifications to the terms and conditions of the Term Sheet as are necessary and appropriate, iii) execute the final form of the Agreement, and iv) take all other steps and execute all other documents as are necessary to execute and implement the terms of the Agreement.

Find that the acquisition by the Authority of the Port's interests in ferry vessels and other ferry related waterside assets currently used by the Port to provide the Alameda/Oakland Ferry Service from the Clay Street ferry terminal in Oakland to the San Francisco Ferry Building at the Port of San Francisco is exempt from the requirements of the California Environmental Quality Act ("CEQA"). 14 Cal.Code.Regs. §§ 15301; 15061(b)(3). The acquisition provides for continued operation of the existing ferry vessels and waterside facilities under the management of the Authority, and continued operation by the Port of landside ferry terminal assets. No changes to the environment will occur as a result of the acquisition. Authorize the Executive Director to record a Notice Exemption in the Official Records of Alameda County.

***Background***

The Authority was established pursuant to California Senate Bill 976, as amended by Senate Bill 1093, codified as the San Francisco Bay Area Water Emergency Transportation Response and Disaster Recovery Act, California Government Code sections 66540 et seq. (as so amended, "Act") which authorizes the consolidation of San Francisco regional ferry services.

Pursuant to this legislation, the City of Alameda transferred the Alameda/Oakland and Alameda Harbor Bay ferry services to the Authority on April 29, 2011. The AOFS transaction included transfer of the City of Alameda's ("City") interest in the M.V. Encinal and the M. V. Peralta ("the Vessels") and the assignment of the City's rights in the agreement between the City of Alameda and the Port of Oakland for the operation of the AOFS from the City of Alameda's Main Street Ferry Terminal to the Clay Street Ferry Terminal at Jack London Square in the Port of Oakland, and continuing from the Clay

Street Ferry Terminal to the San Francisco Ferry Building (the "Alameda/Oakland Ferry Services Agreement"). The Alameda/Oakland Ferry Service Agreement will expire on July 1, 2011.

In order to continue operating the Alameda/Oakland Ferry Service in FY 2011/12 and further transition regional ferry operations to the Authority, the Authority and the Port of Oakland have negotiated the terms of an agreement to which the Authority will acquire (i) the Port of Oakland's interest in the Vessels and related waterside facilities currently used in the AOFS, (ii) a corresponding license to maintain the ferry facilities in their current location for 20 years, and (iii) landing and mooring rights to continue to operate the Alameda/Oakland Ferry Service and other WETA services at the present Clay Street location. The resulting Term Sheet is now before both the Authority Board and the Port Commission for approval. If approved, Term Sheet conditions will be incorporated into a Ferry Asset Transfer and Landing and Mooring Rights Agreement between the Port and Authority ("Agreement"). The Term Sheet is provided as ***Attachment 1*** to this item.

Upon execution of the Agreement, the parties will enter into a two Phase Closing process. Phase 1 Closing occurs when the Port transfers its interest in the Vessels and gives the Authority exclusive landing and mooring rights at Clay Street. Phase 2 Closing occurs once the Authority installs a replacement float at the terminal and the Port transfers title of the waterside assets to the Authority and grants the Authority an exclusive license to maintain the waterside assets at the Clay Street Ferry Terminal location.

The Agreement involves the use of existing facilities and is in a class of projects determined by the Resources Agency of the State of California in Section 15301 of the California Environmental Quality Act ("CEQA") Guidelines not to have a significant effect on the environment, and the Agreement is an activity covered by the general rule that "CEQA applies only to projects which have the potential for causing a significant effect on the environment" and, therefore, is exempt from CEQA pursuant to Sections 15301 and 15061(b)(3) of the CEQA Guidelines. The Authority will file a Notice of Exemption to CEQA following its approval of the Agreement.

## ***Discussion***

The major terms included in the Term Sheet are as follows:

A. Disposition of Assets:

1. Vessels: Port will assign to Authority the Port's equity interest in the Vessels in their "as-is" condition.

2. Waterside Assets: Upon Authority's installation of a replacement float at the Clay street terminal, the Port will assign to Authority its interests in the Waterside Assets, consisting of pilings, passenger gates, aluminum passenger ramps, and the related gangways used in connection with AOFS operation. The old float shall remain the property of the Port. The Authority expects to install the replacement float within 24 months of the Agreement Effective Date.

3. Landside Ferry Terminal Assets: The Port will retain ownership of all landside ferry terminal facilities though these facilities will be made available to ferry passengers for the Term of the Agreement unless Port

relocates the terminal. (See paragraph H below) Authority will not acquire any real estate interest in the Landside Ferry Terminal Assets.

4. Intangible Personal Property: Port will assign whatever rights Port may have to service logos, web sites, domain names and marketing materials final art.

B. General Conditions

1. Term: The initial Term of the Agreement is 20 years. However, the Port agrees to consider extending the Term as may be required to enable the Authority to obtain grant funding for improvements to the waterside assets or landside facilities.

2. Exclusive Landing and Mooring Rights: Port will grant Authority exclusive landing and mooring rights.

3. Parking: Port shall permit Authority ferry customers to park for free in the Washington Street garage. The free parking arrangement shall be in effect until garage occupancy levels reach an agreed upon percentage over a specified time period.

4. Relocation of Ferry Terminal: The parties acknowledge the possibility that the Port may relocate the ferry terminal. Such a relocation would be at the Port's sole cost and expense and the new location must be reasonable comparable to the initial clay street location in terms of accessibility and ferry customer convenience.

5. Security: The Port shall continue to provide landside security and to monitor the video camera feed from camera's focused on the waterside assets. The Port will continue to be responsible for all security expenses under MARSEC Level 1. The Authority will reimburse the Port for increased security costs resulting from a MARSEC level increase.

C. Financial Consideration:

1. Authority will not pay any cash consideration to Port for transfer of the Port's interest in the Vessels, the Waterside Assets or other personal property. Until transfer of the waterside assets to the Authority, the Port will be responsible for the cost to maintain these though the Authority will be responsible for the cost of any extraordinary asset maintenance and repair cost.

2. Authority will pay landing and mooring fees equal to the costs incurred by the Port to provide one parking lot attendant from 5:30 am to 7:30 am Monday through Friday (holidays excluded). The attendant is needed to open the garage to accommodate Oakland ferry commuters. This cost is estimated to be $18,000 per year.

3. Upon Phase 2 Closing, Authority shall fund ongoing maintenance, rehabilitation, and purchase or replacement of Waterside Assets (vessels, floats, etc.) as needed.

4. Port shall not be required to pay any subsidy for operation of any Authority operations or, upon Phase 2 Closing, be financially responsible for any waterside facility operational or capital expenses.

5. Port shall fund ongoing operation, maintenance, repair and security for landside facilities. However, the Authority shall reimburse the Port for the cost to maintain and/or replace the pier awning and the plexi-glass wind protection wall, as needed, as these are provided for the comfort and protection of ferry patrons.

***Fiscal Impact***

There is no direct fiscal impact associated with approval of the Term Sheet. The mooring and landing fees are included in the FY 2011/12 operating budget and the cost for the maintenance and /or replacement of the float, pier awning and wind protection will be included in the Authority's future annual budgets as needed.

***END***

# *Attachment 1*

## TERM SHEET FOR TRANSFER OF PORT OF OAKLAND FERRY ASSETS AND LANDING AND MOORING RIGHTS FOR WETA FERRY SERVICE AT CLAY STREET FERRY TERMINAL AT JACK LONDON SQUARE

**Transferee:** Bay Area Water Emergency Transportation Authority ("WETA").

**Transferor/Lessor**: Port of Oakland ("Port").

**Basic Transaction**: The transaction will occur in 2 phases.

The first phase will commence on the Effective Date of the Transfer Agreement. Port shall transfer to WETA any interest of the Port in the Vessels, and Port will grant WETA exclusive landing and mooring rights at the Clay Street Ferry Terminal at Jack London Square during the Term, subject to Port's right to relocate the ferry landing to a comparable location acceptable to WETA. In consideration of such rights, Port will no longer have an obligation to make an annual funding contribution to the ferry service, and WETA will contribute toward certain costs. WETA shall undertake to complete replacement of the float (i.e., the new or refurbished float is installed and operational) within 24 months from the Effective Date. The period of time from the Effective Date until the float is replaced is hereinafter referred to as "Phase 1".

The second phase will occur when WETA has completed installation of the float and made it operational. When the new float is in place, Port shall transfer the Waterside Assets to WETA. WETA shall cause the existing float to be disposed of at WETA's expense in accordance with applicable law. Port shall retain ownership and control of all Landside Terminal Facilities, including but not limited to the pier, and the parking validation machines located on the pier structure, and the security cameras on the pier structure or float. The period of time from and after the second step is hereinafter referred to as "Phase 2".

1. **Assets to be transferred to WETA.**

   A. **Vessels**: Port shall transfer 100% of its interest in the M/V Encinal and M/V Peralta to WETA.

B. **Waterside Assets**: Waterside Assets are demarcated from the double doors leading to ramp at end of pier, and include the double doors, float, pilings, and aluminum gangway ramp, as identified more particularly in Schedule 1B.

During Phase 1, Port shall (i) retain ownership of and responsibility for the Waterside Assets and shall continue to make the Waterside Assets available to the public to access WETA-provided ferry service embarking and debarking at the Clay Street Ferry Terminal; (ii) provide the regular maintenance and repair of the Waterside Assets in accordance with the maintenance and repair scope of services attached hereto as Exhibit 1.B-2; and (iii). complete any activities necessary to obtain a close-out letter from Disability Right's Advocates confirming that Port has completed its obligations under the Settlement Agreement dated May 21, 2008 with respect the litigation captioned *Mikiten v. City of Alameda, The Port of Oakland, The Blue & Gold Fleet, L.P*., Case No. 06-266836 (Alameda C. Sup. Ct.). WETA shall have exclusive use of the Waterside Assets and exclusive landing and mooring rights at the Clay Street Terminal during the Term (defined below).

During Phase 1 WETA shall be responsible for the cost of any extraordinary maintenance and repair of the Waterside Assets that is not included in the scope of services in Exhibit 1.B-2, and WETA shall undertake to replace the existing float with a new or refurbished float, at WETA's cost and expense. If WETA has not completed such replacement or refurbishment within 24 months from the effective date, WETA shall pay Port liquidated damages for such delay in the amount of approximately $1,000.00 per month for every month (prorated on a daily basis for any partial month) that such replacement or refurbishment is delayed ("Liquidated Damages for Delay"). If WETA fails to pay the Liquidated Damages for Delay, Port may terminate the agreement upon 60 days prior written notice to WETA.

Port shall transfer ownership and control of the remaining Waterside Assets, including the piles for the float, the gangway and the double doors to WETA upon commencement of Phase 2. Upon such transfer, WETA shall assume full responsibility for maintenance, repair and insurance of the Waterside Assets, and WETA shall have an exclusive license to maintain the Waterside Terminal Facilities in their present location for the Term.

**2. Landside Ferry Terminal Facilities and Parking.**

A. The Landside Ferry Terminal Facilities include all assets and facilities to the landside of the passenger double-doors. During the Term, Port shall retain ownership and control of, and responsibility for the Landside Ferry Terminal Facilities. Port shall make the Landside Ferry Terminal Facilities available for ferry customers to access the Waterside Assets, and shall provide WETA with landing/mooring rights as provided in 2.B, below. WETA shall provide capital contributions to support ferry-specific pier expenses as described in Section 6.C.

B. Port shall grant WETA exclusive landing and mooring rights at the Clay Street Ferry Terminal during the Term; provided, however, that WETA will reasonably accommodate requests from Port for special charters and other events that do not interfere with the regular ferry schedule, on a case by case basis.

Port shall have the option, at Port's sole cost and expense, to relocate the Waterside Assets to a comparable location acceptable to WETA at any time during the Term, upon not less than eighteen (18) months prior written notice to WETA. In the event that Port desires to exercise such option, Port shall meet and confer with WETA to address WETA's comments and concerns regarding any proposed new location for the ferry landing. Any proposed new location shall be reasonably comparable to the initial Clay Street location in terms of accessibility and ferry customer convenience. Port shall be responsible for obtaining any required environmental clearances and other required permits and authorizations to relocate the ferry landing to any proposed new location.

C. Port shall grant WETA a no fee license to locate and maintain a ticket vending machine and/or electronic tolling facilities (Clipper Card facilities), an electronic information sign, brochure racks for dock schedules and other ferry related information resources or way-finding signage in the terminal area, subject to WETA's compliance with Port's regulations and guidelines for the same. The location of all such fixtures shall be subject to Port's approval, and approval of any other regulatory agency with jurisdiction over such fixtures or location. WETA shall have sole responsibility for maintenance, repair or replacement of all such signs and fixtures.

D. During the Term of this Agreement, subject to WETA's payment of the Landing and Mooring Fee equivalent to Port's actual expense associated with the ferry service provided for in Section 5.E, below, Port shall permit WETA ferry customers to park for free in Port's controlled parking garage

located at 101 Washington Street (the "Parking Lot") unless and until the occurrence of the events described in this Section 5.D.

Port may implement the parking charges for ferry customers in the following circumstances:(i) if the average occupancy level of the Parking Lot equals or exceeds seventy five percent (75%) for a continuous period of 14 days and is expected to continue at such level, Port may charge each customer $3 for up to 12 hours; (ii) if the average occupancy of the garage over a 14 day period is 90 % or higher for a continuous period of 14 days and is expected to continue at such level. Port may charge each customer $10 for up to 12 hours. Alternatively, the ferry customers will have the option to purchase monthly parking permits. If during the term of this Agreement the Board of Port Commissioners approves parking rate increases for the general public's use of the Washington Street Garage, the rates specified in this Section 5.D may be modified in direct proportion to the percentage increase of rates to the general public. Temporary spikes in occupancy rates due to special events at Jack London Square, and events that disrupt regional traffic, such as temporary bridge closures, shall be excluded from the calculation of average occupancy for purposes of establishing a permanent parking charge. The methodology for measuring occupancy, and a description of anticipated temporary events for which parking charges may be implemented, shall be set forth in more detail in the Agreement. Port shall provide WETA with at least 30 days written notice prior to implementing a permanent parking charge as provided herein. Such notice shall include an accounting of the occupancy rates justifying the charge. If subsequent to implementation of a permanent parking charge there is an apparent permanent reduction in parking occupancy levels below those justifying the parking charge, upon WETA's written request, Port shall reevaluate the average parking garage occupancy rate over a continuous 14 day period, and if the average occupancy rate no longer meets the threshold for the then-current parking charge, Port shall adjust the ferry customer parking charge accordingly.

Port may implement temporary parking charges to address temporary spikes in parking occupancy that are expected to occur as the result of regional transportation system disruptions, provided that Port shall, to the extent reasonably practicable, provide WETA with at least 2 days prior written notice of the implementation of this temporary fee.

**3. <u>Other Ferry Service Related Assets Owned by Port</u>.**

(A) If Port determines at any time subsequent to execution of the Agreement that Port has any Service related assets of the types described in

Paragraphs G through I of Port's representations and warranties in Section 8 hereof, Port shall transfer and assign its interest in such assets to WETA.

B. Concurrent with the Phase 1 Transfer Closing (hereinafter defined) Port shall assign to WETA any permits required for installation of the new float and a copy of the drawings, specifications and plans for the Waterside Terminal Facilities. Concurrent with the Phase 2 Closing, Port shall assign to WETA any permits Port holds that are required for the maintenance of the new float.

(E) Intangible Personal Property: As listed in Schedule 3.E. To include whatever rights Port may have to service logos, ferryfone recorded information number, web sites, domain names and marketing materials final art.

## 4. Term

The initial term of WETA's exclusive landing and mooring rights and other provisions of the Agreement shall be [20] years from the Phase 1 Transfer Closing ("Term"). Port acknowledges that certain grant funds that may be available to WETA for valuable improvements to the Waterside Assets and the Landside Terminal Facilities require that the grant recipient maintain the grant-funded improvements in place for their useful life, which may in some cases exceed 20 years. Such grant restrictions would require that the Term be coextensive with the asset useful life established in the relevant grant agreement. Port agrees to consider reasonable extension of the Term by an additional number of years as may be required to enable WETA to obtain grant funding for improvements to the Waterside Assets or the Landside Terminal Facilities.

If WETA makes a business decision to no longer operate at least 4 trips per day on weekdays (other than for reasons beyond WETA's control, to be specified in detail in the Agreement), WETA shall notify the Port of this reduction and the Port may terminate the Agreement upon not less than 60 days prior written notice to WETA.

## 5. Consideration for Transfer of Assets.

A. Vessels: No monetary compensation. WETA shall: fund ongoing maintenance and rehabilitation; assume grant requirements; fund cyclical replacement costs; provide access to additional vessels as needed for Alameda/Oakland Service.

B. Waterside Assets. No monetary compensation.

C. Other Ferry Service Related Assets: No monetary compensation required. WETA to take on Port obligations under any assigned Government grants, approvals and applications for the Vessels and the Waterside Assets.

D. No real estate interests are transferred; license to use and maintain the Waterside Assets at current location during the Term, (subject to Port's right to relocate, and Port's agreement to consider in good faith an extension as may be necessary to obtain grant funding for capital improvements) and ferry passenger access to Landside Assets are granted in consideration of WETA's obligations herein.

E. During the Term of this Agreement WETA shall pay the Port a fee equal to Port's actual cost of providing one parking attendant at the Washington Street Garage during the hours of 6:00 a.m. to 7:30 a.m., Monday through Friday. The fee for the first year is estimated to be $18,000. On or before the first day of each fiscal year of the Term, Port shall provide WETA with an invoice for the expected cost of providing the parking attendant during such fiscal year. WETA shall pay such invoiced sum to Port in arrears, in four equal payments, payable on or before the 15th day of each fiscal quarter for the cost incurred with respect to the immediately preceding fiscal quarter. Said fee will be subject to labor increases charged to the Port by the parking operator to the Port. If there is a difference between the amount invoiced for a fiscal year and the actual cost incurred for such fiscal year, such difference shall be address by Port in the annual invoice to be submitted by Port for the next following fiscal year.

**6. <u>Operational Covenants</u>.**

A. Port shall be responsible for ordinary maintenance and repair of the Waterside Assets, as set forth in Exhibit 1.B-2, during Phase 1.

B. During Phase 1 WETA shall fund extraordinary repairs, i.e., repairs not within the scope set forth in Exhibit 1.B-2 that are necessary to maintain the viability of the float and existing facilities pending replacement. The parties shall cooperate in good faith and use their best efforts in structuring the timing and mechanisms for payment of such costs so that they may be eligible for grant funding.

C. Except as provided in this paragraph, Port shall be responsible for ongoing operation, maintenance and repair of Landside Terminal Facilities

in good condition and repair at Port's cost and expense so that WETA shall have the continuous, uninterrupted use and benefit of the Waterside Assets during the Term.

WETA shall reimburse Port for the cost of maintaining and/or replacing the awning and the plexi-glass wind protection wall that are provided on the pier structure for ferry passenger's comfort and protection. Prior to incurring any costs with respect to the same, Port shall submit an estimate to WETA for its review and approval, preferably at least 12 months in advance of the needed replacement, in order to provide WETA with sufficient time to secure necessary funds. WETA shall have the right to propose to fund capital improvements to the Landside Terminal Facilities to be made at WETA's cost and expense from time to time. Port shall consider any such requests in good faith.

If, as a result of a force majeure event, extraordinary capital repairs to the Landside Terminal Assets are required to be made in order for continued use of the Waterside Assets for ferry service, the Port is no longer required by the BCDC permit to provide public access to the pier, and such repairs are not funded by insurance, WETA and Port shall meet and confer to identify potential funding sources to repair or replace the facility. If funding from insurance or sources other than the Port's operating funds and reserves are not available, Port shall be entitled to suspend WETA's Landing and Mooring rights until the parties have identified and agreed upon a source of funding for such repairs.

D. Port shall be responsible for providing regular security for the Landside Terminal Facilities only during the term of this agreement. Port's security staff shall monitor security cameras dedicated to the Landside Terminal Facilities and the Waterside Assets; Port shall continue to maintain and repair cameras located on the Waterside Assets at WETA's request and cost. Port shall also be responsible for providing MARSEC security up to MARSEC Level 1. If the MARSEC Level is increased, Port shall increase its security accordingly. WETA shall reimburse Port for the agreed upon incremental cost increase associated with heightened security requirements due to an increase in the MARSEC level.

E. Condition of Waterside Assets: "As-Is" as of July 1, 2011, subject to Port's ongoing obligations during Phase 1 described above.

F. In the event that WETA anticipates significant increase in ferry terminal activity, due to a regional emergency, regional transportation disruption, or other special circumstances, such that an increase in landside support is deemed necessary, the Port shall cooperate, to the extent possible, to

provide such support. Such support may consist of extending parking garage hours, making additional parking facilities available, provision of additional landside security, etc. All Port expenses for agreed-upon activities will be reimbursed by WETA, net of any customer fees that may be charged directly by the Port, such as temporary parking fees as described in 2.D.

G. [Intentionally omitted.]

H. Hazardous Materials Conditions: Port shall fully indemnify WETA against any liability for Hazardous Materials Conditions at Jack London Square, except to the extent Port can prove that the release giving rise to the liability occurred after the Transition Date and was caused by WETA. Port will assist in disclosing conditions of which it is aware, and the Port staff person possessing the most knowledge will represent and warrant that except as otherwise disclosed, Port has not received notice from any governmental agency that ferry terminal operations are in violation of applicable laws.

I. Casualty and Condemnation: WETA shall be responsible for restoration after casualty/condemnation of the Waterside Assets to the extent of available insurance proceeds or condemnation compensation. WETA shall be entitled to an allocation from condemnation proceeds for any value attributed to WETA's landing and mooring rights. Casualty and condemnation shall temporarily suspend WETA's obligation to provide continuous Public Ferry Service, and the Port's obligation to make the Landside Ferry Terminal Facilities available to the public for access to the ferry service. "Public Ferry Service" means regularly scheduled passenger ferry service equally available to the general public for published fares that has, as part of its regular schedule on a daily basis (weekends and holidays excepted), at least one passenger pick-up and one drop-off destination or terminal within the City of Oakland.

J. Permitted Use: Landing and mooring rights are exclusively for the operation of commuter and excursion ferry service provided by WETA on the San Francisco Bay and/or the San Pablo Bay and/or their tributaries, occasional charter ferry operations permitted at WETA's sole discretion, subject to Port's rights described in Section 2.B, above, and for emergency services, as determined necessary by WETA from time to time. The following ancillary ferry related uses shall also be permitted: passenger vessel docking and lay berthing, passenger loading and unloading and minor vessel maintenance and emergency repairs necessary to enable the vessel to be relocated.

K. Assignment: With the exception of certain conditionally permitted transfers, there shall be no assignment of WETA's rights without Port's prior written approval. Port shall not unreasonably withhold approval of the following conditionally permitted transfers: assignment to successor agency in event of reorganization; assignment of rights in connection with financings.

L. Insurance: WETA shall maintain and/or require its ferry service carriers to maintain, insurance as provided in Schedule 6.L. Port and its governing board, Commissioners, officers, employees and agents shall be named as additional insureds on WETA-provided or service operator-provided insurance. Prior to completion of replacement of the float, Port shall continue to maintain responsibility with respect thereto

M. Compliance with Laws: WETA and Port shall comply with all federal, State and local laws, rules and regulations affecting implementation of the Agreement and/or the use of the Jack London Square Ferry Terminal for public ferry service, including without limitation, the Maritime Transportation Security Act of 2002. WETA shall be responsible for compliance of the Waterside Assets; Port shall be responsible for compliance of the Landside Terminal Facilities.

N. WETA shall cause its contracted ferry service operators to:

(i) Comply with all applicable federal, State and local laws, rules and regulations, including, but not limited to, any rules the Port imposes for security purposes, and all applicable Port ordinances, resolutions, rules and regulations, including applicable provisions of the Port Marina Ordinance; and

(ii) Repair in a timely manner and be responsible for any and all damage caused by the ferry service operator, its agents, consultants, contractor, employees, or volunteers to the Landside Terminal Facilities.

O. Port shall cooperate with WETA's efforts to obtain permits and funding necessary for refurbishing, replacing and/or improving the Float and other Waterside Assets owned by WETA as may become necessary with the passage of time. Port shall cooperate with and assist WETA in its applications for any permits or authorizations required for operation of the ferry service at the Clay Street Ferry Terminal, including but not limited to applications for periodic dredging and, installation and removal of piles.

P. Port shall assist in maintaining a link to WETA on City of Oakland and Port websites, and cooperate, at WETA's request, in joint marketing and advertising efforts for ferry services.

**7. <u>The Transition</u>.**

A. Targeted Phase 1 Transition Date – July 1, 2011.

B. Conditions to Transition

(i) On the Phase 1 Transition Date, Port shall transfer any interest of Port in the Vessels to WETA, and WETA shall assume all liabilities with respect to the Vessels accruing after the Transition Date ("Phase 1 Transfer Closing").

(iii) Upon commencement of Phase 2, Port shall assign to WETA, and WETA shall take ownership of, the Waterside Assets and other assets to be transferred, and WETA shall assume all liabilities with respect to thereto accruing after such date, subject to Port's retained liability for Hazardous Materials conditions, as described above (the "Phase 2 Closing").

(iv) All permits and approvals necessary to WETA's legal operation of the ferry service at the Clay Street Ferry Terminal at Jack London Square are validly issued and effective as of the Vessel Transfer Date as provided in <u>Schedule 6.C (iv).</u>

(v) All required insurance is issued and effective at the Phase 1 Transfer Closing and at the Phase 2 Closing.

(vi) WETA Board action approving transaction for the Phase 1 Transfer Closing for the Phase 2 Closing.

(vii) Port action approving transaction for the Phase 1 Transfer Closing and at the Phase 2 Closing.

D. Deliveries at the Closing(s)

(i) Documents necessary to transfer interest in vessels (Phase 1 Transfer Closing); and documents necessary to transfer title to Waterside Assets (excluding the existing float if WETA elects to

install a new float in lieu of refurbishing the existing float (Phase 2 Closing).

(ii) Agreement granting exclusive license for Waterside Assets (Phase 2 Closing) and Landing and Mooring Rights (Phase 1 Transfer Closing).

(iii) Assignments.

(iv) Any required legal opinions.

(v) Other.

**8. <u>Port's Representations and Warranties</u>.** Port shall represent and warrant to WETA as follows:

A. Port of Oakland is validly existing California _____, the transaction has been duly authorized by Board of Port Commissioners, person(s) executing documents on behalf of Port have power and authority to do so.

B. Noncontravention.

C. All required Port consents have been obtained to consummate the transition.

D. To current actual knowledge of Port, no licenses from, payments to or consents of any other person are required in connection with the Transition, except as may be listed in a schedule to the Agreement.

E. To the current actual knowledge of Port, the Port's interests in the ferry vessels to be transferred to WETA are free and clear of liens and encumbrances other than any permitted exceptions to be listed in a schedule to the Agreement.

F. To the current actual knowledge of Port, neither the Waterside Assets nor the Landside Terminal Facilities have been assigned, transferred, conveyed, leased or licensed by Port to any other person or entity.

G. To the current actual knowledge of Port, there are no government grants, approvals and applications and related financial, maintenance, inspection and other grant-funded asset records for the Vessels and the Waterside Terminal Facilities.

H. To the current actual knowledge of Port, Port has no intellectual property, including but not limited to proprietary software, operating procedures, guidelines, trademarks, servicemarks, copyrights, registrations necessary or convenient to WETA's ownership, operation and maintenance of the Vessels and the Waterside Terminal Facilities.

I. To the current actual knowledge of Port, Port has no tangible or intangible personal property used in connection with the Service, including but not limited to service logos, ferryfone recorded information number, web site, domain names and marketing materials final art.

J. To the current actual knowledge of Port, there are no pending or anticipated condemnation proceedings with respect to the Jack London Square Ferry Terminal.

K. To current actual knowledge of Port, the transaction won't result in breach of any contracts to which Port is a party.

L. Port has not and won't sell or encumber the assets to be transferred or assigned to WETA between the date of Agreement and Phase 2 Closing.

M. To the current actual knowledge of Port, all ferry service records delivered by Port to WETA are true and accurate as of the date of such statements and no undisclosed material adverse change impacting ferry terminal operations has occurred between the Agreement date and Transition Date.

N. To current actual knowledge of Port, Port has not received any notice that the operation of the ferry terminal is in violation of any applicable laws, except for any matters to be identified in a schedule to the Agreement.

O. To current actual knowledge of Port, all required permits and licenses for operation of the ferry terminal have been obtained and are effective and in good standing, except for any matters to be identified in a schedule to the Agreement.

P. Except as otherwise disclosed by Port in a schedule to the Agreement, no notice from any state or federal governmental agency has been received by Port indicating that the ferry terminal operations currently fail to comply with one or more applicable federal or state laws or regulations.

Q. Except as otherwise disclosed by Port in a schedule to the Agreement, there are no pending/threatened legal proceedings naming the Port

relating to operation of the ferry terminal, and Port, without any duty of investigation, is not aware of any other such legal proceedings.

R. To current actual knowledge of Port, all attached schedules are true and accurate.

S. Port's representations and warranties above shall survive for 3 years following Transition Date. As referenced above, to current acknowledge of Port means the current actual knowledge of _____ *[person most knowledgeable tbd]*. [NOTE: Most likely will require different persons depending on nature of representation.] [NOTE: For representations and warranties that if false could trigger an obligation to repay any grant funds, the representation and warranty shall survive for the duration required by the relevant grant agreement.]

**9.** **Representations and Warranties of WETA.** WETA's representations and warranties to consist of the following:

A. WETA is a duly organized and validly existing California transportation authority, the transaction has been duly authorized by Board of Directors, person(s) executing documents on behalf of WETA have the power and authority to do so.

B. Noncontravention.

C. All required WETA consents have been obtained to consummate the ferry transfer transaction.

D. There is no pending or threatened litigation that would affect WETA's ability to validly close the transition.

E. WETA is prepared to and capable of performing all of its obligations described herein to be set forth in the Agreement.

F. WETA shall comply with applicable regulatory requirements pertaining to the Waterside Assets during the Term.

WETA's representations and warranties above shall survive for 3 years following Transition Date.

**10.** **Covenants**. Covenants to include the following:

A. WETA to have right to inspect ferry facilities at any time and from time to time prior to Transition Date by delivery of not fewer than 5 business days

prior notice to Port. WETA to provide an initial proposed inspection schedule to Port on or before , and an outline of steps to be implemented by WETA to insure that inspections shall not reduce or delay scheduled ferry service. Port, at no expense to Port, shall reasonably cooperate and assist WETA in such inspections.

B. With respect to the period between execution of the Agreement and the Transition Date, Port and WETA shall use good faith diligent efforts to obtain, at WETA's expense, all required consents, make such necessary changes, amendments or renewals to contracts as and to the extent determined by WETA and Port to be reasonably necessary, and to continue to operate/maintain the ferry terminal assets in the same manner and quality as in the ordinary course of business prior to Agreement Date, and Port and WETA shall cooperate in doing all things reasonably necessary to consummate and make effective the contemplated transaction, including but not limited to:

(i) Obtain required agency approvals and Department of Homeland Security Facility Plan documentation required to transfer Vessels and Waterside Assets.

(ii) Make necessary changes to licenses, permits, and/or planning approvals for operation location and maintenance of Waterside Assets.

C. Port to give any other third party notices, and use diligent good faith efforts to obtain, all at WETA's expense, required third party consents and estoppel certificates as reasonably requested by WETA, if any.

E. Both parties, at WETA's expense, to make any filings and take other steps reasonably necessary to obtain required governmental approvals, authorizations and consents to consummate transaction, if any.

F. Port to give WETA and its accountants and consultants, upon 5 days prior notice, reasonable access during normal business hours to any books, records, documents, properties, files, contracts, etc. (except for confidential employee records and attorney client privileged documents, excluding any attorney client communications related to any assumed liabilities and litigation), relating to the assets and liabilities to be transferred to WETA and Port’s maintenance of the Waterside Assets, and will allow WETA to make copies of same all at WETA's expense.

G. Parties to give each other prompt notice of any occurrence making a representation or warranty untrue.

H. Port, at WETA's expense, to reasonably assist WETA in obtaining any permits or authorizations required for WETA to own, maintain and operate the Waterside Assets.

I. Port to continue post-transfer to provide WETA with access to documents reasonably necessary to operate the Service at WETA's expense.

**11. Other Covenants**.

A. If prior to Phase 2 Closing additional Waterside Terminal assets, or other assets or liabilities are identified that should reasonably be transferred to WETA in accord with the transition, they will be added to the schedule of assets and liabilities to be transferred; if discovered after the Phase 2 Closing, Port will promptly notify WETA and the parties will agree on a process for such transfer, if necessary.

B. The Transition Agreement shall include further assurance provisions obligating the parties to execute such documents and take such actions post closing as may be reasonably necessary to implement the transfer of the Vessels and Waterside Assets from Port to WETA and to otherwise fulfill the purposes of the Agreement.

**12. Other.** Agreement to include other typical provisions including, but not limited to, the following:

A. Termination of Agreement and effect of termination.

B. Survival and Non-Survival of terms.

C. AS-IS transfer with waivers and releases in favor of Port, subject to disclosures required above.

D. Standard miscellaneous provisions

E. Any contract provisions required by law – TBD

F. Other

## Schedule 1.B

LIST OF WATERSIDE ASSETS TO BE TRANSFERRED TO WETA
[Subject to review]

(i) The awnings shown on Exhibit 1.B.

(ii) The aluminum ramps and passenger double doors shown on Exhibit 1.B.

(iii) The piles shown on Exhibit 1.B.

(iv) The float shown on Exhibit 1.B.

Exhibit 1.B – Jack London Square Ferry Terminal Depiction

[To be inserted in the final agreement]

## EXHIBIT 1.B-2

## SCOPE OF MAINTENANCE AND REPAIR SERVICES FOR WATERSIDE ASSETS DURING PHASE 1

1. Replace lamps.
2. Perform fire alarm testing and inspections.
3. Perform ramp inspections, maintenance and minor repairs.
4. Maintain and repair door and lock.
5. Remove trash and perform periodic power washing.
6. Maintain and repair sump pump.

**Schedule 7.C (iv)**

LIST OF REQUIRED PERMITS, APPROVALS AND AUTHORIZATIONS

[To be inserted in the final agreement]

**Schedule 7.C (vi)**

LIST OF REQUIRED CONSENTS TO ASSIGNMENT OF CONTRACTS

[To be inserted in the final agreement]

**AGENDA ITEM 14**
**MEETING: June 2, 2011**

**MEMORANDUM**

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**TO:** **Board Members**

**FROM:** **Nina Rannells, Executive Director**
**John Sindzinski, Manager Planning & Development**

**SUBJECT:** **Hovercraft Feasibility Study Report and Discussion**

***Recommendation***
This is an information item only; no formal action by the Board is requested.

***Background***
In June 2006, WETA began work on the environment assessment and conceptual design of a project to construct a Hercules ferry terminal that would provide commuter service to Downtown San Francisco as one of the preferred expansion routes identified in the Implementation and Operations Plan. The proposed project is located along the San Pablo Bay shoreline just north of Hercules Point, where the City of Hercules is also planning an Intermodal Transit Facility as a separate but related project. To date, WETA has developed a conceptual plan and undertaken significant portions of the required environmental assessment. Further development of the ferry terminal project is currently on hold, as the City of Hercules continues to work through its environmental review process and project funding issues for the related Intermodal Transit facility, which is an integral part of the ferry terminal plan.

Notwithstanding the City's efforts to complete the environmental assessment of the Intermodal Transit Facility, WETA has identified potentially significant constraints that need to be addressed before resuming development of the Hercules ferry terminal project. One of the most significant issues to emerge is the extent and associated cost of dredging that will be required for the terminal site to be accessible to ferry vessels. A preliminary coastal engineering analysis completed by Coast and Harbor Associates indicates that the basin of San Pablo Bay near the shoreline of the project site is very shallow and subject to rapid sedimentation. In order for ferry vessels to access the proposed terminal site, WETA would need to dredge a channel of about two miles in length, which would require maintenance dredging every 2 to 3 years to ensure adequate navigational depth.

The extent and magnitude of this issue is compounded by the fact that at least the initial dredge spoils are likely contaminated. The project site is adjacent to a location where a dynamite factory previously existed and ships were loaded with high explosives. As a result of these factors, the analysis estimated that the initial dredging would cost upwards of $17 million due to the associated cost of removing and properly disposing of a high volume of potentially contaminated dredge materials. Subsequent maintenance dredging that would occur every 2 to 3 years is estimated to cost roughly $3 million per event, which would result in a long term operational cost unprecedented by any current services operated by WETA or planned services under study.

Officials for the City of Hercules are aware of the potential costs associated with dredging and the issues this presents to the financial feasibility of the project. In response, the City met with WETA staff during the fall of 2010 and proposed that hovercraft might be an alternative vessel technology that could work in Hercules and reduce or eliminate the need for initial and

maintenance dredging. Staff agreed to evaluate the use of hovercraft for the project and hired URS Corporation to conduct a feasibility study, a copy of which is attached to this memorandum.

***Discussion***

As the attached Hovercraft Feasibility Study indicates, the implementation of hovercraft as an alternative vessel technology for ferry services such as the proposed Hercules project presents both some advantages and disadvantages. The most obvious advantage is that hovercraft vessels do not require dredged channels to access ferry terminal facilities and would therefore eliminate costly initial and recurring dredging requirements to provide a navigable channel. Furthermore, preliminary discussions with terminal construction contractors have indicated that a Hercules ferry terminal supporting hovercraft service could be built without any dredging of the nearby basin whatsoever.

Another significant advantage of hovercraft is that they can travel at 30% or faster speeds than conventional catamaran ferry vessels. This greatly reduces travel time and is accomplished at no appreciable increase in operating costs relative to catamarans, as evaluated in the Study. In this regard, hovercraft is suitable for longer distance commutes, such as planned ferry services from Martinez and Antioch to Downtown San Francisco, where faster travel times would reduce headways and potentially allow for more frequent peak period service.

Hovercraft vessels are also capable of operating in a broad range of locations with fewer facilities and terminal infrastructure required to support operations relative to conventional ferry vessels. However, hovercrafts are unable to access terminal facilities built and designed for conventional ferry vessels, such as those that facilities that currently exist in the Bay Area and are being planned and developed by WETA. The inability of hovercraft vessels to provide service to most, if not all, existing and future San Francisco Bay terminals would significantly limit their utility in the event of a regional disaster that required deployment of emergency water transit services.

Another significant drawback of utilizing hovercraft vessels are size and passenger carrying capacity. To date, the largest hovercraft built and operated in regular service can carry only 199 passengers. This limitation is significant as these vessels would only be able to be utilized on routes with lower ridership potential. This is especially important given that the demand for service could easily outstrip passenger carrying capacity during the typical 30-year useful life of ferry vessels or in the event of an emergency.

The amenities offered by hovercraft vessels, or lack thereof, are also a concern. From a passenger standpoint, hovercraft vessels are more akin to airplanes than typical ferry boats. On existing hovercraft vessels currently in operation, passengers sit in seats as they would on a plane and generally don't move around when the boat is in transit. There are no outside areas to view the Bay from or much space, if any, for bicycles. Altogether the ride is geared for speed, it does not provide many of the amenities and comforts most Bay Area ferry patrons like about their commute.

Staff is also concerned that there will likely be resistance, perhaps quite significant, to the implementation of hovercraft service from an environmental standpoint, particularly regarding potential noise impacts. While newer technologies are quieter, the perception is that hovercrafts are far nosier than conventional ferry vessels. The major concern with noise would be where hovercraft vessels would dock in San Francisco as the Ferry Building area surrounding the Downtown San Francisco Ferry Terminal is heavily populated with pedestrians, restaurants, and other commercial visitors and office workers. At a minimum, some sort of demonstration of the hovercraft technology in operation would be needed to not

only test the noise impact but also to gauge public acceptance of these vessels. Additionally, perception issues may exist concerning other potential environmental impacts relating to aquatic species, water quality, and safety, as summarized in the Study.

In terms of evaluating the feasibility of hovercraft as an alternative vessel technology for the proposed Hercules ferry service, staff concurs with URS' finding that additional research is needed. Of particular concern is how much utility hovercraft vessels will provide in meeting the long-term ridership estimates for the Hercules services, which are currently being updated by WETA. Another important consideration is whether the hovercraft vessel technology would work for other proposed ferry service routes currently under study by WETA. It should be emphasized that hovercraft are very different than catamarans and would require wholly different operations and maintenance practices and materials, as well as different docking facilities and maintenance berths. Staff is concerned that it would be difficult to justify a radical change to hovercraft for a single route.

***Fiscal Impact***

There is no direct fiscal impact as this is an informational item only.

The San Francisco Bay Area
Water Emergency Transportation Authority

# Hovercraft Feasibility Study

Prepared by:

URS

April 2011

WATER EMERGENCY TRANSPORTATION AUTHORITY

WETA

# Final Hovercraft Feasibility Study

*Prepared for*

**Water Emergency Transportation Authority**

*Prepared by*

URS Corporation
Post Montgomery Center
One Montgomery Street, Suite 900
San Francisco, CA 94104-4538

April 20, 2011

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## ATTACHMENTS

# 1.0 INTRODUCTION

This report presents a screening-level evaluation of the feasibility of using hovercraft (air-cushion vehicles) to provide commuter service from the cities of Hercules, Martinez, and Antioch, to the San Francisco Ferry Building. The assessment was prompted by two considerations; that use of hovercraft could mitigate the need for a major dredging program at Hercules, and secondly, that hovercraft could reduce travel times from more distant terminals including Martinez and Antioch. Because hovercraft can cross the shoreline at any location where there is beach, mudflat, or other gradual transition from water to the shore, hovercraft also are well suited to assist emergency response activities.

A ferry terminal at Hercules using conventional catamarans would require a substantial initial dredging program (Water Emergency Transportation Authority [WETA], Draft Hercules Environmental Impact Statement). Due to historic industrial activity, some sediment is likely to be contaminated with residue from manufacturing processes. Maintenance dredging volumes are also expected to be significant at Hercules.

By water, Martinez and Antioch and are approximately 32 and 51 miles from San Francisco, respectively. Conventional catamaran ferries used on longer routes travel at service speeds of 35 knots (40 miles per hour [mph]) which, including time to slow and dock, results in trip times to Martinez and Antioch of approximately 1 hour and 1.5 hours respectively. In calm conditions, hovercraft can travel at service speeds of 45 to 50 knots (52 to 58 mph), resulting in a potential 25 to 30 percent reduction in trip time, and hence, a trip time to Antioch closer to 1 hour.

Hovercraft operations have proved to be feasible at locations where constraints such as shallow water access or remoteness preclude the use of conventional high-speed catamaran vessels. Existing services considered in this study that use hovercraft capable of carrying 100 or more passengers include the commercial and emergency service between King Cove and Cold Bay in the Alaskan Aleutians, and the long-running service operated by British Hovertravel in England connecting Southsea, Portsmouth with the Ryde on the Isle of Wight.

The remainder of this section provides an overview of existing large commercial hovercraft and two services from which performance data have been collected. Section 2 addresses capital and operation costs, and Section 3 presents environmental considerations. Operational considerations including docking requirements are discussed in Section 4. Section 5 presents conclusions and recommendations.

## 1.1 COMMERCIAL HOVERCRAFT

Griffon Hoverwork, Ltd (GHL) in Southampton, England, is the largest manufacturer of commercial hovercraft designed to carry 100 or more passengers. GHL's designs for British Hovertravel, the BHT-130 through BHT-180 design series, are configured to carry 130 through 180 passengers, respectively. GHL also builds emergency response and military hovercraft. The North American representative and builder of GHL designs, Kvichak Marine Industries, Seattle provided information on GHL hovercraft for this study. Kvichak is familiar with WETA's vessel needs having constructed the four WETA ferries, *Gemini*, *Pisces*, *Scorpio* and *Taurus.*

While a number of hovercraft designs capable of carrying 100 or more passengers have been proposed by manufacturers in the United States, including EPS (the EPS P-100), Sea Air, and Hover-Shuttle, no commercial hovercraft of this size have been manufactured by these companies. EPS is constructing a military version of the EPS P-100.

Kvichak constructed *Suna-X*, shown in Photograph 1, used on the King Cove, Alaska service that connects King Cove with the nearest airport 8 miles across Cold Bay. The hull for *Suna-X* is based on the BHT-150 design. While the BHT-150 design is capable of carrying 150 passengers, the upper deck was of *Suna-X* modified to carry emergency vehicles weighing up to 18,000 pounds (approximately equivalent to the weight of 100 passengers) hence, the *Suna-X* has a smaller cabin which can hold 49 passengers.

**Photograph 1: BHT-150 Design *Suna-X*, King Cove, Alaska**

Emergency vehicles drive onto the hovercraft using a bow loading ramp which can be seen in folded position in Photograph 1. Photograph 2 shows the *Suna-X* in loading position on the beach in Cold Bay, Alaska.

**Photograph 2: *Suna-X*, Cold Bay, Alaska**

*Suna-X* is powered by four MTU 2000 series diesel engines. Two 1,205-horsepower (hp) thrust engines are connected to 11-foot 5-inch diameter variable-pitch 5-bladed propellers. Two 905-hp engines provide both lateral control through the bow nozzles and lift. The 5-bladed propellers and bow nozzles can be seen in Photographs 1 and 2. Fully loaded operational speed is 35 knots but in good conditions with a light load it can reach 50 knots. Fuel consumption is approximately 80 U.S. gallons per hour (gal/hr) (J. McGrath, personal communication). *Suna-X* noise data are discussed below.

In 2007, GHL constructed the *Solent Express*, a BHT-130 design, to cross the Solent, the channel separating the Isle of Wight from England. Photograph 3 shows the *Solent Express* (5-bladed propellers) on the Ryde Hoverport ramp on the Isle of Wight between two older API-88 hovercraft (4-bladed propellers). The Ryde Hoverport is adjacent to the Esplanade, a commercial corridor. Aircraft-style side stairways are used for loading and unloading passengers. At both Ryde and Portsmouth (Photograph 4), sloping concrete ramps allow the hovercraft to use gravity to move towards the water before full thrust is engaged to push away from the ramps.

**Photograph 3: BHT-130 *Solent Express* (center), Ryde, Isle of Wight**

**Photograph 4: *Solent Express* departing Portsmouth**

Before entering service to the Isle of Wight, the *Solent Express* was chartered in July 2007 for trial runs on a proposed 12.9-mile, 20-minute, service crossing the Forth Estuary north of Edinburgh. The trial was monitored in detail, including both noise and fuel consumption data. A total of 32,099 passengers were carried on 288 trips yielding a load factor of 85.7 percent. Average fuel consumption was much better than had been projected measuring 77 gal/hr (209 liters per hour [L/hr]) at an operating speed of 37 knots (42.5 mph).

Both the BHT-130 and BHT-150 designs are designed to operate in significant wave heights of up to 6.5 feet (2 meters [m]) and maximum wave heights of 10.5 feet (3.2 m) while maintaining passenger comfort. As can be seen in Photograph 2, hovercraft can also travel over rougher surfaces such as sea ice ridges and can be configured to clear up to 4 m obstacles if necessary.

# 2.0 CAPITAL AND OPERATION COSTS

## 2.1 VESSEL COSTS

The capital costs for commercial 149 to 199 passenger hovercraft are in the range of $10 to $12 million. This range is based on actual costs to construct the *Suna-X* and *Solent Express* hovercraft, plus 2010 estimates to construct BHT-150 and BHT-160 vessels.

For comparison, the WETA 149-passenger catamarans *Gemini* and *Pisces*, ordered in 2006, and the 199-passenger *Scorpio* and *Taurus*, ordered in 2007, cost $17 million and $18 million respectively. Each price is for two vessels and includes some spares. If the vessels had been ordered individually, the price per catamaran would have been higher. Table 1 shows capital costs for hovercraft and catamarans are similar.

**TABLE 1**
**VESSEL CAPITAL COSTS**

| Vessel | Passengers | Crew | Cost |
|---|---|---|---|
| BHT-150 (2007) | 150 | 2+ | $ 8.7M |
| BHT-150 (2010) | 150 | 2+ | $10.0M |
| BHT-160 (2010) | 160 | 2+ | $11.5M |
| WETA Catamaran (2006) | 149 | 3 | $8.5M |
| WETA Catamaran (2007) | 199 | 3 | $9.0M |

## 2.2 OPERATING AND MAINTENANCE COSTS

The operating costs for a 150-passenger hovercraft including crew and fuel are estimated to be approximately $800/hr which includes approximately $100/hr in allocated maintenance costs for propellers, skirts, and engines. Amortization of the $11.5M capital cost for a BHT-160, assuming 100 percent financing over 20 years, yields an annual cost of $1.17M.

Catamaran operating costs in the Bay Area vary quite widely as shown in Table 2. The table shows bundled cost data (operating and maintenance expenses) per revenue hour for three Bay Area ferry services listed in the National Transit Database (NTD, 2010) for years 2007 through 2009, which is the most recent year in the database. In 2009, the operating costs per revenue hour ranged from $820 for the Alameda service to almost $1,700 for the Golden Gate Vallejo service

**TABLE 2**
**BAY AREA FERRY SERVICES**
**VESSEL O&M EXPENSES PER REVENUE HOUR**

| Service | 2009 | 2008 | 2007 |
|---|---|---|---|
| City of Alameda | $820 | $845 | $756 |
| City of Vallejo | $1,330 | $1,434 | $1,268 |
| Golden Gate Ferry | $1,689 | $1,551 | $1,396 |

WETA will be taking responsibility for operating the City of Alameda ferry service in 2011. Based on the adopted budget for 2011, the bundled operating and maintenance cost of the ferries is approximately $900 per vessel revenue hour, consistent with the overall trend shown in Table 2.

Insurance is expected to be similar for hovercraft and catamarans. Insurance is dependent on location, operating conditions, support available, and the experience of the operating company. Since hovercraft and catamarans would be operating in the same location and with similar support by an experienced company, there should not be significant difference in insurance costs by vessel type.

Annual propeller maintenance costs are expected to be substantially reduced when advanced composite Hartzell propellers and hubs (made in the United States) replace the Hoffmann wood laminate propellers (made in Germany) currently used on BHT designs (see Section 3.1). The interval between maintenance for composite propellers is expected to be 5 to 6 times longer than that for wood laminate propellers. Skirt wear is a function of operating conditions; movement across rough surfaces such as concrete causes more wear than over water. Conceptual designs of landing pads and platforms would enable skirt life to be estimated for a San Francisco Bay service.

2.2.1 Lifecycle Costs

To provide context, the predicted lifecycle costs for hovercraft were compared with those for standard WETA catamarans. Engine maintenance for catamarans and hovercraft would be similar assuming that engine refits for catamarans would use engines similar to the 16V2000 MTU engines currently used on the WETA Gemini class ferries. The costs of maintaining the

main engines on 150 passenger variant BHT hovercraft are comparable to those on WETA catamarans. For example, BHT hovercraft use four similar engines as WETA – but lower powered - aboard the *Solent Express* in the UK. Hovercraft engine maintenance would utilize similar Time Between Overhauls (TBO) intervals (manufacturer's recommended maintenance interval) and hence the costs for interim engine maintenance (head swings) and full maintenance (top-end overhauls) also would also be similar, on a per engine basis.

In many cases, TBOs are based on fuel consumption rather than time in service, given that moderate engine use should extend the required overhaul periods. Since the fuel consumption of catamarans and hovercraft are fairly similar, the overhaul costs should also be similar.

The unique system costs associated with hovercraft related to the skirts, skirt fingers, and propellers, as follows:

**Main Vessel Skirt**

The main skirt on a 150-passenger hovercraft should have a service life on the order of 20,000 hours and has a replacement value on the order of a $1 million. The main skirt is typically replaced once every 5 or 10 years depending upon the duty cycle of the vessel. The life-cycle replacement cost for the main skirt translates to approximately $50 per operating hour.

**Flexible Skirt Fingers**

The main skirt has a number of flexible components which do require regular replacement including finger skirts which are used to direct air flow and to conform to terrain. The wear rate for these components varies as a function of the period of exposure to water versus harder wearing surfaces such as concrete, sand, and rocks. A typical rate of wear in heavy duty service (rough surfaces) would require 'finger' change outs every 1,000 operating hours. A full set of replacement fingers cost approximately $25,000. The potential impact to operating costs is therefore on the order of $25/hr. A more accurate estimate of this cost could be developed for the Bay Area operating environment based on a trials program that incorporated operating on/over the terrain the same as the proposed landing sites at Antioch, Martinez and Hercules.

**Air Propellers**

The maintenance cost for European-made wood-laminate propellers used on existing heavy duty commercial operations are on the order of $90 per operating hour (to cover cyclic overhaul and certification costs). These costs are based on TBO's of 2,000 hours or less. However, large hovercraft in Canada and the U.K. are currently concluding multi-year trials programs using North American-made composite propellers that have significantly longer TBO's and potential hourly operating costs on the order of $30/hr.

It should be noted that the amphibious ability provided by the skirts and air propellers allows complete hull inspections and maintenance work to be carried out at a terminal facility, thus negating the requirement for regular dry-dock inspections and repair.

## 2.3 FUEL CONSUMPTION

Fuel consumption rates for BHT-design vessels are better than equivalent high-speed catamaran ferries. Fuel rates are also substantially better than early hovercraft including the API-88 due to improvements in engine and propeller designs. The 130-passenger *Solent Express* has been shown to consume 290 L/hr or 77 gal/hr. The larger (1-bay longer) 150 passenger design *Suna-X* is achieving 80 gal/hr.

These fuel consumption numbers compare favorably with WETA's existing fleet of 149- and 199-passenger catamaran vessels which consume fuel at a rate of approximately 100 gal/hr at a service speed of 25 knots (Keith Stahnke, personal communication). Larger 350-passenger 35-knot catamaran ferries consume fuel at a rate of 150 gal/hr.

## 2.4 CREW

Crew of a captain plus two deck hands will be required for hovercraft carrying 150 passengers or less. Similarly, WETA 149 and 199-passenger catamarans operate with a crew of 3, consisting of a licensed master and two deckhands.

A 149-seat hovercraft, such as the *Suna-X*, operates under U.S. Coast Guard T-Class certification.

The U.S. Coast Guard requires training for hovercraft and type ratings can be issued once an accredited training program has been completed. For example, an approved training program has been developed by Seamasters Amphibious Solutions Inc., and the U.S. Coast Guard which allows Seamasters to issue approved type ratings. The rating includes 100 hours of time in control of a hovercraft, some of which can be logged during route proving and passenger runs. Experienced catamaran operators should not have difficulty getting this type rating.

## 2.5 TRAVEL TIME

The marine distances from Antioch, Martinez, and Hercules to San Francisco are 43, 28, and 20 nautical miles respectively (51, 32, and 23 miles). Hovercraft operational speeds in calm

conditions can reach 45 knots to 50 knots (52 to 58 mph) with more typical speeds closer to 40 knots. On the relatively short 12.5-mile Edinburgh service where departure and arrival contributed a greater percentage of total travel time, the average speed achieved during the trails was 37 knots. On the longer runs, departure and arrival modes are a smaller percentage of total time and 40 knots should be achievable.

At 40 knots and adding 10 minutes for transition time during departure and arrival, trip times from Antioch, Martinez, and Hercules to San Francisco would be 75, 52, and 40 minutes respectively. At 45 knots, the trip times reduce to 67, 47, and 37 minutes respectively.

## 3.0 ENVIRONMENTAL CONSIDERATIONS

Studies investigating the potential environmental impacts of hovercraft have been performed in North America and Great Britain. Environmental studies were performed during the planning stage of the King Cove service and separate studies were performed in Alaska for the U.S. Postal Service's use of API-88 hovercraft to delivery large items of mail to remote locations over water and ice. Environmental assessments have also been performed for Canadian Coast Guard operations and during the trail service in Scotland. Potential issues that have been addressed include surface and underwater noise, disturbance of birds and marine mammals, and wake.

**Sound Levels**:
Sound levels from thrust propellers and lift engines have been a primary environmental concern and continue to be the first issue raised when hovercraft are mentioned. However, improved engine and propeller designs focusing on reducing sound levels have be implemented with the result that hovercraft are now significantly quieter than the designs developed in the 1960s. Developments and data from recent sound studies are discussed in more detail in Section 3.1 below. Section 3.2 discusses air emissions.

**Bird Disturbance**:
The potential for hovercraft to disturb birds was studied for the Alaska King Cove service and for the Scottish Natural Heritage before the trials across the Firth of Forth in Scotland in 2007. Neither study found significant impacts. A Marine Mammal and Bird Protection Plan (Aleutian East Borough, 2003) was developed and implemented for the King Cove service due to the presence of threatened and endangered marine animals and birds (eiders, albatross, sea lions, and whales) as well as non-endangered marine mammals (sea otters, harbor seals). The plan requires avoidance and reporting of encounters with threatened and endangered marine animals. No such issues have been reported. This can be seen in the Friends of the Alaska Wildlife Refuge support for the hovercraft operations as it negates the need to build a road through the adjacent wildlife refuge (Izembek, 2008).

**Wake**:
The ground (air cushion) pressure under a hovercraft is low. The ground pressure under a fully loaded 150-passenger hovercraft 15 m wide and 30 m long weighing approximately 80 tons is less than 0.25 pounds per square inch (psi). For comparison, the ground pressure under a standing person is in the range of 7 to 8 psi. Because of low air cushion pressure, hovercraft generate very little wake; the water under a hovercraft is displaced only a few inches. In this aspect, hovercraft are superior to conventional catamarans in that wake is much smaller than typical wind induced waves.

Because hovercraft produce very little wake, the issue of vessel induced turbidity, which is typically caused by propeller driven vessels when they are in relatively shallow water, is not an issue for hovercraft.

**Underwater Noise**:
Similarly, the underwater acoustic signal associated with hovercraft is low compared to an equivalent high speed ferry. The Volpe Institute of the Department of Transport measured underwater noise for the U.S. Postal Service operations in Alaska and found that underwater sound levels were not significant (Roof and Fleming, 2001).

## 3.1 NOISE

The thrust propellers are the largest contributors to the sound footprint of a hovercraft. Photograph 5 shows shrouded five-bladed Hoffmann propellers on the *Solent Express*. Hoffmann propellers are constructed from wood laminate with steel leading edges.

**Photograph 5: BHT-130 Hoffmann Propellers and Shrouds**

The sound levels from thrust propellers have been reduced significantly by increasing the number of propeller blades from four to five, using larger diameter propellers, and reducing the spinning speed so that propeller tips do not generate supersonic shock waves. Sound data for the *Suna-X* collected by DLI Engineering for Kvichak Marine is shown in Attachment A (report provided by Keith Whittemore). With the hovercraft at cruising speed, mean sound levels of 71 to 75 A-weighted decibels (dBA) were measured when the hovercraft passed at 1,000 feet. The levels increased to 82 to 86 dBA at 500 feet. These levels are very similar to high-speed catamaran ferry data collected in 2003 during development of the Water Transit Authority Program Environmental Impact Report (e.g., 70 to 77 decibels [dB] at 1,000 feet and 80 to 87 dB at 300 feet).

Table 3 of the *Suna-X* report shows that loudest sound levels were recorded immediately behind the hovercraft at departure when the thrust engines face land. As mentioned in Section 1, an operational technique is used on the Isle of Wight service to reduce departure sound levels. Using the lift engines and a gravity assist to move down the sloping ramps means the thrust engines are not fully engaged until the hovercraft reaches the end of the ramp.

Further reduction in sound levels can be expected if hovercraft use U.S.-made Hartzell composite propellers. Figure 1 shows that the noise measurement data from unshrouded Hartzell propellers are a maximum of 82 dB at 900 feet, the same level that a shrouded Hoffmann propeller achieves at 500 feet. Hence sound levels from shrouded Hartzell propellers, currently being tested in Quebec, Canada, can be expected to show improvement over existing sound levels.

## 3.2 AIR EMISSIONS

The discussion of fuel consumption above indicates that hovercraft fuel usage is better than equivalent high-speed catamarans. Air emissions are a function of fuel usage and emission control equipment.

In 2003, WETA (then WTA) adopted air emission standards that are "85 percent better than Tier 2 standards" (by Senate Bill 915 in California Government Code, Chapter 714, Section 66540.27). The WETA standards are approximately equal to US EPA Tier 4 standards which require an 80 percent reduction in nitrogen oxides ($NO_X$) compared to Tier 2 standards and a 90 percent reduction in particulate matter (PM) compared to Tier 2. Tier 3 engine standards require a 50 percent reduction in PM and 20 percent reduction in $NO_X$ compared to Tier 2 standards. The US EPA has ruled that Marine Tier 3 engine emission standards will be required as of January 1, 2014, and that Marine Tier 4 standards will be required as of January 1, 2017.

At this time, regulations have not been passed that control the emissions of green house gases, particularly carbon dioxide ($CO_2$).

In order to meet the adopted standards, the WETA catamaran ferries have been fitted with compact selective catalytic reduction (SCR) systems built by Engine, Fuel, and Emission Engineering Inc. The SCR for each engine weighs approximately 750 pounds per engine, not including the weight of liquid urea. Three Dutch Pilot Boats have also been outfitted with SootTech emission systems. Performance tests on both the WETA and Dutch vessels showed actual emissions lower than current WETA standards (C. Walther, personal communication).

While Tier 4 engines are not yet commercially available, naval architects have reasonable expectations that manufacturers will develop suitable technology well before the 2017 deadline. For example, despite manufacturer's concerns regarding the difficulty of developing Tier 3 engine technology, a 530-HP Cummins industrial diesel which meets Tier 3 standards has being installed in a "green-tug" being constructed by Jerico Products in Petaluma (Aaron Lind, personal communication). Tier 3 engine upgrades have also been installed on the 4,290 hp tug BRYNN FOSS using a catalyst installed in the high temperature pre-turbo engine manifold (C. Walther, personal communication).

The weight of SCRs and other equipment designed to meet the Tier 4 standards is expected to be reduced as the 2017 EPA deadline approaches. For example, the SCR's used on WETA's catamarans use a ceramic foil substate. A substantial weight reduction could be achieved using a stainless steel foil substrate, similar to that used in automobiles catalytic converters.

Based on existing and expected technology developments, the engines and after-treatment systems used in hovercraft will be able to meet (or exceed) current WETA and EPA Tier 4 emission requirements. The ability of the BHT class of hovercraft currently in service to handle a 150-passenger load and the added weight of an emission system with no degradation of performance is well documented (K. Whittemore, personal communication). While weight is not expected to be an issue, as with all vessel designs, the space for the emission system would need to be planned for and allocated during the design phase of a hovercraft project.

# 4.0 OPERATIONAL CONSIDERATIONS

## 4.1 LANDING PADS

The minimum hovercraft landing requirements are basic; an area 5 to 10 m wider than the footprint of the hovercraft and a surface strong enough to support a loading ramp. For the self-contained bow loading configuration used on the *Suna-X* in Alaska, the landing pads can be as straightforward as the prepared gravel strip shown in Photograph 2. Photograph 6 shows the King Cove landing area which includes gravel side berms and a landing area covered with "rig mats" made of oak planks.

**Photograph 6: *Suna-X* on Landing Ramp, King Cove**

The Isle of Wight service, which has been in operation since 1965, uses sloped concrete landing pads as shown in Photographs 3 and 4.

For the trials in Edinburgh, temporary landing pads were constructed on beaches at the Kirkcaldy and Edinburgh ends of the run. The temporary landing pad at Portobello near Edinburgh and the loading stairway are shown in Photograph 7.

**Photograph 7: *Solent Express* loading on temporary landing surface, Edinburgh**

Landing pads, approximately 30 m by 30 m made of interlocking composite tiles, and security fencing were installed in a very short time frame; 4 days for the landing pad at Kirkcaldy.

Construction of a composite tile or concrete landing pad similar to the above structures adjacent to the Hercules shoreline would be feasible. At low tide, there are extensive mudflats that a hovercraft can pass over easily. The conceptual layout would include a landing pad at the shoreline and a passenger bridge or tunnel to cross the railway tracks which run parallel to the shoreline at the location of the proposed Amtrak station. Similar concepts could be constructed at Martinez on the east or west sides of the marina, and at Antioch. Local contractors have confirmed that construction on mudflats is possible.

**Vessel Accessibility**

As shown in Photograph 7, access to hovercraft parked on a landing pad requires use of an aircraft-type loading stairway. The characteristics of such ramps limit access to those capable of climbing up the ramps, and, prevent loading of large items such as bicycles. Depending on demand and Americans with Disabilities Act (ADA) requirements, the stairways could be modified to allow wheelchair access. During the Edinburgh service trial, based on demand from wheelchair patrons, the loading stairway was modified to include a side-rail mounted wheelchair lift.

The bow loading used on the Alaska service, shown in Photograph 2, would allow loading of bicycles. However, the slope of the loading ramp is steeper than that required by ADA, so that assistance for wheelchairs would still be necessary.

## 4.2 FLOATING LANDING PLATFORMS

There is insufficient space to construct a land-based landing pad at San Francisco. However, floating landing platforms that have been used for other services would be viable at the San Francisco Ferry Terminal site or nearby. Between 1984 and 1994, a drive-on- drive-off floating platform was used by Scandinavian Air Service (SAS) for API-88 hovercraft feeder service between Malmo, Sweden and Copenhagen Airport in Denmark, see Photographs 8 and 9. At the airport, the hovercraft drove up onto the runway. At Malmo, the hovercraft drove onto the floating pontoon from one end, set down to load and unload passengers, and then drove off the other end of the pontoon.

While the drive-on-drive-off design has obvious operational advantages, a U-shaped, drive-in-back-out floating platform design is also feasible. Both concepts are shown on Figure 2. The drive-in-back-out design could be located at any of the San Francisco Ferry Terminal gates.

**Photograph 8: API-88 on SAS Malmo Landing Platform**

**Photograph 9: SAS Malmo Landing Platform**

## 4.3 HOVERCRAFT PERFORMANCE CHARACTERISTICS

Operations in San Francisco Bay will require safe performance in headwinds and crosswinds. Based on operational experience in Alaska, Canada, and England where severe and demanding weather has been encountered on a fairly frequent basis, safe operations can be confidently predicted in the relatively protected environment of San Francisco Bay. This section presents a summary of the development and current practice for hovercraft performance.

### 4.3.1 General Principles and Performance Characteristics

The first Air Cushion Vehicles (Hovercraft) were designed in the late 1950s to reduce the friction between the vehicles and the surfaces over which they operated. The fan systems and flexible skirt designs in the early 1960s proved effective in reducing friction and, by 1965, took the technology well beyond the early directionally-challenged technology. For the past 45 years, design teams have refined the control systems that allow the vehicles to be safely operated in confined waterways. At this time (2010) hovercraft can cope with the most demanding traffic environments, such as in the Solent in the U.K, and Vancouver Harbour and the St. Lawrence Seaway in Canada.

All vessel types have finite operating limits and manoeuvring characteristics. The ability to be fast and agile is informed by many design and environmental variables including the amount of thrust available to overcome a vessels inherent drag factors. For catamarans and hovercraft alike, the reduction of water-related (hydrodynamic) drag is a key factor in achieving relatively high speed per installed horsepower. Catamarans reduce their water-plane area and raise the weather deck above the sea surface, reducing hydrodynamic drag in the process. As weather worsens (sea-states increases) so too does wetted-surface area and wave-making drag for both catamarans and hovercraft, and both vessel types lose speed, ultimately reaching a weather maxima where safe operation is not possible. The rate of speed deterioration – particularly heading directly into waves - is greater for hovercraft than for catamarans and the operational techniques used to mitigate for this deterioration are discussed in 4.4.2 below.

Hovercraft virtually eliminate the drag from water by rising above the sea surface. Compared to catamarans, hovercraft do experience higher relative effects of wetted-area and wave-making drag as weather deteriorates, however their design also gives them higher dash-speeds than catamarans in calmer sea conditions. Whereas a catamaran at slow speed must still overcome the hydrodynamic drag proportional to its tonnage, a hovercraft at slow speed can still virtually eliminate the hydrodynamic drag associated with its tonnage by remaining ‘airborne’. These principles are important in appreciating that hovercraft retain a significant amount of available

power for manoeuvring at low speeds – by bow thrusters, rudders, asymmetric propeller thrust, and by increasing friction in low-speed semi-displacement modes. The ability to momentarily "drag" skirts by reducing lift pressure in one or more parts of the vessel cushion allows the vessel to induce higher turning rates and higher rates of deceleration as the conditions demand. This range of operational modes – airborne, semi-displacement, and displacement – can be used to meet operator demands in any number of challenging operating conditions.

4.3.2 General Sea-going Operating Techniques

Hovercraft typically utilize a rather non-traditional length to beam ratio of 2 or 3 to one. This "wide stance" gives them a relatively smooth ride when compared to displacement vessels of equal length. However, as a consequence, they are more susceptible to speed reduction and ride comfort deterioration as the sea state and wetted drag increase.

In a similar manner, propellers produce less effective thrust per rpm when they are working directly into a headwind. It is important to emphasize that the relationship is not a linear, or 'knot for knot' loss. AP1-88 and BHT hovercraft are capable of maintaining 30 or more knots speed over the ground while heading into 30 knot headwinds – if they do so over mudflats, ground, or very shallow water where wave height is limited. Speed deterioration in direct head wind conditions is a result of head seas (heading straight into waves), and the increase in wetted drag on the inflated skirts. SF Bay is more favorable than other open harbor and coastal areas because of the lack of fetch (straight-line distance over which wind blows to create waves) which reduces the relative sea states within the confines of the Bay compared to open water conditions.

For both of these reasons, the normal hovercraft operational technique is to plot weather courses which allow for the wind and waves to be taken on either side of the bow. Because hovercraft propellers are typically shrouded (see Photograph 5 above), such a 'weather' routing shields the propellers from the headwind and produces a "leeward effect" or a virtual increase in thrust. In the same way 'shaping' courses at an angle to oncoming waves causes a virtual increase in wavelength and reduction in wetted drag. This technique also allows the operator to maintain a higher speed on a given course.

Because hovercraft are amphibious and are safe to operate in zero draft environments, planning routes at an angle to waves and wind is normally part of route planning guidance manuals. While the traffic and collision avoidance regulations will prevail in all circumstances, hovercraft will normally take into account prevailing headwinds by applying the following route planning methodology: when short steep seas are present, attempt to run near-shore or in reaches where wave-height is reduced as a result of shallow water depth.

At some time, weather and navigation conditions will require hovercraft to operate directly into head wind and head sea conditions. The newest AP1-88 variant hovercrafts are capable of maintaining a speed of 21 knots (24.2 mph) in Beaufort scale 5 head winds (21 knots) with short seas (short period waves) up to 5 feet. A 30 knot (34.5 mph) headwind and 6 foot short sea could reduce the hovercraft speed to, or below, its "hump" speed (the speed at which it outruns its own wake) - typically around 18 knots (20.7 mph) for a 30 meter vessel. If strong headwinds are likely to be encountered routinely, WETA will need to select hovercraft, engines, propellers, skirt design, and lift system, to maintain operation of the hovercraft at a given speed.

4.3.3 Technical Statement of Requirements

Hovercraft are typically operated in environmentally sensitive and/or environmentally challenging locations. From shallow water geography to areas where shore-side infrastructure is limited, hovercraft technology can be scaled to meet payload, weather maxima, terminal limitations and other unique challenges. These issues are normally selected based on the owner's basic mission requirements: for example the vessel must carry 180 passengers at a block speed of 30 knots in weather conditions up to and including 30 knot head winds and 2 meter head seas. The performance, economic, and emissions requirements are typically specified in the Technical Statement of Requirements prepared after consultation with designers and builders.

## 4.4 HOVERCRAFT SAFETY AT SPEED IN TRAFFIC LANES

The high speed navigation safety techniques used for hovercraft would not vary significantly from the current techniques employed on WETA high-speed catamarans (techniques know as bridge resource management procedures). Effective initial training for the team in the bridge (captains and mates) is key to maintaining the safe operations of high-speed vessels in all visibility conditions – including the "maximization" of safe speed when traffic is heavy and sea-room is reduced. "Sterile cockpit techniques", that is, the disciplined procedures for traveling at high speed at night which include concise language and responses, and formalized reporting of navigational targets with lookouts backing up radar detection, allow the safe operational envelope of these vessels to include speeds in excess of 40 knots during periods of darkness and in busy waterways.

Passenger management would be much that same as that used with aviation safety in so far as passengers are expected to remain seated during the voyage, with exceptions for trips to washrooms or walking about lounges.

In rare circumstances, a hovercraft travelling at high speed can be induced to "trip" over its own forward flexible skirt, a phenomenon also known as "plough-in". When this happens, the vessel can experience a rapid deceleration if the pilot does not initiate corrective action. The factors which can induce such an event are related to changes in the vessel C of G (which can be avoided by minimizing passenger movement at high speed) or to changes in the vessels cushion (Centre of Pressure). Pilots control both of these factors by movement of fuel ballast, and by varying lift system power and the amount of propeller thrust in effect at a given time. Proper Operator training will virtually eliminate the likelihood of these phenomena in practice.

## 4.5 MANEUVERING NEAR SAN FRANCISCO

The harbor area near the San Francisco Ferry Building and adjacent piers is relatively small and constrained with a significant number of vessel traffic movements during peak commuter hours. Hovercraft operations in the proximity of the San Francisco Ferry Building would need to be compatible with other existing ferry and vessel traffic, and, allow for safe operations in windy conditions.

Other harbor areas in the world are equally or more constrained than that near San Francisco. Hovercraft have operated in the Solent between Portsmouth and the Isle of Wight since the 1960s and AP1-88s have been in operation since the 1980s without passenger injury. In 2009, 750,000 passengers were carried by hovercraft in the Solent which is more congested than San Francisco Bay and is more exposed to bad weather. Hovercraft can avoid normal navigation channels and can use shallow areas for better speeds and traffic avoidance.

Hovercraft have proved to be very adept at operations in severe weather conditions. For example, the Canadian Coast Guard (CCG) utilizes the API-88 variant hovercraft as a Search and Rescue vessel and for buoy-tending, and mass evacuation platforms on both coasts of North America. The CCG vessels are required to be capable of:

- Coming about (turning around) in their own length in confined areas;
- Coming about in 2.4 meter seas;
- Operating astern (moving backwards) at four knots;
- Steering effectively while towing a 100 tonne vessel;
- Station-keeping within 1 meter in wind speeds of 30 knots, and to within 2 meters in all orientations of the wind.
- Capable of station keeping for buoy tending purposes in tidal currents and river rapids, with currents of up to 8 knots.

- Capable of maintaining intended course over ground in cross winds of thirty knots.

For operations in San Francisco Bay, we have assumed the hovercraft would be capable of meeting similar operational requirements (not necessarily the towing capability, although this could be useful during emergency response,)

## 4.6 SEA ROUTE FROM HERCULES

A route between Hercules and the San Francisco Ferry Building would have three primary navigation legs; Hercules to Pinole Point, Pinole Point to the East Brothers Rock, and the East Brothers to San Francisco. Each navigation leg is addressed below. The prevailing winds offshore of Hercules are from the west. A "fresh" breeze is defined as Beaufort scale 5 with winds at 18 to 24 mph (16- 20 kts). A "strong" breeze is defined as Beaufort scale 6 with winds at 25 to 30 mph (21- 26 kts).

The first and shortest reach from Hercules and the San Francisco reach is the 3.7 nautical mile (NM) leg between Hercules and Point Pinole (see Photograph 10). The prevailing westerly winds will affect the average (block) speed of hovercraft on this leg more than any other – conversely the same prevailing westerly's will contribute to higher average speeds on the outbound trips to Hercules. The average speed will not suffer significantly as this leg constitutes only 20% of the total voyage distance.

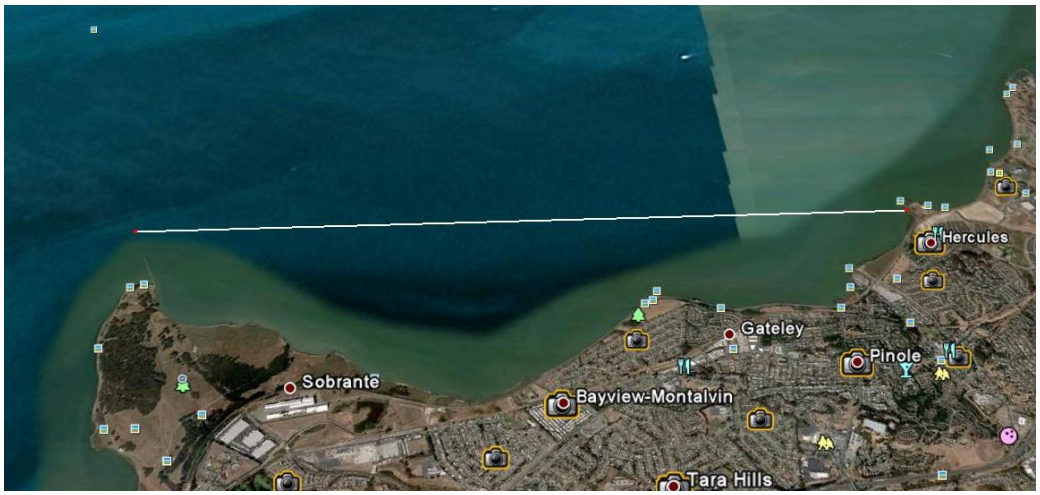
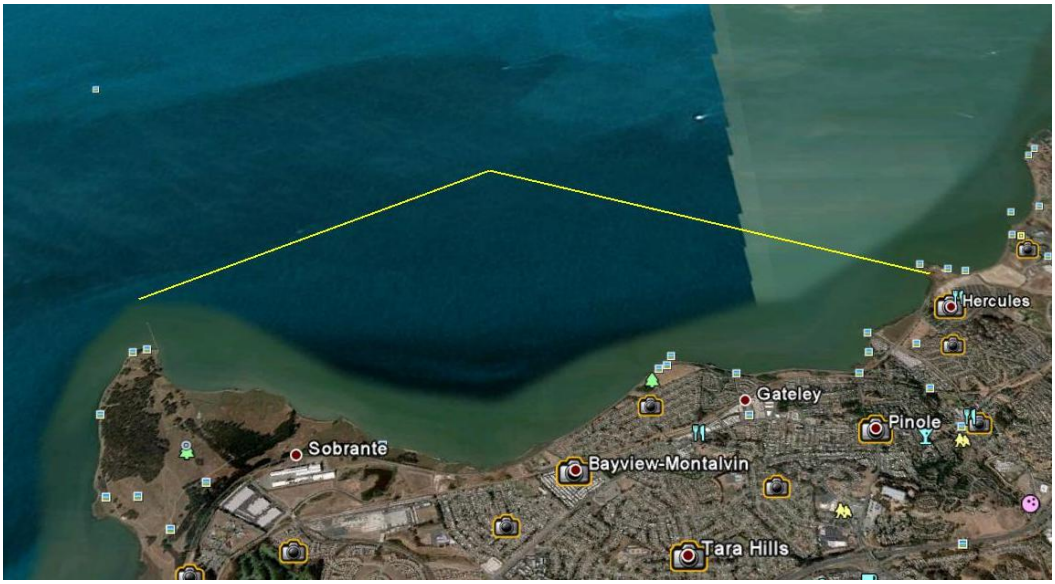



Photo 10: Reach 1 - Hercules to Point Pinole (3.7 NM with 25kt headwind = 9 minutes)

One of the operator techniques that can be applied during head wind and head sea conditions is to "tack". In Photograph 10 a hypothetical course line between Hercules and Point Pinole is considered for a Hovercraft heading directly into a 25 knot headwind. It takes 9 minutes for the

vessel to reach its first wheel-over at Point Pinole. Photograph 11 demonstrates the tacking principle with the same hovercraft commencing its voyage with the prevailing wind on its port bow followed by a wheel-over to put the wind on its starboard bow after two miles (subject to the safety constraints of sea-states and traffic conditions). By "tacking" the hovercraft would arrive at Point Pinole in 8 minutes having traveled an additional 0.3 nautical miles.



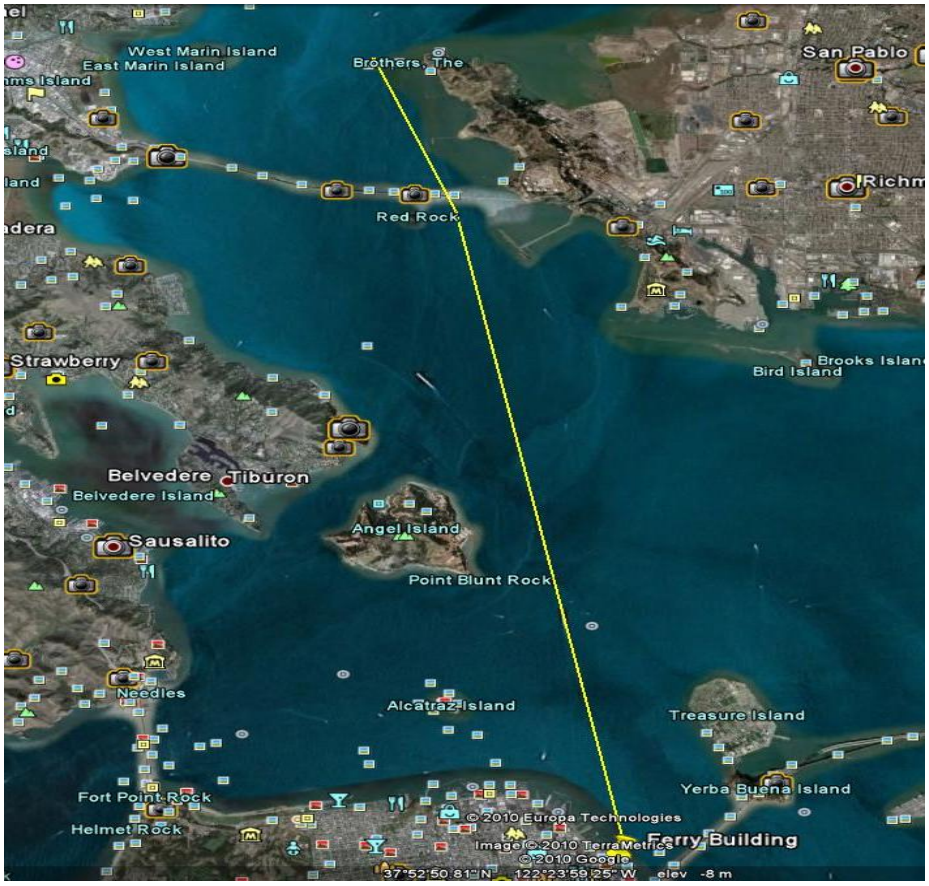

Photograph 11: Reach 1 - Hercules to Point Pinole: (4.0 NM at 30 knots = 8 minutes tacking across 25 knot westerly wind)

The second reach from Pinole Point to the East Brothers Rock is slightly longer at 4.5 nautical miles (Photograph 12). The middle reach allows the hovercraft to take a southwesterly course which places the prevailing wind more broadly on the bows during the inbound voyages from Hercules. Average speeds on this reach will increase and should allow the vessel to reach its second course change in 8 to 9 minutes in a fresh westerly.

Photograph 12: Reach 2 – Pinole Point to the East Brothers (4.5 NM in 8 to 9 minutes)

The third and final leg from the East Brothers to the San Franciso Ferry Building is the longest at just over 10NM in length and, importantly, is oriented North/South (Photograph 13). This reach will experience the least amount of headwind or head sea drag and consequently will provide the most stable average speeds. In the case of fresh westerly's, this reach will run on the order of 16 minutes. Understanding the effects of local wind and route planning one might expect gate to gate service times (Inbound from Hercules) to range from 24 minutes in light winds to 40 minutes under the influence of gale force westerly. The prevailing westerly winds will shorten the time of the return trip to Hercules. The range of "Outbound" service times to Hercules from San Francisco would be from 24 to 34 minutes.

Note that operations in sustained winds above 40 knots are only conducted on hovercraft engaged in emergency response and SAR duties.




Photograph 13: Reach 3 – Brothers to San Francisco (10 NM in 16 minutes)

## 4.7 SEA ROUTE FROM MARTINEZ AND ANTIOCH

The Martinez and Antioch routes would experience the same general trends as the Hercules route, that is, "Inbound" trips to the San Francisco Ferry Building would be generally be slower than "Outbound" return trips under the prevailing westerly winds. Both of these locations would benefit from the shelter provided by the relatively protected channel between Carquinez Bridge and Winter Island near Antioch. While westerly winds will funnel down this body of water, the channel bends a number of times effectively reducing the available wave-making fetch. This should keep the effects of 'wetted drag' to a minimum - which translates to higher average speeds in westerly winds than the equivalent experienced off Hercules.

Best case fair weather transit times from Antioch to the Ferry building could be achieved in 55 minutes each way. Under the influence of gale force westerly winds the "outbound" times could degrade to 85 minutes while "inbound" times in gale force westerly conditions could degrade to 75 minutes.

# 5.0 DISCUSSION AND RECOMMENDATIONS

The advantages and disadvantages of adding hovercraft to the WETA fleet are summarized below:

| Advantages | Disadvantages |
|---|---|
| • Removes need for dredging to obtain access to shallow water terminal locations such as Hercules | • Requires WETA decision to operate two different types of vessel |
| • Provides shorter travel times making transit to distant locations more attractive to riders, particularly if service is faster and less delay prone than driving | • Terminals designed for hovercraft service crossing shallow water or mudflats cannot be served by other WETA catamarans |
| • Faster travel to more distant locations allows shorter cycle times which increases the effective hourly ridership capacity | • Hovercraft capacity using existing designs are limited to 199 passengers |
| • Provides emergency response capability to access any Bay side location with a shore crossing | • Would require additional maintenance facilities for servicing and layovers |
| • Vessel capital and O&M costs similar to WETA's existing fleet | • Aircraft-type operations constrain ability to carry more than a limited number of bicycles |
| • High-tech uniqueness creates appeal to young, high-tech, and time-conscious demographics | • Perception of noise would need to be addressed with detailed studies |

At the screening level, hovercraft service from Hercules to San Francisco could be viable using recent proven hovercraft designs, which at the moment, are limited to 199 passengers. Use of hovercraft would preclude the need for initial channel dredging and maintenance dredging at Hercules and there is sufficient room for a landing pad at the shoreline near the proposed Amtrak transit hub. Similarly, hovercraft could reduce travel time from Martinez and Antioch by 25 to

30 percent, and thereby increase the appeal of this transit mode to commuters. Further evaluation of a landing platform at San Francisco would be necessary.

A 199-passenger hovercraft, equivalent to the carrying capacity of the WETA ferry *Taurus*, is the largest capacity that could be commercially available at this time. The BHT-180 design, which can carry 180 passengers, can be stretched by one bay to carry 199 passengers and a crew of four. While this capacity is less than the 350- to 400-passenger ferries planned by WETA, the 149- to 199-passenger range, at the moment, appears to represent an optimum balance between power requirements and load for hovercraft. A 149-passenger hovercraft has U.S. Coast Guard classification advantages in that the U.S. Coast Guard is familiar with 149-passenger vessels and has already given them the T-class certification.

Other studies of potential environmental concerns have not identified unmitigable issues. Sound is the issue which continues to receive most attention. Through propeller and engine design improvements, particularly subsonic propeller tips speeds, sound levels from hovercraft are now much lower than on older hovercraft such as the early Saunders-Roe and API-88 craft which created the perception that hovercraft are noisy. Advanced propeller design enables sound levels from hovercraft to be controllable. In addition, operational solutions can be developed to reduce the loudest sound levels experienced when hovercraft depart from a landing facility.

Air emissions would require further evaluation to ensure that the hovercraft service would meet WETA's goals. Advances in engine technology and the operational characteristics of the service (shorter trip times) indicate that hovercraft emissions would be comparable to the existing fleet.

## 5.1 RECOMMENDATIONS

If WETA elects to proceed with further evaluation of adding hovercraft to its fleet, the following four recommendations build on the findings and conclusions of this study:

1. Evaluation of the conceptual design and location of a hovercraft landing platform at, or near, the San Francisco Ferry Terminal. WETA, in conjunction with the Port of San Francisco, is currently performing an evaluation of expansion of the San Francisco Ferry Terminal, adding up to three new gates. We recommend that evaluation of a hovercraft gate be included in that planning process. It is of note that a hovercraft bay was included in planning for Phase 1 of the Ferry Building rehabilitation process in the mid 1990s.

2. Development of conceptual designs for landing pad layouts at Hercules, Martinez, and Antioch.

3. Detailed evaluation of operational and maintenance costs for a BHT-180 design stretched by one bay to carry 199 passengers. In particular, develop maintenance costs for skirt wear given the specifics of service on San Francisco Bay, propellers maintenance costs, requirements for protection such as a hanger during high winds events, and evaluation of US Coast Guard classification.

4. Collection of sound level data from hovercraft fitted with shrouded Hartzell propellers.

# 6.0 REFERENCES

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URS, 2003. Final Environmental Impact Report for Expansion of Ferry Transit Service in the San Francisco Bay Area. Prepared for Water Transit Authority. June.

## 6.1 PHOTOGRAPH CREDITS

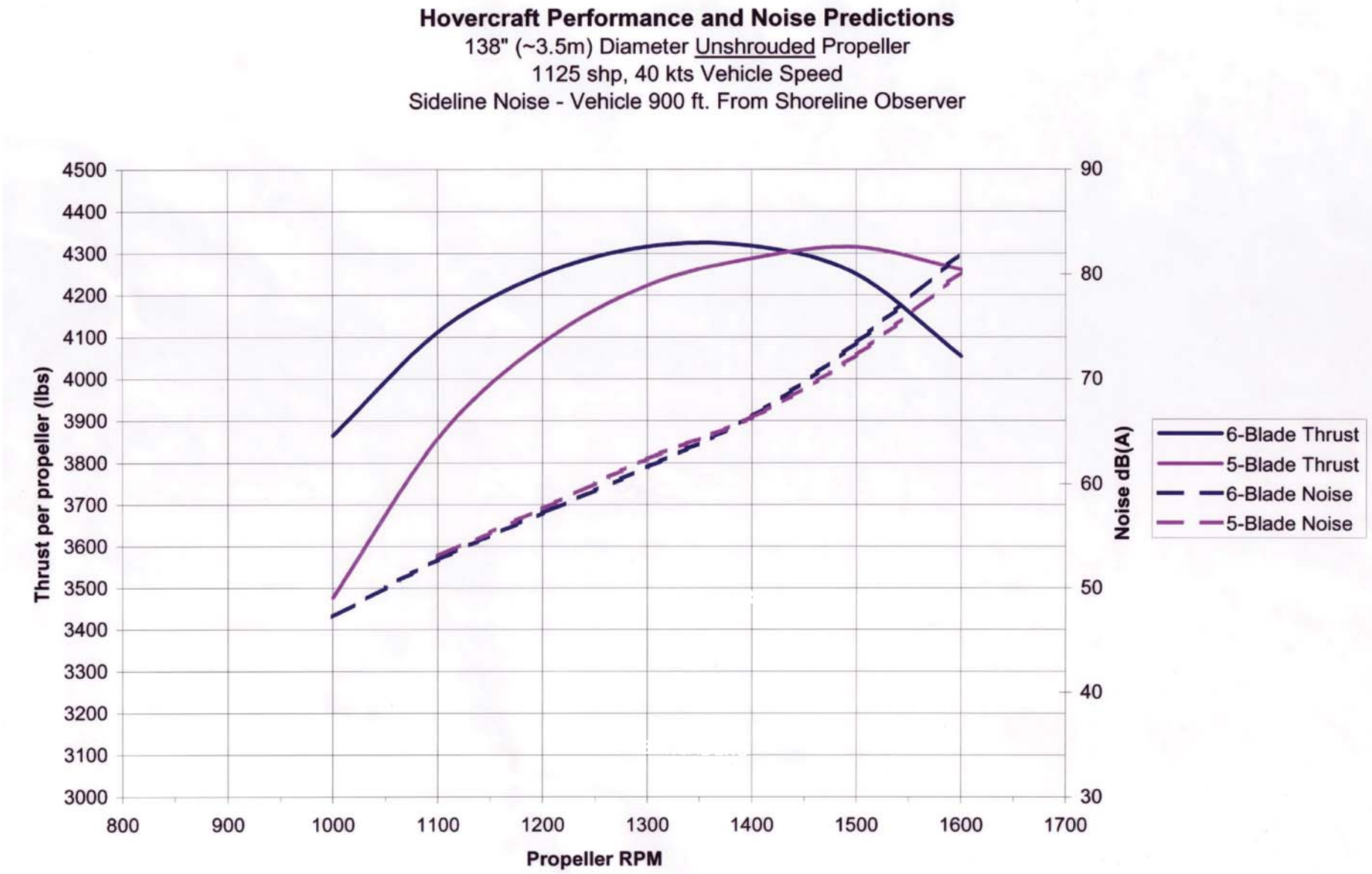
| | |
|---|---|
| Photographs 1, 2, 5 | http://www.griffonhoverwork.com/galleries |
| Photograph 3 | http://en.wikipedia.org/wiki/File:Hovertravel_fleet_at_Ryde.JPG |
| Photographs 4, 5 | http://www.simplonpc.co.uk/Hovertravel.html |
| Photograph 7 | http://www.cityofkingcove.com/hovercraftphotos.html |
| Photographs 8, 9 | provided by J. McGrath |

## 6.2 CONTRIBUTORS

This report was prepared by URS Corporation in San Francisco. John McGrath, retired Canadian Coast Guard base commander, contributed significantly to the technical and operational data for this report. Captain McGrath's experience includes procurement and operation of Canadian Coast Guard hovercraft, hovercraft procurement for the King Cove, Alaska, hovercraft project, and advisor on numerous military and private hovercraft operations.

Keith Whittemore, President, Kvichak Marine Industries, also contributed and provided information on GHL hovercraft and the noise data study in Attachment A.

# FIGURES




**HARTZELL PROPELLER NOISE GRAPH**

WETA
April 2011
Hovercraft Feasibility Study
28067359
San Francisco, California

URS

**FIGURE 1**

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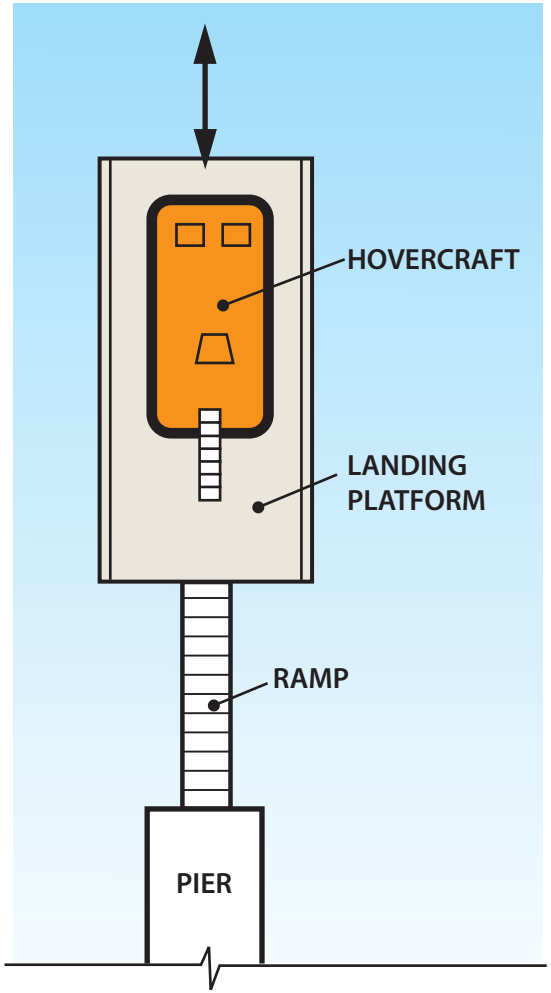
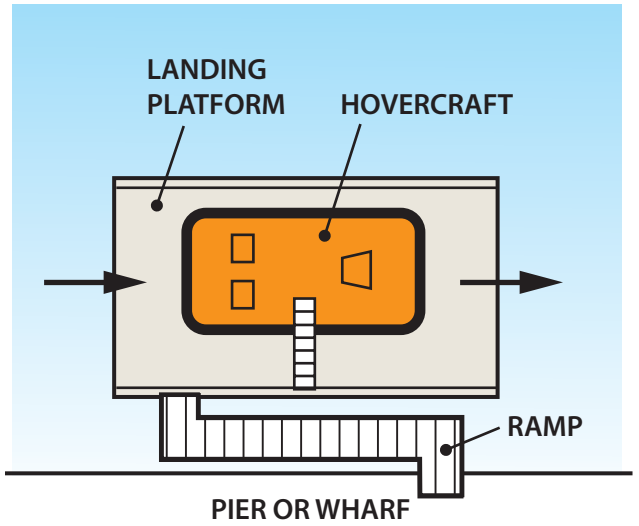



A) BOW LOADING




B) SIDE LOADING

**LANDING OPTIONS**

WETA
Hovercraft Feasibility Study
San Francisco, California

April 2011
28067359

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**FIGURE 2**

Not to Scale

# Attachment A

## Hovercraft Suna-X
## Sound Level Testing

Report Number 4453.001

# Hovercraft Suna-x
# Sound Level Testing

## Kvichak Marine Industries

21 August 2006

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# 1.0 Summary

DLI Engineering Corp. was tasked by Kvichak Marine Industries to conduct sound level testing onboard the hovercraft Suna-x. Sound level measurements were taken 15 August 2006 under multiple operating conditions described below.

# 2.0 Introduction

| | |
|---|---|
| **Survey Date:** | 15 August 2006 |
| **Engineer:** | Laurent LaPorte |
| **Vessel:** | Hovercraft Suna-x |
| **Equipment Tested:** | Vessel sound levels |
| **Location:** | Port Madison, WA (Puget Sound) |
| **Task Description:** | DLI Engineering was tasked with measuring sound levels |

# 3.0 Test Setup & Procedure

Sound measurements were taken under two general operating conditions; steady-state and approaching/departing. All data was collected with a B & K model 2260 sound level meter that was calibrated onsite (15 August 2006).

Sound level readings were taken around Port Madison (north end of Bainbridge Island, WA). This location was chosen because it provided the best shelter from wind and waves.

The steady-state sound measurements were taken with the vessel on a straight line course at steady speed. Sound levels were measured at a distance of 1000 ft and 500 ft as the vessel passed a point perpendicular to the straight line path of the vessel. Reciprocal course/heading tests were taken to compensate for any abnormalities. (Sound level measurements were 10 second A-weighted values.)

Vessel approaching and departing measurements were taken as the vessel landed and departed the shore. Sound level readings were taken at a point inline with the path of the vessel. Multiple 3 second A-weighted measurements were taken at various distances and can be found below.

# 4.0 Results

Collected data are presented in the tables below. Table 1 and 2 consists of steady-state noise levels listed as the overall A-weight value and the A-weighted octave band values. Table 3 lists the approaching and departing levels (overall and octave band). Ambient noise levels varied between 57.3 and 59.8 dBA, and averaged 58.5 during the testing. (The primary source of ambient noise was light shore break.)

Table 1:

## Steady-State Sound Mean & Max Levels (dBA)

| Ship Condition | Test | Distance (feet) | Heading (deg.) | RPM | Speed (knots) | Pitch (deg.) | **10-sec Mean (dbA)** | Max (dBA) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| Cruising Speed | 1 | 1000 | 330 | 1564 | 36.9 | 20 | **71.6** | 76 |
| | 2 | 1000 | 330 | 1687 | 38.5 | 20 | **75.3** | 78 |
| | 3 | 1000 | 160 | 1673 | 33.2 | 20 | **71.7** | 80 |
| | | | | | | | | |
| Cruising Speed | 4 | 500 | 160 | 1665 | 29.0 | 20 | **82.6** | 84 |
| | 5 | 500 | 330 | 1650 | 36.0 | 20 | **85.9** | 87 |
| | | | | | | | | |
| 55% Power | 6 | 1000 | 160 | 1430 | 26.0 | 20 | **63.7** | 68 |
| | 7 | 1000 | 345 | 1458 | 26.0 | 20 | **71.6** | 73 |
| | 8 | 1000 | 165 | 1437 | 22.9 | 20 | **69.2** | 71 |

Table 2:

## Steady-State Sound Octave Band Levels (dBA)

| | | Octave Band (Hz) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ship Condition | Test | 31.5 (dBA) | 54.7 (dBA) | 125 (dBA) | 250 (dBA) | 500 (dBA) | 1000 (dBA) | 2000 (dBA) | 4000 (dBA) | 8000 (dBA) |
| | | | | | | | | | | |
| Cruising Speed | 1 | 36.4 | 54.7 | 58.6 | 66.3 | 67.2 | 63.6 | 61.0 | 56.1 | 43.6 |
| | 2 | 36.6 | 53.1 | 62.0 | 69.0 | 70.0 | 70.0 | 65.7 | 58.4 | 44.7 |
| | 3 | 36.2 | 50.1 | 60.2 | 65.8 | 67.4 | 65.0 | 59.8 | 54.0 | 44.7 |
| | | | | | | | | | | |
| Cruising Speed | 4 | 41.5 | 58.5 | 68.5 | 74.6 | 79.8 | 74.6 | 71.1 | 67.0 | 61.3 |
| | 5 | 45.6 | 63.7 | 70.0 | 76.7 | 80.4 | 80.5 | 79.5 | 72.2 | 62.6 |
| | | | | | | | | | | |
| 55% Power | 6 | 0.0 | 49.7 | 58.8 | 55.6 | 56.4 | 55.4 | 53.9 | 50.2 | 41.8 |
| | 7 | 33.8 | 54.3 | 61.7 | 64.1 | 68.1 | 64.3 | 59.6 | 55.0 | 45.6 |
| | 8 | 0.0 | 49.9 | 62.1 | 62.9 | 63.4 | 61.3 | 58.6 | 55.8 | 47.9 |

Table 3:

## Approaching & Departing Sound Levels & Octave Band Levels (dBA)

| | | | Octave Band (Hz) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ship Condition | Distance | **3-sec Mean** | 31.5 | 54.7 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | Comments |
| | (feet) | **(dBA)** | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | |
| Hovercraft Approaching | 3000 | **-** | - | - | - | - | - | - | - | - | - | Noise level did not exceed ambient |
| | 2400 | **-** | - | - | - | - | - | - | - | - | - | |
| | 1800 | **-** | - | - | - | - | - | - | - | - | - | |
| | 1200 | **61.6** | 0 | 41.7 | 56.5 | 51.7 | 52.7 | 53.3 | 53.8 | 52.2 | 41.4 | |
| | 600 | **65.9** | 36.6 | 57.6 | 58.9 | 56.7 | 58.1 | 56.7 | 57.9 | 55.1 | 42.5 | |
| | 300 | **71.9** | 38.6 | 55.7 | 67.8 | 61.1 | 60.9 | 60.8 | 65.3 | 62.9 | 46.1 | |
| | 0 | **82.3** | 55 | 76.5 | 72.6 | 72.4 | 73.1 | 74.1 | 74.5 | 71.1 | 61.5 | |
| | | | | | | | | | | | | |
| Hovercraft Departing | 0 | **95** | Data set was collected by the Kvichak unit and octave bands are not available | | | | | | | | | |
| | 600 | **74.9** | 39.6 | 58.3 | 73.1 | 65.6 | 61.5 | 62.4 | 64.2 | 56.6 | 45.3 | |
| | 1200 | **69.9** | 35.1 | 49.4 | 65.2 | 60.4 | 62.7 | 61.1 | 62.3 | 55.9 | 35.2 | |
| | 1800 | **62.5** | 0 | 46.1 | 55.5 | 54.1 | 56 | 56.7 | 53 | 58.9 | 37.1 | |
| | 2400 | - | - | - | - | - | - | - | - | - | - | Noise level did not exceed ambient |