

Annex to 2010
Association of Bay Area Governments
Local Hazard Mitigation Plan
Taming Natural Disasters

WETA
Water Emergency
Transportation Authority

WETA – Water Emergency Transportation Authority

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Introduction

The Water Transit Authority (WTA) was a regional agency authorized by the State of California to operate a comprehensive San Francisco Bay Area public water transit system. In 2003, the WTA's plan, "A Strategy to Improve Public Transit with an Environmentally Friendly Ferry System" was approved by statute (Senate Bill 915, Ch. 714, stats of 2003). The San Francisco Bay Area Water Emergency Transportation Authority (WETA) was established by SB 976, and replaces the WTA (Water Transit Authority). The intention of SB 976 is to improve the ability of ferries to respond in an emergency. SB 1093 provides additional detail regarding WETA's mandate.

The Regional Planning Process

WETA participated in regional workshops, conferences, and meetings led by ABAG in conjunction with monthly meetings of the Metropolitan Transportation Commission. As part of this lengthy and comprehensive process, WETA participated in the process separately from other transit districts because WETA's mandate and operations are different from land-based bus and rail systems.

The agency participated in reviewing and adding appropriate mitigation strategies to the overall regional Local Hazard Mitigation Plan by reviewing and contributing to the chapter on transportation and infrastructure.

In addition, WETA has provided oral comments on the multi-jurisdictional plan and provided information on facilities that are defined as "critical" to ABAG.

The Local Planning Process

Because WETA is a small agency with a limited role in disaster mitigation and management, the strategies were assigned a draft priority by the Manager, Operations. Representatives from several agency departments met to review and finalize priorities for appropriate mitigation strategies. Staff involved in these meetings included senior management, Manager, Operations and the Administrative/Policy Analyst. Prior to the meeting, general priorities and appropriate departments were identified. The meeting discussed the mitigation strategies, prioritized said strategies, and reviewed preliminary budgets and potential funding sources for strategies designated as "High" priority for authority-owned-and-operated facilities.

In addition, the final draft mitigation strategies were forwarded for comment to other departments who are responsible for implementation. The Manager, Operations met with each person who is responsible for existing efforts and received input on appropriate future action in each person's respective area of expertise. Goal based strategies and long-term capital budgets were reviewed with staff to develop a mitigation program.

Review and Incorporation of Existing Information

This process involved consideration of both the hazard and risk information developed by ABAG and discussed in the overall multi-jurisdictional Local Hazard Mitigation Plan, as well as the assessments of the age and construction type of structures likely to be owned or managed by WETA during the lifetime of this plan and described on page 5. These discussions also covered the

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Transition Plan, as well as the Water Emergency Transportation System Management Plan already in place at WETA, as well as how to best integrate these plans.

Process for Updating Plan Sections

WETA did not participate in the 2005 planning process. WETA is committed to reviewing and updating this plan Annex at least once every five years, as required by the Disaster Mitigation Act of 2000.

Public Meetings

Opportunity for public comments on the DRAFT mitigation strategies was provided at a public meeting on September 22, 2009 at a publicly noticed workshop jointly held by MTC, ABAG, and several transit districts and advertised by ABAG and MTC. No public comments were received; however, the Annex strategies have been posted on the ABAG website providing the public with an additional opportunity to comment.

The WETA Board will adopt the plan in a public meeting via an official resolution upon approval by FEMA. The mitigation strategies will be integrated into the Emergency Operations Plan and capital budget of WETA.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). All of these hazards impact WETA's planning region; however, in WETA's role as a transit agency, drought has no impact on the provision of transportation services.

All relevant reports developed by WETA have been incorporated into this plan. No additional reports describe the hazard or risk to the WETA service area.

Immediately after a disaster strikes, ferries will be critical in helping the Bay Area get back on its feet and keep the economy moving. When roads, bridges, and/or BART fail, waterways may be the only safe transportation option. If the Bay Area's bridges and BART are inaccessible, the Ferry Building in San Francisco could see over 300,000 passengers looking for ferry service. Current ferry infrastructure and equipment capabilities are not sufficient to adequately respond in an emergency. Better emergency response planning, consolidated ferry services and improved emergency response infrastructure will improve our region's emergency response capabilities.

At the present time, WETA does not own any transportation facilities. Its offices are in San Francisco. The only impact on hazards and risks is through its function as an emergency planning organization. However, water transportation facilities are under construction and during the coming years, WETA will begin to take over the operations of the ferries. Thus, the following hazard assessment covers those facilities.

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Hazards at Bay Area ferry facilities are different than at land-based facilities.

Earthquake: None of these facilities are in an Alquist-Priolo Fault Rupture Study Zone. In addition, the WETA facilities are all in the highest areas of earthquake shaking potential. These facilities are also subject to liquefaction because of their location. None are in areas of expected earthquake-triggered landslides.

Tsunamis: The December 2009 version of the CalEMA tsunami evacuation planning maps shows that all of the ferry facilities are within the tsunami evacuation planning area and as ferry facilities; there is no other location where they could be placed.

Flooding: Because these facilities are on water, none of these facilities are in the 100-year flood plain.

Landsliding: None of these facilities are in an area of existing landslides.

Wildfire: None of these facilities are in areas subject to higher than average wildfire threat.

Dam-Failure Inundation: None of these facilities are subject to dam inundation.

Delta Levee Failures: The ferry facilities are not in an area protected by levees, or in the Delta.

Drought: The operations of WETA are not significantly impacted by drought conditions.

Hazards Conclusion: The most significant hazards to all of these facilities are earthquake shaking and liquefaction. Tsunami evacuation planning also needs to be addressed. This conclusion was based on the hazard exposure information for the facilities, as well as past occurrences of disasters impacting the ferry service area described in the following section.

Risk Assessment of WETA: It is not practical to provide specific information on any specific facility, because WETA does not currently own any facilities. The WETA understands that as it begins to take over the operation of these facilities, it will need to examine their structural integrity and site-specific hazard conditions.

Repetitive Loss Properties

The WETA buildings ferry facilities to be acquired during the transition are not repetitive loss properties for flooding.

Past Occurrences of Disasters (natural and human-induced)

The Loma Prieta Earthquake of 1989 is an example of a large-scale disaster which can strike the Bay Area. It killed 63, injured 3,757, and displaced over 12,000 persons. With over 20,000 homes and businesses damaged and over 1,100 destroyed, this quake caused approximately \$6 billion of damage. Reconstruction continues some two decades later as the replacement for San Francisco-Oakland Bay Bridge is still several years from completion.

More information on State and Federally declared disasters in the WETA service area can be found at <http://quake.abag.ca.gov/mitigation/ThePlan-D-Version-August10.pdf>

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The WETA service area has experienced a number of different disasters over the last 50 years, including numerous earthquakes, floods, droughts, wildfires, energy shortages, landslides, and severe storms. The most significant disaster impacting the district was the Loma Prieta earthquake.

In the Loma Prieta earthquake, the partial collapse of the San Francisco-Oakland Bay Bridge demonstrated the importance of ferries. This disaster affected the regions mobility when lifeline transportation routes were damaged. Ferries were used to transport stranded commuters and first responders immediately after the earthquake and provide additional trans-bay capacity while the Bay Bridge was being repaired.

National Flood Insurance Program

As a transit agency, WETA is not eligible to participate in the National Flood Insurance Program (NFIP).

Mitigation Goals and Objectives

The goal of the ABAG multi-jurisdictional LHMP is to maintain and enhance a disaster-resistant region by reducing the potential for loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters. This goal is unchanged from the 2005 plan and continues to be the local goal of WETA in designing its mitigation program.

Mitigation Activities and Priorities

Existing Mitigation Activities

WETA was not a participant in the 2005 ABAG-led LHMP. However, WETA's priorities are consistent with that plan:

- Create and adopt an Emergency Water Transportation System Management Plan for the Bay Area on or before July 1, 2009.
- Create and adopt, on or before July 1, 2009, a transition plan to facilitate the transfer of existing public transportation ferry services within the Bay Area region to WETA (with the exception of services operated by the Golden Gate Bridge, Highway and Transportation District). In the preparation of the transition plan, priority shall be given to ensure continuity in the programs, services, and activities of existing public transportation ferry services.
- Continue to deliver the Ferry Implementation and Operations Plan (WTA, July 2003) with a focus on building and operating a comprehensive and environmental friendly public water transit system of ferries, feeder buses and terminals to increase regional mobility in the Bay Area.
- Continue to invest in clean-marine technology, advanced vessel design, systems planning, safety and disaster response planning, ridership forecasting, terminal design and developing good connections with landside transit.

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- WETA has utilized, and will continue to utilize, the latest code standards during the design and construction of new facilities.

Future Mitigation Actions and Priorities

As a participant in the 2010 ABAG multi-jurisdictional planning process, the staff of WETA helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan.

The decision on specific priorities for WETA was made by the team identified in the section on the planning process, and reviewed by WETA's Manager, Operations. The decision on the priority was made based the hazards and risks present in the WETA service area, as well as the hazards and risks specific to ferry facilities, and past occurrences of natural disasters. The decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage. The decision was also made to best leverage the implementation mechanisms available to WETA, including the capital improvements budget and the Water Emergency Transportation System Management Plan.

Staff met to review progress on the mitigation, to identify and prioritize additional mitigation strategies to be a specific focus for the 2010 to 2015 period.

These draft priorities were submitted and reviewed by WETA's Executive Director. The draft priorities will be provided to the WETA Board for adoption pending pre-approval of this LHMP by FEMA.

The WETA staff reviewed and prioritized specific mitigation tasks for the next 5 years. This list includes the implementation process, funding strategy, and responsible agency. The full list is included as an attachment to this Annex. In particular, WETA plans to focus on obtaining funding to ensure that:

- Shelving, file cabinets, computer systems, and other nonstructural components of WETA's administration facilities will be evaluated and anchored to meet the performance needs of the agency following an earthquake when funds become available.
- WETA will work with structural engineers and others to ensure that engineers are available to inspect the ferry facilities within three days after an earthquake when funds become available, as well as to encourage staff to take ATC-21 training.
- Develop emergency services contracts with private ferry operators and agreements with publicly operated ferries to strengthen ferry coordination efforts.
- Effectively communicate emergency response procedures and the interoperability of vessels and terminals with Coast Guard and other ferry operators.
- Provide additional docking capacity, maintenance and fueling facility projects as funding becomes available.

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All activities are therefore related to the multi-jurisdictional Local Hazard Mitigation Plan Activity INFR b-10 - to develop a water-based emergency transportation system. All activities are under the supervision of the Manager, Operations.

The timetable for these strategies is 5-10 years, depending on the economic recovery of the Bay Area.

The specific strategy priorities of WETA are included in the WETA spreadsheet referenced in this LHMP.

Incorporation into Existing Planning Mechanisms

WETA has, and will continue to use, a variety of project-specific mechanisms to ensure that the projects and mitigation strategies identified as existing or having relatively high priorities in this LHMP Annex are implemented. WETA will incorporate the **general** goals, objectives and strategies identified in this Annex in the annual capital budget, as well as into the Water Emergency Transportation System Management Plan.

As shown in the attached list, WETA's **specific** mitigation strategies and priorities will be implemented as part of the agency's operations and capital budgets. There are no other planning mechanisms available to WETA that are appropriate to incorporate this plan.

Thus, for example, WETA has identified a need to conduct nonstructural mitigation activities related to shelving and office equipment. The Water Emergency Transportation Plan supports this need as integral to the mission of WETA to ensure that it is able to effectively manage water-based transportation systems following a disaster, while the capital budget is the funding mechanism for processing the request. WETA is looking at the capital budget for minor costs associated with these upgrades, while WETA may need to seek grant funds if ferry facilities acquired during the life of this plan are found to need upgrading.

The final strategies and Annex will be adopted in the same resolution adopting the overall LHMP following approval pending adoption by FEMA by the WETA Board.

Ongoing integration of the policies and programs identified in this Local Hazard Mitigation Plan will occur at WETA by the Manager, Operations.

WETA will continue to work with MTC and the transit districts in the Bay Area to encourage them to adopt the Local Hazard Mitigation Plan and to ensure that these mitigation plans are incorporated into an overall regional planning process.

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Plan Update Process

As required Disaster Mitigation Act of 2000, WETA will update this plan annex at least once every five years, by participating in a multi-agency effort with ABAG and other agencies to develop a multi-jurisdictional plan.

The Manager, Operations will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our service area, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. For example, if a structural engineer determines that a major risk exists at more or more facilities that WETA acquires during the lifetime of this plan, the priority associated with upgrading those facilities will be re-evaluated. Finally, the Annex will be a discussion item on the agenda of the meeting of department heads at least once a year in April. At that meeting, the department heads will focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. The department heads will be responsible for determining if the plan should be updated.

WETA is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Manager, Operations will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the agency again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including various county Offices of Emergency Services. Counties and agencies should then work together to identify another regional forum for developing a multi-jurisdictional plan.

WETA is committed to public participation. All WETA Board meetings are open to the public and the public is invited to comment on items on the Board agenda. The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, WETA will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics. WETA is committed to improving public participation in the update process over the next five years. To improve this process, WETA will consider writing letters to the editor of local newspapers in its service area to promote wider public knowledge of the issues related to disaster mitigation and the planning process.

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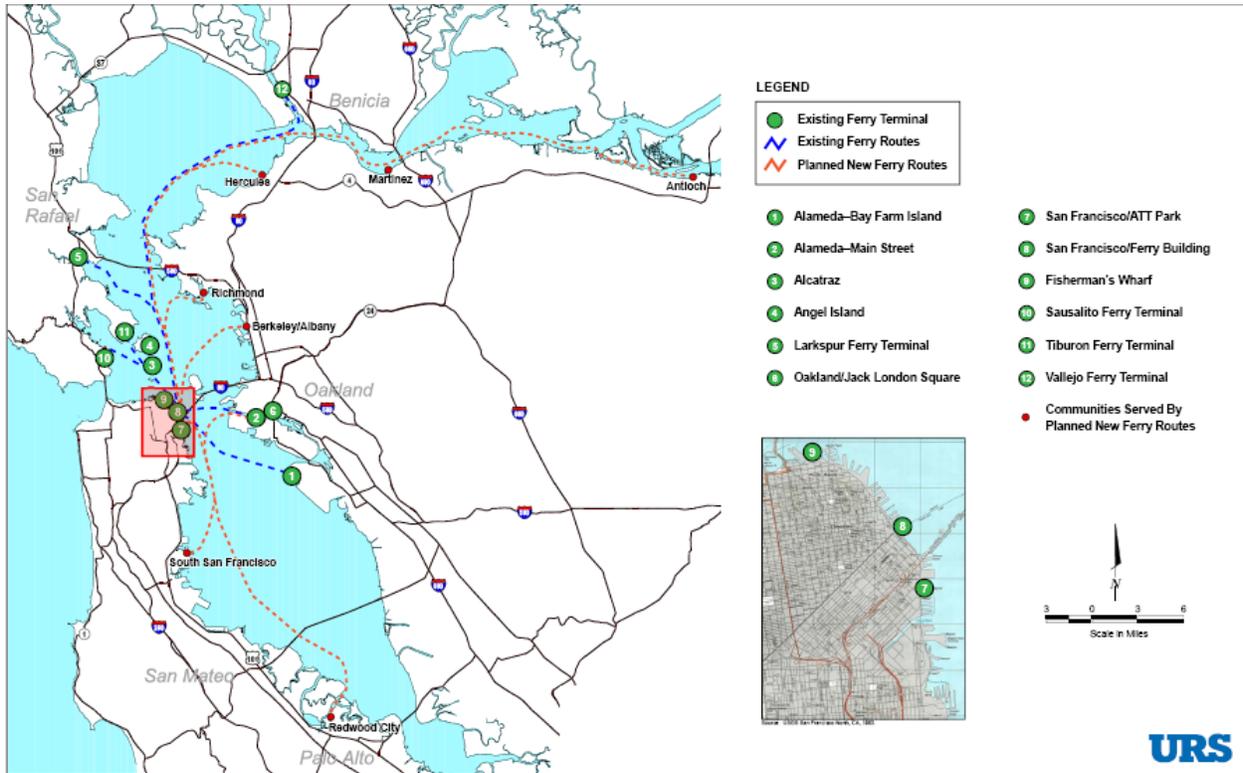
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Exhibit A - General WETA Ferry System Map

For additional information on existing and proposed routes, see <http://www.watertransit.org/>.



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Exhibit B - WETA 2010 Mitigation Strategy Spreadsheet

[Available on LHMP CD or at <http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html>]