

BOARD of SUPERVISORS



City Hall
Dr. Carlton B. Goodlett Place, Room 244
San Francisco 94102-4689
Tel. No. 554-5184
Fax No. 554-5163
TDD/TTY No. 544-5227

DATE: August 25, 2014

TO: Members of the Board of Supervisors

FROM: *ACC* Angela Calvillo, Clerk of the Board

SUBJECT: 2013-2014 Civil Grand Jury Report "Rising Sea Levels...At Our Doorstep"

We are in receipt of the following required responses to the San Francisco Civil Grand Jury report released June 25, 2014, entitled: **Rising Sea Levels...At Our Doorstep**. Pursuant to California Penal Code, Sections 933 and 933.05, the City Departments shall respond to the report within 60 days of receipt, or no later than August 24, 2014.

For each finding the Department response shall:

- 1) agree with the finding; or
- 2) disagree with it, wholly or partially, and explain why.

As to each recommendation the Department shall report that:

- 1) the recommendation has been implemented, with a summary explanation; or
- 2) the recommendation has not been implemented but will be within a set timeframe as provided; or
- 3) the recommendation requires further analysis. The officer or agency head must define what additional study is needed. The Grand Jury expects a progress report within six months; or
- 4) the recommendation will not be implemented because it is not warranted or reasonable, with an explanation.

The Civil Grand Jury Report identified the following City Departments to submit responses (attached):

Mayor's Office, received August 22, 2014, submitted a consolidated response for:

- a. City Administrator
- b. City Controller
- c. Planning Department
- d. Building Inspection Department
- e. Department of Emergency Management
- f. Department of Environment
- g. Department of Public Works
- h. Port of San Francisco
- i. Public Utilities Commission
- j. San Francisco International Airport

(Received August 22, 2014, for Findings 1 through 12 and Recommendations 1a through 1d, 2a, 2b, 3 through 8, 9a through 9c, 10a, 10b, 11a through 11d, 12a, and 12b)

These departmental responses are being provided for your information, as received, and may not conform to the parameters stated in California Penal Code, Section 933.05 et seq. The Government Audit and Oversight Committee will consider the subject report, along with the responses, at an upcoming hearing and will prepare the Board’s official response by Resolution for the full Board’s consideration.

C:

Honorable Cynthia Ming-mei Lee, Presiding Judge
Elena Schmid, Foreperson, 2013-2014 San Francisco
Civil Grand Jury
Antonio Guerra, Mayor’s Office
Roger Kim, Mayor’s Office
Naomi Kelly, City Administrator
Ben Rosenfield, Controller
Asja Steeves, Controller
Jon Givner, Deputy City Attorney
Rick Caldeira, Legislative Deputy
Severin Campbell, Budget and Legislative Analyst
Matt Jaime, Budget and Legislative Analyst
John Rahaim, Planning Department
AnMarie Rodgers, Planning Department

Tom Hui, Department of Building Inspection
Carolyn Jayin, Department of Building Inspection
Anne Kronenberg, Department of Emergency Management
Deborah Raphael, Department of Environment
Guillermo Rodriguez, Department of Environment
Mohammad Nuru, Department of Public Works
Fuad Sweiss, Department of Public Works
Frank Lee, Department of Public Works
Monique Moyer, Port of San Francisco
Elaine Forbes, Port of San Francisco
Aaron Starr, Planning Department
Harlan, Kelly, Jr, Public Utilities Commission
Juliet Ellis, Public Utilities Commission
Cathy Widener, San Francisco International Airport



August 22, 2014

The Honorable Cynthia Ming-mei Lee
Presiding Judge
Superior Court of California, County of San Francisco
400 McAllister Street
San Francisco, CA 94102

Dear Judge Lee:

Pursuant to Penal Code sections 933 and 933.05, the following is the official City and County of San Francisco response to the 2013-2014 Civil Grand Jury report, *Rising Sea Levels... At Our Doorstep*.

Included is the consolidated reply of the Office of the Mayor and the following departments: City Planning, Building Inspection, Emergency Management, Environment, Office of the City Administrator, Office of the Controller, Port of San Francisco, Public Works, San Francisco International Airport, and San Francisco Public Utilities Commission.

The City and County of San Francisco's response to the Civil Grand Jury's findings and recommendations are as follows:

Finding 1:

The City does not have a citywide comprehensive plan that addresses the rising sea level issue.

Agree. The City has a draft comprehensive plan for addressing sea level rise for City assets. At the direction of the Mayor in the summer of 2013, a Sea Level Rise (SLR) Committee made up of representatives from seven City departments and two consulting firms, (Moffatt & Nichol and AECOM,) produced draft "Guidance for Incorporating Sea Level Rise Into Capital Planning in San Francisco: Assessing Vulnerability, Risk, and Adaptation." This draft Guidance was presented to the City Administrator, Department heads, and the Capital Planning Committee on May 12 and is currently undergoing review by City agencies. The draft Guidance includes findings on the state of the science, expected and possible sea level rise through 2100, and assessment of storm surge and wave action effecting water levels. It further provides a comprehensive approach for departments to follow to ensure City assets and capital improvement programs are resilient to the anticipated effects of sea level rise.

Recommendation 1a:

The City should prepare and adopt a risk assessment in preparation for developing a comprehensive plan regarding the rising sea level issue.

Recommendation has not been implemented but is underway. The draft Guidance referenced in the response to Finding 1 provides for comprehensive assessment of the vulnerability of City assets to sea level rise. In addition, it provides a framework that can be used in assessing risk associated with development along San Francisco's shoreline and in addressing that risk, thereby providing a road map for preparation of a risk assessment.

Recommendation 1b:

The City should adopt a citywide comprehensive plan for adaptation to rising sea levels, especially along its shores and its floodplains, which should include a provision that the plan be reviewed and reassessed every five years. The plan should include the provision that construction projects approval should take into account the anticipated lifespan of each project and the risks faced as outlined in said plan. Special consideration should be given to those anticipated to survive for more than thirty years.

Recommendation has not been implemented but is underway. The draft Guidance currently under City-wide review provides a framework for development of a comprehensive plan to address adaptation for City assets to the potential effects of sea level rise and states that the Guidance, the science behind SLR projections, and the approach outlined will need to be revisited periodically as new information becomes available. The Guidance requires consideration of asset life cycle in implementation. In addition, CEQA provides the Planning Department with authority to require that projects be designed to minimize and mitigate potential hazards related to sea level rise and takes into account the asset life cycle in its evaluation.

Recommendation 1c:

The City should build infrastructure systems that are resilient and adaptable to rising sea levels. The City, through its planning and building departments, should require that any construction project vulnerable to future shoreline or floodplain flooding be designed to be resilient to sea level rise at the 2050 projection, e.g., 16 inches, if the construction is not expected to last longer than 2050. For construction intended to last longer than 2050, it is recommended that the City require that the project be designed to address sea level rise projections for the longer term.

Recommendation will not be implemented because it is not warranted or reasonable. The City agrees with the statement that it should build infrastructure systems that are resilient and adaptable to rising sea levels. It disagrees, however, with some of the specifics in the recommendations that follow. Requiring any construction project be designed to be resilient to the existing 16 inch rise 2050 projection does not take into account other factors that should influence scenario selection, including exposure to storm surge or wave action, asset lifespan and location, and consequence of failure of a project. The Draft Guidance prepared by the Mayor's Sea Level Rise Committee described under Findings 1 above will address this issue.

Looking beyond 2050, while it is the case that assets with life cycles extending into the late 21st century must consider longer term SLR projections, it may be unwise – and expensive – to require *immediate* measures to adapt to wide-ranging, highly uncertain SLR projections further out in time. Consideration of adaptive management approaches, the adaptive capacity of assets, and revisiting of SLR science as the decades unfold are clear components of the draft Guidance that will provide the basis of City policy going forward.

Moreover, the Planning Department already evaluates whether proposed projects would expose people or structures to a significant risk of loss, injury or death due to flooding as a result of future sea level rise as part of the environmental review process required under the California Environmental Quality Act (CEQA). CEQA provides the City with an effective means to ensure that development in areas vulnerable to sea level rise is designed to address related flood hazards.

Recommendation 1d:

The City departments that would necessarily be involved in adaptation to rising sea levels, such as

Department of Public Works, Public Utilities Commission, Municipal Transportation Agency, the Port, should coordinate their projects with each other and with utility companies, such as PG&E, Comcast, and AT&T, to minimize inconvenience to the public, and to businesses, and further to avoid repetition of efforts and inefficient use of funds, labor, and time.

Recommendation has been implemented. Currently, City departments coordinate projects with each other and with various utility companies according to procedures established many years ago. In fact, under the lead of DPW various city departments and utility companies have recently invested in implementing an online mapping system that allow all members to view each other projects and facilitate coordination of all projects within the Right-of-Way.

Finding 2:

The City's Planning Code has no provisions addressing the impacts associated with rising sea levels. Without appropriate provisions within the City's Planning Code, there are no effective means to insure sustainable development on land vulnerable to rising sea levels.

Disagree in part. The City agrees with the statement that the Planning Code does not include provisions addressing impacts associate with sea level rise. However, the Planning Department evaluates whether proposed projects would expose people or structures to a significant risk of loss, injury or death due to flooding as a result of future sea level rise as part of the environmental review process required under the California Environmental Quality Act (CEQA). CEQA provides the City with an effective means to ensure that development in areas vulnerable to sea level rise is designed to address related flood hazards. As such, we disagree with the conclusion that without provisions in the Planning Code addressing sea level rise there are no effective means to insure sustainable development on land vulnerable to rising sea levels.

Recommendation 2a:

The City should amend its Planning Code to include maps showing the areas in the City that are most at risk from the impacts of sea level rise. The Planning Code should be amended to prohibit development in said at-risk areas unless there is compliance with the provisions of the City's Building Code and the Port's Building Code (if applicable to the project) outlined in Recommendation 3 below. The amendment should include a provision that the amended sections of the Code regarding the impact of rising sea levels be reviewed and reassessed every five years.

The recommendation requires further analysis. The SFPUC and Port have published maps depicting areas along San Francisco's bay and ocean shorelines that are potentially vulnerable to future flooding due to projected sea level rise through 2100. The Planning Department considers these maps in evaluating potential flood hazards for projects located in areas vulnerable to sea level rise under CEQA. In addition, the Federal Emergency Management Service is currently preparing a pilot study analyzing future coastal flood risks that account for sea-level rise as part of the California Coastal Analysis and Mapping Project Open Pacific Coast Study. The Planning Department will consider this study in evaluating sea level rise hazards for projects located in affected areas under CEQA. CEQA provides the Planning Department with sufficient authority to require projects to be designed to minimize and mitigate potential hazards related to sea level rise, and because maps of areas that are vulnerable to impacts from sea level rise have already been developed, amendments to the Planning Code to include such maps or to enforce flood resilient building standards for development in the affected areas may not be warranted. However, the City is currently evaluating whether to develop new policies addressing sea level rise. Such policies may include amendments to the Planning Code. As such, the recommended planning code amendments require further analysis.

Recommendation 2b:

The Planning Code should be amended to discourage permanent development in at-risk areas where public safety cannot be protected regarding the impact of rising sea levels.

The recommendation requires further analysis. CEQA provides the Planning Department with sufficient authority to require projects to be designed to minimize and mitigate potential hazards related to sea level rise. However, as stated above, the City is currently evaluating whether to develop new policies addressing sea level rise. Such policies may include amendments to the Planning Code. As such, the recommended planning code amendments require further analysis.

Finding 3:

The City's Building Code and the Port's Building Code have no provisions addressing the impacts associated with rising sea levels. Without appropriate provisions within the City's Building Code and the Port's Building Code, there are no effective means to control construction methods that would insure a project's resistance to the impacts of rising sea levels.

Disagree in part. The City agrees with the statement that the City's Building Code and the Port's Building Code do not include provisions addressing impacts associated with sea level rise. However, the Planning Department evaluates whether proposed projects would expose people or structures to a significant risk of loss, injury or death due to flooding as a result of future sea level rise as part of the environmental review process required under the California Environmental Quality Act (CEQA). CEQA provides the City with an effective means to ensure that development in areas vulnerable to sea level rise is designed to address related flood hazards. As such, we disagree with the conclusion that without provisions in the City's and Port's Building Codes addressing sea level rise there are no effective means to insure sustainable development on land vulnerable to rising sea levels.

Recommendation 3:

The City's Building Code and the Port's Building Code should be amended to include: (1) provisions addressing the impacts associated with sea level rise, especially when combined with sudden storm surges and king tides, (2) construction methods that would ensure a project's resistance to and protection from the impacts of rising sea levels, especially when combined with sudden storm surges and king tides; (3) amendments written to protect the most vulnerable systems, including but not necessarily limited to, electrical, telecommunications, and fire protection systems; (4) a provision that the sections of the Codes regarding the impact of rising sea levels should be reviewed and reassessed every five years.

The recommendation requires further analysis. Although CEQA provides the City with sufficient authority to require projects to be designed to minimize and mitigate potential hazards related to sea level rise, City departments are working with one another and with regional and state agencies to evaluate and develop consistent guidance and policies to address sea level rise. This includes researching adaptation and resiliency measures implemented by other municipalities, including building and planning code changes; and considering incorporating similar changes to the City's codes. The sea level rise projections will continue to evolve as new science and prediction methods become available. Therefore, any future implementation of new building code provisions will require specific, prescriptive changes that account for flexibility. Further analysis and coordination between the scientific community and affected agencies must be performed to develop consistent, effective, and practical policies, including possibly building or planning code changes, to address sea level rise.

Finding 4:

BCDC has the final say on any permit within its jurisdiction.

Disagree in part. BCDC does not have the final say on *any* permit within its jurisdiction. BCDC has jurisdiction over the land area lying between the Mean High Water Line of the Bay shoreline and a line drawn parallel to and 100 feet from the Bay shoreline. BCDC permits the following activities within its jurisdiction: 1) Placement of solid material, building or repairing docks, pile-supported or cantilevered structures, disposing of material or mooring of a vessel for a long period in San Francisco Bay or in certain tributaries that flow into the Bay; 2) Dredging or extracting material from the Bay bottom; 3) Substantially changing the use of any structure or area; 4) Constructing, remodeling or repairing a structure; or 5) Subdividing property or grading land.

Recommendation 4:

The City should consult with BCDC at the onset of development plans within BCDC's jurisdiction to ensure equitable and efficient results without necessitating surplus expenditures and time.

The recommendation has been implemented. The City consults with BCDC throughout the planning and environmental review processes on projects located within BCDC's regulatory jurisdiction.

Finding 5:

A comprehensive risk assessment of Ocean Beach, with mitigation recommendations made to the City regarding rising sea levels, was completed by SPUR, with City, State of California and U.S Corps of Engineers involvement, resulting in the Ocean Beach Master Plan, dated May, 2012.

Agree.

Recommendation 5:

The City should consider implementation of recommendations that are most pertinent to the City set forth in the Ocean Beach Master Plan, May 2012.

The recommendation has been implemented. The City has considered implementation of the most pertinent recommendations set forth in the Ocean Beach Master Plan. SFPUC, MTA, DPW, and the Planning Department are actively working with SPUR, the California Coastal Commission other state and federal agencies and community stakeholders to implement the Ocean Beach Master Plan recommendations concerning coastal erosion hazards at Ocean Beach between Sloat and Skyline Boulevards.

Finding 6:

A number of measures can be taken now by the Public Utilities Commission to minimize the impact of sea level rise, especially when combined with future king tides and sudden surges.

Agree.

Recommendation 6:

The City should build, through the Public Utilities Commission, larger sewer pumps, sewer pipes, and sewer transport storage boxes surrounding the city in the near future to accommodate king tides, sudden surges, and sea level rise.

Recommendation has not been implemented but is underway. The SFPUC levels of service incorporate climate change as a requirement for all projects implemented through the \$6.9B Sewer System Improvement Program (SSIP). A comprehensive Climate Change Adaptation Plan is currently being developed as part of the SSIP. Within this planning effort the SFPUC has conducted research of industry best science, has developed Sea Level Rise inundation maps for San Francisco, and is researching what climate science is telling us about future storm intensity. These factors, with conditions unique to the Bayside and Westside, including the impact of King Tides, will inform the planning and design decisions for critical sewer assets.

Finding 7:

Salt water backflows have already infiltrated the City's wastewater treatment plants, both in the Bayside and Oceanside plants. Salt water kills organisms in the system that clean wastewater and damages wastewater treatment equipment. As a result of sea level rise, bay and ocean saltwater backflow into the wastewater treatment systems will dramatically increase, causing serious problems for the wastewater treatment processes.

Agree.

Recommendation 7:

The City should, as an interim measure, retrofit outfalls in the wastewater treatment system with backflow prevention devices to prevent salt water intrusion into the collection systems resulting from high tides, sudden surges, and rising sea level. Local pump stations should also be installed to raise the flow to sewer discharge structures with higher elevations.

Recommendation has been partially implemented and is ongoing. The projects associated with the SFPUC's SSIP include the installation of new backflow prevention devices on Combined Sewage Discharge outfalls on the Bayside that are impacted by high tides, sudden surges and rising sea level. SFPUC is presently piloting an installed device to serve as backflow preventer at one location and continuing design analysis to address all locations. Saltwater backflows do not occur at the Oceanside Plant and are not expected to be an issue in the future. Regarding pump stations, the SFPUC will monitor actual sea level rise and identify adaptation strategies as-needed.

Finding 8:

The Southeast Wastewater Treatment Plant (Bayside), built in 1952, is aging and needs restoration.

Agree.

Recommendation 8:

The City should retrofit the Southeast Wastewater Treatment Plant to accommodate future king tides, sudden surges, and sea level rise.

Recommendation has not been implemented but is underway. Over the next 20 years, through proposed projects associated with the SSIP, the SFPUC plans to implement over \$2.5 billion related to improvements to the Southeast Wastewater Treatment Plant. These projects are all informed by predicted sea level rise elevations including king tides and surges.

Finding 9:

The San Francisco Airport (SFO) is located slightly above sea level and therefore vulnerable to flooding from

heavy rainfall, king tides, and rising sea levels. A number of measures can be taken now by SFO to minimize the impact of sea level rise, especially when combined with future king tides and sudden surges.

Agree in part and disagree in part. SFO agrees that it is minimally vulnerable to flooding from future heavy rainfall and king tides. Currently, the Airport has a system of seawalls which protects Airport property from daily tidal fluctuations, including the highest tides of the year called King Tides; and seawalls also protect the property against regular storm events. There are some known minor deficiencies in the seawall system that we are addressing which could pose some risk during extreme storm events. In addition to the seawalls, the Airport has an internal drainage and pump station system to evacuate any rain or ground water which accumulates on the Airfield. The entire airfield operational system of runways, taxiways, lighting systems and navigational aids is constructed with the understanding of operations occurring outdoors during inclement and wet weather. Therefore, SFO is not unduly vulnerable to today's heavy rainfalls and king tides. SFO is currently taking measures to review and develop a plan to mitigate any outstanding deficiencies in the seawall system related to long-term sea level rise.

Recommendation 9a:

SFO should increase the height of its existing seawalls along its runways to accommodate rising sea levels.

The recommendation has not been implemented but will be within a set timeframe as provided. A shoreline protection feasibility study is being conducted by Moffatt and Nichol that will provide recommendations to SFO on immediate improvements needed to protect SFO from combined impacts of a 100 year flood and sea level rise. Immediate implementation including environmental review and permitting, design and construction will take place in the next 6-8 years to address a 100 year flood event. SFO is also planning on long term improvements to the entire seawall system to address sea level rise. Long term strategies, with implementation 10 to 15 years in duration, include upgrading of drainage pump stations to handle larger storm events and building seawalls with robust foundations that will allow future extensions to accommodate additional sea level rise.

Recommendation 9b:

SFO should continue to improve measures to eliminate standing water on its runways to ensure they remain sufficiently above sea level.

The recommendation will not be implemented because it is not warranted. SFO does not have an ongoing problem with standing water on our taxiways or runways. Occasionally, we have had temporary small pockets of standing water on our in-field or turf areas, but it only takes a short time for the pump stations to catch up with the rainfall and drain these locations. Over the last ten years, SFO has spent \$26.4 million on pump station and storm drainage improvements, including \$18.8 million spent on our on-going Runway Safety Area program. As part of our on-going capital improvement plan, SFO is planning on investing \$22 million in storm drainage and pump station improvements over the next 5 years. SFO believes the combination of upgrading our storm drain pump stations and fortifying the perimeter seawalls is the best way to protect the runways from sea level rise.

Recommendation 9c:

The northern section of SFO should be analyzed by SFO engineers to determine how best to protect its wastewater treatment plant and other infrastructure in that section from sea level rise (e.g. construction of sea walls).

The recommendation is being implemented. SFO engineers are analyzing the best ways to protect the north field area, including the wastewater treatment plant and other infrastructure, as part of the feasibility study mentioned above.

Finding 10:

The Port of San Francisco is built on landfill, and its seawall lies beneath many buildings along the bay. Many piers are in poor condition. A number of measures can be taken now by the Port to minimize the impact of sea level rise, especially when combined with future king tides and sudden surges.

Agree.

Recommendation 10a:

The Port should begin planning and create a timeline for construction of flood control barriers in the low spots along the edges of the piers to prevent waterfront flooding associated with sea level rise.

The recommendation is being implemented. The Port is currently scoping the level of effort for earthquake retrofit and flood protection improvements to the San Francisco seawall. It is anticipated between 2014 and 2017 an earthquake vulnerability assessment as well as retrofit design concepts will be developed and funding secured. Between 2017 and 2030, individual sections of the retrofit will be designed and constructed.

Recommendation 10b:

To assist with the cost of protective measures to address sea level rise, the Port Commission should establish a reserve fund as part of its leasing policy whereby a surcharge is assessed as part of the rent or as a separate line item in each lease.

The recommendation will not be implemented because it is not warranted. The Port is currently seeking alternate funding sources from federal and state grant programs as well as including consideration of sea level rise in projects identified in the capital planning process. The U.S. Army Corps of Engineers is evaluating the San Francisco Seawall to determine if there is a federal interest in retrofitting the seawall, which could lead to federal matching funds through the federal Water Resources Development Act. By resolution 0125-13, the Board of Supervisors adopted “Guidelines for the Establishment and Use of an Infrastructure Financing District with Project Areas on Land under the Jurisdiction of the San Francisco Port Commission” which state:

“Any portion of the City’s share of tax increment that the City allocated to the waterfront district from the project area but that is not required to fund eligible project-specific public facilities will be re-allocated to the City’s General Fund or to improvements to the City’s seawall and other measures to protect the City against sea level rise or other foreseeable risks to the City’s waterfront.”

Infrastructure Financing District (IFD) law generally authorizes certain classes of public facilities to be financed through IFDs. The Legislature has broadened the types of authorized public facilities for waterfront districts to include (1) structural repairs and improvements to piers, seawalls, and wharves, and installation of piles, (2) shoreline restoration, and (3) improvements, which may be publicly owned, to protect against potential sea level rise. The Port is in the process of planning and implementing IFDs on Port property at Seawall Lot 337 in Mission Bay and at Pier 70, and will likely pursue legislative authorization to form IFDs in other areas of the waterfront.

Finding 11:

The City has not set aside funds for the cost of adaptation to sea level rise.

Agree. While the City has not specifically set aside funds for the cost of adaptation to sea level rise, that does not restrict the ability of the City to spend funds in the future. On an annual basis, the Mayor and the Board of Supervisors have the ability to allocate funds towards sea level rise if they wish to do so. It should be noted that the City has been very strategic in planning and funding capital improvement projects. The Capital Planning Program regularly develops a ten-year capital expenditure plan for city-owned facilities and infrastructure and the draft Guidance referred to above will address SLR in the development of this Capital Plan. The Capital Plan allows the City to take a long-range view of all needed infrastructure improvements and prioritize funding for the most critical projects. The Mayor and the Board of Supervisors allocate funding for the City's capital plan on an annual basis.

Recommendation 11a:

The City should start a reserve fund for adaptation for rising sea levels, a portion of which could be obtained from a surcharge on development planned for areas vulnerable to said eventuality.

Recommendation will not be implemented because it is not warranted. A reserve fund for sea level rise adaptation is unnecessary since the Mayor and the Board of Supervisors allocate capital funds on an annual basis. If policymakers did want to set aside funds, a reserve fund is not the only way of reserving City resources. Depending on the policy objective, a project, baseline, or Charter requirement could be more appropriate. However, any creation of a new reserve would need to be balanced against the loss of allocation flexibility for both the Mayor and the Board of Supervisors. Based on the language of the recommendation, it is assumed that the Jury is asking for a surcharge on all development, public or private. It should be noted that the Sea Level Rise Committee is in the process of creating guidelines for public development. A surcharge on private development has not been analyzed.

Recommendation 11b:

The City should assess costs of both implementation of adaptation strategies and potential losses from failing to do so.

Recommendation has been partially implemented. As part of the 2014 San Francisco Hazard Mitigation Plan, the City identified both natural and human-made hazards facing the City. The document formulated a plan to reduce losses from those hazards and established a process for implementing the plan. However, the 2014 HMP is not a comprehensive sea level rise plan, nor was it intended to be. It should be noted that the 2014 HMP includes the cost of several mitigation strategies either directly or closely related to sea level rise. The following are all high-priority mitigation actions that the City intends to implement during the five-year lifespan of the 2014 HMP, assuming funding availability.

- Implement Phase I of the SFPUC's Sewer System Improvement Program (SSIP), including stormwater management, flood control, and green infrastructure projects. Funding source: bond financing: \$75,000,000 approved over the next five years.
- Continue the Great Highway Long-Term Stabilization program to respond to continuing beach erosion impacts along the Great Highway at Ocean Beach south of Sloat Boulevard. Estimated project timeframe: 4-5 years. Potential funding source: SFMTA and Federal Highway Administration (FHWA). Estimated cost: \$3,000,000 - \$5,000,000.

- Upgrade segments of the San Francisco International Airport (SFO) shoreline protection system. Address gaps in the system that could allow the entry of floodwater; and address openings for stormwater drainage that do not have closure devices, which could allow the entry of floodwaters. Upgrade seawalls to address sea level rise. Estimated project timeframe: 5 years. Potential funding source: Capital Planning/Federal Government. Estimated cost: \$60,000,000.
- Upgrade storm drainage outfall pump stations 1A, 1B, and 1C to protect the SFO airfield from 100-year floods and sea level rise. Estimated project timeframe: 1-2 years. Potential funding source: TBD. Estimated cost: \$3,500,000.

The 2014 HMP does include a brief hazard profile for sea level rise as part of the HMP's climate change section, but does not contain an analysis of the city's vulnerability to sea level rise. This is because the 2014 HMP was completed before the Sea Level Rise Committee chose sea level rise maps for the City and agreed on the level of sea level rise they believe will impact the City. Future versions of the HMP will incorporate the more recent work of the Sea Level Rise Committee by updating the sea level rise hazard profile and by including a vulnerability analysis for sea level rise.

Recommendation 11c:

The City should explore applying for grants offered by Congress' Pre-Disaster Mitigation Program. Receipt of grants is based upon risk assessments indicating that potential savings would exceed the cost of implementation. The City should explore available matching funds from the Army Corps of Engineers and other federal sources.

Recommendation implemented. The City has taken the necessary steps to qualify for and receive federal funding. Having a FEMA approved HMP makes San Francisco eligible for federal hazard and flood mitigation grant funding before and after a Presidentially-declared disaster. Additionally, the Port has explored various opportunities with the US Army Corps of Engineers (USACE). In December, 2012, the Port has asked the USACE to conduct a study under the River and Harbor Act to determine feasibility of federally-assisted improvements to the San Francisco seawall as a storm and flood protection structure. In May 2014, the Corps kicked off a Federal Interest Determination for a project under the Continuing Authorities Program (CAP) Section 103 Shoreline Protection. This funding source is for smaller projects that result in implementation, not study. The federal spending limit is \$3 million and the cost share is 65% Federal and 35% local.

In 2010, the Port asked USACE for seawall assistance through the Water Resources and Development Act (WRDA) for maintenance and repair, liquefaction hazard mitigation, and flood protection. While the request has yet to find any success, the Port continues to actively pursue this funding option.

Recommendation 11d:

The City should request an insurance premium estimate from FEMA and then compare that estimate with the funding it could acquire from FEMA for mitigation and adaptation against future flooding.

Recommendation will be implemented in the future. Staff is currently pursuing all available opportunities to work with FEMA on sea level rise mitigation measures. A FEMA sea level rise workshop specifically for the City and County of San Francisco will be conducted this September.

Finding 12:

Rising sea levels is a regional problem. What one community does to protect its shorelines may have a negative impact on a neighboring community.

Response

Agree.

Recommendation 12a:

The City should, through its Mayor and Board of Supervisors, coordinate its efforts with other cities and organizations in the bay area by establishing a working group to address the impact of rising sea levels. This has been successfully accomplished by four counties on the east coast of Florida, as an example.

The recommendation has been partially implemented. The City's Sea Level Rise Committee reached out to a number of other jurisdictions, including those in the Bay Area, to assess SLR strategies being pursued in other locations. Committee members are presenting the City's draft Guidance in a number of regional forums and are exploring regional cooperation and collaboration opportunities. SFO in particular has focused on developing regional collaboration and SFO has reached out to stakeholders and neighboring communities to begin a dialog on adaptation strategies. SFO jointly applied with San Mateo County for a climate ready grant from the State Coastal Conservancy and successfully won the grant to extend its current feasibility study to include San Bruno and Colma Creeks which empty into the bay immediately north of SFO. A working group including stakeholders from SFO, San Mateo County, BCDC, California State Coastal Conservancy, South San Francisco, San Bruno, Caltrans and SamTrans will begin meeting in August 2014 to address impacts of sea level rise on the peninsula.

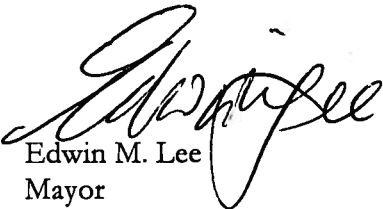
Recommendation 12b:

That the City create a local working group of community citizens and stakeholders to feed into the regional group.

The recommendation requires further analysis. We agree that community and stakeholder involvement in the process of adapting to sea level rise is essential. City agencies to date have spent the bulk of their time focused on technical issues such as what we know about sea level rise science, the state of the art in planning infrastructure resilience, and other technical subjects. As we get up to speed, we will turn our attention to greater involvement from communities, the private sector, and stakeholders as adaptation planning moving forward. The exact nature the outreach and involvement has not yet been determined.

Thank you again for the opportunity to comment on this Civil Grand Jury report.

Sincerely,



Edwin M. Lee
Mayor



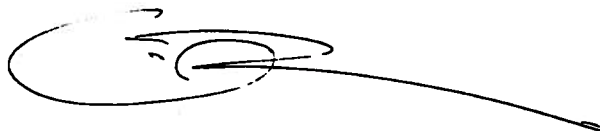
Naomi Kelly
City Administrator



Monique Zmuda
Deputy Controller
Controller



Tom C. Hui
Director
Building Inspection



Gil Kelley
Director of Citywide Planning
City Planning



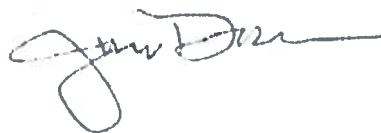
Anne Kronenberg
Executive Director
Emergency Management



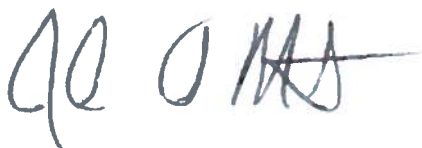
Deborah Raphael
Director
Environment



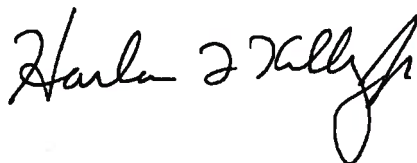
Monique Moyer
Executive Director
Port of San Francisco



Julia Dawson
Deputy Director
Financial Management & Administration
Public Works



John L. Martin
Airport Director
San Francisco International Airport



Harlan L. Kelly Jr.
General Manager
San Francisco Public Utilities Commission.