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HAYWARD REGIONAL SHORELINE ADAPTATION MASTER PLAN

**FOR THE HAYWARD AREA SHORELINE PLANNING
AGENCY (HASPA)**

**PART OF A JOINT POWERS AGREEMENT OF THE CITY OF HAYWARD, HAYWARD AREA RECREATION AND PARK
DISTRICT, AND EAST BAY REGIONAL PARK DISTRICT**

HAYWARD REGIONAL SHORELINE MASTER PLAN

APPENDIX A STAKEHOLDER AND PUBLIC COMMENTS

PUBLIC ONLINE SURVEY

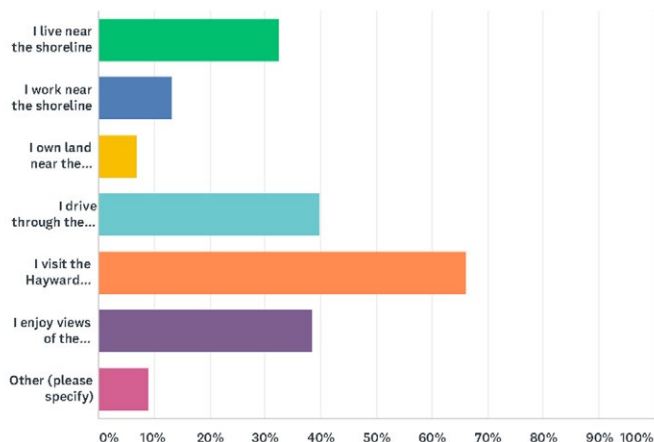
02/27/19 - 03/15/19

ONLINE SURVEY SUMMARY

A 23-question survey was conducted on behalf of the Hayward Area Shoreline Planning Agency (HASPA) to assess the public’s general understanding of Hayward Regional Shoreline, mainly in regard to sea level rise, potential flooding, and participants’ feelings, concerns, and predictions regarding these issues. In the spring of 2019, this survey was completed by approximately 900 people throughout the Bay Area, primarily those who live, work, commute through, or recreate at or near the shoreline.

1. Are you familiar with the Hayward Regional Shoreline that is managed by East Bay Regional Park District and Hayward Area Recreation and Park District?

The majority of people surveyed are familiar with the Hayward Regional Shoreline.

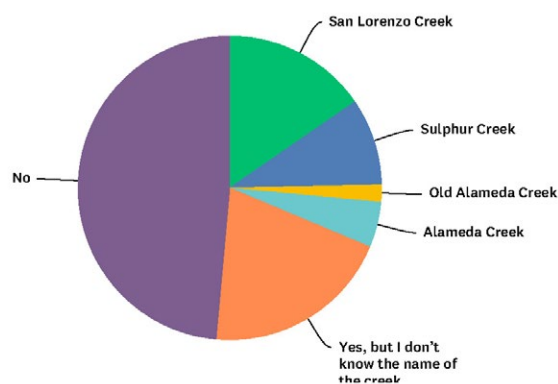


2. What’s your association with the project area?

The majority of those surveyed either drive through the area or enjoy the views of the Shoreline. Approximately two thirds of those surveyed visit the Shoreline and about one third live near the Shoreline. A smaller percentage (about ten percent) specified that they enjoy activities such as birding, cycling, jogging or walking along the Shoreline. A negligible amount of those surveyed stated they’d like to see restaurants built on the area. Some surveyed stated concern for the wetlands and habitats.

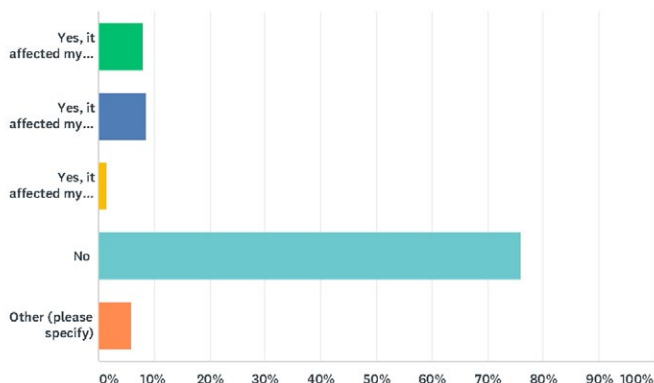
3. Do you live or work near any of the major creeks or channels in the area?

Approximately half of those surveyed do not live or work near major creeks or channels in the area. About 15% of those surveyed live near San Lorenzo Creek. Almost half of residents who live near a creek or channel do not know the name of that creek or channel. The rest of those surveyed stated they live near Sulphur Creek, Alameda Creek, or Old Alameda Creek (in descending order). A small portion of those surveyed mentioned concerns over climate change, compromised creeks, and rising sea levels.



4. Have you or anyone close to you ever been personally affected by a flood, either here or elsewhere?

The vast majority of those surveyed have not been affected by a flood nor do they know anyone personally affected by a flood. A small percentage (less than 10%) were affected a flood that affected their home and transportation, in equal parts.



5. Do you belong to any environmental, shoreline protection, or shoreline-related recreational groups?

The vast majority of those surveyed do not belong to an environmental group or shoreline protection-related group. Of those that are involved in an environmental group, frequently mentioned groups, in descending order, were: The Sierra Club, Save the Bay, Audubon Society, East Bay Regional Parks, and Hayward Shoreline Volunteer Opportunities.

6. How important is it to be protected against flooding?

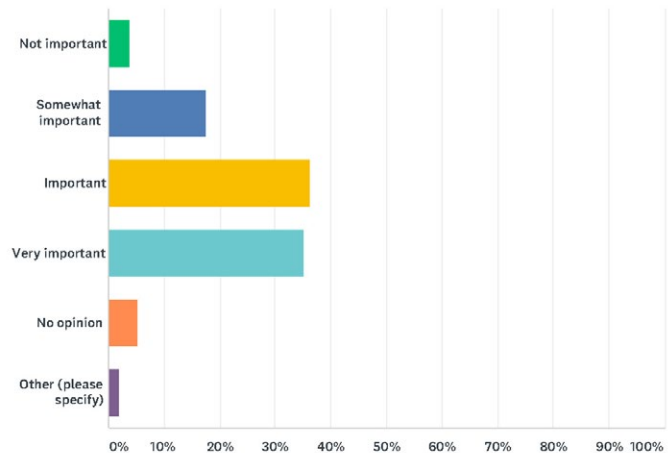
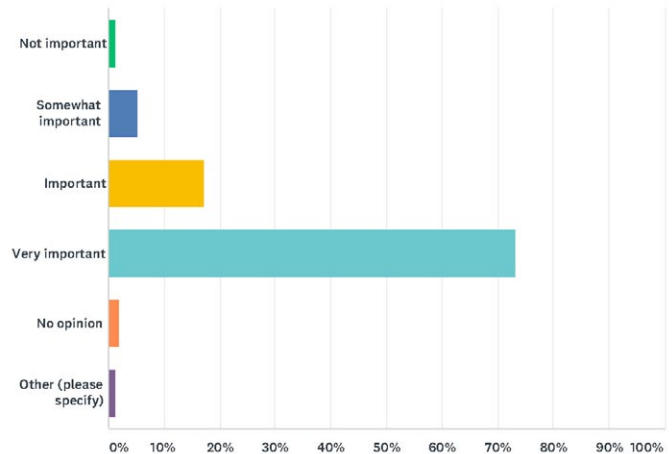
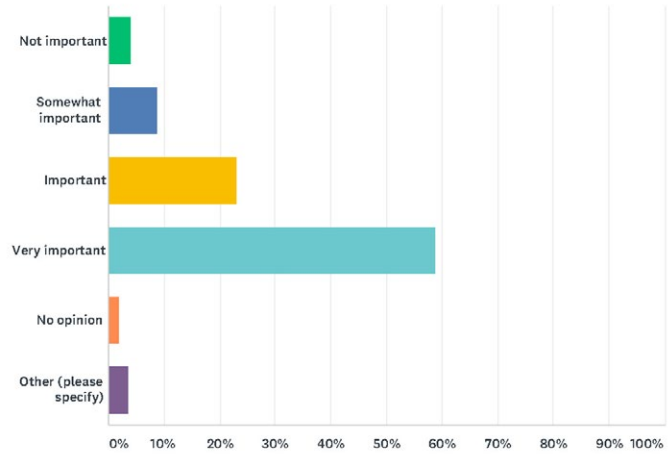
The majority of those surveyed think it is very important or important to be protected against flooding. A smaller portion (approximately 10%) feel it is not important. A general sentiment with those surveyed was that they were unsure what exactly the term “protected against flooding” implies. Some were concerned around where funding would come from and how, specifically, communities could be protected from flooding.

7. How important are wetlands and habitats for the health of the San Francisco Bay?

The vast majority of those surveyed feel wetlands are vital to the health of the Bay. In the comments section of this question, a few people stated people’s property should take priority over all else, and that wetlands and other conservation efforts should come in secondary. A small portion of those surveyed are not sure the effects the wetlands have on the environment of the area. A small minority surveyed feel with rising sea level, conservation efforts are hopeless.

8. How important is it for people to take part in shoreline recreation?

The majority of those surveyed feel shoreline recreation is important to very important. A large portion surveyed feel recreation is somewhat important, and a small percentage do not feel this is important. In general, people feel shoreline recreation creates a bond with ecological resources and establishes a greater commitment to conservation efforts in the area.

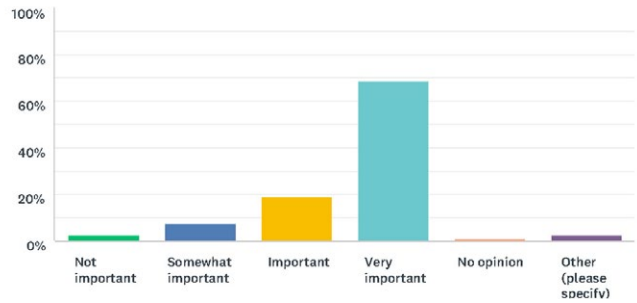


1. How important is it to have uninterrupted shoreline views?

Survey participants were divided on the importance of having uninterrupted shoreline views, and responded to the question in nearly equal parts, spanning from “not important” to “very important.” A general sentiment was that shoreline views do not perform in any way to alleviate the impacts of climate change. Commenters stressed that access is more important than views.

2. How important is it to conserve the shoreline’s natural environment?

The vast majority of those surveyed said that it is very important to conserve the shoreline’s natural environment. A very small percentage feel it is not important. A general sentiment among commenters was that shoreline conservation is vital, and some mentioned the idea of compromise around what areas to protect and at what cost, both financial and spatial.



3. What do you think are the most important natural features that help create a healthy environment?

The most common answer to the question about factors for a healthy environment was biodiversity, in both native plant species and native animals. Also frequently mentioned were maintaining natural habitats, preserving the wetlands, and having clean water and air. A moderate number of participants stated that restricting human access and keeping out of nature is an important way to create a healthy environment. An even smaller portion felt that saving or maintaining the environment was hopeless.

4. Are you currently planning any significant construction or development projects?

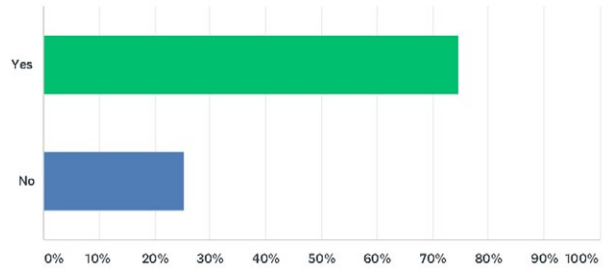
Almost all participants stated that they are not planning any significant construction or development projects. Of the very small number who are planning construction or development, the Eden Landing project was mentioned several times, and general, smaller repairs to homes and buildings in the area.

5. Do you have future plans to begin any significant construction or development projects?

Almost all participants stated they do not have any construction or development plans in the future. Of the few who do have plans, home repairs and remodels were the primary project listed.

6. Are you aware of rising sea level in the San Francisco Bay?

Approximately 75% of those surveyed are aware of the rising sea level in the San Francisco Bay.

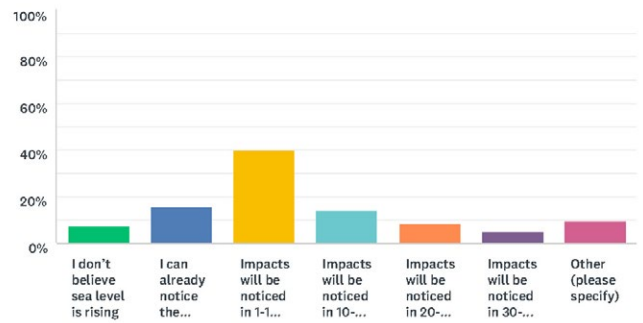


7. Related to sea level rise, what types of threats or impacts to property or people do you know about, if any?

The most common concerns around sea level rise in the Bay Area were flooding and erosion. Another concern was loss of habitat for wildlife in the area. Specific concerns were damages to homes and potential loss of shoreline trails and recreation. Some surveyed were concerned but were unsure what the effects of sea level rise will be. A small number of those surveyed felt that any effects of sea level rise will not affect humanity right now, but will affect those in future generations. A very small percentage do not feel global warming is a real threat.

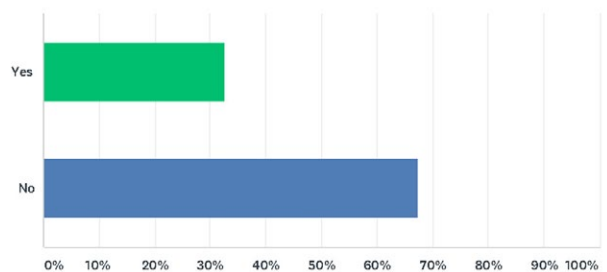
8. When, if ever, do you think there will be a noticeable impact on the Hayward shoreline caused by sea level rise?

More than one third of those surveyed believe sea level rise will affect the Hayward Shoreline in the next one to ten years. A smaller portion of those surveyed felt that they already notice the effects of sea level rise. About a quarter of those surveyed feel that the impacts on the Hayward Shoreline will be seen in 10-30 years. A small number (10%) of those surveyed are somewhat concerned but do not know what the effects will be. A very small number of those surveyed (about 7%) do not believe in sea level rise.



9. Are you aware of any infrastructure in this area (such as levees, tide gates, pump stations) to help reduce flooding?

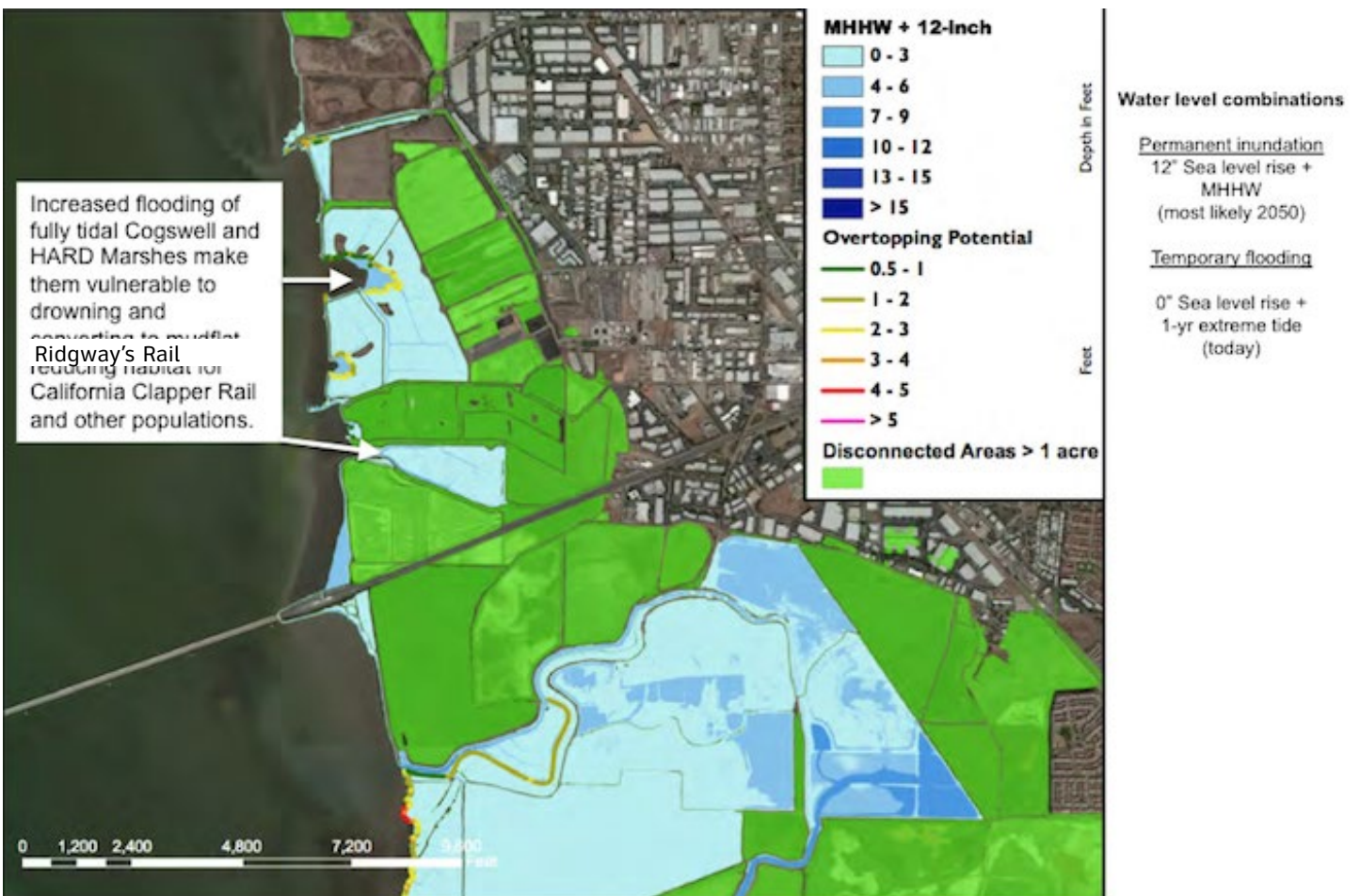
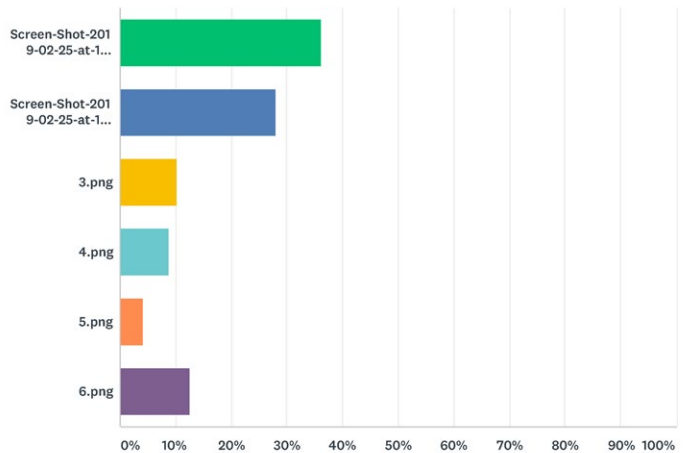
The majority of those surveyed are not aware of any infrastructure that helps reduce flooding.



1. **Hayward Shoreline Sea Level Rise: The San Francisco Bay Conservation and Development Commission has performed scientific computer modeling of sea level rise as part of its “Adapting to Rising Tides” program. Hypothetically, if nothing else is done to protect against flooding, the following scenarios are possible. Note that the green areas are “disconnected” low lying areas that are protected from flooding by some natural or man-made feature. Blue are flooded areas at various depths of water. Which scenario would become a problem for you?**

The majority of those surveyed said that scenario one or two would affect them the most.

The most-mentioned concern of those surveyed was flooding and the subsequent loss of homes, Bay Trails, and other recreational activities, along with poor water quality and damage to waste water facilities. Frequently mentioned was loss of habitat and reduction of biodiversity in the area. Also mentioned was the loss of commuter routes and bridge access. A fair number of participants stated that they would feel sad if the scenario came to pass and the situation is generally upsetting.

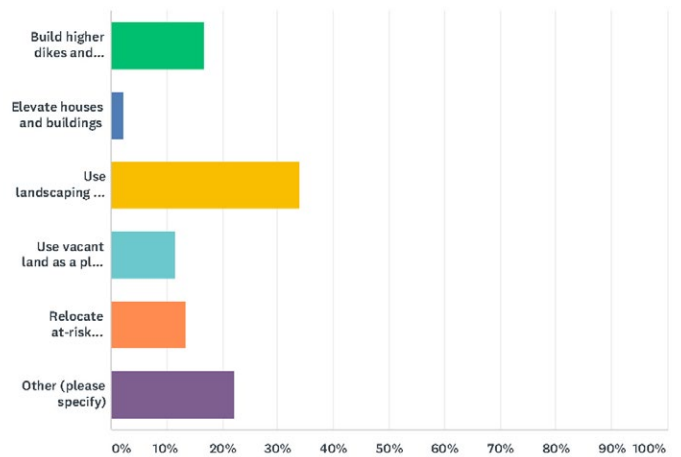


2. The computer modeling shows that at a sea level rise of two feet, most of the Hayward Regional Shoreline will be under half a foot of water if nothing is done to protect the shoreline from flooding. How do you feel about that?

Almost all those surveyed expressed worry, concern, sadness, and fear over the potential of the Hayward Regional Shoreline being inundated with two feet of water. Some surveyed made strong urges for legislators to act now and asked how community members can help. A very small minority stated that they do not believe this to be true or possible.

3. What do you think should be done to help reduce the impact of sea level rise?

Over one third of participants think that using landscaping would be a good way to help reduce the impact of sea level rise, and a fair amount (nearly 20%) believe building dikes would be helpful. Equal numbers of people believe planners could either relocate at-risk infrastructure to higher ground, or that using vacant land as a place to “store” excess floodwater would be best. A fair number of participants commented that “all of the above” might work and suggest to stop building structures in the wetlands. Policy changes were frequently mentioned in the comments. A minority group feels that sea level rise is not worth fighting and might be a lie.



4. Would you like to speak with someone about your responses on additional thoughts you might have? If so, please provide your contact information and someone will be in touch.

Approximately 100 people would like to have a follow up regarding this survey and left their email and/or phone number.

STAKEHOLDER WORKSHOP #1

05/16/19

STAKEHOLDER WORKSHOP #1

HAYWARD SHORELINE INTERPRETIVE CENTER, 05/16/19

ATTENDANCE

- Damon Golubics (COH)
- Aimee Kerr (COH)
- Erik Pearson (COH)
- Sandra Hamlat (EBRPD)
- Devan Reiff (EBRPD)
- Matt Graul (EBRPD)
- Mark Taylor (EBRPD)
- Rohin Saleh (ACFCD)
- Ned Lyke (HASPA)
- Miguel Cardenas (ACMAD)
- Philip Gordon
- Todd Hallenbeck (BCDC)
- Erika Castillo (ACMAD)
- Jackie Zipkin (EBDA)
- Minane Jameson (HARD)
- Joseph Huston (ACMAD)
- Jackie Bestellion (Ohlone)
- Debbie Hernandez (HARD)
- Evelyn Commier (HARD)
- Adrienne De Ponte (HARD)
- Hank Ackerman (ACFCD)
- Pat Gudoa (Ohlone)
- Allen Bestellion (Ohlone)
- Shalini Kannah (SCC)
- Jeremy Lowe (SFEI)
- Nans Voron (SCAPE)
- Gena Wirth (SCAPE)
- Gena Morgis (SCAPE)
- Jess Guinto (SCAPE)
- Mary Kimball (Arcadis)
- Rebeca Gomez (Arcadis)
- Sybil Hatch (Convey)
- Shelby Tramel (Convey)

AGENDA

1. 6:15 Sign In/ Attendee Arrival
2. 6:30 Design Team Presentation
3. 7:00 Breakout Session
4. 8:00 Report Back/ Next Steps

NOTES:

Workshop #1 engaged various stakeholders along the Hayward Regional Shoreline to review existing conditions research assembled by the project team. Breakout sessions were organized into three groups: ecology, infrastructure, and recreation to reflect key elements along the shoreline.

ECOLOGY - *ex. Are there opportunities for the Master Plan to not only protect built assets, but enhance ecology along the shoreline?*

Aspirations:

- Many site-specific studies have already been done for the area and are useful to draw from, including a study on Triangle marsh.
- Good tidal flow is needed to prevent mosquitoes on the shoreline, breaching marshes to tidal flow stops mosquito problem.

Opportunities:

- The shoreline has more kinds of habitats in a small area than all the rest of the bay. Though small, it is complex.
- It is important to plan for endangered species habitat but also maintain current habitat, planned retreat must be coordinated to not lose current like the nesting islands in Hayward Marsh.
- Study on Triangle Marsh, restored in 1980s, used to have bad mosquito problem because of lack of tidal flow.
- Frank's dump only high tide refuge for endangered birds.

Challenges:

- Three endangered birds found on shoreline: Ridgway's rail, snowy plover, least tern.
- Triangle marsh protects landfill behind it, which is unlined and susceptible to bay inundation.
- Twenty two species of mosquitoes in Alameda county.

INFRASTRUCTURE - ex. What infrastructural assets are most at risk from sea level rise?

Aspirations:

- To better manage wastewater effluent to rehabilitate the marsh for habitat and improve the health of the marsh. Proper closure and restoration of existing waste water treatment ponds.
- To configure the hayward shoreline marshes such that upstream properties are removed from the FEMA flood plains.

Opportunities:

- ACFCD is willing to work with HASPA on local solutions and support shoreline resiliency. We need to work jointly to balance flood control and restoration.
- Potential opportunities to utilize reclaimed waste water. For instance, the Bay is currently enriched with nitrogen and an opportunity is to use the wetlands to filter for nitrogen.
- ACFCD is developing strategies at nearby outfall channels to address sea level rise. ACFCD may need to introduce tide gates and pump stations at the outfalls.
- Beautification of existing shoreline protection systems to make them more attractive and safer.

Challenges:

- Very complicated hydrology under existing conditions; under sea level rise and climate change conditions it will become even more complex with many interdependencies.
- There are landfills that the county needs to have access to in order to maintain the infrastructure per Regional Water Quality Control Board (RWQCB) requirements.
- Any shoreline strategy will have major implications for many stakeholders.
- Hayward shoreline is on the windward side of the Bay and is subject to wave action. Any unprotected shoreline will be subject to additional erosion.

RECREATION - ex. Are there other Bay Trail alignments that can facilitate the same recreational experience while mitigating the impacts of SLR?

Aspirations:

- Bay Trail is very important, and we should protect what's there currently.
- More passive recreation.
- Raising the Bay Trail would be great, but also very expensive.
- Bay Trail is seen as a way to get people out of the car. A good way to commute by bike.
- Very important to see water along the Bay Trail.

Opportunities:

- New connectivity; more access points to the shoreline, such as connector bridges.
- Have any added infrastructure be multi-functional. For example, a horizontal levee with the Bay Trail on top.
- An idea to pilot a horizontal levee in the area of the salt ponds.
- Activities at the shoreline: biking, hiking, camping, fishing, bird watching, kayaking, golfing.
- Who visits the shoreline? Runners, cyclists, and college classes all use the Bay Trail.
- Hayward is very diverse. Visitors from South Korea, Japan, etc. come to model what is being done there.
- People don't want additions that draw more people to the shoreline. They like the current foot/cycling traffic as is.
- Educational opportunities: Some sort of kiosk or educational center in every section of the shoreline.

Challenges:

- Funding and permitting.

STAKEHOLDER INTERVIEWS

09/17/19 - 09/18/19

MINUTES

Date: September 27, 2019
Mtg Date: September 17, 2019
Location: ACFCO Office
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Damon Golubics; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Rebeca Gomez-Gonzalez, Mary Kimball; Convey: Sybil Hatch; Alameda County Flood Control District: Rohin Saleh, Hank Ackerman
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

02 Inundation Map Review

- Rebeca Gomez (RG) presented the three SLR scenarios.
 - MHHW + any SLR scenario (2', 4', 7')
 - Provided an explanation of the depth to groundwater
- Rohin (RS) agreed that it was good to err on the conservative side.
- RG noted that this mapping exercise used stillwater level and not the FEMA 100-year model which includes wind and wave.
- RH felt that the modeling exercise was extremely successful to understand the impacts of water.

03 Project Goals

- RS asked if there was a funding expectation for the project.
- GW indicated that the project team is thinking about near-term, medium-term, and future project scenarios.
- Hank (HA) requested that the project team call Frank's Dump, Alameda County Flood Control District Sediment Recycling Site.
- Nans noted that the project goals are intended to be flexible and adaptable, but not relying on words like protect and maintain.
 - RS agreed with the conceptual outlook, but felt that they would need to adjust based off of evaluating the various alternatives.

- Understanding the threshold between what can be addressed at a local/county level vs the regional level is extremely important to understand.
- RS noted that it's most important to determine where a line of protection would be within the shoreline.
 - Identify what needs to be protected.
- GW indicated that this is something the team is currently working on.
 - The team will make some initial proposals about what is being protected.
 - SH and RS indicated that putting a price tag on some of these protective measures (e.g., protecting the oxidation ponds and telling the water treatment facility that they need to pay 5 million dollars (50% for the project) would help to identify what needs to be saved.
- RS noted that using the MHHW as a starting point for modeling purposes does not accurately capture the effects of water.
- RS noted that there is a need to determine the joint probability of the combined event would be.
 - The combination used so far of MHHW with the fluvial event (100 year storm) has been incorrect.
 - King tide has proven to be more accurate for representing existing conditions.
 - The difference between king tide vs. MHHW is a 1.5'-2' difference.
- GW noted that the team is not currently developing a masterplan but rather a series of strategies that can be implemented.
- RS noted that looking at a 5' SLR scenario had a multi-billion dollar price tag for a solution that addresses SLR, but not groundwater. It also does not account for any land buyouts.
 - RS noted that ACFCD cannot plan for any SLR scenarios greater than 2'.
 - At that point, it becomes a regional or subregional issue.
- RS indicated that it would be helpful to identify the threshold at which it is no longer feasible to develop a city-level approach to SLR.
- GW asked Rohin what types of improvements he would do in a 2' SLR scenario.
 - Introducing pump stations
 - Tide control gates
- RS noted that he can provide a detailed study of outflow rates along the various creeks.

- SH mentioned the pump station study that RS developed recently which shows the data for all pump stations county-wide.
- RS noted that one of the larger challenges is the canals on site:
 - Either take a wall on either side of the channels
 - Provide pumps for the water systems that feed into the channels for when water levels are high
- NV clarified that it seems to be cheaper to locate the control structure as close as possible to the line of protection.
 - RS agreed with this.
- RS indicated that he is evaluating all tide gates against SLR to understand if they will effectively address the new conditions.
- GW asked if a pond would be helpful in addition to pump stations.
 - RS indicated that it would be extremely helpful. Improved storage is always helpful.
- RG asked if it's helpful to store further upstream to capture more fluvial water.
 - RS indicated that it could be very beneficial.
- GW asked if the properties adjacent to the Hayward Shoreline could be bought out and converted to storage ponds.
- HA noted that such an approach would require a pump station.
- GW asked if there were upstream communities that could provide upstream storage.
 - RS indicated that it was possible along San Lorenzo, in Don Castro.
 - RS noted that the best location would be closer to the Bay.
- GW asked if ACFCO has looked at connecting the channels with the wetlands around them.
 - On a smaller scale than at Alameda Creek.
- RS noted that it's been explored in smaller locations like Bockman Creek.
 - Water quality has been a major issue, with salinity being too high in certain locations.
- HA indicated that the airport might be doing a mitigation project along Sulphur Creek.

MINUTES

Date: September 27, 2019
Mtg Date: September 18, 2019
Location: Bay Trail Office
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Erik Pearson; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Rebeca Gomez-Gonzalez; San Francisco Estuary Institute (Bay Trail): Lee Huo
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

- Nans (NV) provided an introduction to the project.
 - Noted that the design team is currently identifying goals and strategies for the masterplan.
 - Indicated that it would be helpful to have Lee review the SLR maps that have been done as part of Task 2.

02 Bay Trail Discussion

- Lee indicated that there is a preference for hard surfaces for the Bay Trail, but understands that the trail on the top of levees can often be a soft, DG-type surface.
- Lee noted that the main goal for Bay Trail is promoting bike and pedestrian travel along the perimeter of the shoreline.
 - Bluewater experience is always better, but if there is an experience that moves through wetlands to provide variation that is also acceptable.
 - LH noted that BCDC recommended moving the Bay Trail inland of the infrastructure within the Hayward area.
 - LH indicated that some of the challenges are the balance of natural resources vs. trails.
 - From a political perspective, organizations like the Audubon can be challenging due to conflicting views from the Bay Trail's mission.

- LH indicated that the two sides are moving apart but that it seems imperative to bring together the recreation vs. resources groups to prevent future issues on a regional scale.
- LH indicated that the continuity of the Bay Trail is critical to the success of the program.
 - RGG asked if there is any precedent where there are use restrictions along certain lengths of the Bay Trail.
 - Lee noted that it runs slightly counter to the Bay Trail mission of open access.
- LH indicated that the Bay Trail is extremely interested in incorporating rest/comfort stations every two miles.
 - Gena (GW) asked if it would be preferable to have the masterplan incorporate rest stations into the project.
 - LH noted that it would be great to have some kind of rest station.
- GW asked if there could be certain moments where a Bay Trail spur trail is located within the Hayward Shoreline Masterplan area to facilitate bluewater experiences for an inland trail.
 - LH noted that he would like to review the design but it could be an option.
- LH noted that there are three main North-South trails in the Bay area.
 - Bay Area Ridge Trail
 - Follows the ridgeline around the bay and provides a more rural/wild experience.
 - Bay Trail
 - LH wondered if the Bay Trail could have spurs that connect to the Bay Area Ridge Trail
 - East Bay Greenway
- LH inquired about the planning horizon for the East Bay Greenway.
 - NV indicated that the team was looking at near, medium and long term time horizons.
- Lee noted that he is open to the future location of the BayTrail but ensure that it has connectivity/continuity with the larger Bay Trail and fulfills the need for bike and pedestrian experience.
- GW indicated that there was some benefit to having a diversity of experiences throughout the Hayward Shoreline Masterplan area.
 - LH agreed that the diversity of experiences (wood bridges, marshes, uplands, etc.) is one of the strongest features of the area.

- Erik (EP) inquired about the formal approval process for a Bay Trail relocation.
 - LH noted that the Bay Trail would need approval from the managing organizations (e.g., East Bay Regional Parks District).
 - Could be as general as approval of a masterplan or resolution from a deciding body.
- LH inquired how the design team intended to develop the plan.
 - GW indicated that the plan is flexible, but the near term scenario could require design within the next few years.
 - EP noted that the project's adoption as a plan would require going through the CEQA process.
- NV inquired how frequently Bay Trail would like to be updated on the project's progress.
 - LH would like to be engaged, but preferred to be involved once a series of proposals are developed.
- GW inquired if there was a minimum recommended elevation for the Bay Trail vis-à-vis sea level rise (SLR).
- LH noted that there was not a minimum, but it is something that is starting to be considered.
- LH indicated that he would share the East Bay Regional Parks Bay Trail Resilience Study with the design team.

MINUTES

Date: September 27, 2019
Mtg Date: September 18, 2019
Location: Bay Trail Office
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Erik Pearson; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Rebeca Gomez-Gonzalez, Mary Kimball; San Francisco Bay Conservation and Development Commission (BCDC): Todd Hallenbeck, Dana Brechtald, Jessica Fain
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

02 Goals and Policies

- Gena introduced the work on Goals and Policies for the project
 - Wanted to receive feedback from BCDC on these goals and ensure that they align with BCDC's understanding of the area
- TH noted that it was good that SCAPE included recreational opportunities as part of the goal. This will be an aspect of the project that BCDC will look very closely at.
- Dana (DB) noted that none of the meeting representatives were from the regulatory side of BCDC, but that an introduction could be provided.
 - DB indicated that it would be good to maintain regional and neighborhood connections.
- BCDC could be a platform for helping to share the results of the study with other groups throughout the Bay area.
- GW noted that the goal is to develop a set of strategies for the immediate, near and long term time horizons.
- DB noted that the ART program (ART Bay Area) is developing a plan to have a guidance manual to get strategies approved. Policy planning, capacity building type of work.
 - SFEI and Point Blue recently published a similar document from their work in Marin County.

- GW asked if BCDC could share experiences from their work on the ART process.
 - DB: Everything is done through a working group and developed a set of evaluation criteria that was applied for the project.
- GW described the stakeholder engagement that is being done for the Hayward project.
- TH noted that one of the issues in the past has been a lack of community engagement.
- GW agreed that it's been challenging to find an organization that represents the industrial businesses along the shoreline.
- JF asked the team how the strategies will respond to the three different scenarios.
 - Nans (NV) noted that the team is first trying to identify what all of the strategies are before a coherent strategy is developed for each of the scenarios.
- Adaptation Catalogue: BCDC is collecting and tagging the various strategies and defining them by larger categories (along with a financing section):
 - Adapt
 - Retreat
 - Protect
- TH noted that the catalogue doesn't address issues like groundwater emergence, but would be very interested in seeing what the Hayward team comes up with in the realm.
- TH asked if the Hayward team could share the methodology for studying the groundwater emergence.
- GW noted that we could share the memo that was developed which described the methodology.

03 Strategies for the Hayward Shoreline

- GW introduced a few of the strategies that are being considered for the Shoreline.
 - Maintenance permits
 - Ecological enhancements to the shoreline which are habitat friendly but reduce erosion (Gravel beach)
 - The concept of ecotone or transition levees
- DB asked if the sediment issue has come up in other conversations.
 - BCDC noted that an introduction to Brenda from BCDC could be made to open up the conversation about sediment in the area.
- BCDC is currently working on a plan called Fill for Habitat.

- A more stringent standard that allows filling which can benefit habitats.
 - Encourages more green shoreline strategies and slightly addresses techniques for sediment placement.
- Erik (EP) asked if a levee be widened to protect habitat behind it?
 - JF noted that she wasn't sure but could look into it.
- JF noted that a staff report on this was published on the BCDC website in June and will be voted on in October.
 - GW: Would it be approved immediately?
 - It would have to go through state review and then ultimately to NOAA.
- DB noted that there's an environmental justice plan being voted on two weeks after the other study.
- GW asked if there were precedent projects that will be easier to permit following the approval of the plan.
 - JF noted that the bay fill project was the most obvious one.
- GW asked which agency would be best to approach with gravel beach type solutions to discuss.
 - JF indicated BCDC to be the appropriate agency.
- TH noted that the Bay Plan amendment provides more emphasis on monitoring than previous plans.

04 BRRIT

- JF provided a general introduction of the BRRIT.
- DB indicated that we could set up a call with BCDC to discuss further.
- BCDC is also working on a financing paper that will be available later, including an analysis of grants that are available for adaptation strategies.
 - Indicates the type of project and which phase these grants would be available for.

05 Closing Questions

- GW asked if BCDC knew of examples of retreat in the bay area.
 - JF: There are specific asset relocations but no planning level work.
- GW asked if BCDC could share precedent examples of industrial areas that are being confronted with SLR.
 - Maybe Bayview
 - SF Planning
 - Contra Costa Shoreline
- Mary asked about regional planning efforts.

06 Next Steps

- Marin report
- Adaptation options
- Email intro BRRIT team
- Brenda email (GW to CC Dana)
- Will point to similar planning processes and forward Task 2 report once it's finished.

MINUTES

Date: September 27, 2019
Mtg Date: September 18, 2019
Location: Hayward City Hall
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Damon Golubics, Erik Pearson; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Mary Kimball; CalTrans: Dick Fahey, William Velasco
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

- Nans (NV) provided an introduction to the project.
 - Noted that the design team is currently identifying goals and strategies for the masterplan.

02 Inundation Maps

- DF asked how the team decided on the 2', 4' and 7' intervals.
 - GW indicated that we felt it was a good indication of short, medium and long term SLR.
 - DF agreed that this approach makes sense.
- GW opened up the conversation to CalTrans to discuss the bridge approach and if CalTrans has any plans for the bridge approach.
 - DF responded that the projects are more reactive than proactive due to the nature of existing funding streams.
 - There isn't a department-wide strategy.
- NV asked if there were any tools, plans or strategies that Dick might recommend for this area.
 - DF indicated that there was consensus around the need for more study of the hydrologic conditions around the bridge approach.
- GW noted that it could be useful to identify what levels of protection are currently being provided by the Hayward Shoreline.
- GW noted that one of the team's concerns is how the bridge work is communicated.
- GW asked if there were other studies that could be relevant (Dumbarton).

- DF responded that the project there is more concerned with public outreach, especially with disadvantaged communities.
- DG asked about the status of Highway 37.
- GW asked if there were any other CalTrans assets in the project area that were under consideration.
 - DF indicated that he could loop back with the CalTrans asset manager and see what would be within the project area.
- GW asked if there was any updated datasets for the bridge.
 - Volume data
 - Topographic information
- GW asked what typically happens when there is local flooding on the bridge.
 - DF noted that the planning team from CalTrans typically learns of these events from their maintenance teams.
 - GW mentioned that 511 might be able to provide a tracked dataset
- DG asked if CalTrans was planning on making the bridge more bike and pedestrian friendly.
 - DF indicated that he would be able to share the bay-wide bike plan with the team.
- GW asked what's the estimated design life of the bridge.
 - DF responded that most of the bridges are designed for 75-100 years.
- DF indicated that a list of adaptation strategies and potential stakeholders would be helpful to see.

MINUTES

Date: September 27, 2019
Mtg Date: September 18, 2019
Location: Hayward City Hall
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Damon Golubics, Erik Pearson; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Mary Kimball; Hayward Public Works: David Donovan, Alex Ameri, Jan Lee
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

- Gena Wirth (GW) introduced the project.

02 SLR Maps

- Alex (AA) asked what the time horizon would be for the various SLR scenarios and how the team determined 2', 4', and 7' intervals.
 - GW responded that it was determined in part by Adapting to Rising Tides and Alameda County Flood Control's intervals.
 - The design team will not assign a specific date to the specified intervals.
- AA wanted to make it clear that he is extremely interested in the topic and the mapping research that the team performed.
- AA asked what strategies are being considered for this area.
 - Levees?
 - GW indicated that a levee could help with seawater, but it will not address the groundwater emergence.
- Jan (JL) asked whether these inundation maps would be available for review.
 - GW agreed to make them available once Arcadis finalized them.
- AA asked if a time range could be developed for the various SLR intervals.
 - GW responded that the team isn't comfortable indicating at the moment what those would be, but the team could come back to DPW with a range of time scenarios.

03 Public Works' Plans

- AA indicated that the wastewater treatment plant is one of the most expensive assets that the city owns.
 - Replacement value is half a billion dollars.
 - The areas slated for development (e.g., managing the amount of nutrients in the water, 60-80mm dollar cost) are currently downstream of the existing facilities.
- GW asked if Hayward had discussed moving the treatment plant?
 - AA noted that it has not been discussed as the plant needs to be at the lowest point in the system.
- AA noted that all new construction is located outside of the 100-year flood zone.
 - Most new construction systems cannot exceed 2060 (40 year lifespan).
- GW noted that one of the questions the design team is around the existing oxidation ponds and whether there are any plans for them.
 - AA noted that currently they have a levee around the ponds and have a 200 million gallons capacity.
 - David (DD) noted that the solar panels are located on a slightly filled section.
 - There is a change to the JPA and the importance of the oxidation ponds is diminishing.
- GW asked if there were other plans being considered for that space.
- AA indicated that the only plans are for additional fill and expanding solar panels.
 - The solar panels are on piles.
 - DD asked when the LIDAR data was taken because some of the ponds around the solar panels have been lifted in recent years.
- GW asked if Public Works would be open to entertaining sketch ideas for the storage ponds?
 - AA noted that Public Works is looking at a nearshore discharge solution through Cogswell Marsh.
 - Less energy intensive
 - GW asked if a treatment wetland or pond would be required to accomplish this?
 - AA indicated that a more environmentally friendly solution than a concrete structure is preferred.

- GW asked if Public Works would consider something like a large-scale horizontal levee?
- AA responded that it would be a natural-based system.
- AA noted that the Hayward Marsh has had issues with the EBDA effluent treatment.
 - GW noted that Hayward's EBDA treatment will be limited.
 - AA indicated that that was not presently possible because 17 mgd are required in the Hayward Marsh by Union Sanitary.
 - Union Sanitary would be the best source of information here.
 - AA noted that the EBDA JPA is expiring by the end of this year and the contributing members are trying to come to a 20-year agreement and use that time to find an alternative to the EBDA system.
- GW asked if there were any strategies the design team should consider?
 - AA noted that the idea of moving any of DPW's assets is not feasible
 - The outlook will be to adapt vs. retreat
- AA noted that waste in the landfills is from 1933-1974.
 - Covered in a clay top and vegetated by Hayward DPW.
 - Hayward purchased the landfill from Waste Management, and the Sanitary District will pump the leachate back to the treatment facility, clean it, and pump it back out.
 - The water that comes back from the landfill is relatively clean due to the prevalence of water
- The City of Hayward City Council is extremely concerned with doing the right thing environmentally.
- GW asked if the energy center was a key asset:
 - AA noted that it was built in 2013 with a 30 year useful life.
 - There is less of a need to run the energy center due to shifting energy preferences.
 - This energy center is more costly to run it because it is not on a backbone gas transmission pipeline.
 - AA noted that it is currently being run at 40% of initial capacity estimates.
 - AA felt that it is one of the last gas powerplants that will ever be built in California.
 - After 30 years, the site will likely be decommissioned and deconstructed.

- GW asked if there was a land use plan for once that was decommissioned.
 - AA noted that it's on sanitary district land so it will be taken back for that purpose.
- GW asked if there would ever be an alignment of the Bay Trail that could move over the landfill.
 - AA agreed that such an alignment would be fantastic for passive uses.

04 Roadways

- Cabot Boulevard was just expanded into the plant
- The idea is to do a full interchange at Cabot and Whitesall
- AA indicated that the roadbed was raised along the approach

05 Industrial Group

- Public Works will look to see if there is anyone with the Chamber of Commerce that can be consulted.

06 Next Steps

- AA requested copies of the SLR maps
- GW indicated that the team will share maps with all stakeholders once they are updated to indicate no data areas.

MINUTES

Date: September 27, 2019
Mtg Date: September 17, 2019
Location: Hayward City Hall
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Damon Golubics; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Rebeca Gomez-Gonzalez; South Bay Salt Ponds (SBSP): Dave Halsing
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

- Gena Wirth (GW) introduced the project:
 - Which representatives are part of HASPA.
 - A brief description of the project's intention of developing a long-term vision for Hayward shoreline and adapting to SLR
- Nans Voron (NV) provided additional project context:
 - Described the work done as part of the Background Report (Task 1).
 - Described Arcadis' work on the inundation maps for Task 2.
 - Noted that the team is developing adaptation and design strategies for the Hayward Shoreline.
- Dave Halsing (DH) provided an introduction and description of his past work experience on Oro Loma and various properties within the Hayward Shoreline Masterplan project area.

02 South Bay Salt Pond Discussion

- GW asked if there has been any planning for sea level rise (SLR) at South Bay Salt Ponds (SBSP).
 - DH indicated that the project has no legal responsibility for providing additional flood control beyond existing levels of protection.
 - DH noted that the Eden Landing Ecological Reserve (ELER) Phase I and II projects have been framed as maintaining or improving existing levels of flood protection.

- Levees at the urban edge, a mid-complex levee and the outboard levee have been raised to create a redundant system that is able to last over time.
 - DH noted that this has been the general approach with Valley Water and San Mateo County Flood Control District.
 - The approach by SBSP has been to develop partnerships with the flood protection agencies.
- DH noted that SLR protection is an externality for the project as it is primarily focused on the following goals:
 - Improve habitats
 - Maintain or improve flood control
 - Create more resilient landscapes
- DH noted that during the CEQA process, it was questioned how SBSP would be maintained vis-à-vis sea level rise.
 - SBSP's response was that it wasn't directly considered as part of the project, and that the responsibility rested primarily with adjacent landowners.
 - Damon Golubics (DG) asked if the parties responsible for this question were satisfied by SBSP's response.
 - DH indicated that there have been no legal challenges due to this.
- NV asked if there is a desire to have the marshes adapt to SLR.
 - DH indicated that the project was designing transition slopes as part of the project, and extensive modeling has been performed to satisfy Alameda County Flood Control District.
- GW noted that SBSP's strategies seem to have two purposes:
 - Provide protection to the community
 - Provide adaptation strategies (ecosystem adaptation) that benefit the environment, wetland, etc.
- DH noted that the adaptive management plan has defined much of the project:
 - Example: If target numbers for plover breeding pairs are not met, the plan is adjusted to achieve the targets.
 - The project has used flood control structures as a way of achieving management flexibility while allowing for strategies to evolve over time.

- GW asked if SBSP has considered a 4 foot SLR scenario and the impact on the managed ponds.
 - DH indicated that he was unaware of any formal studies on habitat management relative to such scenarios.
 - DH assumed that in a 4 foot SLR scenario, ACFCO would likely raise the levees on the property and take precedent over managed habitats.
 - DH noted that it was possible for the ACFCO to take properties within SBSP should it be required for flood protection.
- GW asked if SBSP had any FEMA-certified levees within SBSP.
 - The outboard levee in Phase II is FEMA-certified but the other levees are not.
 - GW asked how the mid-complex levee was being classified.
 - DH noted that there are many engineered levees throughout the site and the mid-complex met such a standard. However, it was not a FEMA-certified levee.
 - GW asked if the levees are being designed to allow for future raising.
 - DH indicated that they were.
- DH noted that it has been increasingly difficult to get soil for construction projects.
 - Other shoreline projects are beginning to buy soil from quarries.
 - DH speculated that rip rap and concrete could become preferred solutions due to cost, convenience and timing.
 - NV asked if dredge materials have been considered.
 - DH noted that it was studied in the Environmental Impact Report (EIR) for SBSP.
 - DH indicated that the project is analyzing subsidence rates to ensure that the project is matching historical subsidence.
 - DH noted that there are significant financial, organizational and regulatory hurdles involved with slurring sediment into the ponds.
 - Noted that mudflat seeding could be a potential idea.
- DH provided insight into the regulatory/permitting process.
 - Noted BRRIT has been developing a new process for projects, and recommended setting up a meeting to discuss the Hayward Shoreline Masterplan.
- DH noted that Phase II permitting took approx. 18 months.
 - DH indicated that there are expedited permits.
 - Expedited biological permits but only for restoration projects.

- If the project has any flood protection benefits, goals, etc. it doesn't qualify.
- GW asked if DH had experience with maintenance permits.
 - DH indicated that California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife (USFW) has 5 year permits for operations and maintenance.
- GW asked how the SBSP's levee elevations were determined.
 - DH noted that a combination of HECRAS and MIKE flood modeling to determine necessary protection levels.

MINUTES

Date: September 27, 2019
Mtg Date: September 17, 2019
Location: Hayward City Hall
Topic: Task 4 Stakeholder Interview
Attendees: City of Hayward: Damon Golubics; SCAPE: Gena Wirth, Nans Voron, Tim Clark; Arcadis: Rebeca Gomez-Gonzalez; San Francisco Estuary Institute (SFEI): Jeremy Lowe, Letitia Grenier
Contact: Nans Voron
Doc'd by: Tim Clark
Re: Hayward Shoreline Masterplan – Task 4 Stakeholder Interview

01 Introduction

- Gena Wirth (GW) introduced the project.

02 Adaptation Strategies Discussion

- The team discussed numerous strategies for protecting the outboard levee:
 - Gravel beaches
 - Fascines
 - Jeremy Lowe (JL) indicated that it could be an alternative for the ponds at the southern end of the Hayward Shoreline Masterplan project area.
 - Living Breakwaters
 - JL noted that where the oysters would be best suited from a habitat perspective would be too far offshore to provide sufficient wave protection.
 - However, JL noted that the oyster beds could facilitate increased sedimentation.
 - Mudflat/Marsh Feeding
 - JL indicated that it would be very energy and resource intensive to pump sediment from the bay into the site.
 - Noted that one potential source could be the San Leandro Marina sediment storage area.

- JL suggested that sediment could be delivered via the rail line at the northern boundary of the Hayward Shoreline Masterplan project area.
 - San Lorenzo Creek
 - JL and LG noted that mudflat deltas form at the mouth of creeks throughout San Francisco Bay.
 - SFEI indicated that this could be a worthwhile strategy to recreate.
- LG raised holistic questions to the project team:
 - Is the intention to maintain a wide marsh on the site?
 - How can the marshes maximize ecological value?
 - Can wastewater create gradients within the marsh?
- NV indicated that the third option was being considered. NV also indicated that one of the goals was to enhance wetlands and shift away from the idea of maintenance.
 - NV suggested that it might imply that the shoreline moves back, but it could allow for transition of wetlands on the inland edge.
 - LG noted that some of the conversations for the project could address total area of wetlands, and some could focus on quality of the wetlands.
- NV noted that the project's current phase was focused on considering all strategies.
- LG indicated that what might be most helpful is determining how ecological thinking might guide the principals of the project:
 - Maximize habitat heterogeneity
 - Design ecological conditions that could offset acreage loss
- NV indicated that the team was considering three scenarios in addition to the do-nothing scenario:
 - Full protection scenario
 - Ecologically focused scenario
 - Recreationally focused scenario
- LG indicated that it would be important to consider radial connectivity (towards the uplands) for the project.

STAKEHOLDER WORKSHOP #2

10/28/19

MINUTES

Date: November 1, 2019
Mtg Date: October 28, 2019
Location: Hayward Shoreline Interpretive Center
Topic: Stakeholder Meeting 2
Attendees: SCAPE: Nans Voron, Gena Wirth, Nick Shannon, Tim Clark; H.A.R.D.:
Adrienne De Ponte, Louis Andrade; EBRPD: Sandra Hamlat, Matt Graul,
Mark Taylor; City of Hayward: David Donovan; SCC: Laura Cholodenko;
ACFCWD: Frank Codd; SBSRP: Dave Halsing; ACMAD: Ben Rusmisel;
Contact: Nans Voron
Doc'd by: Nick Shannon, Michelle Kicherer
Re: Hayward Shoreline Masterplan – Stakeholder Meeting

01 Introduction

- Since we last met
 - Completed background report
 - Completed SLR and groundwater emergence maps
 - Site visits and stakeholder interviews
 - TAC Design Charrette, which informed information present at the meeting
 - Shore Tour (about 30 members of the public)
- Timeline and schedule
 - ena provided an update of the project schedule
 - Focused on design strategies for this meeting, evaluating the different types
 - Will develop design alternatives for the master plan and present in mid-January 2020
- ena provided a summary of the SLR and groundwater emergence map analysis
- ena presented the project goals and policy considerations

- The group divided into three breakout stations in different rooms, organized into the themes of engineered, ecological, and policy strategies
 - ena reiterated that these options were drawn for discussion purposes only- the design team is by no means tied to any option. In addition, the options are generally arranged from small to large

02 Engineered Design Strategies

- Ecotone Levee
 - Consider utility corridor protection, possibly change alignment to go through Oro Loma marsh along the transmission lines
 - Oro Loma Ecotone Levee Study - 20% of 12 MD treated with 2 -3 mile of levee
 - EBRPD asked if this would provide protection for the railroad tracks and pipelines east of the tracks.
 - In Sacramento, they have been doing this for years and their levee system has no agency that will handle it.
 - Have to consider P&E and other agencies, as well as the utilities that run through the area. Responsibilities and requests
 - What does P&E want to do?
 - There is a jet fuel line, electrical lines, high pressure 36" natural gas line, etc.
 - May do in stages, phased over time
 - A question arose around if an ecotone levee provides benefit or extends habitat.
- Levee Improvements
 - For 4' scenario, may need to improve levees in front of Cogswell and add a tide gate
 - Difficult to build levees in certain environments because levees weren't built to flood control standards
 - Materials and sediment might be difficult to transport
- Tide gates + Water Control Structures
 - Public Works is concerned about the loss of oxidation ponds
- Wastewater Treatment Plant Adaptation

- Endangered species habitat would be lost if you discharge into Oro Loma marsh
 - EBRPD questioned what to do about the habitat at Oro Loma Marsh- how do we plan to protect those species? To do so we'd have to control how much water is going in and out
- Short term you may lose some habitats
- Water board permit is difficult for horizontal levee discharge
- In Petaluma they have a marsh that acts like a park (reenline). In terms of water treatment needs, not sure if this is possible.
 - David doesn't see the water board or EPA getting on board with the reenline (walkable area) idea
 - Need more case studies to show how mild they are and beneficial
- Nearshore discharge would be less likely than maintaining EBDA pipeline
- Hayward is one of the only WWTP that can do wet weather discharge
- Open effluent channel along Oxidation ponds, transition from chlorine to treated / chlorine-free ponds
- Option 3 creates habitat issues - can treat all the water, but limits on pipeline
- Questions arose about the tide water coming in
- Potential to use as an education feature
- 2 pipes, large flow coming through
 - Palo Alto was the first area to try seeing how much water you can put through these types of pipes
 - They use reverse osmosis which makes water into brackish marsh
 - Treated osmosis water goes to San Jose, mostly
 - Want to bring that concentrate and try it through slope
 - Pump to the top of the slope (which is better than pumping it through Fremont, San Leandro; and cheaper)

- If the pipeline is overloaded at Hayward Treatment Plant, what would we do?
 - We put a lot of water into the pond- estimate 300 mil gallons (EBMUD)
- Flood Storage
 - Everyone seemed quite worried about losing flood storage capacity
 - The golf course area used some fill, not as much available as used to be
 - Could we use SkyWest to hold water, etc.
- roundwater
 - Ellen at SFEI noted that with the more levees and walls you build, the more groundwater you have
 - Diked ponds / stormwater ponds needed for groundwater storage
 - Pumping out-highly contaminated areas requires additional treatment
 - If more stormwater impacts upstream, reveals combined impacts of groundwater and SLR flooding downstream
 - How will clay-lined oxidation ponds respond to groundwater emergence?
- Cost and Feasibility
 - Commodities are going to keep costing more
 - At the treatment plant we've picked up the better part of 10 feet; a lot of fill to make fire roads etc. but we can't use that type of fill in a marsh because of the quality needed for marshes
 - Fill: where would it come from? Where would fill be stored and staged to use? Quality tested?
 - The acquisition of fill seems to be an area of big concern
 - Hazard Mitigation Funds for infrastructure projects
 - Create habitat to offset infrastructure mitigation. E.g. horizontal levee + marsh restoration. Potentially tap into large amounts of money through FEMA

03 Ecological Design Strategies

- Marsh and Mudflat Migration Planning
 - Connect Sulphur Creek to Skywest, since it would be hard to connect tidal flows under the rail tracks and high pressure gas line
- Fine Sediment Augmentation
 - Daphney Hash, ACFCD, would know about Don Castro pipeline
 - Network of pipes in marshes? As opposed to spraying from one pipe
 - Power for pumping sediment slurry from deep water navigation channel is very expensive!
 - Need a booster pump every 1-2 miles
 - Reference Dredge Reuse Feasibility Study for costs, Moffat and Nichol
- Tidal Marsh Restoration
 - Utilize oxidation ponds for wet weather equalization, open others up to tidal marsh restoration
- Diked Pond Management
 - Think about creating a riparian corridor at Skywest old Course
- Tributary Connection to Baylands
 - This is beneficial for marsh health from an ecological standpoint, but won't do much for flood protection or SLR adaptation- not an adaptation strategy, per say
- Fine and Coarse rain Beaches
 - Any of these would need spits, groins, or jetties to help trap sediment – like hayward and Johnson landing
- Ecosystem Enhancements
 - State of Estuary Conference- SMHM isn't really using upland transition zone. They are swimming around and staying put, due to predators or maybe competitors.
 - May be better to provide localized shelters? Small trellis- like structure for mice.
 - What will the agencies allow us to do if the habitats are essentially gone (ex: pickleweed all covered, etc.)

04 Policy Design Strategies

- Managed Retreat
 - More managed retreat and mitigation planning
 - Can we make sure the design solution doesn't prevent retreat in 50-100 years?
- Public Access + The Bay Trail
 - The "blue water experience" is artificial and overrated
 - Seems like you'd do all 3 options in some combo or sequence over time
 - Keep a link to the Interpretive Center with any Bay Trail realignment

05 Final Comments and Questions

- Louis expressed the desire to maintain a link to the Interpretive Center in all Bay Trail adaptation plans, as long as its current location and uses remain
- David noted that SCAPE has a lot of great ideas on the table

06 Key Takeaways

- Broad interest in the **time frame** of these strategies and the **combination of multiple strategies**.
- Need to define **what infrastructure is critical** and what is more adaptable to define adaptation strategies and **priorities**.
- Pair strategies together for **multi-benefit projects**, may be easier to secure funding as well.
- All strategy options from small to large seem like they can be **phased over time**- may end up doing them all, but in different time frames.
- Strategies should **anticipate combined impacts** of groundwater emergence, SLR, and upland stormwater- plan for additional future uncertainty.
- There is interest in **managed retreat**, but consensus that it may not be ready to be implemented yet. Should design the masterplan to not prevent this from happening in the future.

- This is a **community effort** and can't be done alone. Agencies should work together. When do projects become more of a **regional issue**? And who is responsible for implementing, and maintaining?
- Need for **local stakeholders** and **public** to **provide feedback** on the design and structure

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STAKEHOLDER MEETINGS

01/08/20 - 01/10/20

MINUTES

Date: January 8, 2020
Location: 399 Elmhurst St, Hayward, CA
Topic: Hayward Shoreline Master Plan
Attendees: ACFCD [Rohin Saleh, Hank Ackerman]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
EBRPD [Matt Graul, Chantal Alatorre, Mark Taylor]
City of Hayward [Taylor Richard]
H.A.R.D. [Adrienne De Ponte]
Doc'd by: Nick Shannon
Re: **ACFCD- Adaptation Strategies Discussion**

Action Items noted in **red**.

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

Alameda County Landfill

- Ownership
 - Hank noted that the county purchased most of the landfill. HARD is going to quitclaim the piece of land they own to the county, which the general manager at HARD is fine with
 - Mark noted that they will have to change the license agreement, since EBRPD maintains the Bay Trail, under an operating agreement with HARD
 - Hank noted they will likely give EBRPD an easement
- Future Plans
 - They attempted to put a 5 MGW solar plant on the landfill 4-5 years ago. They still intend to use the landfill for a solar plant.

- Hank expressed that the county does not want to use the site for any recreation
- Gena noted there are potential co-benefits associated with erosion control on the landfill edges and Bay Trail protection.
- Capping
 - Hank noted they still have to cap the landfill. This involves filling the northeast portion and removing / filling the concrete canoe.
 - They will not fill the landfill higher than it already is today.
 - Mark noted that the HARD section along the Bay Trail has a liner
 - Hank noted they have a licensing agreement with LMI to cap the landfill as they are able to. The county does not have the funds for all of the fill at once and they will do it as they can. (multi-million dollar project)
- Bay Trail Segment
 - Hank indicated he imagines they will raise the roads to the N and S of the landfill, as well as the Bay Trail, as sea levels rise
 - Mark noted the Bay Trail has been raised a few times already
 - The elevation of the Bay Trail over time could be a viable erosion control strategy

Rohin noted that it is difficult to evaluate the strategies when you don't have a frame of reference.

- In terms of frequency, you have to evaluate how often water will get into an area, which will change the strategy. 7' (MHW) vs. 9' (King Tide) changes the strategy.
- Rohin requested to associate the plan with the elevation *and* frequency of tidal inundation
- Gena noted that we have developed these options based on tying back to daily tidal flooding with the various SLR scenarios

Design Flood Elevations

- Flood control is interested in how far you will go to provide a level of protection
 - For FEMA certification, elevation has to be at least 2' above existing 100 year event

- Flood control has to meet the minimum FEMA flood protection for any project, and be adaptable to sea level rise.
 - Hank noted that wave runoff will be higher in shallower areas
- Rohin noted that as a frame of reference, flexibility and adaptability is a key issue. We all have to be on the same page to make sure the projects fit together and are designed to the same elevations and level of flood protection.
- Mark asked if flood control is looking at flood control storage or raising levees
 - Hank noted that Rohin is analyzing the past 50 years of records. They can't build enough pumps to get the water through a flood protection levee. A critical issue is where you get the land for the ponds to hold the water as it's being pumped out.
- Adrienne and Matt brought up looking at SLR across the Bay at a regional scale and the coordination between agencies.
 - ACFCD is a part of CHARG, which is thinking about the larger discussion around regional coordination.
- Gena asked if flood control has a recommendation for the level of protection
 - Rohin noted that they are evaluating that question now.

Don Castro Sediment

- Gena noted that it is imperative to have any tidal restoration project raise the pond as high as possible before restoration. Is there a possibility to pair the Hayward Marsh restoration with the Don Castro sediment pipeline?
 - Hank noted they are trying to find the money to proceed with the project, but they need a grant.
 - Hydraulic dredging and pumping (around \$12 million) is cheaper than trucking (around \$24 million)
- Hank noted the possibility of getting an agreement to get infrastructure in place on access roads, then bring in pumps and dredging equipment when needed.
- Matt noted it depends on the timeline where you take the sediment- 10 years down the line, Oro Loma Marsh may need the sediment
- Rohin noted it is cheaper to dredge into the creek, then pump further downstream.

- Hank noted they may be able to do this in the concrete lined portion, not the natural creek

General discussion

- Mark asked about plans for the tide gate at Bockman and if they would need the extra storage space.
 - Rohin explained that the storage capacity in the channel is negligible.
 - Rohin noted they are looking at moving the tide gate at Bockman inland because it will get inundated with SLR. However, if Oro Loma marsh was muted, they wouldn't have as much of a problem with its current location.
- Rohin noted that with inundation, metered wetlands are ideal
 - Gena noted that chambering is good for tidal action, however we know from SFEI that it is not a recommended strategy, as it cuts off ponds from sediment and impacts marsh health negatively
 - Mark noted there may be a combination of strategies- keep the wetlands tidal as long as you can, then mute them later on

Next Steps & Questions

- Rohin noted they would like to work jointly with the City and HASPA. One of the main drivers is cost.
- Rohin noted that some of the scenarios look very probable
- Rohin noted that flood control is working with Arcadis to model the upland stormwater flow for infrastructure improvements.
 - **In a month or so ACFCD will be able to share a draft of the data.**

03 ACTION

- **ACFCD to share the upland stormwater flow modeling with SCAPE once it is ready in a month or so**
- **SCAPE to review the master plan alternatives with ACFCD once they are developed (March-April)**

MINUTES

Date: January 8, 2020
Location: 1099 E St, Hayward, CA
Topic: Hayward Shoreline Master Plan
Attendees: H.A.R.D. [Adrienne De Ponte, Rick Hatcher, Minane Jameson, Paul McCreary, Jim Wheeler, Jacqui Diaz, Debbie Hernandez]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
EBRPD [Mark Taylor]
City of Hayward [Damon Golubics, Taylor Richard]
Doc'd by: Nick Shannon
Re: **H.A.R.D.- Adaptation Strategies Discussion**

Action Items noted in **red**.

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

Review of Adaptation Strategies

- Paul noted they are currently finishing the final CD's of the second phase of reconstruction of San Lorenzo Community Center Park

Hayward Shoreline Interpretive Center Relocation

- Rick noted it seems like the main concern is access, are they weighted?
 - Nans indicated that once we start to combine the strategies, we will pair these options with the raising of roads, etc.
- Jim noted that the barge is the coolest idea
- Jacqui noted that the key is transportation. Everything is going to be inundated, and it is so close to the CalTrans highway that will be fixed.
 - Tying into the CalTrans improvements, and raising key access points, could be a potential path forward

- Jacqui noted she attended a SBSP presentation and asked if there is any tie-in with this project
 - Gena noted we have met with Dave Halsing and he has been a part of the discussion
- Minane noted she is thinking in terms of more near-term, 30 years. She would like to see more of a big-picture outlook of what the broader climate will be (precipitation, temperature)
- Rick indicated the direction of a 3-tiered approach, to prioritize programming first:
 - Existing plan and site location, ramifications, costs and programming
 - Smaller location sites to program the entire region
 - Existing projects and improvements to address access
- Gena noted this seems like a useful next step, to analyze the options based on the 3 alternatives
- Nans brought up the idea of phasing. Up to 2' SLR, the building may be used as-is, but to start thinking of a more permanent location option with longer-term projects.
- The constellation idea of the Interpretive Center program was brought up as a way to have satellite / mobile locations for programming along the entire shoreline
 - Jim noted it would be interesting to magnify the diversity of the unique shoreline environments and pilots/satellites
- Minane noted that the CCC won't fund improvements in high risk areas. What types of funding will be available? Based on the level of protection, etc.
 - Rely on the master plan to go to the agencies to go after a grant
- Adrienne asked if you can legally convert or abandon habitat
 - Mark noted if you look at it long-term, or other habitat, they may support it on the bigger scope
- Adrienne asked if there are any mitigation obligations in perpetuity for the HARD Marsh
 - **HARD to look into any mitigation obligations**
 - Matt noted it may be possible to relocate mitigation

Next Steps & Questions

- Minane expressed that there are a lot of options and that she is counting on the design team; the Board will decide on the money. It does feel harder than expected. Would appreciate any cost indications (4x as much as another option, based on our experience). Numbers will be very important
- Gena indicated that the current thinking, phasing, and timeline may be more important. It is a vision guidance document, not a bid package

03 ACTION

- *HARD to look into any mitigation obligations for HARD Marsh*
- *SCAPE to review the master plan alternatives with HARD once they are developed (March-April)*

MINUTES

Date: January 9, 2020
Location: 111 Grand Ave, Oakland, CA
Topic: Hayward Shoreline Master Plan
Attendees: CalTrans [Dick Fahey, Hans, Khai Shoon Leong, William Velasco, Albert]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
EBRPD [Matt Graul, Chantal Alatorre]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard]
Doc'd by: Nick Shannon
Re: **CalTrans- Adaptation Strategies Discussion**

Action Items noted in red.

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

San Mateo Bridge Landing

- Hans asked if the team is looking at raising the whole bridge
 - Nans noted that for this master plan, we are only talking about the mile stretch between the toll booth and Clawiter road (about a 1 mile stretch)
 - Gena noted that any ideas we think of on this end of the bridge will likely have to coordinate with the western landing
- Dick asked if the floating bridge in Seattle is on a lake
 - Nans confirmed it is. In the Bay, the tidal range is a lot bigger
- Dick noted that they have an internal SLR task force in the district with representatives from all key functional areas. He sent the draft package out to everyone in the task force. From a planning perspective, they have branches doing long range planning. (Transportation concept reports) They do like to see

all of the concerns and options and will likely fold what we do into the concept report. From a planning perspective, this is fine.

- Khai noted that in option 1 and 2, the bathtub effects aren't as big of a problem. SR-44 built flood walls with underground storage and one pump station. Drainage issues aren't as big of a con.
 - If groundwater was emerging, flood walls/levees wouldn't be an option since you can't keep the roadway at that elevation anymore. Purely talking about surface flow, these strategies aren't a problem for creating a bathtub effect.
 - Khai noted there have only been some subsurface drainage improvements to deal with groundwater thusfar.
- Options 3,4, and 5 are more challenging since they change the current alignment.
- Khai noted that for option 3, you may be able to do in the same alignment. They have done it before. If you take 2 lanes, build an embankment, and keep doing that. It would require a lot of public outreach to have people take alternative routes.
- Dick asked if you could construct option 4 while maintain the current alignment
 - Khai indicated you might not want to, since you will have things falling down from construction regardless.
- Gena asked how CalTrans would elevate the road.
 - Khai noted that maintenance may prefer its current alignment.
- Hans noted that CalTrans is going to remove the toll booths and make it all electronic
- Dick noted he didn't get any comments from maintenance
- Gena noted that Interpretive Center upgrades would need to be highly coordinated with any CalTrans improvements.
 - Nans indicated that in the levee scenario, building a levee on top may provide road access to the center. There is interest in creating synergies across agencies to create co-benefits across projects
- Gena asked if CalTrans uses the maintenance access roads to the North of SR-92.

- Dick mentioned he can check with the maintenance/bridge inspection teams
- Gena noted to double check elevation of the rest of the bridge W of the toll booth. LIDAR data usually doesn't account for bridges.
 - Dick noted that this happens a lot with their SLR maps.

Next Steps & Questions

- Gena noted that partnerships could begin to emerge now to create projects and apply for grant funding, etc. and asked how CalTrans would like to see the bridge approach represented in these alternatives.
 - Dick noted that from a planning perspective, since there isn't funding and it's not an implementation plan, he doesn't have a problem showing multiple alternatives and options
 - Khai indicated it's more likely if you put down the options clearly, the public expects it to happen. Don't put anything too specific down.
 - Gena noted that the preferred alternative may state: adaptation required, further study required by CalTrans, and indicate a fuzzy zone, while stating the pros/cons of multiple options.
 - Dick noted that this approach seems quite reasonable.
 - Hans noted that if the CalTrans team feels any options aren't feasible, we should discard those options.
 - Dick noted he can do further internal outreach to get feedback.
 - Dick requested an updated presentation to describe and display the options to share.
 - Gena noted we can share a curated selection of slides now, and in early March we will share the combined alternatives for review. Stakeholders will get to see the alternatives first.
 - Gena noted that the three options may be: causeway, another with a levee on the north side with interpretive center access, and one showing the bare minimum. All 3 could be carried forward as a fuzzy hatch in the proposal.
 - Dick noted that this sounds reasonable

03 ACTION

- *CalTrans to check with maintenance/bridge inspection about use of the maintenance access roads to the north of SR-92 bridge landing.*
- *CalTrans to circulate adaptation strategies to their internal team to get feedback on the feasibility of the options.*
- *SCAPE to review the master plan alternatives with CalTrans once they are developed (March-April)*

MINUTES

Date: January 9, 2020
Location: 2655 Grant Ave, San Lorenzo, CA
Topic: Hayward Shoreline Master Plan
Attendees: EBDA [Ian Wren, Jacqueline Zipkin]
Oro Loma [Jason Warner]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
SFEI [Jeremy Lowe]
SFEP [Heidi Nutters]
EPA [Luisa Valiela]
HARD [Adrienne De Ponte]
EBRPD [Matt Graul, Mark Taylor]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard]
Doc'd by: Nick Shannon
Re: **EBDA/Oro Loma WWTP- Adaptation Strategies Discussion**

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

- Jackie will be used as a point person for any document sharing moving forward.

Adaptation Strategies

- Luisa asked if there are any subtidal design features in any of the strategies
 - NV indicated that any oyster reefs have to be far offshore, they may subside, and are not a huge priority but the team is looking at subtidal design strategies as well. The just may not provide as much erosion reduction being so offshore.
 - Matt noted that subtidal elements may not be standalone features on their own but they would likely be more of an add-on to other projects

Ecotone Levee

- Ian noted that the former oxidation ponds being considered for shallow water treatment. Option 2 of the ecotone levee aligns with their ideas.
- Jackie noted that they also have a grant to look at the oxidation ponds and evaluate the feasibility of a portion of the ponds as seasonal wetlands and/or wetland treatment function during the dry season
 - Nans noted that we do have this option under WWTP adaptation strategies
- Nans asked if Oro Loma is looking at isolated perimeter protection
 - Jason noted that their view is, being so far out in the marsh, it is hard to do a horizontal levee around the treatment plant. The sludge ponds are more debatable and have a lot more room to have a natural levee system.
 - Gena asked if there is opportunity to relocate the sludge pond function?
 - Jason indicated that many plants don't have them, so there are alternatives.
 - Gena asked if there are overlaps between 1st mile project and these options.
 - Jackie noted they haven't decided where the project should go yet.
 - Jason noted the expectation is that it is along the rail corridor
 - Nans noted that we can't tie back along Bockman, and have to go north of the project area in ecotone levee #3.
 - Gena noted that another consideration at Bockman is a breach and levee break to enhance marsh salinity/freshwater gradient.

Transforming Shorelines First Mile Project

- Jackie noted they are in the very early stages of the First Mile project. It is funded through an EPA grant to do design and permitting of a horizontal levee. The exact length and location is to be determined.
 - Jackie confirmed it is in generally the area we have been showing

- The idea is to advance the concept from the EBDA/Oro Loma perspective
 - They intend to issue an RFP in the next month or so for a design consultant
- Jackie noted that it would treat a very small amount of wastewater, based on the demonstration project. Part of the grant will be to define how much is feasible to treat in this area. There isn't a scenario where all of EBDA's wastewater could be treated through these features
- Adrienne asked about freshwater impacts to the gradient and ecology
 - Nick and Jeremy noted that the idea of the horizontal levee is to provide a transition zone with native upland vegetation. This wet meadow condition historically occurred throughout the Bay and provided a freshwater seep that created a brackish zone. Jeremy indicated that the freshwater seepage over the slope actually inhibits the growth of invasive species.
 - Jeremy noted that the horizontal levee started out as an enhancement to marsh restoration projects in the South Bay, as part of a transition zone to buffer storm surge.
 - There is a problem with habitat conversion, extending fill into existing marshes. This is a question BRRIT is having to deal with.
 - Jason will send Adrienne a list of plants used at the Oro Loma demonstration project.
- Mark indicated that the levee cross section would be different for fresh/salt water plants
 - Ian noted that you could incorporate a clay cap for long-term migration with SLR where you can't get freshwater
- A mitigation project for the Port of Oakland on the northeast corner of Oro Loma Marsh was raised as a concern
 - A conservation easement may be in place. Would a marsh / ecotone levee impact this?
- Ian noted that a paper is being released soon on the water question, and what slope you'd need to maximize treatment.

- Ian noted that EBDA is also working with SFEI to assess potential for nature-based WWTP solutions regionally across the 37 plants in the Bay

Levee Improvements

- Gena noted that flood control indicated they will support large-scale levee improvement projects that are certified by FEMA
- Jeremy reiterated that it would likely require separating the FEMA certified engineered levee and that on one slope would be the seepage slope. It would be relatively short, and you could separate the uses with an impermeable membrane to stop water from seeping down into the slope of the flood risk management levee. Questions have arose around how to certify/engineer the levee.
 - Jason indicated that at the back of the horizontal levee would be a FEMA certified levee. You wouldn't built a horizontal levee without one

Wastewater Treatment Adaptation

- Jason indicated that in 50 years from now, wastewater will be used to drink. You don't need an outlet for the water unless there is a good ecological reason.
- Jason brought up pumping 'urban drool' over the horizontal levee to enhance water quality before it enters the Bay. This polluted runoff may not be as feasible to drink and using the horizontal levee for treatment may be a more likely scenario.
- Jackie noted that the water board permit is not as difficult to obtain- may be the least of the problems. She is interested in case studies and opportunities. Other permits are more restrictive
 - Matt brought up problems with the NPDES permits
- Ian indicated that option 4 for WWTP Adaptation isn't an overly optimistic scenario

Diked Pond Management

- Gena noted that for the oxidation ponds, we are also looking at habitat relocation from Oliver Salt Ponds (which may be restored to marsh)

Next Steps & Questions

- Ian indicated to maintain the 1st mile as a more consistent option throughout. For the oxidation ponds, the options outline seem consistent, and allow for more flexibility.
- Jackie noted that in a few weeks, we could talk again about our thinking and get feedback on the preferred alternatives. Also to be sure to coordinate in the future to be sure the First Mile doesn't propose anything different.
- Jason indicated that our design team is driving, and they will build the project based on what we decide collectively.
- Jason indicated that at some point, the cost of levee per LF will make or break the decisions
- Jackie asked the best way to move the conversation forward.
 - Nans stated that we can share the Task 4 report with the adaptation strategies today. In early March, we will have initial alternatives, and that will be a good next point of contact. If we have questions, we will reach out in advance of that timeline.
 - Jackie reiterated that the interest is to advance what we collectively think is the best opportunity
- Matt noted that once we have the alternatives, they will share with their boards to get feedback and there will be an ongoing discussion during that time period
- Adrienne noted that interpretive trips, educational outreach, and public buy-in will be key in all of the strategies

03 ACTION

- *SCAPE to review the master plan alternatives with EBDA + Oro Loma once they are developed (March-April)*

MINUTES

Date: January 9, 2020
Location: 4901 Breakwater Ave, Hayward, CA
Topic: Hayward Shoreline Master Plan
Attendees: HASPA Board of Trustees [Al Mendall, Dennis Waespi, Minane Jameson]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
HARD [Adrienne De Ponte, Debbie Hernandez, Jacqui Diaz, Rick Hatcher]
EBRPD [Mark Taylor, Chantal Alatorre, Matt Graul]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard]
Doc'd by: Nick Shannon
Re: **HASPA Board Meeting- Adaptation Strategies Presentation**

Action Items noted in **red**.

01 SUMMARY

- Adaptation Strategies Presentation (schedule, since we last met, adaptation strategies, master plan assumptions)
- Next Steps & Questions

02 DISCUSSION

Fine and Coarse Grain Beaches

- Al asked if gravel beaches are as wide as a levee
 - Gena noted that they could be placed in front of a levee
 - Coarse gravel is more suited for the estuary condition and require less footprint.
- Minane asked about what size of rock would be used for the beaches
 - Gena noted that more fine-grained gravel would be likely. The final grain size would be determined based on wave action, containment structures, and design intent.
- Dennis noted that armoring the landfills- aesthetically, environmentally, leaching into the Bay? Have post-closure agreements.
 - Gena noted the potential of another option as risks increase. The question now is if gravel beaches are enough? Or to consider more

conventional techniques, such as raising the levee. But there are funding and partnership opportunities.

- Mary noted the con of replenishment aspect. Is there a life cycle / how far out do you forecast the design life of a beach?
 - Gena indicated it depends on the design life. Nobody knows that because it hasn't been piloted yet. It could be a short-term project that extends the lifecycle of a resource

Diked Pond Management

- Al noted that all of the diked salt ponds strike him as an unnatural state. These strategies should be thought of in a way that provides greater resiliency over time.
- Gena noted it is very practical and sustainable to retire salt pond habitat, move it to another portion of the site. The habitat is very important and historic.
 - Adrienne noted there is snowy plover habitat at Oliver Salt Ponds now, which is a threatened bird. It is also a CA designated historical landscape with historical remnants. HARD did a mitigation project in 2001.
 - Matt noted that if we did something like that, have a lot of great plover habitat in Hayward Marsh- have to coordinate and there may be tradeoffs.

Fine Sediment Augmentation

- Dennis brought up Lake Chabot and sediment management.
 - Matt noted that ACFCD said it would be around a \$20-25 mil project for the Don Castro sediment pipeline. If you have the infrastructure in place, you can use it over time long-term, which is almost what we need.
 - Gena noted that this project may be a win-win-win for a grant project (flood control, ecosystem adaptation)
- Rick noted that in the natural ecosystems, that sediment is supposed to be going downstream.
- Al asked if it is possible to consider WWTP as a source of sediment

- Gena noted that may be a lot farther off, since the biosolids dissolve more easily in water and don't have the same mineral quality marshes need to adapt.

Ecotone Levee

- Dennis asked if there would be some level of protection in the front, which would eliminate the Bay Trail
 - Nans clarified that this would not necessarily be the case.

Tide Gates & Water Control Structures

- Nans clarified that these options are not mutually exclusive

Wastewater Treatment Adaptation

- Al asked if these options can accrete sediment
- A concern about keeping a wet transition zone was brought up- it does create mosquito habitat. Willow, riparian issues.
 - Nans noted that the plant palette selection may help
 - They are monitoring at Oro Loma, but there are mosquito issues
 - As the land subsides, more breeding happens in those areas. You need a monitoring plan
- Mark noted that the Oro Loma pilot is full of almost all invasives
- Gena noted that we will be editing the last 2 diagrams to reflect the solar fields and biosolids ponds, to maintain those uses.

Land Elevation

- Nans clarified this is not recommend in a large-scale, but more of a planning or zoning overlay.
 - The land would may be elevated 2-7'

San Mateo Bridge Landing

- Damon noted that CalTrans was amenable to all 5 options.
- Gena noted it is unlikely CalTrans will support a single option, but we may designate a zone for bridge adaptation.
- The causeway is the most expensive, but most ecologically beneficial.

Public Access & the Bay Trail

- Mark asked if we would you want to go around the oxidation ponds with the trail.
 - Gena agreed. SCAPE will update that diagram.

Hayward Shoreline Interpretive Center Relocation

- Remaining lifetime on structure?
 - Adrienne noted that the structure is fine, we just don't know how long it will take to be inundated.
 - Gena noted that we don't have any structural analysis/architect reports. The next step would be to analyze structure to define critical points of decision.
 - It was constructed in 1986 and all utilities are underground and inundated frequently.

Closing Comments

- Al is pleased to see the change in scenario thinking... initial A and C are impractical. He likes the idea of having natural projects near the Bay and moving levees / engineered solutions back.
 - Inland ecotone levees with effluent discharge is at top of the list- expensive but it does a lot of good, opens up potential funders of projects. Hopes this is part of a couple of the alternatives
 - Skywest as water retention basin seem like an unrealistic possibility?
 - Erik noted that public works has concern about it as well.
 - Would be nice if one of those three options was a low-budget option. There are no dollar figures on any of this, which has to be fixed. Give an order of magnitude. It is essential to make a high-level decision on what is feasible.
 - For the TAC team and as a policy and decision maker, it is not going to be useful without any costs associated.
- Dennis noted that he likes the nature-based solutions, and ecotone levee.
 - Love the idea of sediment, makes a lot of sense.
 - Concerned with the Bay Trail. Relieved to think they would leave Bay trail in place to maintain blue water experience (very important, especially in the south Bay). Keep it in until it washes away.

- Agrees with Al- we have to figure out the ability to get grants and permitting.
- Gena clarified that we will think about alternatives over time, when projects have to be phased, and identify partners and larger effort projects versus major expense projects. Because of the feedback we've gotten, all of the alternatives require large infrastructure investments and are costly.
- Minane agrees with Al and Dennis- keep natural assets, aesthetics, support wildlife, and the Bay Trail.
 - Couldn't help with choosing an option, but relies on those who know in choosing a way to handle this. It gives hope that we do have options, hopes we have them in 10-20 years down the line.
- Rick noted the responsibility as a leading agency in the area to deal with these issues. There is now a wealth of information and there needs to be a hybrid, phased approach. It is a 30-50 year process, but we have a place to start.
 - Program first for what the needs are.
 - Include outside agencies and areas outside the study area
- Al noted he sees this as a 20-30 year time frame
 - Gena noted that the time range is fluid, depending on the level of risk associated to each asset. We are looking at 4' SLR but will identify projects that need to happen with 2'.
 - Al noted that we have more time than he thought
- It may be reasonable to keep Managed Retreat in the plan, then state the projects you might not have to do, which would be valuable information
- Mark noted there will have to be a considerable amount of coordination between agencies and adjacent cities
- Matt noted the potential reuse of stormwater over the ecotone slope to treat water before it enters the Bay

03 ACTION

- *SCAPE to present the master plan alternatives at the next HASPA Meeting on April 9.*

MINUTES

Date: January 9, 2020
Location: 3700 Enterprise Ave, Hayward, CA
Topic: Hayward Shoreline Master Plan
Attendees: Hayward Public Works [David Donovan, Jan Lee]
CalPine / Russell City Energy Center [Cameron White]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
HARD [Adrienne De Ponte]
EBRPD [Mark Taylor]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard]
Doc'd by: Nick Shannon
Re: **Hayward Public Works / CalPine Russel City Energy Center-
Adaptation Strategies Discussion**

Action Items noted in red.

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

Diked Pond Management

- David brought up stormwater detention show in these options, and that as a wastewater storage pond, the water is technically unchlorinated and can't meet permits for full discharge. Since it's not fully treated, they have to still chlorinate and dechlorinate.
 - He'd like to maintain the ponds for this function
- You can't call it habitat per say, since it's not managed for species. There is a lot of water foul on the islands, and they are providing habitat, just opportunistically.

- Jan noted that the amount of space needed varies depending on their needs- sometimes there is more flow, sometimes less and the volume varies year to year.
 - Jan noted she sees a dramatic reduction based on the diagrams
 - Nans noted that these options may pair with levee raising to maintain the capacity.
- JL noted that based on a new agreement with EBDA, they can only discharge 35-15 MGD, so they need more storage capacity
 - The reduction of discharge into the EBDA pipeline from the Hayward WWTP indicates that other cities now have more EBDA discharge capacity.
- 500 million gallons is the current discharge capacity. Need to maintain this at a bare minimum.
- Today, they have small pumps (water levels up to 5', can take back to 2' deep). Then the plant relies on evaporation, then there are mosquito issues with standing water.
- David noted that they have to get to a certain depth until they bring it back to the system.
- Mark asked if the ponds are only used for wastewater, and not flood control
 - David confirmed. Their permits only cover the wastewater treatment uses. They can't manage other water, since it has different contaminants.
- David and Jan don't prefer any of the options, besides 1, which would maintain their current uses

Ecotone Levee

- Jan likes option 2 or 3 to preserve the oxidation ponds.
- Cameron confirmed CalPine isn't moving. It is currently out of flood plain and raised higher than the Hayward WWTP
- David noted that for stormwater, there are roughly 4 or 5 4-5' diameter pipes, and his guess is that they're pushing a decent flow.

- David questioned if the oxidation ponds are even viable for the amount of water they need to control? They are willing to be a team player, just wondering if there is feasible capacity
- David noted that if the EBDA pipeline is decommissioned, they would try to have ALL of effluent discharged locally. They originally discharged into Line A. In support of a treatment marsh then discharge into the Bay
- David raised a concern around putting oyster beds in the Bay- if they are there the permits would not allow near shore discharge.
 - Nans noted that the feasibility of oyster reefs may be hard, and subside or sink into the mudflats.
- David indicated support for a horizontal levee and near shore discharge.
- Mark noted that that water will be a lot more valuable (drinking water, etc) in the future in 40-50 years.
- Jan noted that If EBDA can continue, it is the cheapest option around.

Oxidation Ponds

- The ponds were used in their JPA agreement with EBDA. Now with the new agreement, they have to regulate their own flow to give EBDA pipe capacity
- David indicated they are not able to give up ponds during storm surge, if the levees were to overtop. Anything put in the pipes, they need to meet the permits- if Bay water gets into the ponds, they can't treat it under current permits.
- David noted that they are clay lined ponds and groundwater emergence isn't as much of a problem.
- David noted they are not opposed to getting rid of the oxidation ponds, but it depends on EBDA.
- David noted that they get up to 1"/day of evaporation from the ponds and they generally do add in flow to them regularly, opening up the flow nightly.
- Nans indicated that the real opportunity is if EBDA was decommissioned, they would generally not need the use of the ponds as much.
 - David confirmed, if they are equipped to do near shore discharge
- David indicated that ecotone levees can get submerged/flooded and easily drain to be used for nutrient removal soon after

Wastewater Treatment Operations

- David noted that at their current level of treatment, they can treat the entire flow during storm events, before it gets to the ponds.
 - After tertiary treatment, where more nutrient removal occurs, which is still non-potable, then they can do near shore discharge
- The plant would need 100 mil of upgrades to do full nutrient removal, and upgrade another 50 mil for near shore discharge
- David noted that if you put water back into the aquifer, it has to meet potable standards. Their plant would have to be larger in size to do so.

CalPine / Russell City Energy Center

- Cameron noted that the design life of the plant is 30 years, but it is not uncommon for them to go to 40/50 years. It was built in 2013 and is now one of the most important power plants in northern CA.
 - Natural Gas power plant fed by a pipeline that comes in
 - Taps into the larger pipeline along the rail and comes in along Depot Road.

Conclusions

- Need to maintain all of the functions, and storage capacity. Varies on the microclimates, if there are larger storms, will have to store more.
- David noted that the plant goes offline for a few days during strong storm events to open up more capacity in EBDA pipeline for other treatment plants to evacuate their systems
- In the future, it comes down to a combination of building additional infrastructure, adding additional storage, and needing more flexibility.
- David noted that in their current operations, the ponds are off limits. If it becomes cheaper to get current operations off of the plant, that story may change.
- It all comes to tradeoffs / cost-benefits, and the ability to maintain core functions

03 ACTION

- *SCAPE to review the master plan alternatives with Public Works + CalPine once they are developed (March-April)*
- *SCAPE to invite Alex to the stakeholder meeting in March*

MINUTES

Date: January 10, 2020
Location: BCDC Office
Topic: Hayward Shoreline Master Plan
Attendees: BCDC [Jessica Fain, Dana Brechwald, Anniken Lydon, Walt Deppe, Julia]
SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
EBRPD [Matt Graul, Chantal Alatorre]
City of Hayward [Damon Golubics, Taylor Richard]
Doc'd by: Nick Shannon
Re: **BCDC- Adaptation Strategies Discussion**

Action Items noted in red.

01 SUMMARY

- Project Update (schedule, since we last met, master plan assumptions)
- Review of Adaptation Strategies
- Next Steps & Questions

02 DISCUSSION

Fine and Coarse Grain Beaches

- Anniken asked about longshore transport in this area. Through BRITT, there is a proposal for a cobble beach that has a system of 5 groins set up. They have to find a way to show the beach utilizes the min. amount of fill you need for that form of protection, since there is no modeling of wave attenuation from the oyster reefs proposed.
 - If SCAPE wants more information, we could contact the Port of SF- this cobble beach at Heron's Head Marsh is now an active project in India Basin.
 - Herons head isn't talking about material replenishment. However, Anniken thinks they will get a significant amount of longshore transport. Anniken noted that there is a seeding feature upstream in transport that would replenish the beach over time, but there are no plans to actively replenish that amount in the future. Crown beach is on

a 20-year cycle nourishment cycle- they truck sand back to elbow of the beach.

- Gena noted that this project is at the master plan level and we will likely not get to that level of detail yet to know any further detail on the long shore transport conditions.
- Anniken: Beaches do provide more habitat and BCDC does have an active application for them. It is on the table and they do consider it in the policies.
- Anniken posed concerns about a beach cutting off water and sediment flows into the marsh. Nans noted that the channels would be maintained. Anniken reiterated to make sure the flow is maintained to the marsh.
- Walt noted there is a provision in the new fill for habitat policy for fill for these types of habitat projects.
- Gena questioned whether BCDC would have a preference for using gravel beaches in front of natural or built assets.
 - Anniken noted that it seems like if you place the beaches in front of the existing levees, it wouldn't impact the existing marsh habitat. However, you would be impacting mudflats in both cases. Anniken doesn't think they would have a preference for beaches in front of natural vs. built assets.
- Gena noted that because the erosion performance of beaches is somewhat unknown, our team may study using them in front of natural assets where they naturally used to occur. However, we may still test them in front of Oro Loma to study their performance for future applications in front of built assets.
- Walt reiterated that understanding the properties that impact longshore transport will impact where to site the beaches. It would be ideal to locate them where it might help you learn something.
- Anniken noted that the biggest issues are how many groin structures you have to use and whether you need to be constantly moving the sand. If it happens at a fine scale if you will have a lot of them. Fill for gravel is viewed more positively than fill for a groin structure.
 - Incorporating a reef-type rock or structures in the groin itself so the groin is providing some type of habitat is beneficial from a regulatory

perspective. Scouring into riprap to create microtexture. This would help make the fill serve habitat purposes.

- Walt asked whether we are considering fine or coarse grain beaches. Gena noted that this will likely require more analysis and that the master plan will likely keep it open to allow for flexibility. Further analysis would inform the grain size if this becomes a project that moves forward.
 - Walt noted that we will need a substantial coastal engineering analysis and to think about possibilities for public access.

Tidal Marsh Restoration

- Walt asked if Oliver Salt Ponds is an active salt pond. Gena clarified that they are not but they do hold active habitat sites for breeding shorebirds.
- Anniken asked if there will be a combination of these strategies. Gena noted that we are about to move into that phase and that we will come back for further discussion once the alternatives are developed.

Fine Sediment Augmentation

- Walt noted that his gut reaction is that sediment from a more direct upland pipeline may be more suitable to minimize that amount of fill and lessen impacts to the mudflats.
- Gena noted that this is not a strategy we expect to implement today, but maybe 20 or so years in the future.
- Walt noted that it also depends on matching the sediment type.
- Anniken: potentially a thin-layer placement study by USACE. Her understanding the study is just a planning document and they do not have any money for implementation. Sediment is a precious resource. If you know only a percentage is going to make it on the mudflats, it may not be as positive. If you can show that a greater portion of the sediment is going on the mudflats/marshes, it is more likely.
 - There have been studies and modeling around placing sediment in marsh channels, but only a small amount makes its way on the marsh itself
 - To get placement, you need a barge involved placing it there, or a pipeline

- Gena asked if there are any recommendations on how to sustain marshes over time, since it is a pretty dire situation with SLR.
 - Walt stated that marshes are still important as buffer zones for inland communities. There could be creative about thinking about the sediment system holistically- concrete flood control channels, ways to enhance the amount of sediment brought from upland sources.
 - Gena noted there are no significant sediment sources in these channels. However, we are still looking to connect them into diked baylands.
 - Matt noted that there may be more water quality benefits to the Bay through connecting the channels, and marsh nourishment.
- Gena asked about upland nourishment. Anniken noted that Brenda is a good person to talk to about this. Her team will be working on it, especially with dredge material / thin-layer placement.
- Gena asked about how the Hayward Shoreline marshes are viewed in relation to other sites that could use more material. Anniken noted she don't have answer to that necessarily but it is a great question. There is only a finite amount of dredge material. Today the dredge program doesn't view one site better than any others and that it may become more project proponent driven- maximizing the marsh protection benefits from beneficial reuse projects. There will be so much need in the future and it will come down to prioritization.
- Anniken asked if the stakeholders have noted any marshes to prioritize? Maybe adding more marshes you can't sustain is counterintuitive. Gena responded that we have been advised by SFEI that the most sustainable thing you can do is to restore diked baylands to marsh so those ponds can accrete over time. Otherwise they will keep subsiding and be unfeasible to maintain. As much as possible, we should let the systems convert, but they may not necessarily accrete at the pace you may hope.

Ecotone Levee

- Gena noted that the main questions we have about ecotone levees is habitat conversion and the scale of strategy.

- Anniken noted that BCDC does have policies that talk about transition zones. Habitat impacts are more of an Issue for the resource agencies. Depending on where you place the fill, it may not be in BCDC's jurisdiction.
 - If it is in a tidally influenced marsh, it is in their jurisdiction.
- Anniken noted it is nice to see the idea of pulling back the line of protection to create a layered system. If you have any drowning of marsh, you do have some space but recognize there is a back stop where you can't migrate any further. They do have policies that are in line with this.
- Walt reiterated the jurisdictional question is big for these options. If you are not in a tidally influenced wetland, the shoreline band jurisdiction may be easier from a regulatory standpoint, but BCDC will still look at impacts to species of tidal marshes that still use other wetlands. Alignment that is out of the BCDC jurisdiction may be easier.. Anniken noted that if it is necessary, and you can show it is the minimum amount of fill necessary, it may be preferable in their jurisdiction if it creates a better project. It will just require more justification. She would hate to see it not serve the purpose to avoid potential regulatory impacts.
- Walt brought up that when SLR gets past 2-4', what do you do after that? Think about if you need extra room in the back for future lifting.
 - BCDC's policies for climate change state that projects have to be resilient to mid century SLR (2050). Shoreline protection is based on the life of project. You have to show adaptability, and a suite of adaptation options for 2100.
 - Med-high risk level with high emissions.
 - **2050:** 1.9' SLR + 100 year storm
 - **2100:** 6.9' SLR + 100 year storm
 - For landfills, you will want to use a higher risk scenario
 - Look at ocean protection guidance.

Wastewater Treatment Adaptation

- Walt noted that for the oxidation pond, they don't know the jurisdiction of them. May be in the shoreline band.

- Anniken noted that BRITT has 3 projects proposing partial treatment of wastewater, under a different jurisdiction than the water board. Would have to look at history of land use in the area to know what jurisdiction is.
- Walt noted that if you look at section 66610 [McAtter-Petris Act](#), on website, you can see what the jurisdiction is and what trigger it.
- Anniken noted that even if the water board doesn't issue a water quality for the project, they may still issue NPDES permit. EBDA has one for their outflow. The City of San Leandro is going to do their own NPDES permit acquired by the water board for discharge.

Public Access & the Bay Trail

- Option 2 is the most preferred. If you build an interior system, don't abandon the existing alignment until it is compromised.
- Walt reiterated that maintaining even a spur trail out the Bay is important. Access to gravel beaches may be feasible and good to think about. Gena brought up the habitat tradeoff. Walt did state BCDC has some policies that talk about the balance of public access / habitat benefits.
- Anniken noted that the preference is not to immediately build something inland- a phased step back is preferable to maintain connections to water for the greatest extent.

Hayward Shoreline Interpretive Center Relocation

- Gena noted the competing goals of the center, being close to the Bay and its vulnerability.
- Walt noted that presumably the building has a permit if it was built in 1986. It likely had public access requirements associated with it.
 - BCDC to check if the Interpretive Center has a permit or not and circle back with SCAPE
- Walt noted that if there was a feasible option to adapt in place, it may be best. They would have to look at findings of how it made it allowable where it is.
- Anniken noted that especially if it requires public access, adapting where it is would be ideal. If it is infeasible as is, you'd have to show why and relocate.
- Walt indicated that one of the main tenants of BCDC is maximum feasible public access along the entire shoreline.

- It is easier to update permit is current location, depending on the feasibility of updating.
- Gena noted that a recommendation that comes out of this master plan will likely be to look at a feasibility study of the building structure.
- Walt noted that if it was to be relocated, it may be in the BCDC shoreline jurisdiction, if close to a marsh.
- Gena noted that it does have access to full range of ecosystems Anniken noted the in-Bay experience and that there is a particular footprint of the building, and shading. A barge would be permanent fill that would have a larger footprint, which the resource agencies may not be favor.
- Walt noted that iff it's in the Bay jurisdiction, look at what kind of fill it is- solid, floating, pile supported, cantilevered. If there are new impacts for any type of fill, BCDC will look for mitigation to offset that or minimize it. Priorities are to avoid, minimize, then compensate.

Next Steps

- Walt noted that once we get to the design alternatives, it will be a good opportunity to give feedback based on policies. It would be good to go to Design Review Board (looks at public access projects for larger permits) to give a briefing down the line, to see initial reactions to concepts and avoid headaches down the line.
- Anniken emphasized to think about monitoring for pilot projects to show their efficacy. Especially if you are planning to implement on a larger scale. It will be valuable to go to BCDC with that analysis in hand.
- Anniken indicated we should meet with BCDC's BRITT to get feedback. Some of the members heard about this.
 - Best to go to that group once we have the 3 alternatives.
 - Anniken stated that these strategies are valuable, even without alternatives. They are seeing projects with these design strategies. It would be useful to go to BRITT at both stages- adaptation strategies and design alternatives.
 - Anniken will go to BRITT members to see which path forward would be best.

- USFWS has a Tidal Marsh recovery program that may show what areas of marsh should be maintained. Unclear whether it is for existing marshes / new restoration. Val is their representative and helped create the plan

03 ACTION

- *BCDC to check if the Hayward Shoreline Interpretive Center has a permit or not and circle back with SCAPE*
- *BCDC to check with BRITT about a meeting to get their feedback on the adaptation strategies and/or design alternatives*
- *SCAPE to review the master plan alternatives with BCDC once they are developed (March-April)*
- *SCAPE to present to the BCDC Design Review Board once the master plan is developed further*

STAKEHOLDER WORKSHOP #3

04/08/20 - 04/13/20

MINUTES

Date: April 8, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
BCDC [Walt Deppe (permit analyst), Jessica Fain (planning director), Dana Brechwald (ART program manager), Dan Hossfeld (ART), Andrea Gaffney (Bay Development Design Analyst), Todd Hallenbeck]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Erik Pearson, Taylor Richard]
Arcadis [Mary Kimball]
Doc'd by: Nick Shannon
Re: **Hayward Shoreline Master Plan- BCDC**

01 ACTION ITEMS

- *BCDC to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *SCAPE to follow up with Brenda Goeden to talk about sediment management*
- *SCAPE to create a map of BCDC's jurisdictional boundaries*

02 MEETING MINUTES

Introduction

- Gena provided an overview of the Master Plan Assumptions and where we are in the process
- Nans presented an overview of the three Design Alternatives

Design Alternatives Comments

- Walt indicated that in Alt #1, cutting Oro Loma Marsh in half will be pretty difficult to approve due to regulatory challenges of cutting an existing tidal marsh in half
- Walt indicated a preference for a hybrid between alts #2 and #3, which may be easier from a regulatory standpoint
- Walt reminded the team of BCDC's climate change policies that state projects have to be resilient to mid-century and adaptable to end of century
 - Anything being protected by a line of protection has to be resilient up to 2075
 - Adaptable to 6.9' SLR by 2100
- Dana commented that Foster City has a 6.6 mi levee improvement project where they have maxed out the loading capacity of the levees in their current locations. They are also constrained by existing roads that prevent lateral expansion of levees
 - Dana brought up the idea of the levee alignment having the capacity to increase in elevation over time, which is something BCDC would like to see being more adaptable in the future
- Jurisdictional analysis – look at for existing constraints
- Walt asked the team to map BCDC's jurisdiction- the Bay and shoreline band, salt ponds, managed wetland areas, etc.
 - Use section 66610 of the [McAtter-Petris Act](#).
 - **SCAPE to work with Walt to create a BCDC jurisdiction map**
 - If marshes are not currently open to tidal circulation, they may be more in shoreline band jurisdiction.

- If marshes are muted now with tide gate barrier, where they lie in BCDC's jurisdiction depends on if existing tide gate was there when BCDC was created- it may not be in the Bay jurisdiction.
- Walt asked about the structure for permitting, which depends on phasing. There could be a combination of projects into a master permit of all the projects that will come eventually, or it could be a section by section permit process.
 - Nans indicated that we have not gotten to that level of detail yet, but will identify further permitting considerations in the analysis of the preferred alternative, along with implementable projects and phasing
- Nans asked about how to evaluate habitat types- if you lose habitat behind line of protection?
 - Gena expressed the importance of a diversity of ecosystems
- Andrea expressed curiosity about why it was discounted to have wetlands on Bay side in alt #1. If you assume you will maintain as wetlands, that brings up the question of fill and how you will get that sediment locally.
 - Gena noted that we are exploring sediment management and will layer that into the preferred alternative. There are some potential sources, e.g. Don Castro Dam and an upland sediment pipeline.
 - Walt suggested to have a conversation with Brenda.
 - **SCAPE to reach out to Brenda to talk about sediment**
- Andrea asked if alt #1 preserves the most diversity in landscapes. And if you bring the line of protection further inland, does it create a homogenous shoreline with adaptive management?
 - Nans indicated that this is a correct assumption
- New fill for habitat policies- value of new habitat?
- Walt brought up that besides habitat value, BCDC also has water surface area and volume policies.
 - In alt #3, further study would be needed of a barrier proposal before the water circulation plan is accepted. Before a barrier is adopted in the future, you would be required to re-plan all of affected shoreline and water area. This would require a large study about the new barrier- a study that determines *how doing that would affect water circulation in the entire Bay*, not just impacts to the local wetlands.

- Andrea brought up public access. In the SBSP Shoreline Project, they are assuming the concept of a bigger Bay and restoring managed wetlands and ponds to tidal action. Part of that includes the Bay Trail moving inland. The Bay Trail goal is to be as close to water as possible, but if water edge is moving inland, then in that concept it's okay to move the Bay Trail. It just must maintain a relationship to the water's edge.
 - Nans indicated that in all 3 alternatives, we are aligning the Bay Trail with line of protection, with a small exception in alt #2
 - Andrea noted to think about where you're adding elevation, maintaining connection to and across, and where there may be opportunities to expand connection points.
- Dana expressed interest in the phasing aspect and when projects are triggered
 - Gena noted that a few projects may be triggered first, such as Oliver Salt Ponds, which are quite vulnerable on the Bay's edge. An ecotone levee may have partnering triggers to implement in Bay water, and gravel beaches may be piloted first.
 - Matt added that some agencies may take projects on their own
- Jessica expressed that the project is exemplary work and just the types of projects that they would like to see happening around the Bay

MINUTES

Date: April 8, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
CalTrans [William Velasco, Dick Fahey]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard, Jack Steinmann]
HARD [Adrienne De Ponte]
Arcadis [Kevin Clinch]
Doc'd by: Nick Shannon
Re: **Hayward Shoreline Master Plan- CalTrans**

01 ACTION ITEMS

- *CalTrans to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *Dick and William to circulate the Draft Design Alternatives Report to the other functional units at CalTrans and consolidate their feedback*
- *Dick and William to request additional information from the maintenance and inspection teams about any maintenance / access considerations or constraints for SCAPE to incorporate in the Master Plan*
- *SCAPE to add a statement to the Master Plan Assumptions that any CalTrans improvements will not necessarily align with a line of protection that is part of the Master Plan. The two will likely have different time frames and will not be dependent on one another.*
- *SCAPE to let William know if any time extensions are anticipated regarding the project schedule.*

02 MEETING MINUTES

Introduction

- Gena provided an update of where we are in the master planning process
 - Over the next couple of weeks, the team is soliciting feedback from a variety of stakeholders, clients, and the HASPA Board. This will culminate in the selection of a preferred alternative by mid-May
 - Between mid-May and September, we will refine and iterate the preferred alternative, analyze over different time frames, and look further into funding and implementation.
- Nans provided an overview of the Master Plan assumptions
 - Design elevations are being used for planning purposes only, as a tool for the master plan analysis. Any projects that come out of this effort will have to go through a full engineering and cost-benefit analysis.
- The three Design Alternatives are mostly based upon where the line of protection lies

Design Alternatives Comments

- Dick noted that he appreciates the overview and the comment that the assumption that the line of protection and SR-92 options do not rely on one another
 - Dick requested for this statement to be put in the document so it's clear that any highway improvement projects would not occur at the same time as flood protection infrastructure that is part of the Master Plan- there is no guarantee that they will occur at the same time.
 - **SCAPE to add this statement to the Master Plan**
- SR-92 Options
 - Dick asked if it is possible to do a causeway in option 1 and 2.
 - Nans responded that yes, it is possible. You may not get as much benefit as in option 3, since there is less fully tidal marsh to connect to.
- Dick indicated he likes the idea of a causeway for its multi-benefits. It's hard to consider though with planning and funding challenges.

- For this process, it's good to consider all the options. Beyond a planning stage, CalTrans won't have a preference for one alternative over another.
- Gena commented that in the preferred alternative and final Master Plan, we will note the need to allow for future flexibility with any CalTrans improvements
- William expressed that the other functional units at CalTrans should be involved- they will reach out to get their comments.
- William indicated to make sure the maintenance and inspection folk will be able to function after the project is implemented.
 - William and Dick to reach out to maintenance and bridge inspection teams about any maintenance / access considerations or constraints for SCAPE to incorporate in the Master Plan
- William noted that the end user should also be involved in the planning.
- William suggested that if we encounter any issues with meeting the project deadline, CalTrans may be flexible in this new normal. SCAPE should let William know in advance if any adjustments to the project schedule are anticipated.
 - Nans indicated that since there was some flexibility in the project schedule, we do not anticipate this need and will do our best to keep the current timeline. However, if things do change, SCAPE will let William know if any time extensions are needed in advance.

Note from Kevin-

Dick made a good comment about maintenance. Caltrans Maintenance holds a lot of sway. That said, the maintenance considerations / access should be the same as the existing bridge. It will be interesting to hear their views.

It occurred to me during the call that, regarding SR 92, the levee option is the easiest to adapt to higher water levels should this occur. The causeway would, of course, be very difficult to raise once in place. Do you know the roadway elevation of the existing bridge?

MINUTES

Date: April 8, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
Oro Loma [Jason Warner]
EBDA [Jackie Zipkin, Ian Wren (independent consultant)]
SFEP [Heidi Nutters]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Erik Pearson, Taylor Richard]
Arcadis [Kevin Clinch]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- EBDA/Oro Loma/SFEP

01 ACTION ITEMS

- *EBDA, Oro Loma, and SFEP to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*

02 MEETING MINUTES

Introduction

- Gena provided an overview of the Master Plan Assumptions and where we are in the process
- Nans presented an overview of the three Design Alternatives

Design Alternative Comments

- Jason noted that he understands the tradeoffs in between
- Jackie asked about the projected time horizon
 - Nans noted that we are looking at a 4' SLR scenario, which is estimated to be around 2070/2080 based on state guidance.
 - We are driving the project more on the SLR elevation and decision making process needed when that occurs
- Heidi asked about the understanding behind the alignment in Oro Loma Marsh in alt #1
 - Nans indicated that it is the cheapest, and we don't know how Oro Loma will adapt or transform with the rate of SLR and availability of sediment so the idea is to maintain diversity of habitat types.
- Jackie asked if we assume there is no more discharge into Hayward Marsh from the Hayward WWTP.
 - NV confirmed that is our current assumption
- Jackie indicated that EBDA is waiting on this project for the preferred alignment for the First Mile project.
 - They were assuming the inboard alignment near the rail corridor in high level planning but other alignments could work. They would just have to change the infrastructure and associated flow rates.
 - There is a recycled water pipeline near the rail corridor they were thinking of tapping into to get the wastewater source to the horizontal levee.
 - Jackie indicated that they would use the First Mile project to flush out the details and design around HASPA preferred alternative
- Ian commented that it would be strange to have FEMA levee through an industrial park

- Jason brought up a presentation at CASA to protect another WWTP, which consisted of \$2 bil of infrastructure and a seawall to ring plant.
 - Jason indicated the possibly of single digit millions to protect Oro Loma in place with sheet piles. If they were in a pinch and needed a single solution, it would work.
- Jackie noted that she likes alt #3 for the Hayward area.
 - A horizontal levee and freshwater treatment for wet weather storage in winter. She was imagining alt #3 but can't speak for the City folk.
- Jackie noted that the idea of having EBDA fully decommissioned is not likely in alt #3. There will be future need for brine discharge, potable recycling, etc. The use of pipeline may change.
 - **SCAPE to re-word the con in alt #3**
- Jackie noted that Oro Loma moved to local discharge for wet weather. It is a reasonable assumption for Hayward WWTP.
 - Oro Loma is trading 10 days of wet weather discharge for nutrient upgrades.
- Ian brought up another San Leandro plant seeking a shallow discharge option. Didn't think treatment wetland in alt #3 is incompatible with current conditions.
- Jackie noted that in concept for near-term, it seems feasible to use treatment wetland for wet weather storage in winter and a treatment marsh in the summer.
 - Gena indicated this is a phasing opportunity for possible early implementation
- Ian brought up issues in alt #1 and #2 with the resource agencies. BCDC and CDFW are critical agencies.
 - Jason indicated that CDFW is the most problematic. If alt #3 is an option, alt #2 won't be an option. Alt #1 is such a big change, even if there are good reasons to do that, there is no way they would approve it when there is the other alternative on the table.
 - Jason indicated that there is only one feasible option from a permitting standpoint- the alignment near the rail corridor, which would be the least impactful.
- Ian noted that #3 is most viable because of the impacts to the SMHM Preserve,

- A FEMA levee at the most hardened edge, leaves more options Bayward side of that alignment. If you put it too far out, you limit your options.
 - Might be able to protect oxidation ponds with a non-FEMA levee
- Jason- standalone FEMA levee, in front of that is the ecotone levee. Reduces energy in front of FEMA, smaller cross section.
- Jackie indicated that flood control is a concern. The ecotone levee habitat would be washed out by wave action.
- Mark Taylor noted that if a horizontal levee is not built of heavy clay, wind and waves are going to tear it apart. If it is built out of sandy loam, it will be torn apart.
 - Jason noted that the idea was to have something built outboard of the ecotone slope to reduce wave action
 - Mark commented that EBRPD is looking at alt #1 to protect the above and below ground PG&E lines.
 - Matt agreed and stated that there may be more impacts on inland alignment. Alt #2 and #3 will still fill in the Bay near the railroad. You may have more fill by railroad tracks since there aren't existing berms to connect to.
- Ian noted to test BCDC's appetite for adding a larger intervention.
- Jason would support alt #1, but his pragmatic intuition would say it's not possible.
 - Matt noted that for long term marsh protection, alt #1 may be favorable.
 - Mark echoed that from a habitat standpoint, they may want to keep as much muted marsh as they can, otherwise it would just transition to mudflat.

MINUTES

Date: April 8, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
SPSP [Dave Halsing]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Erik Pearson, Taylor Richard]
Arcadis [Mary Kimball]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- SBSP

01 ACTION ITEMS

- *Dave to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*

02 MEETING MINUTES

Design Alternative Comments

- Dave noted that the report was very well organized and visually striking. The pros/cons seemed good and nothing obvious was left out.
- Dave indicated that alt #2 is better place to start since there is room for future retreat if needed. It doesn't overly commit to outer edge version and does a little more to balance competing needs. The idea of having more flexibility later is favorable.
 - For the Bay Trail, the idea of having it on a levee on high ground on edge of Bay seems untenable. It may not be as realistic to hold on to that everywhere.
- Dave noted that he is not weighting all pros/cons the same in his head. The blue water experience of the Bay won't be where it is now.
- Dave expressed that stormwater management is a big thing in alt #3
 - Ecosystems at Bay are used to fluctuating stormwater.
 - Like to avoid where possible, the NOLA situation where you must pump constantly.
- Salt Pond Stormwater Detention
 - Dave brought up a precedent in Ravenswood- the cities of Menlo park and Redwood city are implementing something similar on 35 acres of dry salt panes
 - During high tide and slough, there is nowhere for water to go and it floods the neighborhood. They are incorporating a connection to draw water to the managed ponds in advance. They then let the water out when tide goes back.
 - This is the same hydraulic idea. In most places, you don't need a lot of capacity to take the peak off.
 - Having a good water quality management and monitoring plan was key for the Water Board and they laid out recommendations.
- Dave recommends getting in front of regulators early and to follow their recommendations, which will lead to easier permitting and implementation later

- BRITT is aiming to do this
- Dave expressed concern over the extent of gravel beaches
 - Gena noted that we are trying to address the risk and threats, which are quite pervasive. Gravel beaches may be a strategy to slow erosion on marsh edge.
 - Prioritize beaches where you need protection- landfill, added protection at Cogswell breach
- Cutting Oro Loma Marsh in half in alt #1- 'risk splitting' habitat
 - Dave indicated that yes, it could be done.
 - There are examples of highly functional muted marshes at New Chicago Marsh in the South Bay.
 - NWR, right next to educational center in Alviso.
 - A breach is maintained for managed ponds Bayward of the marsh.
 - It is good habitat and the wildlife really likes it. This may be a strategy to keep habitat for endangered species to successfully use for more decades. As compared to creating a broad swath natural-ish marsh, but with SLR, you maybe can't have both in one spot.
 - Dave noted that he sees the value of risk 'splitting'
 - The fill of the levee alignment would be easier to permit since there is less total fill. It is worth talking through.
 - Dave indicated that he would worry less about Army Corps, and more about the wildlife management agencies, since it would convert habitat in a different way.
 - If it's muted tidal, it is easier to just leave gate at one elevation. Eden landing.
 - It is easier to build on top of something existing, e.g. the existing access berms in the middle of Oro Loma Marsh
- Nick asked if Dave has any lessons learned from ecotone levee projects in the South Bay
 - Dave noted he sees great benefit for wastewater treatment

- For the Mountainview and A8 ponds, they got their transition zones permitted with minimal difficulty by making the case that all of it is a conversion of one water US to another and not necessarily a loss.
 - Everywhere they were breaching or lowering a levee, it was creating new waters, letting water in. And it is only a temporal loss of water- as SLR occurs, it is going to be waters again. Just had to do the math.
- Water boards – no net loss of wetlands or waters — is the trickiest part to get around (executive order)
- Dave concluded that he liked our process of stepping back from single stakeholder to look at every piece of it

MINUTES

Date: April 9, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
Bay Trail [Lee Huo]
EBRPD [Mark Taylor, Chantal Alatorre]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard, Jack Steinmann]
HARD [Adrienne De Ponte]
Arcadis [Mary Kimball]
Doc'd by: Nick Shannon
Re: **Hayward Shoreline Master Plan- Bay Trail**

01 ACTION ITEMS

- *Bay Trail to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *SCAPE to increase clarity in representation of the Bay Trail in the preferred Master Plan maps*

02 MEETING MINUTES

Design Alternatives Comments

- Lee noted a few bigger picture positive aspects of the alternatives
 - The statement about how any proposed alignments would be move incrementally as the need arises
 - Maintaining a connection to the Interpretive Center
- Lee expressed that prioritizing blue water experience and alt #1 is the favorite. Alt #3 is not ideal. However, we don't know what SLR will look like when that happens.
- Lee noted that the Bay Trail described as recreational alignment. This is true for its utility in this area. However, Lee has been out there in public engagement events and people do use this alignment as commute to work and for stress relief.
 - Lee suggested to consider the transportation aspect of the Bay Trail- it is never ideal because the alignment lies primarily on levee tops. It is not the best situation for road cyclists in this area due to the rough path material.
 - For funding- big picture, consider transportation benefits. Most of the Bay Trail funding is coming from transportation funds.
 - Lee asked if the Bay Trail will be paved / resilient to erosion
 - Nans stated that we don't know the path material and may not get to that level of detail in this Master Plan, however we may provide recommendations in the final report. We do know there is a need for maintenance access.
 - Lee suggested that if the trail could be more hardscape, it presents opportunities to make the argument for transportation funding.
 - Lee asked about the trail alignment for the Interpretive Center link in alt #2.
 - Lee sees value in how its current alignment, and other 2 alignments maintain the relationship to the Interpretive Center. There is value when you don't have to backtrack, which provides an easier level of engagement.
 - Lee indicated he really likes the landfill relocation of Interpretive Center

- Lee expressed concerns over no blue water experience with alt #2 and #3
 - #3 is least desirable. You retreat as far as you can, but also about a lot of uses.
- Lee asked about the bridge on pile structure and where it would be located
 - Nans noted that it would be the entire section (L shape) that pulls off from the ecotone levee alignment
 - Lee noted that it is expensive to build and maintain this type of structure over time. However, it is a really good idea. People like traveling through this area because of that diversity of trail experiences- crossing bridges over mudflats and sloughs.
- Lee requested to add a con of trail proximity to the railroad. It may become a negative experience
 - **SCAPE to add this statement to the cons**
 - Mark noted that during daylight, the trains run every hour / hour and a half between freight and passenger trains. They are quick and noisy.
- Lee indicated that in the maps where the alternatives combine everything, the new Bay Trail alignments disappear, since it runs along similar lines and because of color.
 - **SCAPE to increase clarity in representation of the Bay Trail in the preferred Master Plan maps**
- Lee also noted that it is not clear what alignments are existing and going to be removed
 - **SCAPE to clarify and refine with the preferred alternative**
- Lee asked about next steps and how the document will be used moving forward
 - Nans noted that we are using these alternatives to collect feedback from a variety of stakeholders. We will also simplify and share with members of the public and create an evaluation matrix to rank the different alternatives to come up with a preferred alternative.

MINUTES

Date: April 9, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
CDFW [Conrad Jones, Marcia Grefsrud]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard, Jack Steinmann]
HARD [Adrienne De Ponte]
Arcadis [Kevin Clinch]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- CDFW

01 ACTION ITEMS

- *CDFW to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *Conrad and Marcia to send SCAPE contacts of CDFW staff who deal with tidal species*
- *SCAPE to reach out to Water Board to solicit feedback*

02 MEETING MINUTES

Introduction

- Gena provided an overview of the Master Plan Assumptions and where we are in the process
- Nans presented an overview of the three Design Alternatives

Design Alternative Comments

- Conrad expressed a few concerns
 - Sheet piling in various configurations- adjacent to the landfill bordering existing or new tidal marsh.
 - If it is SMHM habitat, protecting upland areas with sheet piling will isolate the SMHM from any refugia
 - Remaining saltwater marsh
 - Protecting infrastructure with raised levees, but marshes are subject to 4' SLR, so we won't have marsh. It may be open water up to the existing, restored / improved levees, which will have significantly less function with wave runup
 - Marsh and ecosystem adaptation over time- sediment management. It is overwhelming with the scope of efforts needed to address the issue.
- Think about providing the transition zone on the inboard side of the levees, as they have done in Eden Landing ponds 1 and 2. It could break up wave runup and provide transition habitat where needed.
 - Conrad noted that transition zones are important for erosion and wildlife benefits.
 - They are most beneficial if they go to upland. If you have a road, predators can come and go.
 - If they can be isolated islands with a channel or wetland on one side, that's great.
- Restoring hydrological connectivity to south of SR-92
 - Conrad noted that he likes the idea in concept.
 - There is concern for how in a broad picture it is a good thing in Eden Landing since they don't have the infrastructure in place to

accommodate increased flows effectively. The habitat restoration happening, and this would present additional impacts to their flood infrastructure.

- Conrad expressed concern over the historic breach at Cogswell, which will be worse with SLR
 - Nans noted that we have indicated a gravel beach to slow erosion
 - Conrad noted that something is better than nothing. A gravel beach could help accrete more sediment.
 - Based on the base flows, Conrad's impression is that a reduction in size and armoring will help limit further expansion.
- Marcia stated that she is involved with permitting for flood protected species and does not work in tidal zones, since they are fully protected. They take avoidance measures.
 - Marcia expressed concern over raising levees or floodwalls to protect areas behind it, does that leave the current tidal marsh unprotected?
- Nans asked about Alt #1 and Marsh Conversion- can Marcia and Conrad identify the right people to contact?
 - **Marcia and Conrad to connect with CDFW contacts on tidal species**
 - Conrad noted that John Crouse works for him and is not a regulator
- Matt noted we are looking at how to improve future operations- 1,5,10 years down the line. The base conditions will be different, so we need to look at the marshes and habitat value from a different lens.
- Marcia suggested to reach out to the Water Board and that we may get a call from Brian Wines
 - **SCAPE to reach out to the Water Board to solicit feedback**

MINUTES

Date: April 9, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Nans Voron, Nick Shannon]
EBRPD [Mark Taylor]
Mosquito Abatement [Erika Castillo, Joseph Huston]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard, Jack Steinmann]
Arcadis [Mary Kimball]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- Mosquito Abatement

01 ACTION ITEMS

- *ACMAD to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*

02 MEETING MINUTES

Design Alternatives Comments

- Erika noted that they have reviewed the report on their end.
- Joe indicated that from a mosquito abatement perspective, at the moment they would lean towards the north end as shown in alt #1, and the south part as shown in alt #2.
 - With alt #1, the line needs to be maintained with the PG&E lines. Front being fully tidal, back as muted tidal behooves us. Were involved in transitioning habitat before. There are minor issues with mosquitoes- issue with back eastern part of marsh
 - The three landfills are buttressed off with all projects
- Joe anticipates difficulty in alt #3 for mosquito abatement.
 - Biggest thing is to have access by foot or truck. Keep access and make sure areas not landlocked
 - Alt #3 creates more homogenous environments, yet today this strip of shoreline has most diverse habitat environment. Muted to tidal to salt ponds to seasonal. The structure in the oxidation ponds looks problematic.
 - Joe noted that they operate their regions with habitat diversity in mind. Access is main thing, but the background of those sources- diversity of species and habitat- is important.
- Alt #1 and #2 have more diversity and maintain habitats.
 - The segment across Oro Loma is good for 2 habitats.
 - The Bay side is not much mosquito wise
 - Back half is similar to what's there now.
 - Joe asked if this would keep the breach at Sulphur creek open
 - Nans indicated that the assumption is to maintain breach
- Joe stressed that the key is control-
 - Existing ditch work they did with heavy equipment really helps control mosquitos - make sure tidal flow comes in and out.
 - Ditch maintenance is also key- keep this in consideration. The back of Oro Loma is kind of muted anyway except for specific high tide events that bring water into those problem areas. Normal tides not an issue.

- Ecotone levees
 - Joe- contingent on access and maintenance
 - Treated water with filtering vegetation is not much of a problem
 - The problem is standing water- one species of mosquito is associated with bulrush and tules.
 - To the south, in Hayward Marsh, they implemented a big bulrush removal project.
 - The maintenance regimes need constant tweaks. Try to anticipate the need for money to change the planting palette and mitigate if there are any future issues.
- Joe noted that there are 22 mosquito species in the county, and each has their own type of breeding source.
 - Frank's East fills with rainwater, which is problematic. They have to treat upward of 8 to 10 more times with a virus vector, for a 15 mile traveling mosquito.
 - Modifying Frank's East to controlled, fully tidal, or stormwater storage with overflow as needed drop water out quickly, is preferable.
 - The vegetation on the shallow fringes of the oxidation ponds have been an issue in the past.
 - The smaller triangular pond north of the oxidation ponds encounters a lot of breeding since it is full of junk and difficult to navigate.
- Mosquitos don't tend to breed in open water at large volumes with wind flow- they concentrate on the shallower edges.
- Nick asked about lessons learned from the Oro Loma demonstration project
 - ACMAD did not have any initial involvement.
 - Long term maintenance plans are key.
 - Pampas grass and willows taken over- at certain times they hold significant amounts of water, which is problematic from mosquito standpoint.
- Erika noted that the mosquitos lay eggs in the water, then when it floods, they hatch out.
- Ecotone Levee Slope

- Erika noted that due to the nature of a 1:30 ratio, pockets and puddles will form. For mosquito control, they recommend a 2:1 slope. Steep sides, without pockets.
 - Nans noted that we don't anticipate much puddling on Bay side- it may be flooded twice a day.
 - We are showing a shallow slope on the tidally influenced side, and the inland slope to the muted marsh is steeper.
 - Erika and Joe confirmed this approach
 - Joe noted that the tidal side would have a salt-tolerant palette of *Salicornia distichous*, which is super salt tolerant. The more gradual slope is not as problematic with tidal flushing.
 - There should be contingencies to fill areas that sink.
- A lot of horizontal levees shown are new, and they need to ensure access to the spots to inspect and treat. There is a problem with access to the point of levees in alt #3.
- Nick asked about predator roosting on the ecotone levees
 - Joe noted that harriers will hunt regardless. There is a [air of peregrine falcons south in the project area.
 - Most of ecotones, if they're not super densely vegetated, are not as problematic.
 - There is a decent fox population, and there definitely need to be control measures as well.
 - With enough salinity, the palette is limited.
- Joe stressed the importance of access and all-weather roads for maintenance and safety vehicles.
- Joe stressed the importance of long-term maintenance plans, ditch work.
- Nans expressed that we will reach out and reconvene throughout process

MINUTES

Date: April 9, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
Public Works [David Donovan, Alex Ameri, Pamela Svrdlin]
EBRPD [Mark Taylor, Matt Graul]
EBDA [Jackie Zipkin]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard, Jack Steinmann]
HARD [Adrienne De Ponte]
Arcadis [Tim Hare]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- Public Works

01 ACTION ITEMS

- *Public Works to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *Feel free to mark up the document and add notes to indicate preferences, new opportunities, changes, or further considerations. You can send us a pdf mark up or a scan of handwritten notes.*
- *Public Works to discuss the option of underground stormwater storage at Skywest Golf Course*
- *SCAPE to add a statement to the Master Plan Assumptions that the Hayward WWTP nutrient removal upgrade is anticipated to be in place by 2025.*

02 MEETING MINUTES

Introduction

- Gena provided an overview of the Master Plan Assumptions and where we are in the process
- Nans presented an overview of the three Design Alternatives

Design Alternatives Comments

- Alex asked if alt #1 would prevent the City from doing local discharge
 - Nans clarified that it would not, and that local discharge is part of the options
 - Gena added that if we propose discharge at oxidation ponds, would need a breakwater at Cogswell Marsh to prevent wave runup and further erosion
 - Jackie noted that an ecotone levee would be discharge for only a portion of Hayward flow, so there would still be a need to allow for an additional outfall nearby, or continued discharge to EBDA
 - Alex indicated that the plan is not to discharge all of their dry weather flow since they are planning to use some for recycled water. There is importance for wet weather flow because of timing and volume, you need to maintain something to discharge all of that additional water.
- Alex asked about what you gain moving the FEMA levee east of the oxidation ponds
 - Nans responded that it is a shorter alignment for the line of protection, which does get pretty expensive
 - Alex asked about the option of moving the line of protection into the ponds and what the benefits are
 - Nans responded that the benefits are that you don't fill in Cogswell Marsh, and it is further away from the marsh breach and less vulnerable to erosion from open water.
- Alex asked about the risk of flooding without a FEMA levee
 - Nans clarified that FEMA certification helps reduce flood insurance costs. The levee elevation depends on the level of protection the City wants to design for.

- Nans brought up that it may not be worth investing that money without the insurance benefits
 - Gena noted that we can also analyze this level of risk without impacting communities behind. The two projects may happen at different time frames- FEMA levee and levee to protect the oxidation ponds.
 - Nans asked what the adverse risk scenario is- protect from daily tidal elevation or storm surge?
 - Jackie noted that the use of the treatment wetland can be seasonal, and used during the summer. You can then continue to use wet weather storage in winter. This doesn't have the same negative effects as far as storm surge is concerned.
- Alex expressed interest in thinking of other uses for other parts of oxidation ponds. The solar field only has a life of 30 years. The City may have other plans for property.
- Alex indicated that alt #1 has more potential but they are not closing the door to the other options. Some of the benefits he sees:
 - Completely protecting the oxidation ponds
 - Continued use of wet weather storage sites
 - Allow for different uses of oxidation ponds
 - Not a lot of other major differences as far as the City is concerned, but they are more concerned with the treatment plant
- Jackie noted that this doesn't preclude a portion of the ponds from being a treatment wetland
- Damon indicated that the City hasn't gotten into nitty gritty of each option and they are still considering them all. Alt #1 is looking pretty good.
- Jackie brought up a con of the options with the ecotone levee by oxidation ponds that states that the treatment level the plant is providing may not be good for endangered species habitat in the marsh.
 - The Hayward plant is planning upgrades for nutrient removal
 - Nans clarified that these pros/cons were assumed for the current existing condition.
- Alex noted that the requirement is to have the nutrient upgrade in place by 2024/2025 at the latest.

- SCAPE to add this statement to the assumptions
- In alt #3, does it make sense to do the nutrient upgrades now?
 - Jackie noted that the understanding is that the nutrient upgrade would only treat half of the plant's flow.
 - A treatment wetland could treat the stream that is not going through the upgraded process
 - To go to a treatment wetland, need to remove ammonia first and they will have that step with the upgrade
 - The two could work together to reduce the requirement for the upgrade, or reduce need for future additional upgrades. This is something they will study with the grant.
- David indicated he has a very similar feeling to what everyone has said. He likes alt #1. You can always build up larger walls, or make them deeper.
 - Nans indicated that in alt 1, we would need to come up with significant intervention to find a way to reduce wave action at the levee edges
 - Between #1 and #2, the plant is protected in both situations
- Erik brought up that we are having cost estimates prepared, which will help with decision making process.
 - Tim noted that Arcadis has put together a lot of costs to form this very high level estimate. It is not very precise, but they feel comfortable with most of the components. It will be enough to compare each alternative to each other to see strengths. Some fixed costs, such as pump stations, may be consistent- since each alternative is treating relatively the same volume.
- Alex brought up that alt #2 proposes more sheet pile
 - Nans confirmed. Each alternative moves the tide gates further inland, which requires more protection on the landfill edges that are exposed to the Bay
- Mark does the alignment in Oro Loma change?
- Nans brought up using the golf course as stormwater storage
 - We understand, based on FAA regulations, that surface ponds out of the question. However, we would like to still consider underground storage,

since we do anticipate a large need for stormwater detention in these scenarios.

- Alex expressed that this is an interesting question. The City has concentrated on evaluating the appropriateness of surface water storage on the property and it's very clear that it is not acceptable.
 - The City has looked into underground potable water storage in other locations and the thing that stopped them from proceeding was the cost.
 - The City will need to have internal discussions before providing feedback on this question
 - Alex and Public Works to discuss the option of underground stormwater storage at Skywest Golf Course
- Gena noted that this is a vision plan that shall be used as a long-term vision tool for planning purposes.
- Alex asked if there was any feedback from Oro Loma about the options
 - Jackie noted that Jason didn't have a strong preference over whether Oro Loma was protected by the line of protection or not. If it comes down to it, they will just put up sheet pile.
- Alex requested a summary of action plans and timeline
 - Nans noted that SCAPE will send around thank you email with next steps and timeline.

MINUTES

Date: April 13, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan Draft Design Alternatives
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
ACFCD [Hank Ackerman]
EBRPD [Mark Taylor, Matt Graul, Chantal Alatorre]
City of Hayward [Damon Golubics, Erik Pearson, Taylor Richard]
HARD [Adrienne De Ponte]
Arcadis [Mary Kimball]
Doc'd by: Nick Shannon
Re: Hayward Shoreline Master Plan- ACFCD

01 ACTION ITEMS

- *ACFCD to send any additional comments on the Draft Design Alternatives Report by Friday, May 1st*
- *Hank to share design peak flow data for all flood control channel outfalls in the study area (Bockman Channel, Sulphur Creek, Line A, Line E, Line F) by Friday, 04/17*
- *Hank to share updated LIDAR data of the project area*

02 MEETING MINUTES

Introduction

- Nans provided an overview of the Master Plan Assumptions, where we are in the process, and presented an overview of the three Design Alternatives

Design Alternative #1

- Hank asked if the SR-92 ramp would be low and flooded
 - Nans noted that we are looking at a variety of options and that any SR-92 improvements are not dependent on the line of protection identified in the Master Plan alternatives
- Hank questioned both ends of the levee tie-backs and expressed concern that they would be pushing water on other people
 - Hank indicated that you would have to put something on the south side of SR-92 or raise SR-92 to act as a levee
 - At north end you would have to do a similar thing on the opposite levee to prevent flooding of the subdivision, and take it up to the point where the slough goes into the wetland
 - Gena asked if there are any levee plans for these other places, since they are out of our study area
 - Hank noted that you can't build the levee without mitigating water from pushing onto something else
- Hank noticed that for the pump stations, we may not have enough area for detention. There would have to be huge pump stations to accommodate all of the flow. And if there were any power outages, you would have bad flooding.
 - Nans indicated that the pump stations right now are being planned with back up power, etc.
 - Mary confirmed and asked if there was any direction ACFC could give on the flows they would need to accommodate
 - Hank is not sure if the outfalls in this area are included in the study Arcadis is doing
 - Mary indicated we are looking at pump stations that are not necessarily handling the 100 year capacity, and asked what else you would have to do to manage increased flow

- Hank noted that we'd still have to design for the 100 year. He's not talking about a 100 year storm against a 100 year tide, but instead looking at MHHW for the SLR scenario.
 - Take MHHW of the existing condition and throw on amount of SLR you are projecting, and that is how high the pumps would have to lift the water
 - Nans confirmed this would be 4' SLR on top of the existing MHHW, and management of the 100 year storm flows inland of the line of protection
- Nans asked if the sites of stormwater detention would help decrease scale of pump station
 - Hank indicated that if stormwater could flow into the marsh upstream, it would relieve pressure off the pump station. It would just have to pump longer for the water that returns back into the channel after the storm
 - There is not a place to store water in Line A

Design Alternative #2

- Hank noted that when you move pump stations further inland, you lose storage capacity when they are closer to the Bay.
 - The pumps stations have to pump to the same elevation, but the area behind them in the channel itself can add to the storage capacity (not a lot, but it could push water back upstream if the pump stations are further inland)

Design Alternative #3

- Hank asked about the treatment wetland and how water will it get into it from the other side of the red line
 - Nans noted that we are assuming through a pipeline that goes through or on top of the levee
 - Nans confirmed that this is still a treatment pond for Hayward WWTP
- Hank asked where you'd get storage for the pump stations in this option
 - Hank asked about the elevation of Oro Loma Marsh

- Potential to have pipes that allow water to flow out between the railroad and the pump station, with tide gates, so you don't have to pump as much water. However, it may be the same elevation as the Bay.
 - Possibility of creating a pond adjacent to the channel. May have some environmental mitigation costs from working in marshland though.
- Not sure if Frank's East is part of the actual dump site. If so, it can't be used for stormwater storage.
 - There is marsh in Frank's West. The perimeter of dump site is high- you could connect a levee on the south side and raise the Bay Trail, then use that marsh as a storage basin, with tide gates that drain out as the tide goes out.
- Gena asked, with having no storage capacity in Alt #3, does Hank prefer 1 or 2?
 - Hank indicated that it is critical to have a large enough area to store at least some water, since a pump station can fail
- Mary confirmed that Arcadis is considering the the pump station capacity in relation to the amount of stormwater detention space that is provided in each alternative
 - **Hank noted that they are looking at the design peak flows for each of the flood control channel outfalls and will share the data by Friday, 04/17.**
- Hank brought up the fact that with SLR, there is going to be dead storage in the channels. With lower tide, it won't drain as much, so the volume in the channel and how fast to get it out will be critical
 - Nans asked if the pump station could you drain the dead storage
 - Hank confirmed
- Hank noted that before you come up with a max elevation to build levees to, to think about the surrounding areas and height of levees that would impact them.
 - The City of Oakland, with 3' SLR, has water start to come up through the ground. Without harming Oakland, we wouldn't be able to build beyond 3'. May go 3.5' down here.

- In the south Bay, San Jose, the elevation is more around 4.5'. All around the bay, there will be a maximum elevation to build to without impacting the rest of the Bay. Providing maximum protection without doing serious harm in Oakland, or even in Hayward too.
 - Hank stressed to look at the life span and planning horizon of levee projects– think about this in the advancement of these strategies
- Hank suggested to build a wide enough base for the levees to be flexible in the future.
 - Hank expressed concern over building a levee, since in the interim you could cause issue to someone else. It may have to be a federal or state project since it would have to be built in a short window of time as a single project, and some cities may not be able to afford it.
 - Hank added that having the plan ready is a good thing
 - Hank noted that Rohin has looked at locations around the Bay with King Tide, and there are low points that would have to be brought up. Any time you cutoff areas for water to flood into, you bring up issues.
- Hank noted that he will sit down with Rohin to discuss the draft report.
- Hank noted that Rohin just had the coastal area LIDAR updated a year ago, which would be a lot more accurate
 - Nans confirmed that SCAPE has been using LIDAR data from 2010.
 - **Hank to share the updated LIDAR for the project area**

MINUTES

Date: May 5, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
USFWS [Dan Welsh]
EBRPD [Mark Taylor, Chantal Alatorre, Doug Bell]
City of Hayward [Taylor Richard]
Arcadis [Lee Miles, Mary Kimball]
Doc'd by: Nick Shannon
Re: **Hayward Shoreline Master Plan- USFWS**

01 ACTION ITEMS

- *USFWS to send additional written comments on the Draft Design Alternatives Report before 05/26*
- *SCAPE to send USFWS the Existing Conditions Report*

02 MEETING MINUTES

- Dan from USFWS is the Deputy Field Supervisor in the Bay-Delta USFWS office
 - Steve, who was unable to join this call, is on Dan's staff
- Gena provided an update of where we are in the master plan process
- Nans provided an overview of the three Design Alternatives

Design Alternatives

- Dan indicated that the team is on the right track to balance competing needs. He realizes that it is a long-term planning effort.
- Dan is looking forward to continued coordination with USFWS
 - There is quite a bit of salt marsh habitat that is used by federally endangered species (SMHM, Ridgway Rail, migratory bird species)
- Dan indicated that Alt 1 gives him the most concern from bisecting existing marshes in half. He indicated a preference for Alt 2 or 3, at face value.
- Dan noted that USFWS involvement is typically triggered under the Federal Endangered Species Act or Fish and Wildlife Coordination Act
 - This depends on the federal nexus and if the project is permitted or funded by a federal agency
 - Dan asked if the team anticipate direct USACE involvement in funding and construction, and stated that USACE would need to consult with USFWS if so.
 - Dan noted that if there is no federal nexus, USFWS would still be involved through Section 10 under the ESA
 - The Fish and Wildlife Coordination Act looks at overall habitat, not necessarily just endangered species
- Gena asked if Dan had any thoughts about Alt 1, specifically where the levee cuts Oro Loma Marsh in half
 - Dan indicated that they would need to look at details of the habitat value Oro Loma Marsh is currently providing, and what it would provide under this alternative. The biologists would have to get into the details.
- Nans asked about USFWS's approach to SLR
 - Dan noted that they consider SLR for the planning of their managed areas and in their consultation with federal agencies

- The goal is long-term preservation, conservation of the listed species
 - They look at where the habitat will be in the future, and the quality of that habitat
- Gena brought up the idea of 'risk splitting'- there will be winners and losers for the wildlife in each alternative. Mudflats will benefit, and shorebirds, but it may not be a great benefit for the rail and harvest mouse that use the marshes
 - Dan noted to plan for right quality and connectivity of habitats for the listed species. He doesn't know if bisecting the marsh is the right thing to do to accomplish that
- Dan asked if USACE has committed to anything at this point
 - Nans noted that there are no formal commitments at this time. We are still identifying funding mechanisms and partners and are looking at a variety of projects and partners
 - Dan noted that USFWS would look to USACE to fund their involvement at a later stage
- Nans explained the idea of the Salinas Swap, and moving the salt pond habitat further inland and restoring Oliver Salt Ponds to tidal marsh
 - Dan indicated that the concept seems worth considering- are the salt ponds used by the snowy plover?
 - Doug noted that the plover don't use them for breeding, but may use the ponds for foraging
 - The plover nesting colony is located in Hayward Marsh
 - Doug noted that south of SR-92 in Eden Landing, there are snowy plover restored habitats. In conjunction with the nesting in Hayward Marsh, there are 2 areas are a focal point for the listed species
 - Doug noted that they are looking to maintain this habitat with SLR, while being faced with emergency repairs on outboard levees. It is a challenge to balance all of it
- Dan indicated that the balance between preservation of infrastructure, ecosystems, and public access is important
- Mark Taylor noted that in Alt 1, it may preserve some habitat for SMHM and Clapper Rail

- Dan noted that the marsh management plan for Hayward Marsh should protect the habitat short and long term
 - Dan asked EBRPD to keep USFWS in the loop with the Hayward Marsh plan

Next Steps

- Dan asked if USFW is expected to provide formal input by a certain time at this stage
 - Nans noted that we are requesting written feedback in the next three weeks. This is not for an agency review, but will be used to help select the Preferred Alternative.
 - **USFWS to provide written comments before 05/26**
 - **SCAPE to share existing conditions report**
 - USFWS Biologists to reference the document upon review of the Alternatives
 - This stage of the project is an important benchmark in the project to define the vision for the Hayward Shoreline
 - This will be the first point of feedback but certainly not the last.
 - Formal feedback on the endangered species impacts will be coordinated in greater detail at a later time, with a potential federal nexus

MINUTES

Date: May 8, 2020
Location: Conference Call
Topic: Hayward Shoreline Master Plan
Attendees: SCAPE [Gena Wirth, Nans Voron, Nick Shannon]
BCDC [Brenda Goeden]
EBRPD [Mark Taylor, Chantal Alatorre]
City of Hayward [Taylor Richard, Damon Golubics]
HARD [Adrienne De Ponte]
Arcadis [Lee Miles, Mary Kimball]
Doc'd by: Nick Shannon
Re: **Hayward Shoreline Master Plan- Sediment Management**

01 ACTION ITEMS

- *Brenda to send any additional comments in BCDC's compiled comments this week*

02 MEETING MINUTES

- Brenda is the sediment program manager for BCDC. She is primarily focused on dredging, sand mining, and beneficial reuse, as well as overall sediment management for the Bay as a whole

Design Alternatives

- Brenda asked about the existing conditions of the shoreline
 - Mark noted that, from his observations, the shoreline has lost 3-3.5' of outboard marsh annually. The most accumulation is at the San Lorenzo Creek delta, north of the project area
- Brenda noted the East Bay's shoreline challenges- strong wave climate churns up sediment and it may not deposit as much in the marshes.
- Brenda stressed that the whole East Bay is an alluvial fan, and the creeks are important.
- Brenda indicated that moving the Bay Trail back is probably a good idea
- Brenda expressed concern over gravel beaches on mudflats; it may impede sediment transport to the marshes.
 - Brenda referenced a Jessie Lacey study about sediment transport in the North Bay- more sediment may actually move to the marshes in the dry season/summer, and not as much during the wet season/storms.
 - Recent research shows that the sediment moves out of tributaries and creates a reservoir near shore, where it becomes a storage situation. Then, over time with wave action, it moves into the marshes
 - Brenda noted that there are many unknowns about sediment transport to the marshes, and this is something they want to research further
 - **SCAPE to think about the language around gravel beaches-** they would still allow sediment to flow in, but are necessary to reduce edge erosion

Sediment Strategies

- Brenda brought up a few ideas around getting more sediment into the marshes
 - **Look at Dams and Reservoirs**
 - San Lorenzo Creek was brought up before- sluicing
 - How to move sediment out of these areas, into lower areas?

- Don Castro dam project- sediment pipeline- is something to consider
- Thin-layer placement, as in Seal Beach.
- Strategic placement framework- these concepts have been laid out but not tested yet in the Bay
 - There is a proposal with the USACE to test some of these concepts
- Beneficial reuse of dredge material- direct placement
 - 80% water / 20% sediment
 - Costs a lot of money
 - Broad mudflats in front of the side require a lot of management to move the slurry to sites
- Berms, or physical structures to break down the wind/wave fetch on site- opening up to the Bay
 - Berms are decent structures in the marsh, but they do provide predator access
 - Sonoma Baylands- concerns about predator access
 - Topographic diversity- good for habitat and refugia
 - Hamilton Wetlands
 - Berms isolated 85% compaction
 - Topo change helps attenuate waves and helps sediment fall out
 - Mark noted that the berms in Oro Loma Marsh were relatively easy to build
 - Breach from the channels, not the Bay, due to erosion impacts
- Widening the creek? Allow more sediment into the marshes
 - Corte Madera reference
 - 50% trapping of sediment from the Bay below HOT
 - Sulphur Creek
 - The Bay is an estuary and there is tidal and fluvial interfaces- water and sediment moves both ways
 - Brenda raised concern around tide gates- they trap sediment and limit the exchange of both

- Is there a way to bring sediment trapped at the Bay into the marsh?
- Small channels – capture sediment coming down from the creek / conduits for Bay sediment to come into the site
 - Mark noted a flood control issue at Line A- they had to dredge so often due to the Bay sediment clogging the channel, before the new tide gates
 - Most of the sediment comes from the Bay
- Peter Bay / Arthur Feinstein- 200 acre proposal of a sand berm
 - Offshore where there was a historic beach
 - Reduce the need for beach nourishment
 - Sets up a lagoon
 - Wind collapses the berm, and it turns into a beach
- Brenda noted that we are at an interesting point in time- just barely learning how to move sediment beyond direct placement. We know how to do direct placement, but it costs a lot of money.
 - At Inner Bair Island, they used construction fill to raise the elevation of the diked ponds and got the fill virtually for free from construction waste (trucking it in)
 - SBSP put out an ACE bid with a similar assumption, but it will now cost \$\$, and the costs were flipped.
 - There are a lot of permits coming in for office buildings along the Bay's edge and they are all elevating the land, which requires sediment, which is expensive

Pilot Projects

- Brenda raised concern over pilot projects being too small- if they aren't big enough, you can't see the results. However, if they are big and they fail, you have to be sure you are able to deal with that
- BCDC is looking to show that you are using the minimum amount of fill necessary –
 - State this assumption per project in the project cut sheets
- Gena noted some potential pilots:

- Gravel Beaches
- Sand Berm concept
- Channel modifications / widening / additional breaches

Next Steps

- Gena brought up the idea of management and monitoring- the Master Plan may be set up to pilot some of these concepts once they are permitted, and allow HASPA to be the first in line with the framework to do so
 - Test one round with USACE proposal- maybe there is funding
 - We do need to start testing these concepts soon
 - Set up HASPA to be able to codify this approach, and not be too specific about it
- Brenda agreed, and clarified that we are not proposing permitting action now, but are bringing the regulators along so they are aware of what we want to do in the future
 - Triggers- to cause the team to take action
 - Monitoring is important to identify the triggers
 - In the meantime, projects will start that will support future projects once the trigger hits
 - Use lessons learned from other pilots
- Brenda brought up BCDC's special area plans as a reference to this type of framework
- Adrienne supports the idea of triggers, and actionable items
- As you monitor and manage, you bring the regulators along the way
- Brenda brought up the idea of groundwater, which adds more buoyancy to things further inland

ONLINE PUBLIC FORUM #1

05/18/20 - 06/26/20

ONLINE PUBLIC FORUM #1 COMMENTS

Zalak Trivedi

Thank you for sharing this information and for eliciting feedback! It is exciting to see the stakeholders come together and make a plan for a future that both reduces risk and preserves the unique ecology of this area.

In my opinion, the Design Alternative #2 (Down the middle) provides the best preservation of ecology while keeping it diverse. This is very exciting to me. I always enjoy the different plants, birds and other critters when I take a walk there. I feel it important to preserve this joy for future generations.

As mentioned above, the ecology preservation and maintaining its natural biodiversity is very important to me.

Phil E. Gordon/Pat Gordon

Comments are directed at the five initial ASSUMPTIONS of the proposed Hayward Shoreline Adaptation Master Plan, in which I include general references to my preferences. I do think that no one municipality will successfully accomplish their adjustment goals, without all Bay Area "neighbors" mutually agreeing in knowledgeable cooperation.

1st. Preserve and enhance the Ecologic Features ["components" = more ecological]. [There will be a need to accommodate vulnerabilities of ecosystem components; especially any known or as yet unknown factors]. [Funding any research to close the gaps in ecologic assessments should be planned for].

2nd. Consider creative alternative or modifications of the Elements of the "Urban Fabric": remaining as status quo may be somewhat less tenuous.

3rd. Education (such as found in the work of the successful Hayward Shoreline Interpretive Center) should help in conveying the broad understanding this plan and the needed adjustments, especially any adaptations to ensure an healthy ecosystem, along with meaningful protections (or modifications) of private assets.

4th. Non-structural strategies, once agreed on, should, thereafter, be an integral part of any ongoing adaptations (or future changes) - even those non-imminent.

5th. Long-term planning must address and communicate to all stakeholders at large

Phil E. Gordon, Hayward, ALA Co., California.
Member: Hayward Shoreline Advocates
and Ohlone Audubon Society

As the plan has stated, there is a mixture of

elements. Elements that safely offer protection and perpetuation to existing ecosystems and citizens' peace of mind regarding their assets and (even in the impending turmoil we currently face) should be selected, incorporated and presented to all of us.

Thank you!

Erika Crawford

I have brought my daughter to nature programs at the Interpretive Center for the last two years. This is one of our favorite places in town. The master plan should protect the marsh habit and focus on sustaining the ecosystem here.

I preferred Alternative 2 because it sounds like it would reduce negative impact to the existing marsh habitat, and it sounds like it would help expand the habitat with additional marsh restoration.

Laurie J Price

Dear Board Executive Committee, HASPA,

This letter pertains to the Hayward Shoreline Adaptation Master Plan, dated June 4, 2020. I include both feedback and several questions about the current draft. First, I want to say that I am pleased that this planning for climate change adaptation is going forward in Hayward and elsewhere. Climate change and sea level rise will only become more serious problems in future decades; the California coast and the San Francisco Bay shoreline are precious and maybe with this type of planning we can avoid the worst kinds of damage.

The Master Plan states that one central goal is to "reduce risk to critical infrastructure and built assets" While built assets are one consideration, in my view we need to give the highest priority to another stated goal: protecting the ecology of the area. Many plant and animal species depend on Bay shoreline habitats; these include some species that are threatened or endangered. This shoreline cannot be replaced somewhere else.

The seven "Nature Based Strategies" identified in the Master Plan seem on the surface to be positive interventions for the protection of our natural resources. However, in future drafts it would be helpful to have information about the specific impacts of these strategies on birds and other Bay shoreline species.

The second category of response, "Engineered Strategies," includes several approaches that should be avoided in my view. Vertical seawalls and revetments undermine tidal habitats; these structures will threaten rather than assist in preservation of native plants and

animals. While still a bit experimental, the ecotone levee is the best of the “engineered” options. These long, gradually sloping, partly underwater levees mimic the natural shoreline. As with the Oro Loma project to the north, an ecotone levee might work well with Hayward’s wastewater treatment plant, while also preserving important habitat. Now to a few brief questions regarding the Master Plan.

The June 4 Master Plan provides maps showing three “Design Alternatives” for levee placement: “Closer to the Bay,” “Down the Middle,” and “Further Inland,” How can these (linear looking) boundaries be employed with an ecotone levee approach?

A second question. What are the precise climate change/sea level rise conditions in which each of these three boundary alternatives would be adopted? Does HASPA intend to settle on just one of these three boundaries? Or do these three boundaries represent a menu of options to implement sequentially, based on actual climate change impacts in the area?

Finally, a technical request: is it possible to get higher resolution maps in future Master Plan power points? I found the street names and other text impossible to read in the June 4 draft, requiring further research.

Thank you for your attention to this letter of feedback.

Laurie J Price Ph.D. MPH

Hayward Resident

Ecotone levees should be implemented.

NO vertical seawalls, revetments.

Robin McCoy

I believe that the Master Plan should be directed to keeping the shoreline area as natural as possible. It should be directed toward preserving the habitat for native species. Seawalls and other engineered devices should be limited as much as possible as they tend to have many unintended consequences (such as diverting water elsewhere). I like to hike on the shoreline and while I would like to preserve hiking trails I am willing to sacrifice these to maintain the habitat. As sea levels continue to rise it is important to have buffers between the sea and human areas. While presently no one seems willing to make the hard decisions of moving human infrastructure back it will soon be made for us. We should be looking forward to adapt our areas to what the shoreline is becoming not trying to engineer our way back to what was (and won’t ever be again). Let’s put our money into saving the habitat NOT just preserving “human” areas. Thanks for your time.

I don’t like alternative #1 at all, Alternative #2 is ok but I think I prefer Alternative #3.

Michael Quenneville

Please make an area for skateboarding including a few ledges, stairs or flat rails. Something similar to what was done in Greenwood park. Skaters are gonna skate regardless of weather it’s condoned or not. Thank you very much.

Laura Mattos

The Master plan and implementation should cover the most comprehensive innovations possible as SEA LEVEL rise is inevitable. While doing the most will be costly now, the future will be aided with less destruction and upheaval of repeated alterations. It seems to me that some infrastructure should be moved in the initial phase rather than numerous times in the next 100 years. I notice you are not addressing places such as Eden Shores that is built in a “wetland” area.

Definitely Nature Based Strategies with increased tidal marsh habitat along with some moving of facilities and structures now. Not doing it from the beginning will result in further destruction of property and higher costs.

Bubba Manzo

Implementing a system that strays away from developing on, near, or around marsh land. Absorption rates are drastically reduced when coastal areas are zoned for industrial use. We have plenty of industrial buildings, blacktop, even a power plant next to, or literally on our wetlands that are in danger of flooding during a storm surge.

Businesses need to realize they’re staying there will cost them great loss in the future should we see sea level rise beyond 4ft in the next 50 years.

Design 3: Further inland makes the most sense. These complicated, natural systems are the best shot we have at mitigating the negative effects of climate change. I believe we should run a second alternative flood levee along the train tracks all the way down.

Myles McClain

I live in the Longwood/ West Winton neighborhood. I’d love to see a shoreline that allows continued access to the walk and bike paths along our Hayward shoreline. I believe marshland will be the most effective and the most eco-friendly plan for our shoreline.

Elizabeth Munoz

I think it should achieve as much protection as possible by taking it back to where it was before we messed

with it. I like the redundancy in the master plan!

I like the line of protection from design alternative #1, but with the restoration of tidal habitats as described in alternative #2. Either way, thank you very much for your time and energy on this!

Stephanie Shell

I have no comments on the technical issues. I'm just glad to see that there is a plan being made by all of these agencies, instead of just waiting until something bad happens. Thank you!

Edward Lyke

My relationship to the Shoreline was multi-faceted as I was a marine biologist and invertebrate zoologist at CSU Hayward for many years and routinely used the Shoreline for class field trips, student/faculty research projects, and mitigation projects. I was very involved in the planning of Cogswell Marsh and the Shoreline Interpretive Center. In addition I was for many years the Chairman of HASCAC and as such was integral in all the discussions, planning, programs/brochures and the original Master Plan for the Hayward Shoreline. I worked closely with many people at EBRPD, HARD, the City of Hayward, school districts and the environmental community to bring to fruition the Shoreline as we know it today. However, it has been almost two decades since I as so active on the shoreline and I find myself sort of "out-of-the-loop" on current ecological and environmental management practices; it is hard to be getting 'old'!

I am pleased to to see the development of these Design Alternatives as a part of planning for the future of the Shoreline, particularly in conjunction with the inevitable rise in sea level and other concomitant changes in our world in response to climate change. HASPA should be congratulated for taking a lead in the Bay Area in planning for these issues.

While all three Design Alternatives have elements that recommend them I find myself leaning to a Hybrid of those proposed in Design II and III. Sea level rise is going to take place, it is going to be greater than perhaps we expect, and it is necessary to make plans for the very long term consequences. While this Master Plan is looking forward for close to 100 years, that should be the minimum for projecting changes in the marsh systems, the wastewater treatment facilities, the public access, and the protective levees and other infrastructure elements of the Shoreline and the surrounding business and residential communities. Design III has a larger footprint for ecological restoration, in particular the enhancement of the tidal marshes that will be critical for the ecosystem. I am particularly supportive of eventually moving the

HARD Interpretive Center to higher ground on the Winton Ave landfill area. With careful planning the costs could be managed and would, in all probability, not be more than what would be needed to protect and/or float the building at the current site.

I look forward to reading about the Preferred Master Plan. I suspect it will be a very comprehensive document and critical for the planning and implementation of the many aspects and elements of the Shoreline.

Thank you all for your efforts.

Philip Fay

Clean water should be a much higher priority than presented in Alternatives #2 and #3.

I would like to see better protection of our waste water treatment plants from Alternative #1 (closer to the bay) incorporated into the more middle of the road approach of Alternative #2 (down the middle).

Rudell O'Neal

I do not live nor work along the shoreline. Nevertheless, I am concerned about the natural preservation of it. I applaud Hayward trying to act in advance. I believe a combination of man made and natural preservation efforts hold the solution.

Where feasible, use natural measures to allow for marsh and flood planes. Where essential to protect vital infrastructure, use engineered methods.

Hannah Grgich

Having only briefly familiarized myself with this project, my preference would be that we retain as much of the existing marsh habitat as is possible. This comes from both an interest in environmental diversity and as a community member, the marshes are a good way to to connect with nature and an engaging educational experience for people of all ages. I realize that we should safely maintain vital infrastructure, but I am not terribly sympathetic to industrial/business in the area, as I feel they might be able to relocate or self-finance solutions if they wish to retain their location.

I would like to see an adaptive management plan, and retaining as much ecosystem diversity as possible.

Karla Werning

I both use the Hayward airport and walk with my dog by the shoreline. It is important to us to preserve both. The natural marsh areas are critically important in any plan. Do not reduce, diminish, damage the marsh habitat!

We should probably stop building close to the bay. Some built upon areas be eventually be lost.

The least damage to natural areas:
streams, marshes, wetlands.

Lawrence Danos

These plans are certainly worth looking at and deciding on a worst case scenario protection plan. In my vision sea level rise would probably be a slow process reaching about one foot higher than today's mean sea level by 2050. The rate of rise would increase for the next 50 years to about three more feet by 2100. Thereafter, it's a wilder guess how much higher the rise could be. This plan feels good for at least until 2075 according to my vision, and hopefully would accommodate the tidal highs and lows. Those homes nearest the marsh areas face problems during winter storms.

The combination of all the elements are going to be needed. It's a matter of placing things like revetments and berms in the right places. I understand adaptive management techniques will be built into the maintenance plan. Re-aligning on an as-needed basis will certainly be key to success. Thanks for allowing public input into this important planning process.

Timothy Devine

Wildlife, habitat, and ecosystems should be given top priority

Anything that promotes reconnection of natural landscapes and waterways; And, discourages development of any kind.

Mickey Souza

Wouldn't it be better if we had done more before we will have to spend \$\$\$\$ to mitigate these rising seas? Has anybody done chemical change predictions for the water that will be encroaching the wetlands/habitats?

Added considerations:

If gas lines are also in need of relocation, remember that California has a goal for electrification (vs. fossil fuel heating) phasing out fossil fuels by 2045. <https://www.sacbee.com/news/politics-government/capitol-alert/article218128485.html>

Not sure after reading the proposals, but are you are considering solar distributed systems rather than try to salvage old PG&E distribution poles?

Captain

I live in Castro Valley. please let the seas rise, I look forward to Castro Valley being beach front property. I'll build a dock for my boat and sail the 7 seas. I can't wait.

Can you send me some plans for my new dock.

Mickey Souza

Wouldn't it be better if we had done more before we will have to spend \$\$\$\$ to mitigate these rising seas? Has anybody done chemical change predictions for the water that will be encroaching the wetlands/habitats?

Added considerations:

If gas lines are also in need of relocation, remember that California has a goal for electrification (vs. fossil fuel heating) phasing out fossil fuels by 2045. <https://www.sacbee.com/news/politics-government/capitol-alert/article218128485.html>

Not sure after reading the proposals, but are you are considering solar distributed systems rather than try to salvage old PG&E distribution poles?

Yvonne Dardenne

I don't know enough to comment here. I just want to go on record as an advocate for protecting and preserving natural environment - for all creatures - animals, humans, vegetation.

The nature-based approaches seek to enhance protective ecological features of the shoreline

NATURE-BASED STRATEGIES
Fine and Coarse Grain Beaches
Tidal Marsh Restoration
Diked Pond Management
Fine Sediment Augmentation
Tributary Connection to Baylands
Reefs and Living Breakwaters
Eelgrass Restoration

Michael Jaeger / Barrington Business Park

We are the managers of Barrington Business Park or 2534-2655 Barrington Court, Bldgs A, B & C. Bldgs B & C are set along Frank's East and we are certainly concerned of sea level rise over the long term. We think a main goal of the Master Plan should be to protect the City's infrastructure and improvements from inundation, including the commercial and other buildings along its shoreline, while also protecting the natural shoreline habitats and recreational enjoyment of the shoreline areas. We strongly prefer design alternative #3 as it protects Barrington Court from inundation with a longer more comprehensive flood protection levee along this important commercial and industrial corridor, and it also provides a larger natural shoreline habitat area. Possibly there could be transition areas within this larger shoreline habitat areas to allow for retention of more shallower tidal marshes in interior sections as sea level rises.

*Flood protection levee along the east side of Frank's East so to protect our commercial facilities and the vibrancy of the commercial area. We are willing to also work with the City and all related agencies to assist in achieving this goal. Pls let us know how we can help and what we can do to assist. Best regards.

Debra Lewis

Please keep and create more natural habitat for the birds and smaller wild creatures. Don't allow direct public access to these areas. I have seen what direct public access does: my favorite wild areas in Hayward and Castro Valley have been destroyed by new generations which, sadly, have many members who enjoy destruction and distribute masses of litter at an insane rate. Just look at Ward Creek Day Camp or Lake Chabot; they are no longer parks; they are giant waste bins.

KEEP THE PUBLIC AWAY FROM THESE PLACES AND KEEP THE AREAS NATURAL! Do we need more catastrophes like the present virus?

I LOVE NATURE AND WILL THEREFORE STAY AWAY FROM IT.

KEEP THE MARSHES PROTECTED AND CREATE MORE OF THEM IF POSSIBLE.

David Head

That water won't be here for another 500 years. Hayward is skyrocketing to bankruptcy, and now you want to spend money on this?

Clara DiBona

I like the levees, tide gates and pumps that are in option 1. I think something needs to be done about the Hayward bridge, but not being a professional engineer, I am not sure what is both cost-effective and necessary. I am glad that a lot of thought has gone into this planning document, and that it incorporates the bay trail and nature center. When our son was younger we used the trail quite a bit.

Levees, tide gates, water pumps, revised bay trail and preserved nature center.

Ensure that the power plant and the Hayward Airport are protected.

Alexis Ostarello

Between us, my husband and I have 55 years of living in Hayward. We have enjoyed walks and bike rides on the trails near the shoreline over the years. When I think of Hayward, I often think of the Shoreline. To a city of over

150k people, natural resources and trails are important to balance out the urban and suburban concentrations

The nature-based strategies seem to be the most important. The environment does not have a voice in its own preservation, yet that is exactly what will be lost if we don't prioritize it. Infrastructure invariably decays over time, and public health and social initiatives will shift over time. We can use the Interpretive Center to educate our fellow citizens on the importance of putting nature first. It will not rebound if we don't act on its behalf.

James McBride

Please don't waste your time. I have walked and ran the shoreline trail for more than 25 years. I pay attention to conditions. The water level is not rising.

Maria Elena Byron

I found it hard to read your 'designs'. The SLR projections maps seem to be cut off at SR 92 however there seems to be some part of the problem that could affect even the area where we live but since the map was cut off I couldn't tell how much. We are in the El Rancho Verde section of Fairway Park abutting the Chapel of the Chimes Cemetery. Can you answer whether or not under your premises we might be affected? Please reply to dbyron1339@aol.com PS: I am an elderly person and I had to zoom the sizing of the maps 200-300 percent to find out that SR 92 was the cut off.

Evelyn Cormier

I have been involved off and on for more years than I can count. Initially I was bringing classes of first or second grade students to experience the shoreline from the time the building was built. Since then in various advisory or self initiated times I have been involved in the shoreline in order to preserve its unique and much needed site to help young and old understand what a unique and valuable site this is and needs to be preserved even in the face of sea level rise.

Ecotone levees should be used to the fullest extent possible to retain the natural setting of the shoreline. The planning needs to be coordinated with Eden Landing Ecological Reserve because that location is or will be faced with many of the same challenges without the built environment.

It is true that the constraints are indeed a challenge. The wetlands, marshes and building all have to be provided for in a way that provides the maximum amount of feasible protection within the limits of funding.

The designs need to incorporate the features that preserve the open space the shoreline and its unique site as well as protecting the other assets along the shoreline using ecotone systems to the extent possible.

Gerry Smith

In general, I'm in favor of some combination of #2 and #3. My primary concern is making sure that we continue to have a rich marshland environment that continues to support wildlife. Although #3 reduces the complexity of environments, it does a good job of maintaining/enlarging the total amount of marshland environment. Perhaps, as further adaptation/mitigation occurs, we can restore some of the diversity?

As stated above, my primary concern is preserving as much of our marshland environment as possible, and also continuing to have the rich diversity of environments that we currently enjoy.

Ashana Khan

For the shores, we should make high walls just like they have in flood zoned rivers. That should be good for all future water level rise as well.

Cheryl Crone

I am not going to pretend to say I understand your master plans or the environmental coastline issues. I just think you are missing an opportunity to do two things at once.

Additional idea:

Somehow you need to have this Plan include a revenue generator for the City of Hayward. A revenue stream larger than entrance or parking fees. I would like to see a ferry terminal, preferably with stops at SFO and downtown SF. And possibly connecting to the new Oakland As stadium and other existing ferry terminals.

Planning now for future Bay Area traffic needs is a good environmental decision. I hope this suggestion will be discussed and somehow incorporated into your plans.

Thank you for your time and service.

Roberta dePonte-Jacobs

I respect all who are studying this important issue. I do own a home in the "Jackson Triangle". My daughter and her family live there presently. I admit to know far too little to make an educated comment at this time but, I do want to suggest you folks remember the Hayward fault and the San Andreas fault. Our town is between the two fault lines. A big shake will challenge any catch basins, dykes etc. Therefore, I support the cost of including the investment into expert consultants in

this regard. I am grateful that you are moving forward with evaluation and planning. A factor in choosing the least expensive option is always the impact of the deeper water future potential. I support preparing for a 7' water increase and a large earthquake.

Thank you for asking us for input and for keeping us informed.

Duane

Global Warming/Climate Change is a political scam that is not worth wasting our money on. If it is happening there is nothing anyone can do about it, except to migrate like all species and humans have done for millions of years.

None - they all sound like boondoggles to enrich politicians and their cronies.

Minane Jameson / HASPA

Thank you for this thoroughly studied report. I am currently a HASPA Trustee, so I care very much about the future of this site. It is an incredible area that is home to so much wildlife and a great place for people to enjoy nature and the views of the bay. The Bay Trail is ideal for recreation, but many people rely on it for traveling to their jobs.

I do not feel knowledgeable enough to decide which elements of the three Design Alternatives are a must and which can be eliminated or altered, but I do feel a good starting point would be to work with the second Design Alternative. I would defer to the experts to decide where to go from there.

Protecting habitat and recreation opportunities (the Bay Trail and the Interpretive Center) would be my top priority. Not all habitat can be saved, but I would prefer an option that can save most, especially any habitat that endangered species rely on. Relocating or rebuilding both the BT and IC will be necessary at some point, and I'd like to see that they are included in the final plan.

Gerald Sannebeck

No master plan. Don't waste resources or time.

Patrick Lannan

I visit the shoreline at least three times a week.

I value retaining the shoreline as a recreation area, a place for education about the natural environment, and a place for sustaining a variety of ecosystems that support native plants and wildlife.

I recognize the challenges we face as climate change

causes sea level rise. I suspect there will be more political will for funding to maintain transportation and utility infrastructure than there will be for parkland and habitat preservation. So, I favor a more substantial up-front investment in preservation of parkland and habitat.

I am surprised I did not see more effort to adapt infrastructure in the Hayward industrial park and to support greater tidal flow. I wonder if we could see roadways elevated over channels that work to manage tidal flow. I also see new construction in these neighborhoods. This seems shortsighted. I would favor seeing a moratorium on new construction immediately adjacent to tidal marshes and parkland until we see a plan that sustains our current commitment to parkland, acre for acre.

I prefer the "close to the bay" scenario. I think it more likely that we will be able to retain parkland and diverse habitat if we have some of these areas behind a durable structure.

I am curious about the idea of sustaining land with "siltation" and would like to hear about where we have seen this management strategy effectively deployed. I would like to see cost projections for this kind of management strategy so we can compare this approach to a durable barrier built close to the Bay.

Dean Flatt

I would suggest that we accept defeat and retreat from the areas at risk of flooding. Buildings have known, finite lifespans. No new construction in those areas at risk of flooding within the lifespan of proposed construction. Later when the land has lower value, purchase and reclaim the land for public use after existing construction reaches its end of life, either as protected wetlands or recreational area or some public use consistent with Mother Nature and not Man's will.

Dave Pryor

The whole thing is nonsense and the city should not waste any taxpayer dollars on any sort of contingency for rising water levels.

You realized that former president Obama just bought shoreline property didn't you. This is illustrative of general non belief among all our so called leaders in "climate change".

Carin High / CCCR

I agree whole heartedly with Council member Aisha Wahab's comments that the emphasis of the Master Plan should prioritize protection of habitat for wildlife. The City of Hayward has been very forward thinking in its vision of protecting its shoreline and should

be commended for undertaking this process.

It is important to keep in mind that the Hayward Shoreline is not isolated from the rest of the shoreline, and that when considering the "diversity" of habitat to be maintained, one must also consider habitats that exist or are proposed to be created on adjacent lands (e.g. Eden Landing Ecological Preserve) and to also consider the costs and challenges of maintaining muted tidal marsh, especially as sea level rises. Therefore, when selecting an alternative consideration should be given to what is likely to be the most sustainable in the long-term. The ecotone levee alignment provided in the San Francisco Bay Shoreline Adaptation Atlas seems to most closely resemble the alignment of Alternative 3. I am glad to see SFEI is included on the design team for the Master Plan and hope their scientific expertise will help guide the selection of the preferred alternative.

I have only quickly scanned through the available documents, so I have missed discussions of impacts of all of the proposed alternatives on the federally listed threatened California Least Tern (LETE). I don't see the species listed under the pros and cons of any of the alternatives. Is it hoped or assumed the LETE will relocate to Alameda NAS or to the Eden Landing Ecological Reserve? My interest in the LETE colony at Hayward Shoreline stems from monitoring the nesting island for several summers and am aware that the Hayward site provided a positive contribution to successful LETE recruitment. I understand that trade-offs need to be considered especially when considering what is feasible and sustainable at this location, but there does need to be an assessment of the potential impacts to the LETE population.

As I mentioned above, I am leaning towards Alternative 3. Has any discussion been provided of how any of the proposed alternatives might be phased? Are there components that must be implemented before others? Such information might provide an insight as to whether or not certain elements might be held back to assess how the implementation is proceeding, whether or not sea levels are rising as anticipated, or to assess whether certain adaptive management techniques such as sediment augmentation are feasible for the Master Plan site?

I notice the plans include an area for solar fields. Has this feature been vetted by avian scientists? This location be inappropriate for such a land use as such a feature could be a hazard for migratory waterbirds. While I recognize the footprint of the area designated for a solar field is relatively small, the potential for waterbird collisions should be considered.

Patricia Hunt

If I understand your proposals, I prefer Design Alternative #1 (Closer to Bay). It appears that

there would be less of a requirement for future sediment augmentation. I think the less of a requirement for future maintenance, the better. Administrations change and maintenance funding is generally one of the first things to be cut.

You also indicate that managing water levels behind the line of exclusion would be easier in this scenario.

I don't think bisecting the Salt Marsh Harvest Mouse preserve is a very good idea, and I doubt that US Fish & Wildlife would approve.

Barry Abella

Dear Planning Commission. I live within a couple of miles from the shoreline. I've been riding my bike along the shore for over a decade. It's like a piece of heaven on earth to me and is a jewel of the bay in my mind. I'm more inclined to support the closer to the bay and putting in the effort to keep the trail as close to the water as possible. Since the trail is already close to the bay, I would rather fight the sea level where it's at even if it means temporary closure to do so. One thing I enjoy about the hayward shoreline construction is that I can ride along the trail year around even during the winter due to the type of soil. Please keep any future design and soil such that it's usable year around i.e. not using clay levy like the trail at coyote hills going to the dumbarton. Additionally I feel it's important to have as wide a trail for wakers/riders etc to not get in each other's way. Lately with the increase in trail use do to the fake pandemic it's been challenging to co-exist with so many people on the trail. Another good thing to think about is the people who are fishing they tend to hang around the bridge and block the bridge so you might want to look at a platform for them.

Elena Ufimtseva

I am a Hayward resident and the Hayward shoreline is one of my favorite places to come for a run with my dogs, let them swim and have a good time.

I think the climate change of the shoreline adaptation is very important, as well as preservation of the recreational access, educational centers , bathrooms.

I would like to see more what will be done to the trail system, water access and water runoff cleaning and filtering.

The Hayward regional shoreline should have a recreational water access that can be organized in a way to prevent the shoreline destruction. The dedicated areas to launch the kayak or a paddle board, let the dogs take a swim will be of a great improvement.

David Gehr

I would think the best plan would be to restore and maintain the history of the shoreline. I visit the shoreline 2-3 times a week running and riding from HWy 92 to Marina Park also I regularly visit the Oliver salt flats and Coyote Hills. I'm hoping with whatever plan that is adopted would still allow us the ability to enjoy the trails and spectator views and environment that the shoreline provides.

Steven Schoenberg / USFWS

I am a senior biologist with the U.S. Fish and Wildlife Service's Bay-Delta Office in Sacramento, which has authority over certain activities under our agency's jurisdiction in a service area that includes the location of the Master Plan.

The plan outlines a range of alternatives to preserve multiple beneficial uses in the face of climate change and associated sea level rise. We acknowledge that such planning is necessary. Among these uses are the need to preserve, enhance, and/or restore habitat for fish and wildlife, including both listed species as well as other wildlife species of regional significance. The listed species in the planning area include Ridgway's rail, the salt marsh harvest mouse, California least tern, and western snowy plover. Concerns for these species and others include, but are not limited to, protecting habitat in the face of sea level rise, minimizing effects of any future construction and associated land use changes that result from elements of the plan alternatives, and ensuring the long term survival and recovery of populations.

The Service's involvement will arise when there is a federal nexus where federal funds or permits are issued to implement elements identified in the Plan. This occurs under the authorities of the Fish and Wildlife Coordination Act (FWCA) and Endangered Species Act (ESA). Under FWCA, this can include our participation in early planning when a lead Federal agency (e.g., Corps of Engineers) has identified and expressed an interest in developing a Federal project that includes elements in the Plan. We would also coordinate with other State, Federal, and local interests, and internally, to provide more specific recommendations regarding alternative preference, and project-specific conservation measures. Under Section 7 of the ESA, we review proposed actions for the effect on listed species during the consultation process, and provide as appropriate authorization for take, terms and conditions, and guidance on conservation measures you propose. Because our involvement under FWCA and ESA has not yet been initiated, it would be premature to comment on specifics at this time.

Anne Cawood

I would like to see as much of the wildlife habitat be restored to protect the shoreline and increased plantings for native plants for birds, bees and butterflies to protect the shoreline. I walk the shoreline area every week.

Joseph DiDonato

Tough decisions. What I would base my design on is what we cannot afford to lose. To that extent, I would prioritize the SMHM preserve and the eastern half of Oro Loma Marsh. On the latter I suggest either a protective barrier at the utility corridor or a significant amount of soil built up in the eastern half (if it will be subject to tidal inundation). The import of soil and the design of upland refugia within the SMHM preserve is also an alternative if that area is not behind a seawall. Mice will swim and climb vegetation during inundation so some vegetation that will remain above the MHHW could be planted in the mouse preserve. Salt ponds somewhere will be critical for plovers but that be achieved south of hwy 92.

The plan must be flexible and not stagnant and include possible options not currently available. Reclamation of the landfills and Frank's tract could do wonders for the overall complex and should be included as an option "if those areas become available in the future". I think the permit hurdles are initially challenging most agencies will see the benefits of a long range self-mitigating plan. The stakeholder group should include the Fed and State wildlife agencies, BCDC, the county agencies and utility companies, similar to what we formed under the Seasonal wetland Enhancement Committee of which I was the chair when we developed the plan for restoration of Oro Loma Marsh. If they are at the table initially, it'll make the permit process much easier.

Pravin Balram

I have lived in Hayward since the seventies and very much enjoy biking and walking its parks and trails.

I suggest as part of plan we create a pedestrian only waterfront promenade strictly for pedestrians and cyclists with a complement of park benches, etc and a public parking area on both the southern entrance at the Hayward Interpretive Center and northern entrance in San leandro.

We could charge a nominal fee for parking, and use the funds generated for the maintenance of the promenade, in addition keep strict operation hours from sunrise to sunset to discourage overnight parking and criminal activity.

I prefer design alternative 1, closer to the bay. (lets meet it head on now!!)

I do agree that this will create more of a burden to control the muted tides in the existing marsh land but with some science and technology we can create a series of automated locks that continuously monitor the Bays tidal ebb and flow and thus keep things from stagnating in any one area.

That said global sea level rise is a foregone conclusion and this be one of many losing battles with the forces of mother nature.

Wade Winblad

Most cities are located near a shore.

In Hayward, our shore is enjoyed by junk yards, stinking mud flats, and a very few hiker's that have the time to go out there.

We should have development just like San Leandro marina.

It's time to stop wasting our land. A marina, restaurants, park space.

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July 7, 2020

Reply to: jewellspalding@mac.com

Hayward Area Shoreline Planning Agency
Board of Trustees
City of Hayward: [Council Member Al Mendall](#)
East Bay Regional Park District: [Dennis Waespi](#)
Hayward Area Recreation and Park District: [Minane Jameson](#)

Re: Comments on HASPA Shoreline Adaptation Master Plan

Dear Hon. Members of the Hayward Area Shoreline Planning Agency:

This is on behalf of the Sierra Club in response to the request for comments on the Hayward Shoreline Adaptation Master Plan dated June 4, 2020. These comments are preliminary and based on our limited time to review these different proposals. We of course reserve our entitlement to modify these comments or supplement them as we are able to further study these proposals and/or as additional information is disclosed.

Climate change adaptation is going to be an ecologically important challenge for at least the coming century. The Master Plan notes that one project goal is to “create a resilient shoreline for people and ecology.” A second goal is to “reduce risk to critical infrastructure and built assets. While we hope that both of these goals can be achieved, our main focus is to maximize protection of the valuable ecological resources and threatened/endangered species that depend on the shoreline of the Bay

In the Master Plan draft, each of the three response categories offers certain strategies that will assist with the stated ecology goal. For example, all seven of the “Nature Based Strategies” can potentially help protect species that live along the Bay shoreline and the Sierra Club heartily endorses these.

Moving to the second general category “Engineered Strategies,” from our perspective vertical seawalls, standard levees and revetments all entail serious ecological threats. These structures are totally inappropriate for Hayward since there is a lot of precious marshland along the Bay. Many many plant and animal species, including some threatened and endangered species, would be damaged by the vertical concrete or piled up seawalls. These types of structures undermine tidal marshes and the species that depend on these. They also present structural erosion problems, “scour” in front of the sea wall, especially in major storms.

The Master Plan draft does have one “engineered strategy” that appears to be promising: the ecotone levee. This “horizontal levee” works to achieve “a gradual blending between communities across a broad area” (www.ec010gical.wordpress.com/2014). These long, gradually sloping (1:30 slope rather than 1:1 slope), partly underwater levees mimic the natural topography of the shoreline and are consistent with habitat restoration. The ecotone levee supposedly will help avoid loss of the rare wetland habitat and the species that depend on that habitat along the Hayward shoreline. Ecotone levees **are** still experimental. The city of Palo Alto and the Oro Loma Sanitary District have shown some success with them. The Oro Loma Horizontal Levee Project, just north of Hayward, provides a good model for the Hayward Water Treatment facility, since Oro Loma is currently testing the abilities of various mixes of native plants and sediments “to

treat wastewater flowing through the levee from the holding basin” (https://oroloma.org/wp-content/uploads/STB-Oro-Loma-Report_11.13.17.pdf)

Turning to the third general category, “Non-Structural Strategies,” in our view, “managed retreat” will eventually need to be a central part of Hayward’s overall shoreline adaptation plan. Starting perhaps 25-30 years from now, certain “built assets and infrastructure” will need to be rebuilt elsewhere as sea level rises by two feet, four feet, then possibly seven feet. While managed retreat is not something we argue for in the near term, we foresee that it will become the primary strategy in the longer term, given groundwater emergence and storm surge levels.

Finally, the different alternatives discuss that mitigation measures may be necessary depending upon the proposed strategy. Any mitigation measures must be viewed in the totality of the circumstances concerning sea level rise that we will experience. By way of example, one mitigation that is discussed is mitigation for loss of salt marsh harvest mouse habitat. Yet, there is no discussion of where and how such habitat could be found or created as a mitigation site in the context that the Bay will experience a rise in sea levels that will eliminate existing salt marsh harvest habitat. Consequently, proposed mitigation measures should be analyzed as to their practicality given the overall rise in the Bay’s water level.

The above paragraphs delineate our view of the Shoreline Master Plan draft three general categories of response. Overall, we emphasize the importance of preserving animal/plant marshland habitat on the shoreline; the ecotone levee is clearly the best plan to achieve this objective. We have two questions that we would like to see more fully addressed in coming Master Plan drafts. These are discussed below.

Question 1: Slide #12 of the Master Plan presents maps showing three “Design Alternatives” for placement of levees: “Closer to the Bay,” “Down the Middle,” and “Further Inland,” Would these (very linear looking) boundaries allow for an ecotone levee approach? What are the climate change/sea level rise conditions in which each of these boundary alternatives would be adopted? Or would each of the three boundaries be implemented over time, as sea levels rise? (Or will HASPA take the best available science and try to settle on just one of these three boundaries as the right one to use long term?)

Question 2: What specific plan will be made for Sulphur Creek, which has an outlet in the middle of the shoreline area . What specifically will be done to restore Sulphur Creek to its pre-industrial form?

Thank you for your attention to our position on the Hayward Shoreline Master Plan draft, and to our questions concerning certain aspects of the Plan. We look forward to further development of the Plan to maximize its shoreline habitat conservation and restoration commitments. Please make sure to provide us notice on the further developments of this Plan which can be directed to our Chapter Director Minda Berbeco at the address below.

Sincerely,
 /s/Jewell Spalding
 Southern Alameda County Group,
 San Francisco Bay Chapter
 Sierra Club

CC: Minda Berbeco, Chapter Director, minda.berbeco@sierraclub.org
 Damon Golubics, HASPA staff contact, damon.golubics@hayward-ca.gov



July 9, 2020

Hayward Area Shoreline Planning Agency
777 B Street
Hayward, CA 94541

Attn: Damon Golubics, Senior Planner

Dear HASPA Members:

We appreciate the opportunity to comment on the Hayward Regional Shoreline Master Plan alternatives. The Master Plan presents detailed alternatives and impressive analysis of pros and cons, providing a strong basis for decision making by the Agency, the City of Hayward, East Bay Regional Park District, and Hayward Area Recreation and Park District.

We provide the following comments on the alternatives analysis, understanding that the Agency's intention is to develop a hybrid preferred alternative:

Given the challenge and costs of making the changes to infrastructure that will be required, the development of a final alternative must recognize the reality of significant sea level rise through the middle of this century and beyond. Regrettably, the most prudent approach is for the Agency to adopt the higher sea level rise projections in current California state guidance, and should expect that those projections will continue to be revised upward.

Using higher sea level rise projections, to achieve maximum benefit to natural resources of the Bay and shoreline habitats, and maximum protection for infrastructure within and adjacent to the Hayward Area Shoreline, Alternative 3 must be the basis of the final plan. As the Master Plan notes, Alternative 3:

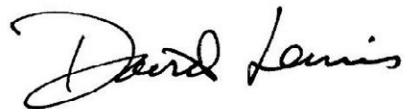
will maximize ecological restoration along the shoreline and layer risk reduction infrastructure. This alternative prioritizes a larger extent of connected tidal habitat that is Bayward of the line of protection and incorporates ecological and risk reduction infrastructure along a wider extent of Baylands.

This alternative allows for creating of the largest expanse of tidal marsh habitat, and also presents the greatest opportunities for marsh migration and adaptive management to rising sea level. This alternative is also the safest way to plan for greater sea level rise without having to abandon or significantly revise this shoreline plan before it is fully implemented.

We acknowledge that this alternative creates more costs for protecting and adapting existing infrastructure, or relocating infrastructure inland of the Line of Protection. Relocation of water treatment plants and reconfiguring CA-92 onto a causeway will be particularly costly. This alternative also identifies that some current public access, trails and existing habitat would be inundated by sea level rise and rising groundwater tables.

As this ambitious project advances, the City of Hayward and its partners must take into consideration the impacts all alternatives will have on communities of concern and to strive for equity of benefits. The inclusion of diverse voices in stakeholder processes will be crucial as this project moves forward, and best practices in this area suggest that funding be allocated for environmental justice advocates to be part of the process. There are additional best practices being identified in the many regional conversations taking place about how the Bay Area can plan and invest for more equitable climate adaptation and access to nature, including at the Bay Area Restoration Authority and the San Francisco Bay Joint Venture, as well as in BCDC's Bay Adapt and MTC's Plan Bay Area 2050 processes.

We urge those involved in this project to consider the emerging regional consensus that climate adaptation must be ecologically sound and equitable and make the Hayward Shoreline Master Plan process an example to hold up to others across the region.

A handwritten signature in black ink that reads "David Lewis". The signature is written in a cursive, flowing style.

David Lewis
Executive Director

Mission Peak Conservancy Letter of Comment

Comment on the Hayward Area Shoreline Planning Agency (HASPA) draft Master Plan:

Mission Peak Conservancy appreciates the opportunity to comment on the draft Master Plan for the Hayward Shoreline. The Shoreline Planning Agency (HASPA) and its partners, the Hayward Area Recreation District, the East Bay Regional Park District and the city of Hayward have brought in nationally-recognized technical experts to work with local groups, to address the interconnected challenges of sea-level rise. We are impressed by the scope and ambition of the technical solutions under consideration. When the planning process is completed, we expect that its methodology, stakeholder engagement, and technical solutions will be models for other regions to follow.

The planning area covers more than three square miles, fronting four miles of shoreline along San Francisco Bay. This encompasses environmentally-sensitive wetlands and salt ponds, recreational trails, critical infrastructure for energy generation and water treatment, and commercial, industrial and residential properties.

Mission Peak Conservancy focuses on protecting and expanding park access, multi-purpose trails, and linear parks. We recognize that the challenge of flooding and sea-level rise cuts across all elements of water-related uses. We see recreational access as essential for public health. We are also concerned with the disparate impact of sea-level rise, since it impacts vulnerable communities near the shore, and this could exacerbate social inequities. We recognize that the freshwater aquifers along the shore will face an existential threat, one that possibly cannot be mitigated. At the least, the threat to aquifers needs to be assessed and defined.

Given the regional scope of the Master Plan, implementation will require contributions from a wide range of funding sources. We see the biggest challenge as coordinating the government agencies, nonprofits organizations and private landowners. While each of the options under consideration carries a substantial price tag, approaching one billion dollars, sea-level rise appears inexorable within the next 50 to 100 years (four feet of rise). Thus, inaction would prove even more costly in the long run.

We would like to see better working relationships among the political jurisdictions and special-purpose agencies that have interests in this project. Given the political divisions, collaboration will not happen naturally. A balkanized set of conflicting responses, that only draws lines in the sand to stop the rising sea, will not bring about meaningful adaptation. Specifically, we would encourage HASPA to open

discussions with the city of San Leandro and regional planning agencies such as Sea Change San Mateo County, the city of Union City, and the Don Edwards San Francisco Bay National Wildlife Refuge.

Because of our focus on trails, park access and non-motorized transportation, we appreciate the plan's commitment to protect trails where possible, and relocate them where necessary. The preservation or reconfiguration of the Bay Trail for public access and recreation should remain a top priority.

Traditionally, land use policies and environmental requirements have proscribed managed retreat, in favor of hard physical barriers instead. Given the high cost of armoring hundreds of miles of shoreline around San Francisco Bay, hard barriers will be limited to only the most critical facilities. Adaptation, managed retreat (reconfiguration) and resilience will be required for most localities, because permanent fixes are not possible. Construction of upstream facilities (e.g., dams and stream-bed alterations) that restrict the natural flow of sediment into the Bay will have to be regulated more strictly, and consideration should be given to reversing or deconstructing those facilities.

To conclude, we applaud the planning process that is now underway. We would encourage building better political links with neighboring agencies and regional planning organizations. Of necessity, adaptation must address cultural, educational, interpretive, political, legal, and social dimensions. The legal framework now in place, that protects property owners, water rights and environmental assets in their current configurations, needs to be reevaluated and reinterpreted from the perspective of resilience.

Sincerely,

Kelly Abreu

Mission Peak Conservancy

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ONLINE PUBLIC FORUM #2

10/12/20 - 12/01/20

ONLINE PUBLIC FORUM #2 COMMENTS

Carin High / Citizens Committee to Complete the Refuge

Comment #1

• Outreach: Appendix A of the Master Plan provides summaries of stakeholder meetings and comments made during these meetings, but it would have been useful to have access to agency comment letters. A review of Appendix A stakeholder outreach indicates that the U.S. Fish and Wildlife Service (USFWS) was contacted and that comments from the USFWS would be submitted by May 26, 2020. Were those comments received – are they the comments that appear in Appendix A submitted by Steven Schoenberg? Did California Department of Fish and Wildlife (CDFW) provide any additional comments? The letters from these agencies could provide insight into the preferences of one design element over another and whether issues of concern were identified by the agencies. It doesn't appear from the information provided in Appendix A that outreach to the San Francisco Bay Regional Water Quality Control Board (RWQCB) has occurred. Feedback from the RWQCB would be extremely useful and could inform HASPA in advance, of any permitting challenges that might be posed by the preferred alternative. Last, it is unfortunate that environmental groups that advocate for the protection of species such as Audubon, the Citizens Committee to Complete the Refuge, the Sierra Club, etc., were not included as stakeholders or at least included in a focus group discussion prior to final public comment period for the Master Plan.

Response #1

- Appendix A includes all meeting minutes and any formal letters received in relation to the Plan.
- Appendix A also includes comments received by Steven Schoenberg on behalf of USFWS, on May 28, 2020.
- The San Francisco Bay Regional Water Quality Control Board was approached multiple times during the engagement process and provided no comments nor participated in any meeting or workshops.
- Both Audubon and the Sierra club were invited to participate into workshops, meetings and online surveys prior to the final public comment period.
- Citizens Committee to Complete the Refuge submitted a letter that can be found in Appendix A.

Comment #2

- As we stated in our opening remarks, the authors of the Master Plan are to be commended for their

visual and written presentation of the range of adaptation strategies that might be applied within the plan area. The information provided within the document is a primer for decisionmakers planning resilience projects along the edges of San Francisco Bay and is remarkable in the breadth of topics covered ranging from descriptions of the afore-mentioned adaptation strategies, to permitting agencies and their potential concerns, to potential funding mechanisms for various elements of the Master Plan. That being said, it would be extremely useful to provide access to the technical information that may have been relied upon to determine which elements of the preferred alternative were the most feasible. The Hayward Shoreline Adaptation Master Plan website should continue to be maintained and a “Library” or “Resources” section added, similar to the South Bay Salt Pond Restoration Project website - <https://www.southbayrestoration.org/> The website could then provide technical reports/studies as a resource that is continually updated for those members of the public who wish to continue to be engaged with the process of Master Plan implementation and could also serve as an educational outreach platform for the public at large.

Response #2

- All of the technical information produced during the Master Plan process can be found in the final Master Plan document, or previous submissions. These are all accessible on the project website- www.haywardshorelinemasterplan.com.
- The Design Team also provided GIS information related to sea level rise and ground water emergence to the City of Hayward. This information has been made available on the City's GIS portal.
- As projects are implemented over time, additional technical information could be made accessible to the public.
- The Design Team recommends to HASPA to maintain the Master Plan website past the lifetime of the study in order to share technical information and additional studies as they become available while the Master Plan is being implemented.

Comment #3

- Sea Level Rise Estimates Used: Page 119 of the Master Plan states: “The plan is looking at reducing risk to critical assets from daily tidal inundation and future 100-year storm surge in a up to 4’ of sea level rise scenario. For planning purposes, the Project Team has been considering a target elevation of 14.3’ (NAVD 88) to evaluate the various Design Alternatives and to assess the feasibility of the Preferred Alternative.

The plan is based on adapting the project area over a mid-range time frame. Based on State guidance, this time frame is estimated to be between 50 and 60 years long.” According to the Master Plan the estimates utilized were based upon 2018 California Coastal Commission recommendations. In February of this year the California Ocean Protection Council (OPC) approved its “Strategic Plan to Protect California’s Coast and Ocean for 2020-2025.”¹ This document includes as a target, “1.1.1: Ensure California’s coast is resilient to at least 3.5 feet of sea-level rise by 2050 or higher, as consistent with the State’s Sea-Level Rise Guidance Document as appropriate for a given location or project. This target will be modified periodically based on the best available science and updates to the State’s Sea-Level Rise Guidance Document.”

- Will HASPA alter its Master Plan Assumptions to incorporate this latest guidance? Will the OPC guidance have any impact on the elevations of interim levees at Oro Loma and the Salt Marsh Harvest Mouse Preserve which have elevations that aim to “reduce risk up to the existing 100-year storm plus 2’ of sea level rise (SLR)?” Does the increase in the rates of predicted SLR inundation impact the time frame within which various components of the Master Plan need to be implemented to provide SLR resilience for existing infrastructure and development? For example, should the California Environmental Quality Act (CEQA) processes for Line of Protection projects be initiated sooner than 2030 and 2045?

Response #3

- The final master plan target elevation exceeds the most recent guidance from the California Ocean Protection Council, as well as guidance from other state and federal entities. The interim levees are intended to provide near-term flood protection but are recommended to include foundations that can be adapted to a higher elevation in the future as needed. The master plan provides a flexible framework and as projects are further refined, and as additional climate science and guidance is developed, specific elevations of future projects and the timing of projects can be refined.

Comment #4

- General Support of the Preferred Master Plan Alternative: In general, without access to supporting information that demonstrates the various elements of the Preferred Alternative are feasible to implement (e.g. geotechnical and hydrological studies, etc.), we support the Preferred Alternative, including the use of gravel beaches to reduce erosion, expansion of tidal marsh habitat, the use of horizontal levees as part of wastewater treatment facilities and the eventual relocation of the Hayward Shoreline Interpretive Center.

As stated earlier, we commend HASPA for incorporating nature-based solutions as adaptation and resilience strategies and for recognizing the ecological value of the Hayward Shoreline to the San Francisco Bay.

Response #4

- As the projects identified in the Plan are being implemented, further analysis and engineering studies will be required. The Master Plan analyzed alternatives for high-level feasibility with feedback from a variety of stakeholders and experts. Additional feedback and stakeholder engagement will be required for individual projects as they are being further designed.

Comment #5

- Salt Marsh Harvest Mouse Preserve: We do wonder how long the interim levees will be effective against sea level rise and have concerns about the sustainability of the salt marsh harvest mouse (SMHM) preserve. Have any preliminary plans been developed for the SMHM preserve that involve increasing ground elevations within the preserve itself and not just on the ecotone levee? In the short term, the ecotone levee (#2f on page 182) will provide the capability for SMHM habitat to migrate upslope and provide escape habitat for SMHM during periods of inundation, but as sea level rises and tidal marsh habitat is compressed between rising seas and the Bay Trail, there will be less suitable habitat for the SMHM. The Master Plan includes a provision for realignment of the Bay Trail (page 171), “The current alignment of the Bay Trail will be maintained as long as possible (until it is inundated with sea level rise) and connected to the realignment.”

- We urge HASPA and the Bay Trail to consider relocation of the Bay Trail before the trail itself is threatened by inundation to provide some higher elevation habitat for the SMHM that is not subjected to human disturbance. As sea level rises, the SMHM population within the plan area will have few places that it can escape to, while recreational uses can be relocated to avoid conflicts with an endangered species.

Response #5

- The interim levee at the SMHM preserve is only intended to provide protection up to the medium-term time horizon. This elevation will have to be decided as this project is further being developed. Additionally, further studies will be required to identify the feasibility of increasing the elevation of the preserve, without impacting the existing protected habitat.

- The Bay Trail comment is noted and the phasing of the bay trail relocation will be further studied and analyzed in the future.

Comment #6

- California Least Tern Breeding Colony: The preferred alternative provides two options for the California Least Tern (LETE) breeding colony – the first is to relocate the breeding pond to the east of its current location, behind the SMHM Preserve interim levee. The second is to leave Pond 3A in place and raise the levee around the pond. The existing condition for the LETE breeding pond is that access to the levees adjacent to the breeding pond is limited to maintenance vehicles, monitoring of the LETE breeding colony, and very occasional access along the levee by classes from the Hayward Shoreline Interpretive Center on their way out to the Bay. The two proposed LETE breeding pond alternatives feature the location of the Bay Trail on two or three sides of the breeding colony pond. The Northern California LETE breeding colonies - the larger Alameda NAS colony and the Pond 3A breeding colony - have had some of the highest rates of recruitment in California. According to the 2016 Season California Least Tern Breeding Survey2, "...the San Francisco Bay and central coast areas had the highest minimum fledgling-to-maximum pair ratio," with the Pond 3A colony have producing 1.80 fledglings per pair. This was one of the highest ratios in the state. Clearly the Hayward LETE breeding colony is of importance in the recovery this species. In recent years LETE have established a breeding colony on Pond E14 within the Eden Landing Ecological Reserve.

- Neither of the options seems ideal from a perspective of exposure of the breeding colony to potential human disturbance. If the Bay Trail wasn't along three sides of the LETE breeding pond, it might make the most sense to leave the pond in its current location and build up the surrounding levees because this would avoid the need to relocate the colony and would provide a greater footprint for the SMHM preserve. However, we know nothing about how this might impact adjacent wetlands, whether the soils could withstand additional fill material for raising the levee, how water levels within the pond would be maintained, etc.

Response #6

- The habitat considerations for the LETE are noted. As these projects are implemented, further analysis and alternatives will be developed to ensure LETE habitat is preserved in the future with sea level rise.
- The feasibility of building a levee around the entire existing colony, and maintaining that levee as a shoreline that will get inundated with sea level rise, was considered but other alternatives were selected to balance risk reduction, habitat adaptation, and cost implications.

Comment #7

- Human Disturbance: The potential conflict between

recreational use and protection of wildlife and the habitats that support them was raised during the stakeholder meetings and public comment period. We do not oppose public access; we believe carefully and thoughtfully located public access is a necessity for Bay Area residents. However, we strongly believe that along the edges of the Bay, consideration must be given to the needs of tidal marsh species particularly since we have lost approximately 90% of our historic tidal marshes, and the ability of our remaining tidal marsh habitat to survive sea level rise has been severely compromised by the placement of development right up to the edges of the Bay.

- This Master Plan is commendable for the incorporation of tidal marsh restoration as an important goal of the adaptation and resilience plan, and in the short term, some "breathing space" does exist to allow tidal marsh species to distance themselves from human disturbance. Elements of the Master Plan where potential conflicts between recreational use and wildlife may occur are along the proposed gravel beaches – it appears the only location where public access does not extend to the gravel beaches may be on the western side of the Oliver Salt Ponds. These areas may be used by nesting waterbirds and by roosting LETE and may be in close proximity to areas where LETE may forage at high tide. The Bay Trail may completely surround the SMHM Preserve which could be problematic during periods of inundation due to King tides or 100-year flood conditions when SHMH might be forced to the sides of the levees unless sturdy and taller vegetation is provided as escape habitat within the marsh). Western Snowy Plover may also utilize these areas as well as nesting islands within the LETE breeding colony pond. The San Francisco Bay Bird Observatory (SFBBO) report mentioned earlier states, "Snowy Plover nests are legally protected by a 600 ft radius nest buffer because Snowy Plovers in the San Francisco Bay have been shown to flush off their nests when a perceived predator is at a distance of up to 500ft." The Master Plan may provide adequate structural habitat for rare and listed species such as the Western Snowy Plover, the California Least Tern or the salt marsh harvest mouse, but without adequate separation from human disturbance, the habitat may go unutilized.

Response #7

- Thank you providing such detailed information. Comment noted. Any project that is implemented will require further analysis and feasibility studies on the proposed configuration of new habitat, how it will be able to adapt with sea level rise and how public access will be provided or prevented to protect endangered species habitat.

Comment #8

- Conclusion: CCCR would like to thank you for the opportunity to provide comments. The Master Plan is a significant undertaking and we commend HASPA for its efforts and for setting enhancement of the Hayward shoreline's ecological value and providing refuge to help endangered tidal marsh species as goals of the Master Plan.
- We hope there will be future opportunities for public engagement in this planning process and that groups such as CCCR and the Audubon Society can participate as stakeholders. We request that CCCR is added to the notification list for the Master Plan.

Response #8

- CCCR is included on all updates in the Master Plan process and did submit a formal letter. The Audubon Society was included in stakeholder invites, but did not participate.
- The Design Team recommends to HASPA that both CCCR and Audubon receive updates on the Master Plan as the process unfolds.

Benjamin Pearl / San Francisco Bay Bird Observatory

Comment #9

- I am contacting you to comment on the Hayward Regional Shoreline Adaptation Master Plan. Specifically, I wanted to address the plan's inadequate consideration for breeding habitat for the Pacific Coast Distinct Population Segment (DPS) of Federally Threatened Western Snowy Plovers (plovers). Hayward Regional Shoreline (the shoreline) is one of the most significant plover breeding sites within the San Francisco Bay Estuary (Recovery Unit 3, RU3), and in 2020 supported 14% of all plover breeding documented in RU3 (Pearl et al. In Progress). Outside of the South Bay Salt Pond Restoration Project footprint, which supports the majority of plovers in RU3, three sites at the shoreline provide the most important plover breeding habitat in RU3.

Response #9

- Comment noted. Additional feasibility studies and analysis related to endangered species habitat will be required as part of the Master Plan implementation and while the current plan provides a high-level road map, it is recommended that additional considerations are given to breeding habitat.

Comment #10

- Oliver Brothers North Salt Ponds are a critical Snowy Plover breeding site.
- In the USFWS Snowy Plover Recovery Plan, the Oliver

Brothers North Salt Ponds (OBN Ponds) were noted as one of only seven plover population centers in RU3, and identified as an important area to provide breeding habitat to minimize the potential for population decline (USFWS, 2007). Although this area is not surveyed by either HARD or EBRPD, the San Francisco Bay Bird Observatory (SFBBO) has documented breeding activity in the OBN Ponds for almost twenty years. Since 2003, SFBBO staff and volunteers, most of which were Hayward Shoreline Interpretive Center staff, have conducted at least monthly surveys in these ponds during the breeding season (March-September). In 2003, when SFBBO staff conducted surveys once every two weeks, a total of seven nests were located in these ponds (Strong & Dakin, 2004). After 2003, SFBBO did not have the resources to monitor the area, and surveys were conducted in these ponds by volunteers on a monthly basis. During this time, volunteers located nests and/or observed broods in 2007 (Robinson-Nilson et al. 2007), 2009-10 ((Robinson-Nilson et al. 2009; (Robinson-Nilson et al. 2010), 2014 (Tokatlian et al. 2014), and 2019 (Pearl et al. 2019). Data reported on ebird by citizen scientists indicate undetected breeding activity in the OBN Ponds in 2015 and 2018. In 2020, when SFBBO staff conducted surveys on a weekly basis from May 22-October 2, 11 nests were monitored and an additional two nests were detected as broods (Pearl et al, In Progress). Five of the monitored nests hatched, while four were depredated and the fate of one nest was unknown. Anecdotally, broods experienced moderate to poor survival.

- Although high water levels may have limited plover breeding in the OBN ponds during some years, repair of the outboard levee in 2012 by HARD reduced high tide flooding and likely resulted in more suitable breeding habitat being available to plovers each year. The large amount of breeding activity documented in 2003 and 2020, the only years in which SFBBO staff conducted regular surveys, indicates that a large amount of breeding activity was likely missed in the years in between. Loss of this breeding habitat without providing enough suitable replacement habitat would have significant effects upon plover recovery in RU3 and for the DPS as a whole.

Response #10

- Comments noted. Oliver Salt Ponds are one of the most vulnerable diked ponds along the Hayward Shoreline. The repairs to the outboard levee would not address flooding from the low-lying levees along the inland channels. The possibility of protecting Oliver Salt Ponds over time with sea level rise was evaluated, but due to severe cost implications, it was recommended to restore the ponds to tidal marsh and relocate the breeding habitat further inland where it is less vulnerable to sea level rise.

Comment #11

- Frank's Dump West undersurveyed, provides high quality Snowy Plover breeding habitat
- In addition to the OBN Ponds, Franks Dump West (FDW) has been identified as suitable breeding habitat since at least 2003. As with the OBN Ponds, after 2003 SFBBO did not have the resources to survey FDW. While HARD employees conducted volunteer surveys for SFBBO between 2004-2019, it appears that FDW was not surveyed by volunteers after 2006. Despite this, with the exception of 2009, plovers have been reported at FDW by citizen scientists on ebird from 2008-2020 during the months of April-July, when plovers present are likely breeders. Breeding was confirmed in six years, when broods were reported on ebird in 2014 and 2016-2020. In 2020, when SFBBO conducted weekly surveys from May 22-October 22, 18 nests were monitored, with 17 determined to have hatched. Among the 6 ponds monitored by SFBBO in 2020 with at least ten nests, FDW had the highest hatching success observed (Pearl et al. In Progress). In addition, five plover chicks were banded from two separate broods, with 3 chicks from one brood all determined to have fledged. Although only 13% of hatched nests were banded, anecdotally, unbanded plover broods at FDW experienced the highest fledging success in RU3, with the majority of broods from hatched nests present each week until fledging.
- Despite the lack of surveying in FDW over the years, it is clear that this pond has supported plover breeding since at least 2014, and likely much longer. If the Sulphur Creek levee and outboard levee along FDW were repaired and raised to meet expected SLR scenarios, and a water control structure was installed on Sulphur Creek to better control water levels in FDW, this pond could continue to contribute significantly to meeting USFWS recovery goals for RU3 and the DPS as a whole. If this pond is opened to tidal action, which was the only alternative ever presented for this Master Plan, and similarly high quality habitat is not provided elsewhere, plover recovery in RU3 will be significantly negatively impacted.

Response #11

- Comments noted. The feasibility of maintaining levees along the Bay over time with sea level rise is of concern as well. Any project identified in the Master Plan will require additional feasibility studies and analysis to determine the appropriate adaptation of habitat over time with sea level rise.

Comment #12

- Least Tern Island provides important plover habitat, but depends on Least Terns

- Least Tern Island in Pond 3A, which was created by the EBRPD to support a breeding colony of California Least Terns, has incidentally supported some plover breeding as well. From 2008, when plovers first nested on the island, through 2020, an average of 4.1 ± 3.0 nests were monitored by EBRPD Biologists (SFBBO Annual Reports 2008-2020). Least Terns are a colonial species that forms a dense breeding colony and aggressively defends eggs and chicks from predators, while plovers are a semi-colonial species that does not actively defend its nest from predators, but instead rely upon crypsis to reduce predator detection. When predators are as far away as 600ft, plovers may flush to conceal the location of the nest. Therefore, plovers may benefit by nesting among Least Terns (Powell 2001, Pearl et al. 2017), who aggressively defend the colony from predators. They also benefit from the intensive habitat management and predator control conducted at the colony by EBRPD.

- It must be noted, however, that in monitoring islands, levees, and berms created as part of the South Bay Salt Pond restoration project, SFBBO has found that plovers do not preferentially select to nest on these habitat types, and more importantly, these habitats provide low quality habitat compared to salt ponds (Pearl et al. 2019). Due to the small area and narrow parameters of these habitats, the effectiveness of plover's crypsis is greatly reduced, as predators are more likely to randomly find a nest compared to within expansive salt ponds, where they would need to be specifically hunting for nests. As such, any habitat created to support plovers outside of the Least Tern colony should provide a large amount of dry and sparsely vegetated salt panne habitat, ideally enhanced with oyster shells, gravel, or other materials to increase plover crypsis.

Response #12

- The LETE habitat design considerations are noted.

Comment #13

- Major reduction in plover breeding habitat unaccounted for in Master Plan
- In both the Background Report and Master Plan, a map of Hayward Regional Shoreline illustrates where various listed species, including plovers, have been reported on ebird. The map shows that plovers have been reported all over the shoreline, with the OBN Ponds and FDW showing a large amount of sightings. The same map uses symbols to identify where the listed species breed on-site, with plovers erroneously only being listed in Hayward Marsh despite the clear history of breeding in these areas laid out above.
- Currently, the shoreline provides up to approximately 290 acres of habitat suitable for plover breeding in OBN Ponds, FDW, Franks Dump East (FDE), Pond

3A, and surrounding areas, depending upon water conditions. The highest quality habitat among these is found at FDW (49 acres), OBN Ponds (114 acres), and Pond 3A (29 acres). Under the Preferred Alternative with Southern Alternate, total potential breeding habitat would be reduced to approximately 126 acres. If the Southern Alternate is not implemented, available breeding habitat would be reduced to approximately 119 acres, and none of the currently highest quality sites would remain. Instead, plover breeding habitat would be found at three locations, the Diked Baylands/Saltponds (51.5 acres; Diked Pond) north of Hayward Marsh, FDE (41.4 acres), and the small pond east of the West Winton Landfill (4.2 acres; West Winton Pond). As previously mentioned, plovers are a semi-colonial species that requires ample space throughout their life history to breed successfully, and the major reduction in habitat size could have significant impacts upon the number of plovers that the shoreline can successfully support.

Response #13

- Comment noted. Additional mapping and analysis will be required as the plan is being implemented over time. Plover breeding habitat locations will be further documented.
- Additional environmental analysis and considerations will have to be given to Plover breeding habitat as projects are being identified. The Master Plan tries to achieve a balance between risk reduction, public access and ecological restoration as stated in its goals.

Comment #14

- Appropriate enhancement of remaining plover habitat is critical
- While any alternative that results in a significant reduction in suitable plover breeding habitat, as all alternatives presented did, is not preferred to support plover recovery, enhancement of remaining habitat under the preferred alternative would be critical to partially address the loss of habitat. In the Diked Pond, which would represent the largest remaining plover habitat at the shoreline, providing a large expanse of dry, sparsely vegetated salt panne habitat with no predator perches and consistently available foraging habitat would be essential. Spreading oyster shells, gravel, or other materials to increase plover crypsis would also be important. With these enhancements, the Diked Pond could provide good quality plover breeding habitat.
- FDE may also provide decent quality breeding habitat, but has several problems that limit its habitat value. Most importantly, the presence of three large electrical power towers in the pond provide perches for raptors to hunt from, and in the case of Common Ravens,

Peregrine Falcons, and Red-tailed Hawks, are also used to nest on. As part of a predator management plan to support threatened and endangered species, the Don Edwards San Francisco Bay National Wildlife Refuge monitors power towers in sensitive habitat on both Refuge lands and Eden Landing Ecological Reserve for nesting predators and works with PG&E to remove them (Pearl et al. 2019). Operating a similar program in FDE, as well as installing anti-perching equipment where possible, could significantly improve plover breeding success. FDE is also partially overgrown with dense pickleweed and other vegetation, which plovers can't nest in, reduce plovers ability to detect approaching predators, and provides hiding places for Northern Harriers, Short-eared Owls, and mammals. Removal and/or thinning of this vegetation would be critical to providing the maximum amount of breeding habitat. Lastly, due to the triangular shape of the pond, the wide north side of FDE provides the best potential habitat, while the narrow south side, which is close to the landfill, building, and road, has limited habitat quality.

- The West Winton Pond, at a very small 4.2 acres, and experiencing high disturbance located directly next to the Bay Trail, provides limited habitat value to breeding plovers. If breeding did occur at this pond, it could only support 1-2 nests total each year. However, the value of this pond could be significantly improved by merging its area with a portion of the wet weather equalization ponds proposed to be converted into a freshwater treatment marsh. By adding an additional 25 acres of land along an existing raised area in the wet weather equalization ponds, the West Winton Pond would then provide 29.2 acres of breeding and foraging habitat. Similar enhancements as those proposed for FDE and the Diked Pond could provide moderate to good quality breeding habitat.

Response #14

- Comments noted. Any project identified in the Master Plan will require additional feasibility studies and analysis to determine the appropriate adaptation of habitat over time with sea level rise.

Comment #15

- Additional changes to Master Plan must be considered
- Although the preferred alternative in the Master Plan is an improvement upon the three alternatives presented prior, given an abundance of data that indicates the importance of the shoreline to plover recovery in both RU3 and for the DPS as a whole, it is nevertheless inadequate to support the number of plovers that have been recently shown to breed on site. Based upon the data presented, I strongly suggest that HASPA consider changes to the plan, whether those suggested here or otherwise, to provide a greater amount of breeding habitat for plovers.

- Thank you very much for your responses and consideration.

Response #15

- Comments noted. Any project identified in the Master Plan will require additional feasibility studies and analysis to determine the appropriate adaptation of habitat over time with sea level rise.

Margaret Mary Bauer

Comment #16

- Thank you for the in-depth analysis and recommendations made. I am heartened to see that our city staff and council are on the ball with dealing with this issue.

Response #16

- Comment noted.

Sally A Holt

Comment #17

- The western wall should be extended to at least the end of Hayward (ie Costco).

Response #17

- The study area for this project does not extend south of SR 92. The proposed line of protection extends inland at the southern end of the project area in order to tie into higher ground.

Michelle Lin

Comment #18

- From my understanding as an environmentalist is that levees cause more erosion in the long-term – thus creating a solution today at the expense of tomorrow. Since the levees are already present and still provide protection to our facilities, I suggest that we make the effort to expand the marsh beyond the levees through implementing more ecological solutions - planting more vegetation. Marshes act like a sponge, buffering torrents from storms while the vegetations add another benefit of filtering pollutants. Expanding the habitat is also a long-term solution to the continual threat of sea-level rise. Thus, doing so would mitigate future storms without the expensive and short term solution of raising the height of levees.

Response #18

- The Preferred Alternative aims to provide as much tidal restoration outboard of existing and new levees as possible, while balancing the need

to reduce risk to built assets along the Shoreline.

- The Preferred Alternative also expands tidal marsh habitat and identifies strategies to preserve this habitat over time with sea level rise. The marshes will require active management with sea level rise, or else they will transition eventually to mudflats and open water.

Carl

Comment #19

- I have a question about the center - it states you are thinking of moving it as a possibility. Where would it be moved to? I don't think I saw that in the report.

Response #19

- The Preferred Alternative does not identify a specific location to move the Hayward Shoreline Interpretive Center. The SMHM Interim Levee will protect the structure in place up to a certain level of sea level rise. At that point, it can either be retrofitted to be elevated above sea level or be relocated to another location. One option for relocation is on top of the West Winston Landfill, however this will require additional feasibility and engineering studies.

Comment #20

- Another question that might be more for the City of Hayward but getting to the center is a two-lane road in and out. Has there been talk by the city about making a bike lane to the shoreline and the overhead bridge to get to Eden Landing, has there been any talk about that? Again a lane to the bridge would be nice, that again might be city of Hayward. I am not sure if that would take up part of the park on that side of the road.

Response #20

- There is currently a pedestrian bridge above SR-92 that connects the Bay Trail from Eden Landing to the Hayward Regional Shoreline.
- The bike lane suggestion is noted.

Comment #21

- Also has there been any thought to making the trail from the center to San Leandro paved? I know this is an odd question but I have been asked this by people I have seen on the trail. I have said that I don't think it will ever happen given the resource that it is.

Response #21

- The suggestions is noted. The exact material of the Bay Trail will require additional feasibility studies and analysis, however we do know that a paved

trail is preferred to leverage transportation funding as it could be considered as a commuter trail.

Comment #22

- Overall the plan looks fine.

Response #22

- Comment noted.

**Debbie Pollart / City of San Leandro
Public Works Director**

Comment #23

- Graphic after page 57 shows a 'bridge' located in the San Leandro Marshlands (located adjacent to/north of San Lorenzo Creek). This area is not within the COH's jurisdiction and I'm wondering what exactly the bridge is intended to be/function as (i.e., for peds/bikes?).

Response #23

- This graphic depicts infrastructure (transmission towers and power lines) that will be impacted by sea level rise, as indicated on the legend.

Comment #24

- Graphic after page 67 - All of the Heron Bay subdivision should be indicated as 'yellow' (residential). This graphic shows two bridges, so same comment as #1 above.

Response #24

- Comment noted- the graphic representation of Heron Bay subdivision will be updated.
- This graphic depicts infrastructure (transmission towers and power lines) that will be impacted by sea level rise, as indicated on the legend.

Comment #25

- Pages 69 and 79, LAVWMA is an acronym and should be all caps.

Response #25

- Comment noted- this will be updated.

Comment #26

- Page 71 - Why is there no mention of the San Leandro Marshlands? They are outside of the Project Area, but shown in the graphic, just like the South Bay Salt Ponds Restoration Project. Ditto for graphic after page 75.

Response #26

- Comment noted- label will be added.

Comment #27

- Graphic after page 77, Heron Bay subdivision should be all yellow (no different colored lots).

Response #27

- Comment noted- this will be updated.

Comment #28

- Referring to the graphic before page 141, I will be very interested to see the discussion of potential impacts to City of San Leandro residents/infrastructure and our 315 acres of restored marshlands in the coming CEQA review process from the proposed flood protection levee (the northernmost portion). Similar to ACFCD's comment noted in the Draft Plan, I have a concern about this feature simply pushing water elsewhere and potentially impacting San Leandro residents and biologically sensitive marshlands (we also have Ridgeway Rails and Salt Marsh Harvest Mouse).

Response #28

- As noted on page 236, more detailed technical analysis will be needed to evaluate the proposed tie-ins to high ground, access needs across the line of protection (for transportation connectivity, wildlife, safety, etc.) as well as evaluate the potential for increasing flood levels in surrounding communities.

Comment #29

- Thank you for the opportunity to comment on the Draft Master Plan Report. Please include me in future notifications when the Draft EIR is available for public comment.

Response #29

- Comment noted. The design team recommends to HASPA to update the project's distribution list.

Wade Winblad

Comment #30

- Please visit the San Leandro marina or Sausalito. We could have a beautiful and FUNCTIONAL shoreline. Now we have stinking mud flats and a stupid useless museum. I haven't been there in about 10 years because it's a wasteland.

- I want to visit a restaurant or Marina. Development will be generate revenue instead of a TAX DRAIN. Why do you government types want mud?

Response #30

- Comment noted.

Comment #31

- Would prioritize Restaurants, Views, Entertainment

Response #31

- Comment noted.

Jackie Zipkin / EBDA

Comment #32

• I'm not planning to submit formal comments because overall, I think this has been a fantastic process and all of EBDA's big picture ideas have been incorporated. I am writing just to offer a handful of minor suggestions to improve the final report. None of these are critical, but they are things that occurred to me in reviewing it again. Please let me know if you have any questions. I look forward to continuing to work with the team on implementation.

Response #32

- Comment noted.

Comment #33

• On page 98 in the graphic that describes the Ecotone Levee, where it says "Reclaimed Water", I suggest changing the text to read, "Effluent could potentially be discharged through the densely vegetated slope" or "under the densely vegetated slope." Per the design of the Oro Loma system, the water is discharged subsurface. This is important because there have been community concerns about having wastewater added to local marshes. This distinction makes clear that the wastewater is under the soil and poses no risk to the public (not that it would anyway, but it seems like an important clarification).

Response #33

- Comment noted- this will be updated in the final document.

Comment #34

- On page 101:
 - o I don't really see the relevance of the Novato example. Perhaps instead use a Hayward example?
 - o Suggest standardizing on Treatment Facility or Plant in the graphic.
 - o For the eastern part of the graphic, change to Livermore-Amador Valley or add Livermore Plant/

Facility and Dublin-San Ramon Plant/Facility.

- o In the description, change "decommissioning" to "repurposing"

Response #34

- Comment noted- this will be updated in the final document.

Comment #35

- Page 127, see edits in red. Also, should Oro Loma Sanitary District be added to this table?

Response #35

- Comment noted- this will be updated in the final document.

Comment #36

- Page 141 and page 150 – Why is the area next to the Hayward ponds in the Closer to the Bay alternative is shown as ecotone levee rather than horizontal levee with wastewater inputs as in the other alternatives?

Response #36

- This configuration was provided as an option for discussion. The final Preferred Alternative incorporates a horizontal levee, however the Design Alternatives were formulated to solicit feedback over multiple configurations to inform the selection of the final proposal.

Comment #37

- Page 145 – delete the sentence "This alternative assumes that EBDA is decommissioned." It's not accurate and doesn't seem necessary.

Response #37

- Comment noted- this will be updated in the final document.

Comment #38

- Pages 183 and 185 – it seems to me it makes sense to phase the Hayward treatment wetland and the Hayward horizontal levee together so that you can integrate their designs.

Response #38

- Comment noted.

Comment #39

- 7. Page 191 – typo: Dams and Reservoirs -

Reservoirs such as the Don Castro Reservoir

Response #39

- Comment noted- this will be updated in the final document.

Comment #40

- Page 209 – typo under stakeholders for Oro Loma Phase 1 : East Bay Dischargers Authority

Response #40

- Comment noted- this will be updated in the final document.

Comment #41

- Page 222 – Under #1 (Oro Loma), suggest the following: Coordination Opportunity: Monitoring and evaluation of the Oro Loma Horizontal Levee pilot is an opportunity to inform the design and implementation of the proposed Hayward and First Mile/Oro Loma Horizontal Levees. Also, under #2 (First Mile), fix typo: East Bay Dischargers Authority

Response #41

- Comment noted- this will be updated in the final document.

Comment #42

- Page 236 – Under Wastewater Treatment: This includes assessing space needed for the treatment wetland, as well as how the design may be impacted by the potential decommissioning repurposing of the EBDA pipeline.

Response #42

- Comment noted- this will be updated in the final document.



Citizens Committee to Complete the Refuge

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Hayward Area Shoreline Planning Agency
777 B Street
Hayward, CA 94541
Attn: Damon Golubics, Senior Planner

1 December 2020

Re: Hayward Regional Shoreline Adaptation Master Plan, Submitted October 2, 2020

Dear Hon. Members of the Hayward Area Shoreline Planning Agency:

These comments are submitted on behalf of the Citizens Committee to Complete the Refuge (CCCR). We would like to thank the Hayward Area Shoreline Planning Agency (HASPA) for the opportunity to provide comments on the Hayward Regional Shoreline Adaptation Master Plan (Master Plan). We commend HASPA for recognizing the value of incorporating nature-based solutions in the Master Plan to mitigate and adapt to the threat of sea level rise. We also commend the authors of the Master Plan for presenting the elements of the plan in a manner that is accessible to the public. As an example, the inclusion of photos and diagrams to supplement written descriptions of adaptation strategies effectively simplifies complex concepts.

The Citizens Committee to Complete the Refuge (CCCR), with a membership of 1,800, has an ongoing history of interest in wetlands protection, wetlands restoration and wetlands acquisition. Our senior members were part of a group of citizens who became alarmed at the degradation of the Bay and its wetlands. We joined together, and with the support of Congressman Don Edwards, requested that Congress establish the Nation's first national wildlife refuge in an urban setting. The process took seven long years and in 1972 legislation was passed to form the San Francisco Bay National Wildlife Refuge (Refuge). We turned to Mr. Edwards again, and in 1988 (the first year he submitted it), his legislation to double the size of the Refuge was signed into law. The Refuge now bears his name in honor of his efforts.

We have taken an active interest in Clean Water Act (CWA), California Environmental Quality Act (CEQA), Porter-Cologne Water Quality Act and Endangered Species Act (ESA) and California Endangered Species Act (CESA) regulations, policies, implementation, and enforcement. We have established a record of providing information regarding possible CWA and ESA violations to the Corps, EPA, and FWS. We regularly respond to Corps public notices, and inform the public of important local CWA and ESA issues. We review and comment on CEQA documents. We also respond to ESA comment periods including five-year reviews, proposed listings, and recovery plans. All of these actions demonstrate our ongoing commitment to wetland and plant and wildlife issues, and towards protecting the public interest in wetlands, in Section 404 and 401 of the CWA, CEQA, the ESA and the CESA.

Due to time constraints, CCCR has not been as involved in this process as we would have desired to be, but based upon what we have been able to review online, we have the following comments and questions.

Outreach: Appendix A of the Master Plan provides summaries of stakeholder meetings and comments made during these meetings, but it would have been useful to have access to agency comment letters. A review of Appendix A stakeholder outreach indicates that the U.S. Fish and Wildlife Service (USFWS) was contacted and

that comments from the USFWS would be submitted by May 26, 2020. Were those comments received – are they the comments that appear in Appendix A submitted by Steven Schoenberg? Did California Department of Fish and Wildlife (CDFW) provide any additional comments? The letters from these agencies could provide insight into the preferences of one design element over another and whether issues of concern were identified by the agencies. It doesn't appear from the information provided in Appendix A that outreach to the San Francisco Bay Regional Water Quality Control Board (RWQCB) has occurred. Feedback from the RWQCB would be extremely useful and could inform HASPA in advance, of any permitting challenges that might be posed by the preferred alternative. Last, it is unfortunate that environmental groups that advocate for the protection of species such as Audubon, the Citizens Committee to Complete the Refuge, the Sierra Club, etc., were not included as stakeholders or at least included in a focus group discussion prior to final public comment period for the Master Plan.

Lack of access to technical information: As we stated in our opening remarks, the authors of the Master Plan are to be commended for their visual and written presentation of the range of adaptation strategies that might be applied within the plan area. The information provided within the document is a primer for decision-makers planning resilience projects along the edges of San Francisco Bay and is remarkable in the breadth of topics covered ranging from descriptions of the afore-mentioned adaptation strategies, to permitting agencies and their potential concerns, to potential funding mechanisms for various elements of the Master Plan. That being said, it would be extremely useful to provide access to the technical information that may have been relied upon to determine which elements of the preferred alternative were the most feasible. The Hayward Shoreline Adaptation Master Plan website should continue to be maintained and a “Library” or “Resources” section added, similar to the South Bay Salt Pond Restoration Project website - <https://www.southbayrestoration.org/> The website could then provide technical reports/studies as a resource that is continually updated for those members of the public who wish to continue to be engaged with the process of Master Plan implementation and could also serve as an educational outreach platform for the public at large.

Sea Level Rise Estimates Used: Page 119 of the Master Plan states:

“The plan is looking at reducing risk to critical assets from daily tidal inundation and future 100-year storm surge in a up to 4’ of sea level rise scenario.

For planning purposes, the Project Team has been considering a target elevation of 14.3’(NAVD 88) to evaluate the various Design Alternatives and to assess the feasibility of the Preferred Alternative.

The plan is based on adapting the project area over a mid-range time frame. Based on State guidance, this time frame is estimated to be between 50 and 60 years long.”

According to the Master Plan the estimates utilized were based upon 2018 California Coastal Commission recommendations. In February of this year the California Ocean Protection Council (OPC) approved its “*Strategic Plan to Protect California’s Coast and Ocean for 2020-2025.*”¹ This document includes as a target,

“1.1.1: Ensure California’s coast is resilient to at least 3.5 feet of sea-level rise by 2050 or higher, as consistent with the State’s Sea-Level Rise Guidance Document as appropriate for a given location or project. This target will be modified periodically based on the best available science and updates to the State’s Sea-Level Rise Guidance Document.”

¹California Ocean Protection Council. “*Strategic Plan to Protect California’s Coast and Ocean 2020-2025.*” February 2020. http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200226/OPC-2020-2025-Strategic-Plan-FINAL-20200228.pdf

Will HASPA alter its Master Plan Assumptions to incorporate this latest guidance? Will the OPC guidance have any impact on the elevations of interim levees at Oro Loma and the Salt Marsh Harvest Mouse Preserve which have elevations that aim to “reduce risk up to the existing 100-year storm plus 2’ of sea level rise (SLR)?” Does the increase in the rates of predicted SLR inundation impact the time frame within which various components of the Master Plan need to be implemented to provide SLR resilience for existing infrastructure and development? For example, should the California Environmental Quality Act (CEQA) processes for Line of Protection projects be initiated sooner than 2030 and 2045?

General Support of the Preferred Master Plan Alternative: In general, without access to supporting information that demonstrates the various elements of the Preferred Alternative are feasible to implement (e.g. geotechnical and hydrological studies, etc.), we support the Preferred Alternative, including the use of gravel beaches to reduce erosion, expansion of tidal marsh habitat, the use of horizontal levees as part of wastewater treatment facilities and the eventual relocation of the Hayward Shoreline Interpretive Center. As stated earlier, we commend HASPA for incorporating nature-based solutions as adaptation and resilience strategies and for recognizing the ecological value of the Hayward Shoreline to the San Francisco Bay.

Salt Marsh Harvest Mouse Preserve: We do wonder how long the interim levees will be effective against sea level rise and have concerns about the sustainability of the salt marsh harvest mouse (SMHM) preserve. Have any preliminary plans been developed for the SMHM preserve that involve increasing ground elevations within the preserve itself and not just on the ecotone levee? In the short term, the ecotone levee (#2f on page 182) will provide the capability for SMHM habitat to migrate upslope and provide escape habitat for SMHM during periods of inundation, but as sea level rises and tidal marsh habitat is compressed between rising seas and the Bay Trail, there will be less suitable habitat for the SMHM. The Master Plan includes a provision for realignment of the Bay Trail (page 171), “The current alignment of the Bay Trail will be maintained as long as possible (until it is inundated with sea level rise) and connected to the realignment.”

We urge HASPA and the Bay Trail to consider relocation of the Bay Trail before the trail itself is threatened by inundation to provide some higher elevation habitat for the SMHM that is not subjected to human disturbance. As sea level rises, the SMHM population within the plan area will have few places that it can escape to, while recreational uses can be relocated to avoid conflicts with an endangered species.

California Least Tern Breeding Colony: The preferred alternative provides two options for the California Least Tern (LETE) breeding colony – the first is to relocate the breeding pond to the east of its current location, behind the SMHM Preserve interim levee. The second is to leave Pond 3A in place and raise the levee around the pond. The existing condition for the LETE breeding pond is that access to the levees adjacent to the breeding pond is limited to maintenance vehicles, monitoring of the LETE breeding colony, and very occasional access along the levee by classes from the Hayward Shoreline Interpretive Center on their way out to the Bay. The two proposed LETE breeding pond alternatives feature the location of the Bay Trail on two or three sides of the breeding colony pond. The Northern California LETE breeding colonies - the larger Alameda NAS colony and the Pond 3A breeding colony - have had some of the highest rates of recruitment in California. According to the 2016 Season California Least Tern Breeding Survey², “...the San Francisco Bay and central coast areas had the highest minimum fledgling-to-maximum pair ratio,” with the Pond 3A colony have producing 1.80 fledglings per pair. This was one of the highest ratios in the state. Clearly the Hayward LETE breeding colony is

²Frost, Nancy. 2017. “California Least Tern Breeding Survey 2016 Season.” State of California Natural Resources Agency. Department of Fish and Wildlife Wildlife Branch.

of importance in the recovery this species. In recent years LETE have established a breeding colony on Pond E14 within the Eden Landing Ecological Reserve.³

Neither of the options seems ideal from a perspective of exposure of the breeding colony to potential human disturbance. If the Bay Trail wasn't along three sides of the LETE breeding pond, it might make the most sense to leave the pond in its current location and build up the surrounding levees because this would avoid the need to relocate the colony and would provide a greater footprint for the SMHM preserve. However, we know nothing about how this might impact adjacent wetlands, whether the soils could withstand additional fill material for raising the levee, how water levels within the pond would be maintained, etc.

Human Disturbance: The potential conflict between recreational use and protection of wildlife and the habitats that support them was raised during the stakeholder meetings and public comment period. We do not oppose public access; we believe carefully and thoughtfully located public access is a necessity for Bay Area residents. However, we strongly believe that along the edges of the Bay, consideration must be given to the needs of tidal marsh species particularly since we have lost approximately 90% of our historic tidal marshes, and the ability of our remaining tidal marsh habitat to survive sea level rise has been severely compromised by the placement of development right up to the edges of the Bay.

This Master Plan is commendable for the incorporation of tidal marsh restoration as an important goal of the adaptation and resilience plan, and in the short term, some “breathing space” does exist to allow tidal marsh species to distance themselves from human disturbance. Elements of the Master Plan where potential conflicts between recreational use and wildlife may occur are along the proposed gravel beaches – it appears the only location where public access does not extend to the gravel beaches may be on the western side of the Oliver Salt Ponds. These areas may be used by nesting waterbirds and by roosting LETE and may be in close proximity to areas where LETE may forage at high tide. The Bay Trail may completely surround the SMHM Preserve which could be problematic during periods of inundation due to King tides or 100-year flood conditions when SHMH might be forced to the sides of the levees (unless sturdy and taller vegetation is provided as escape habitat within the marsh). Western Snowy Plover may also utilize these areas as well as nesting islands within the LETE breeding colony pond. The San Francisco Bay Bird Observatory (SFBBO) report mentioned earlier states, “Snowy Plover nests are legally protected by a 600 ft radius nest buffer because Snowy Plovers in the San Francisco Bay have been shown to flush off their nests when a perceived predator is at a distance of up to 500ft.” The Master Plan may provide adequate structural habitat for rare and listed species such as the Western Snowy Plover, the California Least Tern or the salt marsh harvest mouse, but without adequate separation from human disturbance, the habitat may go unutilized.

Conclusion: CCCR would like to thank you for the opportunity to provide comments. The Master Plan is a significant undertaking and we commend HASPA for its efforts and for setting enhancement of the Hayward shoreline's ecological value and providing refuge to help endangered tidal marsh species as goals of the Master Plan.

³ Pearl, Benjamin and Yiwei Wang. December 27, 2018. “California Least Tern Breeding at Eden Landing Ecological Reserve.” San Francisco Bay Bird Observatory. <https://alamedawildlife.files.wordpress.com/2019/01/2018-final-report-california-least-tern-breeding-at-eden-landing-ecological-reserve-1.pdf>

We hope there will be future opportunities for public engagement in this planning process and that groups such as CCCR and the Audubon Society can participate as stakeholders . We request that CCCR is added to the notification list for the Master Plan.

Respectfully submitted,

A handwritten signature in black ink that reads "Carin High". The signature is written in a cursive, slightly slanted style.

Carin High, CCCR Co-Chair

CC: Board of Trustees

City of Hayward: Council Member Al Mendall

East Bay Regional Park District: Dennis Waespi

Hayward Area Recreation and Park District: Minane Jameson

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Benjamin Pearl
Plover and Tern Program Director
San Francisco Bay Bird Observatory
524 Valley Way
Milpitas, CA 95035

November 30, 2020

Hayward Area Shoreline Planning Agency
Hayward, CA

To whom it may concern,

I am contacting you to comment on the Hayward Regional Shoreline Adaptation Master Plan. Specifically, I wanted to address the plan's inadequate consideration for breeding habitat for the Pacific Coast Distinct Population Segment (DPS) of Federally Threatened Western Snowy Plovers (plovers). Hayward Regional Shoreline (the shoreline) is one of the most significant plover breeding sites within the San Francisco Bay Estuary (Recovery Unit 3, RU3), and in 2020 supported 14% of all plover breeding documented in RU3 (Pearl et al. In Progress). Outside of the South Bay Salt Pond Restoration Project footprint, which supports the majority of plovers in RU3, three sites at the shoreline provide the most important plover breeding habitat in RU3.

Oliver Brothers North Salt Ponds are a critical Snowy Plover breeding site

In the USFWS Snowy Plover Recovery Plan, the Oliver Brothers North Salt Ponds (OBN Ponds) were noted as one of only seven plover population centers in RU3, and identified as an important area to provide breeding habitat to minimize the potential for population decline (USFWS, 2007). Although this area is not surveyed by either HARD or EBRPD, the San Francisco Bay Bird Observatory (SFBBO) has documented breeding activity in the OBN Ponds for almost twenty years. Since 2003, SFBBO staff and volunteers, most of which were Hayward Shoreline Interpretive Center staff, have conducted at least monthly surveys in these ponds during the breeding season (March-September). In 2003, when SFBBO staff conducted surveys once every two weeks, a total of seven nests were located in these ponds (Strong & Dakin, 2004). After 2003, SFBBO did not have the resources to monitor the area, and surveys were conducted in these ponds by volunteers on a monthly basis. During this time, volunteers located nests and/or observed broods in 2007 (Robinson-Nilson et al. 2007), 2009-10 ((Robinson-Nilson et al. 2009; (Robinson-Nilson et al. 2010), 2014 (Tokatlian et al. 2014), and 2019 (Pearl et al. 2019). Data reported on ebird by citizen scientists indicate undetected breeding activity in the OBN Ponds in 2015 and 2018. In 2020, when SFBBO staff conducted surveys on a weekly basis from May 22-October 2, 11 nests were monitored and an additional two nests were detected as broods (Pearl et al, In Progress). Five of the monitored nests hatched, while four were depredated and the fate of one nest was unknown. Anecdotally, broods experienced moderate to poor survival.

Although high water levels may have limited plover breeding in the OBN ponds during some years, repair of the outboard levee in 2012 by HARD reduced high tide flooding and likely resulted in more suitable breeding habitat being available to plovers each year. The large amount of breeding activity documented in 2003 and 2020, the only years in which SFBBO staff conducted regular surveys, indicates that a large amount of breeding activity was likely missed in the years in between. Loss of this breeding habitat without providing enough suitable replacement habitat would have significant affects upon plover recovery in RU3 and for the DPS as a whole.

Frank's Dump West undersurveyed, provides high quality Snowy Plover breeding habitat

In addition to the OBN Ponds, Franks Dump West (FDW) has been identified as suitable breeding habitat since at least 2003. As with the OBN Ponds, after 2003 SFBBO did not have the resources to survey FDW. While HARD employees conducted volunteer surveys for SFBBO between 2004-2019, it appears that FDW was not surveyed by volunteers after 2006. Despite this, with the exception of 2009, plovers have been reported at FDW by citizen scientists on ebird from 2008-2020 during the months of April-July, when plovers present are likely breeders. Breeding was confirmed in six years, when broods were reported on ebird in 2014 and 2016-2020. In 2020, when SFBBO conducted weekly surveys from May 22-October 22, 18 nests were monitored, with 17 determined to have hatched. Among the 6 ponds monitored by SFBBO in 2020 with at least ten nests, FDW had the highest hatching success observed (Pearl et al. In Progress). In addition, five plover chicks were banded from two separate broods, with 3 chicks from one brood all determined to have fledged. Although only 13% of hatched nests were banded, anecdotally, unbanded plover broods at FDW experienced the highest fledging success in RU3, with the majority of broods from hatched nests present each week until fledging.

Despite the lack of surveying in FDW over the years, it is clear that this pond has supported plover breeding since at least 2014, and likely much longer. If the Sulphur Creek levee and outboard levee along FDW were repaired and raised to meet expected SLR scenarios, and a water control structure was installed on Sulphur Creek to better control water levels in FDW, this pond could continue to contribute significantly to meeting USFWS recovery goals for RU3 and the DPS as a whole. If this pond is opened to tidal action, which was the only alternative ever presented for this Master Plan, and similarly high quality habitat is not provided elsewhere, plover recovery in RU3 will be significantly negatively impacted.

Least Tern Island provides important plover habitat, but depends on Least Terns

Least Tern Island in Pond 3A, which was created by the EBRPD to support a breeding colony of California Least Terns, has incidentally supported some plover breeding as well. From 2008, when plovers first nested on the island, through 2020, an average of 4.1 ± 3.0 nests were monitored by EBRPD Biologists (SFBBO Annual Reports 2008-2020). Least Terns are a colonial species that forms a dense breeding colony and aggressively defends eggs and chicks from predators, while plovers are a semi-colonial species that does not actively defend its nest from predators, but instead rely upon crypsis to reduce predator detection. When predators are as far away as 600ft, plovers may flush to conceal the location of the nest. Therefore, plovers

may benefit by nesting among Least Terns (Powell 2001, Pearl et al. 2017), who aggressively defend the colony from predators. They also benefit from the intensive habitat management and predator control conducted at the colony by EBRPD.

It must be noted, however, that in monitoring islands, levees, and berms created as part of the South Bay Salt Pond restoration project, SFBBO has found that plovers do not preferentially select to nest on these habitat types, and more importantly, these habitats provide low quality habitat compared to salt ponds (Pearl et al. 2019). Due to the small area and narrow parameters of these habitats, the effectiveness of plover's crypsis is greatly reduced, as predators are more likely to randomly find a nest compared to within expansive salt ponds, where they would need to be specifically hunting for nests. As such, any habitat created to support plovers outside of the Least Tern colony should provide a large amount of dry and sparsely vegetated salt panne habitat, ideally enhanced with oyster shells, gravel, or other materials to increase plover crypsis.

Major reduction in plover breeding habitat unaccounted for in Master Plan

In both the Background Report and Master Plan, a map of Hayward Regional Shoreline illustrates where various listed species, including plovers, have been reported on ebird. The map shows that plovers have been reported all over the shoreline, with the OBN Ponds and FDW showing a large amount of sightings. The same map uses symbols to identify where the listed species breed on-site, with plovers erroneously only being listed in Hayward Marsh despite the clear history of breeding in these areas laid out above.

Currently, the shoreline provides up to approximately 290 acres of habitat suitable for plover breeding in OBN Ponds, FDW, Franks Dump East (FDE), Pond 3A, and surrounding areas, depending upon water conditions. The highest quality habitat among these is found at FDW (49 acres), OBN Ponds (114 acres), and Pond 3A (29 acres). Under the Preferred Alternative with Southern Alternate, total potential breeding habitat would be reduced to approximately 126 acres. If the Southern Alternate is not implemented, available breeding habitat would be reduced to approximately 119 acres, and none of the currently highest quality sites would remain. Instead, plover breeding habitat would be found at three locations, the Diked Baylands/Saltponds (51.5 acres; Diked Pond) north of Hayward Marsh, FDE (41.4 acres), and the small pond east of the West Winton Landfill (4.2 acres; West Winton Pond). As previously mentioned, plovers are a semi-colonial species that requires ample space throughout their life history to breed successfully, and the major reduction in habitat size could have significant impacts upon the number of plovers that the shoreline can successfully support.

Appropriate enhancement of remaining plover habitat is critical

While any alternative that results in a significant reduction in suitable plover breeding habitat, as all alternatives presented did, is not preferred to support plover recovery, enhancement of remaining habitat under the preferred alternative would be critical to partially address the loss of habitat. In the Diked Pond, which would represent the largest remaining plover habitat at the shoreline, providing a large expanse of dry, sparsely vegetated salt panne habitat with no predator perches and consistently available foraging habitat would be essential. Spreading

oyster shells, gravel, or other materials to increase plover crypsis would also be important. With these enhancements, the Diked Pond could provide good quality plover breeding habitat.

FDE may also provide decent quality breeding habitat, but has several problems that limit its habitat value. Most importantly, the presence of three large electrical power towers in the pond provide perches for raptors to hunt from, and in the case of Common Ravens, Peregrine Falcons, and Red-tailed Hawks, are also used to nest on. As part of a predator management plan to support threatened and endangered species, the Don Edwards San Francisco Bay National Wildlife Refuge monitors power towers in sensitive habitat on both Refuge lands and Eden Landing Ecological Reserve for nesting predators and works with PG&E to remove them (Pearl et al. 2019). Operating a similar program in FDE, as well as installing anti-perching equipment where possible, could significantly improve plover breeding success. FDE is also partially overgrown with dense pickleweed and other vegetation, which plovers can't nest in, reduce plovers ability to detect approaching predators, and provides hiding places for Northern Harriers, Short-eared Owls, and mammals. Removal and/or thinning of this vegetation would be critical to providing the maximum amount of breeding habitat. Lastly, due to the triangular shape of the pond, the wide north side of FDE provides the best potential habitat, while the narrow south side, which is close to the landfill, building, and road, has limited habitat quality.

The West Winton Pond, at a very small 4.2 acres, and experiencing high disturbance located directly next to the Bay Trail, provides limited habitat value to breeding plovers. If breeding did occur at this pond, it could only support 1-2 nests total each year. However, the value of this pond could be significantly improved by merging its area with a portion of the wet weather equalization ponds proposed to be converted into a freshwater treatment marsh. By adding an additional 25 acres of land along an existing raised area in the wet weather equalization ponds, the West Winton Pond would then provide 29.2 acres of breeding and foraging habitat. Similar enhancements as those proposed for FDE and the Diked Pond could provide moderate to good quality breeding habitat.

Additional changes to Master Plan must be considered

Although the preferred alternative in the Master Plan is an improvement upon the three alternatives presented prior, given an abundance of data that indicates the importance of the shoreline to plover recovery in both RU3 and for the DPS as a whole, it is nevertheless inadequate to support the number of plovers that have been recently shown to breed on site. Based upon the data presented, I strongly suggest that HASPA consider changes to the plan, whether those suggested here or otherwise, to provide a greater amount of breeding habitat for plovers.

Thank you very much for your responses and consideration.

Regards,

Benjamin Pearl

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CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov



Revised Agenda

Thursday, October 8, 2020

3:00 PM

Remote Participation

Hayward Area Shoreline Planning Agency

SPECIAL HASPA MEETING

A Joint Powers Authority Comprised of the East Bay Regional Park District, the Hayward Area Recreation and Park District, and the City of Hayward.

COVID-19 Notice: Consistent with State of California Executive Order No. 29-20 dated March 17, 2020, and Alameda County Health Officer Order No. 20-10 dated April 29, 2020, the HASPA will be participating in public meetings via phone/video conferencing.

Please note that we are now using the Zoom Webinar platform to conduct meetings and receive live public comment.

How to submit written Public Comment:

Send an email to Planning.Division@hayward-ca.gov by 12:00 p.m. the day of the meeting. Please identify the Agenda Item Number in the subject line of your email. Emails will be compiled into one file, distributed to the HASPA Board of Trustees and Technical Advisory Committee (TAC) staff, and published on the City's Meeting & Agenda Center under Documents Received After Published Agenda. Written comments received after 12:00 p.m. that address an item on the agenda will still be included as part of the record.

How to provide live Public Comment during the meeting:

Click the link below to join the webinar:

<https://hayward.zoom.us/j/91966663641?pwd=UDhYNGowaC9Cb0hnMjr2MUh5dGdTZz09>

Password: H@1#7zp=

Or Telephone:

Dial:

*US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799
or +1 929 205 6099*

Meeting ID: 919 6666 3641

Participant ID: Enter “#”

Password: 25246944

A Guide to attend virtual meetings is provided at this link: <https://bit.ly/3jmaUxa>

CALL TO ORDER

ROLL CALL

APPROVAL OF HASPA MINUTES OF OCTOBER 8, 2020

1. [MIN 20-102](#) Approval of the HASPA Minutes of July 9, 2020

Attachments: [Attachment I Draft Minutes of July 9 2020](#)

REPORTS: Technical Advisory Committee (TAC)

2. **2695-2893 W. Winton Application Update**
3. **4150 Point Eden Way Application Update**
4. **25800 Clawiter Road Application Update**
5. **Hayward Shoreline Adaptation Master Plan Update**

WORK SESSION ITEMS

6. [WS 20-040](#) Implementation of Shoreline Adaptation Master Plan

Attachments: [Attachment I Memo Re: Implementation of Shoreline Adaptation Master Plan](#)
[Attachment II Short-Term Project Matrix](#)

REPORTS: Board Members (Trustees)

REPORTS: Setting of Agenda for Next Meeting (Trustees/TAC)

ADJOURNMENT

NEXT MEETING, JANUARY 14, 2021, 3:00PM

Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans Disabilities Act of 1990. Interested persons must request the accommodation at least 48 hours in advance of the meeting by contacting the City Manager at (510) 583-4300 or TDD (510) 247-3340.



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: MIN 20-102

DATE: October 8, 2020

TO: Hayward Area Shoreline Planning Agency

FROM: Technical Advisory Committee for HASPA

SUBJECT

Approval of the HASPA Minutes of July 9, 2020

RECOMMENDATION

That the HASPA Trustees approve the HASPA minutes of July 9, 2020

SUMMARY

There was a HASPA meeting on July 9, 2020

ATTACHMENTS

Attachment I Draft Minutes of July 9, 2020



HAYWARD AREA SHORELINE PLANNING AGENCY

City of Hayward
East Bay Regional Park District
Hayward Area Recreation and Park District

Meeting of Board of Trustees
Special Virtual Meeting Held Remotely via
Zoom Webinar

July 9, 2020

DRAFT ACTION MINUTES

HASPA TRUSTEES PRESENT:

Al Mendall, City of Hayward, HASPA Chair
Dennis Waespi, East Bay Regional Park District
Minane Jameson, Hayward Area Recreation and Park District
Rick Hatcher, Hayward Area Recreation and Park District

HASTAC MEMBERS PRESENT:

Brian Laczko, Hayward Area Recreation and Park District
Damon Golubics, City of Hayward
Erik Pearson, City of Hayward
Edgar Maravilla, City of Hayward
Mark Taylor, East Bay Regional Park District
Matthew Graul, East Bay Regional Park District
Chantal Alatorre, East Bay Regional Park District

STAFF:

Taylor Richard, Climate Corps Fellow
Debbie Hernandez, Hayward Area Recreation and Park District
Jacqui Diaz, Hayward Area Recreation and Park District
Robert Goldassio, City of Hayward
Marc Andres, City of Hayward

VISITORS:

Nans Voron, SCAPE
Gena Wirth, SCAPE
Nick Shannon, SCAPE
Joseph Marrone, Arcadis
Tim Hare, Arcadis
Richard Moore, Retired Civil Engineer
[Plus other Zoom Webinar guests unannounced]

Call to Order

A regular meeting of the Hayward Area Shoreline Planning Agency (HASPA) was called to order at 3:00 P.M. by Chair Mendall.

Introductions

Introductions of those present were made [listed on Page 1].

1. Approval of HASPA Minutes for January 9, 2020

Moved by Trustee Waespi and seconded by Trustee Jameson, without objection, to approve the minutes of the Hayward Area Shoreline Planning Agency meeting of January 9, 2020.

REPORTS

Reports from Technical Advisory Committee (TAC)

2. Shoreline Master Plan (SMP) Update

TAC Member Damon Golubics gave a brief introduction of SCAPE and Arcadis, the HASPA Shoreline Master Plan consultants. Present staff introduced a PowerPoint presentation on the Shoreline Master Plan.

SCAPE conducted a presentation with PowerPoint slides on the current draft Shoreline Master Plan and progress updates, allowing for comments and feedback throughout. The presentation included an overview of the project schedule, a summary of design alternatives, a summary of comments, the draft preferred alternative and next steps. [Presentation slides, agenda attachments, and complete video recording of Zoom webinar available at <https://hayward.legistar.com/Calendar.aspx>]

Chair Mendall asked about the alignment of the Bay Trail over time.

SCAPE responded that the current alignment will be maintained until no longer feasible at which point it will move inland. The phasing plan, a next step in the project, will detail this change in greater detail.

Chair Mendall asked about the motivation behind protecting the salt ponds.

SCAPE noted that the salt ponds replicate historic ecosystem functions by providing critical habitat for shoreline birds.

Trustee Hatcher sought clarification on the risks facing the San Lorenzo Community Center Park.

SCAPE and Arcadis explained that the park will be protected from four feet of sea level rise but may be susceptible to groundwater emergence. The impacts from groundwater emergence need to be further studied to assess the park's risk.

Trustee Jameson asked about the reliability and maintenance needed for the proposed pump stations and if there were any relevant case studies.

Arcadis responded that pump stations are reliable due to their backup power generators and pumps. The pump stations do require maintenance as machinery will need to be replaced over

time. Many cities including New Orleans rely on this technology to protect their built environment.

Trustee Jameson asked if climate change impacts other than sea level rise like extreme heat were considered.

SCAPE noted that the plan did not specifically analyze extreme heat. However, prior studies have shown that wetlands or other vegetated areas can mitigate against the urban heat island effect.

Richard Moore, identified as a retired civil engineer, asked about project's connection to the surrounding communities.

SCAPE responded that the implementation of this project will definitely include coordination with neighboring communities. Chair Mendall added that the adjacent communities have been and will continue to be included in the process.

Richard Moore, a retired civil engineer, asked about the consulting team's qualifications, the Hayward wastewater treatment staff involvement in this project and level of protection provided by this plan.

SCAPE noted that the project team includes talented planners, landscape architects and engineers from Arcadis, a world-renowned coastal engineering firm. SCAPE noted that the City of Hayward staff have been continuously involved in this project, providing insight on their assets. Furthermore, SCAPE noted the preferred alternative can begin to address two to four feet of sea level rise however the plan will provide recommendations to protect against greater levels.

Chair Mendall expressed support for the plan and appreciated how it balanced the different stakeholder needs.

Trustee Waespi thanked the team for a good job, expressing support for the plan. Trustee Waespi understood that the Bay Trail will adapt over time but appreciated that it and other recreational experiences will be maintained.

Trustee Jameson echoed appreciation for the plan. Trustee Jameson expressed concern over cost but understands that sea level rise is a priority issue.

Trustee Hatcher asked about outreach to the industrial businesses near the Shoreline.

SCAPE responded that businesses did participate in an initial survey and have recently been invited to comment on the plan through the project's webpage.

A question was made by "Davido," via the Zoom webinar chat, asking which aspects of the construction phases are the most expensive.

SCAPE and Arcadis responded that the levees and pump stations are the most expensive.

SCAPE's presentation and the concurrent discussion ended at 4:47 P.M.

3. 4150 Point Eden Way Application Update

An illustration of a rendering of the proposed development was displayed. TAC Member Damon Golubics stated that the applicant is preparing to provide a fourth-round application resubmittal to the City of Hayward to resolve correctional items identified by staff. The project would serve as the regional headquarters for U-Haul, consisting of office space and a warehouse, a segment of glass-lined building frontage, and truck bays hidden in the rear of the building away from HWY 92. The project would realign the Bay Trail at the western edge, allowing for greater blue water experience. The project would also include a focused Environmental Impact Report (EIR) that considers the project's impacts to cultural and biological resources. It is estimated that the EIR may take about nine months to prepare.

Trustee Jameson expressed concern that the glass on the building façade may create reflection that could adversely impact wildlife.

TAC Golubics responded that he will relay her feedback to the project's staff Planner, Leigha Schmidt, City of Hayward Senior Planner, who may have the option to request that the glass be addressed in the EIR.

Trustee Hatcher liked that the project considered the future alignment of the Bay Trail as it is a great recreational asset in Hayward.

4. **2695-2893 W. Winton Application Update**

TAC Member Damon Golubics stated that the applicant resubmitted for a Zoning Text Amendment to the Industrial District Zoning Regulations. The delivery center will also require a Conditional Use Permit. An addendum to the Mitigated Negative Declaration and an updated traffic study are also being prepared.

Staff is planning to take present the project to the Hayward Planning Commission, tentatively scheduled for late September or early October.

Trustee Jameson requested clarification if one tenant would occupy the entire building.

TAC Member Damon Golubics clarified that the proposed tenant would occupy the entirety of the building.

5. **Continuance of HASPA for Another 5-Year Period**

TAC Member Damon Golubics requested a one-year extension of the HASPA joint powers agreement with the City of Hayward (COH) to continue as the host agency. TAC Golubics mentioned that the host of HASPA was scheduled to change on January 1, 2021, however due to the current shoreline master plan grant management and coordination with the consultants to fulfill milestones of the scope of work, it will serve HASPA's best interest if the COH continue as host agency for an extra year. TAC Member Damon Golubics recommended, after the one-year extension with COH as the host agency, East Bay Regional Parks District take over as next host to continue the agreed upon five-year period, to begin on January 1, 2022.

Chair Mendall announced that his term with City Council is coming to an end, and the next HASPA meeting (scheduled for October 8, 2020) will be his last as a HASPA Trustee. Chair Mendall commended the City of Hayward for their work thus far in being the host agency during the development of the shoreline master plan. Chair Mendall also encouraged the next host agency to

focus heavily on applying for grants towards implementable projects identified in the Shoreline Adaptation Master Plan once completed.

TAC Member Golubics advised that, if approved, each respective agency will then return to their own approving body [boards/councils] to approve a resolution authorizing this agreement.

Moved by Trustee Waespi and seconded by Trustee Jameson, without objection, to approve the continuance of the Hayward Area Shoreline Planning Agency Joint Powers Authority for another year with the City of Hayward to remain as the host agency.

REPORTS: Board Members (Trustees)

There were no reports.

REPORTS: Setting of Agenda for Next Meeting (Trustees/TAC)

Tentative Agenda for Next Meeting, Thursday, October 8, 2020, at 3:00 P.M.

Standing TAC Report Items:

- Shoreline Master Plan Update/Action
- 4150 Point Eden Way Update
- 2695-2893 W. Winton Update
- Point Eden Way, Point Eden Landing Road, Trust Way, and Research Road (FYI)
- HASPA JPA 1- Year Extension, Progress Update

Potential Future Agenda Items:

- Streamlined Permitting Update
- Community Outreach Plan
- In-Depth Report on Outside Agencies
- Citizens' Climate Lobby (Potential Agenda Item from Trustee Jameson)
- Invite Vinnie Bacon to present and provide feedback to HASPA
- Visit and feedback from Assembly Member Bill Quirk

ADJOURNMENT

Chair Mendall adjourned the meeting at 5:02 PM.

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MINUTES

Mtg Date: October 22, 2020
Location: Conference Call
Topic: Hayward Planning Commission
Attendees: SCAPE: Nans Voron, Gena Wirth, Nick Shannon
Arcadis: Mary Kimball
COH: Edgar Maravilla, Goldstein, Andrews, Bonilla, Roche, Stevens, Ali-Sullivan, Erik Pearson, Taylor Richard
Doc'd by: Nick Shannon
Re: Draft Hayward Regional Shoreline Adaptation Masterplan

Commissioner Comments & Questions

- Andrews expressed that she appreciated the presentation and recognized the need to protect against climate change.
- Andrews asked about the residential impacts in the northern end of the project area
 - Gena noted that we needed to look outside of our study area to complete a line of protection, which would benefit the residential areas behind. This requires further collaboration and study with the San Lorenzo community.
- Andrews asked if there is a plan to study protecting the residential areas
 - Nans noted that we are not aware of any. ACFCD is looking at impacts to their flood control districts. There is no shoreline resilience study we know of.
- Andrews requested that the commission writes a letter of recommendation to study the impacts to the residential areas.
- Andrews noted appreciation for the nature-based strategies and asked what we can do right now
 - Nans indicated that we identified a suite of short-term projects and that there are already some projects ongoing (First Mile Project, transformation of oxidation ponds, Hayward Marsh Restoration project).

- There are potential stakeholders in the area interested in funding more projects. For example, BART is looking to fund mitigation projects nearby. FEMA will also release more money in the next fiscal year.
- Andrews noted we are getting requests for building more industrial land uses- is there anything we can do to mitigate development impacts?
 - Nans noted that some recommendations include increasing the flood standards, raising utilities, dry or wet floodproofing. However, long-term, it isn't just an issue of tidal flooding, but groundwater as well. Long-term strategies might include relocation.
- Andrews asked about the Bay Trail and Interpretive Center. Is tourism contributing to the issues?
 - Gena noted that the biggest impact to many of the trails is erosion from wind and wave events, not as much from the use of people.
 - We have proposed a phased approach to trail relocation, moving it inland when a trail at the edge becomes inundated.
 - Nans added that we are also trying to provide a space for education and for people to become stewards of their environment
- Ali-Sullivan commended the process.
- Ali-Sullivan was pleased to see that the Interpretive Center could remain in place
- Ali-Sullivan expressed the need for regional coordination so municipalities are planning for the same level of mitigation.
- Ali-Sullivan noted the cost of the project, and how much will be needed to protect the whole Bay. It's not just a Hayward problem- one area impacts others. Shared responsibility across the Bay.
- Ali-Sullivan asked what the City is doing to protect vulnerable populations, and how they were able to provide input into this plan
 - Gena noted that the Online Survey was the most successful piece of outreach (1,000 responses), and more responses with the follow-ups. The in-person events were smaller but still successful in reaching youth populations with hands-on educational engagement.

- This will have to be a continued effort past the moment of the plan. We have made sure to make all of the sea level rise maps available through the online portal for people to see how they identify with the risk.
 - Nans noted that we still have a long comment period between now and the end of November. It will be important for HASPA members to reach out through their agency channels.
- Goldstein appreciated the thoroughness of the report
- Goldstein asked if the study includes the combined effects of sea level rise and groundwater rise.
 - Gena noted that we studied the impacts of both. The maps show sea level rise and flood impacts (blue) and potential zones for groundwater emergence (green). Many recommendations also focus on mitigation for groundwater.
- Goldstein asked if any parts of the study deal with liquefaction
 - Gena responded that the study did not look at that specifically, but Arcadis is very familiar with the needs of designing to mitigate for liquefaction and this was incorporated in the cost estimate.
- Goldstein asked if the cost items would occur over a period of time
 - Nans added that the cost estimate is mostly for reference to compare the alternatives, and the costs are if you were to build everything tomorrow. The cost will fluctuate over time and be phased. It does incorporate a large contingency.
- Goldstein recommended to add this caveat to the report- this cost is a for moment in time, what it would take to build the entire project.
- Goldstein asked if any consideration was given to growth over time.
 - Gena noted that we have been in conversation with the COH about the industrial business district and that they want to preserve it and encourage growth. Our policy recommendations outline how zoning and building standards should adapt to accommodate future risks.
- Goldstein asked what would happen if we do nothing
 - Nans noted that this wasn't part of our scope of work, however it is something that could be a study.

- Gena added that we did maps and an assessment of what is at risk in the Do-Nothing scenario, but not a cost estimate.
- Stevens asked if there is contaminated sites in the zone of flood risk, can groundwater mobilize the contaminants.
 - Gena noted that this study did not do analysis of specific parcel contamination. Groundwater mobilization of contaminants is specific and would need a different set of experts to analyze the risk.
- Roche asked about what would happen if one area of the Bay put up levees, but other areas didn't. The water has to go somewhere. If we do nothing, what would the cost be. Make sure our investment works long-term.
 - Gena brought up the assumption map and noted that over time, assumptions may change
 - In the near-term it is definitely possible to build resilient buildings along the shoreline
- Roche asked if there is a Bay-wide plan
 - Erik noted BCDC has a plan called Bay Adapt for regional coordination
- Roche noted the low-lying SR-92 approach. Is there opportunity to collaborate
 - Gena noted we have had conversations with CalTrans and determined that the bridge approach has many ways to adapt over time (elevation, causeway)
 - CalTrans was interested in incorporating the potential for a causeway in the final report
- Bonilla appreciated the plan- legible graphics, balanced approach of risk reduction with ecological enhancements, regional collaboration, and stakeholder engagement.
- Bonilla asked if the technical support could be expanded beyond businesses to residents so they understand potential risks to them
- Bonilla expressed appreciation for the long-term strategic approach to the plan. However, things change and Bonilla asked how often the plan would be updated

- Erik noted they are thinking about what will happen after the plan. They will be focusing on the short-term projects with more detailed studied.
 - Erik guessed that they might look at the comprehensive plan again in 10 years.
- Bonilla brought up bolder strategies that were mentioned, such as managed retreat- maybe it's not as radical as we think it is
 - Gena noted that managed retreat is happening today and there are incentives. It is being looked at more seriously by municipalities and agencies. However, we're not at the point where it's being taken seriously in Hayward because they haven't experienced extreme events. Over time, these conversations will need to happen.
 - Gena noted we focused on proposing short and medium term projects that will be compatible with long-term alternatives. Interim moves might be made, then more planning and assessments.
- Bonilla agreed with the importance of addressing the vulnerable populations.

MINUTES

Mtg Date: December 22, 2020
Location: Conference Call
Topic: ACFCD Check-in
Attendees: SCAPE: Nans Voron, Gena Wirth, Nick Shannon
Arcadis: Mary Kimball, Martina Novak, Jody Hughey
ACFCD: Rohin Saleh, Hank Ackerman
EBRPD: Chantal Alatorre, Mark Taylor
COH: Erik Pearson, Taylor Richard
HARD: Brian Laczko
Doc'd by: Nick Shannon
Re: Hayward Shoreline Adaptation Masterplan

Shoreline Adaptation Master Plan

- Rohin noted that the Master Plan looks very good overall, and that all of their comments were incorporated.
- Rohin asked how fixed the Line of Protection is. Is there potential for some movement? He would prefer some flexibility in the modeling to determine feasibility.
 - Gena and Nans responded that it is likely to change as projects get implemented and areas are studied in greater detail. However, the location shown in the Preferred Alternative has broad stakeholder support from a planning perspective.
- Rohin noted that they prefer the alternative with increased storage in the back of Oro Loma Marsh
- Hank expressed concern over the effects on the inboard side of the levees. You need large inboard ponds and can't have pump stations large enough.
 - Rohin noted they will have to test it in the modeling to confirm feasibility.
 - Mary noted that Arcadis did outline the engineering considerations associated with the recommended line of protection. They also did a

high level analysis of its feasibility for pump station and storage capacity.

- Rohin noted that if some aspect of the Master Plan has more urgency, it has more urgency for them

ACFCD – Ongoing Projects

- Rohin noted that ACFCD is going to be looking at the outfalls in the study area in anticipation of mitigation for sea level rise and flooding. They will be using the Bay Area Model to do an alternatives analysis.
 - Rohin noted that they will start evaluating internal drainage with the line of protection as shown in the Master Plan's Preferred Alternative to see how it performs, then come back to say what works or not.
 - Hank noted that they may not have the funding to do this project this fiscal year. It isn't at the top of their priority list. ACFCD is entering their budgeting process and they will check to see if they have the money.
- Rohin added that with the modeling, it is possible that the current line of protection just works.
- Brian expressed concern over ACFCD not being part of the process. Their participation is key.

Grant Funding

- Erik noted that HASPA is looking to apply to grants
- Gena added that they are exploring 2 projects and looking at FEMA funding. The goal is to take 2 projects with a NOI to more fully vet the project.
 - ACFCD participation is key
 - This would generate funding for design and further studies
- HASPA has a plan already so they are positioned to be more competitive in early funding
- Hank noted that the Oro Loma project could be complete with Bockman and retention ponds
- Hank noted that he is opposed to funding a construction project because of impacts to the other parts of the Bay. That type of project would be funded by the federal government.

- Hank added that coming up with a complete design that is ready for construction is okay, but it shouldn't be built without a Bay-wide plan, like something that CHARG is doing
- Hand added that ACFCD is definitely interested in a planning and design grant to make sure the impacts are mitigated. They could run the analysis through the Bay Model to see impacts to other areas.
- Rohin noted that any levee should be built with a large enough base to accommodate increased height in the future
- Erik requested for ACFCD to edit the NOI word document.
- Gena expressed that the funding application should a more nuanced middle ground approach for implementation to secure funding for design and construction. It is a lot of potential funding to actually implement.
- Hank noted that they prefer to stick with Arcadis if possible, due to their involvement in other projects, if it is possible with the federal regulations with procurement.

Next Steps

- Erik to coordinate on FEMA funding application with ACFCD
- ACFCD to send comments on the Draft NOI to Erik by 12/28
- Jody to circle back with ACFCD after the holidays

