

# San Francisco Bay Conservation and Development Commission

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September 9, 2016

**TO:** All Commissioners and Alternates

**FROM:** Lawrence J. Goldzband, Executive Director (415/352-3653; larry.goldzband@bcdc.ca.gov)  
Sharon Louie, Director, Administrative & Technology Services (415/352-3638; sharon.louie@bcdc.ca.gov)

**SUBJECT: Draft Minutes of August 18, 2016 Commission Meeting**

**1. Call to Order.** The meeting was called to order by Chair Wasserman at the Ferry Building, Port of San Francisco, California at 1:06 p.m.

**2. Roll Call.** Present were: Chair Wasserman, Vice Chair Halsted (represented by Alternate Chappell), Chan (Represented by Alternate Gilmore), Cortese (represented by Alternate Scharff) DeLaRosa (represented by Alternate Jahns), Gibbs (departed at 2:23 p.m.), Gioia, Gorin (arrived at 1:09 p.m.), Kim (arrived at 1:21 p.m.), McGrath, Nelson, Sartipi (represented by Alternate McElhinney), Sears, Sperring (represented by Alternate Vasquez), Wagenknecht, Ziegler (represented by Alternate Brush – arrived at 1:12 p.m.) and Zwissler.

Chair Wasserman announced that a quorum was present.

**Not present were Commissioners:** Association of Bay Area Governments (Addiego, Bates, Techel), Department of Finance (Finn), U.S. Army Corps of Engineers (Hicks), State Lands Commission (Lucchesi), San Mateo County (Pine) and Governor (Randolph).

**3. Public Comment Period.** Chair Wasserman called for public comment on subjects that were not on the agenda. There were no public speakers present to comment.

Chair Wasserman moved on to Approval of the Minutes.

**4. Approval of Minutes of the August 4, 2016 Meeting** Chair Halsted asked for a motion and a second to adopt the minutes of August 4, 2016.

**MOTION:** Commissioner Wagenknecht moved approval of the Minutes, seconded by Commissioner Vasquez.

**VOTE:** The motion carried with a vote of 14-0-1 with Commissioners Scharff, Jahns, Gibbs, Gioia, McGrath, Nelson, McElhinney, Sears, Vasquez, Wagenknecht, Brush, Zwissler, Vice Chair Chappell and Chair Wasserman voting, "YES", no "NO", votes and Commissioner Gilmore abstaining.

**5. Report of the Chair.** Chair Wasserman reported on the following:

a. **New Business.** Does anyone have any new business they would like us to put on the Agenda for a future meeting? He received no comments.

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**BCDC MINUTES**  
**August 18, 2016**

b. **Bay Fill Working Group.** Commissioner Nelson, would you please report on this morning's meeting?

Commissioner Nelson reported the following: We discussed two issues this morning. The first issue discussed was the work plan for the Working Group as we prepare for future Commission workshops. The second issue was conversation about the key issues related to sea level rise in the habitat arena. We have now worked through just about all of those key issues on the habitat side. We have already started discussion about how we handle sea level rise issues with regards to the built environment.

Chair Wasserman asked: Any questions on that? (He received no comments) The Chair moved on to a report by Commissioner Zwissler on the Resilient by Design program.

c. **Resilient by Design.** Commissioner Zwissler presented the following: We have formally convened an executive board of the project, which includes Larry Goldzband from BCDC, the Coastal Conservancy and a number of cities. There are 11 members on the Board. We now have formal by-laws under which we are operating. The next big piece of business that we are undertaking is the selection of the 10 sites. There will be 10 sites selected for the design competition around the Bay. It is the intention to spread them geographically by type such as natural wetlands, a hardscape urban or an infrastructure project. It is important to remember that 10 sites is not the whole Bay. We are hoping to also select sites so that they can be representative of different solutions that then can be applied elsewhere. The Executive Board has undertaken a process to select those sites. They will be using an advisory committee to advise them. This will certainly happen by the end of the year. Our website is about to go up and fundraising is well underway. We are cautiously optimistic that we are going to be getting a major gift that puts us over half way to our target, a 4.4 million dollar budget. With a fair wind this will kick off in the spring of 2017. It will run for about one year.

d. **Report of the Chair.** Chair Wasserman asked: Any questions on that one? (He received no comments) My own report is fairly brief. It is rare that climate change is not an issue in some of the significant political campaigns. I raise this in terms of raising the awareness in the public of the critical issues of climate change and rising sea level. There was an article in The Chronicle about glaciers melting in the South American lakes. This will have almost no direct impact on rising sea levels in the Bay. I do think it is one more signal, one more indication; that we are facing very major problems. There are a series of articles from the New Yorker magazine, which have been pulled from the archive and are online about a range of issues on climate change. I thought one of the quotes was particularly interesting. It was a comparison made by a glaciologist and he likened the climate system to a row boat. You can tip it forward and it will just go back. And you can tip it forward and it will just go back. And you can tip it forward and it will just go back. And then you tip it and it goes into the other stable state. You are upside down in the water. That is a good analogy for the issues that we are dealing with in terms of adapting to rising sea level.

e. **Next BCDC Meeting.** We will not need to hold our September 1st meeting. At our September 15th meeting, here at the Ferry Building:

- (1) We may hold a public hearing and vote on the proposed development on Treasure Island.
- (2) We may hold a public hearing and vote on a material amendment for the Richmond – San Rafael Bridge.
- (3) We may hold a public hearing on an enforcement matter regarding Marina Village in Alameda.
- (4) I hope that we will consider the postponed item on the outcomes of the Rising Sea Level Workshop and our plans for that.
- (5) We may have a briefing on planning for Highway 37 in light of rising sea level.

f. **Ex-Parte Communications.** With that, this is the opportunity for anyone to put on the record any ex-parte communications regarding judicial matters and hearings, not legislative or policy matters. (No comments were received)

Chair Wasserman moved on to Item 6, Report of the Executive Director.

**6. Report of the Executive Director.** Executive Director Goldzband reported: Summer is now about two-thirds over which is a shock to those of us with kids going back to school next week. Unlike our kids, BCDC has not had a summer vacation. This will be a short meeting compared to those in September and October. Our permit staff has been crunching applications. Our enforcement staff has been negotiating. Our planning staff has been teaching us GIS and our admin staff has been working double time making sure that we have the tools necessary to do all that. As a former high school nerd I really like Frank Portman’s description of late August – he wrote in his first novel: “There’s always a bit of suspense about the particular way in which a given school year will get off to a bad start.” Thankfully, our summer at BCDC never took a bad step and we’re starting the final push to get us to the fall.

We had the pleasure of hosting Juliana Morozumi, our new Department of Finance analyst, at BCDC on Tuesday morning. We spent almost two hours going through BCDC 101 – who we are, what we do, how we do it and what we need to do better. To be clear, Juliana actually is returning to BCDC – she had been our analyst until late 2012. She was very taken by our staff’s determination and passion. The site visit she took with Steve Goldbeck and Wendy Goodfriend to Mission Creek below AT&T Park and the Oakland Alameda Coliseum complex was a great way to introduce her to our work on rising sea level. As Juliana left BCDC she commented on how efficient BCDC is given our small size. I hope that bodes well for our future budget-related discussions.

Last Monday I had the distinct pleasure of flying to Washington, D.C. and being in our Nation’s capital for almost two days in mid-August (laughter). I should note that my friends told me that they thought I was smarter than that – indeed, the temperature in D.C. has not dipped below 70 degrees for over a month, even at night. One day later, accompanied by Tom Gibson, Chief Counsel for the California Natural Resources Agency, and Joaquin Esquivel, the Resources representative in the Governor’s Washington, D.C. Office; I met with staff of the U.S. Army Corps of Engineers and, ultimately, the Principal Deputy to the Assistant Secretary of the Army for Civil

Works — the highest ranking civilian in the Corps. Our message was simple – they should reconsider our request to enter into mediation with NOAA so that we can attempt to resolve the issues clouding our consistency determination regarding dredging without having an alternative but to file a lawsuit against them.

I expect that I shall have an answer for you when we meet on September 15<sup>th</sup>, which is now why we will now schedule a closed session for September 15<sup>th</sup> as well. I want to let you know how helpful Tom and Joaquin have been throughout our work with the Corps. The next day Joaquin and I met with several Senate and House staff members to let them know of our meetings with the Corps and they appreciated being kept up to date on our efforts.

Finally, all of you have noticed that we have not scheduled a vote today on the application to build a hotel on the Alameda shoreline on which you held a public hearing two weeks ago. That application was withdrawn last week after the hearing. We look forward to the applicant working with the Design Review Board and with our staff in the future.

That completes my report and I am happy to answer any questions you all may have.

Chair Wasserman asked: Are there any questions for our Executive Director? (No questions were voiced) Seeing none; that will bring us to Item 7, Consideration of Administrative Matters.

**7. Consideration of Administrative Matters.** Jaime Michaels is here if there are any questions. (No questions were voiced). Chair Wasserman moved on to Item 8

**8. Vote on an Application to Construct a Hotel and Parking Structure Located at 2350 Harbor Bay Parkway, in the City of Alameda, Alameda County; BCDC Permit Application No. 2016.003.00.** Chair Wasserman announced: Item 8 has been postponed.

**9. Public Hearing and Possible Vote on an Application by the State and Federal Contractors Water Agency and Westervelt Ecological Services, LLC, to restore the Tule Red Duck Club to Tidal Wetland; BCDC Permit Application No. 2016.002.00 md.** Chair Wasserman announced: Item 9 is a public hearing and vote on the proposed project to restore the Tule Red Duck Club in the Suisun Marsh to tidal action. Pascale Soumoy will introduce the proposed project.

Coastal Program Analyst Soumoy addressed the Commission: I would like to introduce the Tule Red Tidal Restoration Project and its proponents, the State and Federal Contractors Water Agency and the Westervelt Ecological Resources.

On August 5<sup>th</sup> you were mailed a summary of an application to restore the Tule Red Managed Wetland, which is also a former duck club, into a tidal marsh. Tule Red is located in the southeast region of the Suisun Marsh bordered by Grizzly Bay, the California Department of Fish and Wildlife Grizzly Island Refuge and a private property all of which are in within the Suisun Marsh Primary Management Area.

The project proposes to restore 420 acres of managed wetland into tidal marsh by reconnecting it to Grizzly Bay. The project's main goal is to create tidal habitat conducive to the proliferation and growth of zooplankton and phytoplankton to benefit Delta and Longfin Smelt and salmon as well as creating upland refugia for protected wetland species. The project would impact approximately 320 acres of managed wetland, 54 acres of tidal habitat and 46 acres of upland habitat within the Commission's jurisdiction.

In total, the applicant would provide 420 acres of new tidal and enhanced upland habitat. To do so the project includes the construction of tidal channels, ponds and pannes; the construction of a transitional sloped habitat berm alongside the existing levees to provide upland refugia for the federally and state-protected Salt Marsh Harvest Mouse and Ridgways Rail, and finally, the breaching of the site to Grizzly Bay.

Please note that the transitional berm would also bolster the levees and assist in protecting the neighboring properties from flooding. The project also addresses the discharge of water with low-dissolved oxygen levels that is coming from the adjacent Department of Fish and Wildlife properties by creating a containment pond and water control structures to aerate the water.

To do so the project requires the excavation and use of approximately 300,000 cubic yards of onsite soil for site features and the removal of about 1900 cubic yards of existing fill in the form of duck blinds, foot bridges, a clubhouse and associated structures from the site. A small amount of new fill for project elements such as a tide gate and its wooden platform will be required. Overall, the project will result in a reduction of approximately 1000 cubic yards of fill out of the managed wetland.

In regards to public access the project does not propose any onsite access due to public safety and wildlife concerns and instead proposes in-lieu public access that includes improving two existing fishing piers, development and placement of interpretive signage, implementation of a marsh-wide study to identify public access opportunities within the Suisun Marsh and the contribution of \$150,000 dollars to the Coastal Fund for future public access projects in the Marsh.

Here to present the details of the project are Mr. Byron Buck, the Executive Director of the State and Federal Contractors Water Agency and Mr. Gregg Sutter, the Executive Vice President of Westervelt Ecological Services.

Mr. Byron Buck spoke before the Commission: The State and Federal Contractors Water Agency is a Joint Powers Authority of the largest water districts in California, from the Bay Area to the Tijuana Mexican border.

Our members deliver about two-thirds of the water supply within California and service about two million acres of agriculture.

All of them get water from the State Water Project and the Central Valley Project, which has current permit conditions to restore wetland habitat in the Delta to mitigate for operations of the project. That is what this project is really about.

Half of what we do is habitat restoration because we have a background in that and we are able to be a little bit more nimble than the state and federal governments in terms of moving some of this forward. We work in partnership to do it and this is the first big project to come through about an 8,000 acre requirement within the Bay Delta.

This is a site vicinity map in the context of the California Eco-Restore program, a program set up by Governor Brown. Mr. David Okita, the head of the Governor's Eco-Restore program is here in the audience. The Tule Red restoration site is in the eastern portion of Suisun Marsh. We are gearing up and moving rapidly on a lot of these other projects as well. This is one of the first projects through the gate.

The Suisun Plan was adopted in 2011, as a long-term land management plan for the Delta, with compliance for the private owners to mitigate for their issues and to restore parts back into tidal wetland. There is a 4,000 to 8,000 acre goal within the Marsh for this tidal wetland restoration. This fits into the Suisun Marsh Restoration Plan, environmental documents and indeed we tiered off those documents as the lead agency on this project under CEQA.

This is partially fulfilling the 2008 biological opinion objectives for the Central Valley Project and the State Water Project. From a biological standpoint we want to increase the food web's primary productivity for fish. The problem with fish is really a food problem. Society has removed so much wetland from the system that the fish are starving. We need to produce more food for them. This site is ideal for doing that. It takes advantage of the existing topography and elevations. It is right at about sea level now. This site is accreting sediment so it is ideal for following sea level rise. We want to promote native and naturalized marsh vegetation. We are going to accommodate sea level rise.

Avoiding impacts to neighbors and duck clubs nearby is also a major part of our design and doing this in a way that is compatible and does not have this project getting into a terrible controversy that would be terrible for all the rest of the duck clubs. We have developed a good strategy to enhance public access as more of these projects come online in a way that is going to be compatible and non-controversial.

The property boundary actually goes way out into the bay and we will get some biological credit for the productivity we are increasing. We are not adding any fill to the Bay and conversely we are actually taking a lot of fill out and making new open-water habitat. This project will be an addition to a large, publicly owned piece of property that does have public access and is open at least six months out of the year in the non-hunting season.

In the early 1900s this was open water or underwater much of the time. What we have seen over time is that the sediment that came down during the Gold Rush Era into the Delta has filled in a lot of areas. This is a turbid area because the wind fetch across the Bay, the southwest winds and the Delta breeze re-suspends the sediment. The land has really moved westward over time.

We have worked with those phenomena in addressing how this site is going to accommodate for sea level rise. It is still an accreting site. There is still a lot of sediment in the system even though the big pulse has moved through the system. In this area it re-suspends on a daily basis because of the winds and there is a natural berm on the west side that tends to capture the sediments on the high tide.

All the science supports that it will grow over time because of the trapping of sediment, the increase of marshland vegetation; and it will rise at the pace of, or ahead of, sea level rise. We have designed the restoration process with the accommodation of sea level rise.

We are going to need to see a lot more of this type of restoration in the region, if we are going to see wetlands remain; if it all just does not submerge. If we do not do what we are proposing then this becomes a wetland island, which is something we do not want to see.

There are requirements of thousands of acres of this type of restoration so we have a lot of opportunities to do additional projects like this and indeed the Suisun Marsh Plan has nearly a quarter of the Marsh turning over to tidal wetland over a 20-plus year period.

Endangered fish like this habitat because you have wetlands and the confluence of fresh and saltwater that is productive for the species they prey. We are talking about Chinook salmon, Delta Smelt and Longfin Smelt. This is an ideal area for doing what we want to do in terms of creating food nurseries for the fish.

Part of this property has been owned by the Department of Fish and Wildlife and it has been managed as part of the Marsh, during the last 50 years or so. It was only during the tidal discussions that we found out that they owned part of this and they did not know. We have been working with DFW to do this restoration as a unit. It is physically distinct from their wildlife area, and has not been managed by them. It has been managed privately as part of a duck club for the better part of 50 years. They were more than happy to work with us to integrate it within the design. It also prevents a lot of earthwork rather than having to build a levee to wall off this isolated 60 acres. It made much more sense to consolidate and restore it. Fish and Wildlife is a partner with us on this project.

To the north are private duck hunting clubs that have been bordered by the DFW property for the wildlife area. There are more private clubs to the south. We have to be sensitive to those private users and their security needs. We have worked a lot with the staff to come up with something that is a reasonable way to proceed.

Existing duck club management is a managed freshwater wetland that is dry half of the year. During summertime the grass and vegetation is mowed. The drainage and water-management system allows for the site to be flooded in the wintertime and attracts ducks for the duck hunters and this cycle repeats every year. There is no open access to the ocean. The water comes in through a tidal gate when the water is fresh in the system and is moved about the system and distributed for the managed wetland habitat. This is a fairly simple distribution system where it comes in from the south and is moved up and through the wetlands to create a duck club nesting area that is attractive to the birds that the hunters like.

The natural berm on the west side is unique in the higher areas on the west side of the site, the lower areas are on the east and we have incorporated that into our design as well. These are interior levees here that protect the lands to the east.

We have spent about five years on this project and incredible amount of technical detail to develop a self-sustaining wetland. We have done a lot of water quality work and topographic surveys to pin down exact elevations underneath the very thick vegetation. We have done geotech surveys to see how well the new managed habitat levees will hold up and what kinds of issues we might have with building those.

When we were looking for cultural resources there really was not anything there because this was underwater in prehistoric periods. There was no indication of Native American use.

The site is all wetland today. It is a freshwater wetland. It is not open to the ocean so on a Wetland 404 Permit basis it is a one-to-one exchange and what we are creating is much more productive than what is there today.

We have gone through a lot of hydraulic modeling. There is a lot of interest in this work in terms of how the site will manage itself over time without a lot of intervention. We looked at half a dozen different design and breach alternatives.

We have done a lot of work on residence time; how much time is the tidal water going to stay on the site? We have been working with the experts at U.C. Davis that have studied the Delta and the Suisun Marsh for decades. They helped us design for a variety of residence time. We have some features that have two to three weeks residence times and others that are just going to circulate on a daily basis. All of this is good for fish food production.

We looked at regional salinity modeling because anytime you create new accommodation space in the Delta you are changing where the X2 line of where freshwater and saltwater is in the Delta. There are a lot of folks who are concerned about that because it affects water supply and water quality in other regions.

There is an existing DFW drainage discharge into the site, which has had problems over the years with dissolved oxygen levels. In this project we are going to solve that problem by giving them some space to accommodate the water and be able to manage the discharge and only let it out when there is adequate capacity. We are also building an aeration structure that will re-aerate the water and inject oxygen back into it before it is discharged. We are solving a longstanding water quality problem that the refuge has had, that would not be solved otherwise.

Sediment modelling has been a big issue for us in terms of what is it going to look like over time and how are we designing for sea level rise?

The design alternatives went through an intensive peer review process, under the umbrella of the Delta Plan and the Delta Stewardship Council and the whole adaptive management cycle. We had an outside expert panel set up to review all of our technical work and look at the designs and how this is going to work. In fact, this design was tweaked quite a bit by these people to bring in some features that they thought would be important and we changed the breach locations and so forth.

This had a lot of influence on what we ultimately have today before you. We were in a three year design cycle with a whole host of folks.

We have had a lot of resource agency consultations. There have been you folks and a whole lot of folks on the federal side as well, the Corps of Engineers, NMFS, Fish and Wildlife Service, the Regional Board, the Delta Stewardship Council, California Department of Fish and Wildlife, TWR, Solano County and so forth.

There are 17 permits involved to be able to do this.

We were the lead agency under CEQA. Our Board adopted the addendum to the Suisun Marsh Management Plan, EIR/EIS in March of this year.

This was the design alternative that won out. This breach size is designed and modeled so that it will be self-sustaining and even with the longshore drift and the sediment along the site we believe there is enough tidal energy within the system to maintain this channel.

The site is lower to the east than to the west so water will come in and fill these secondary channels. The tidal pannes on the southeast site are features that were all over the Delta before the influence of man. They would fill in on the high tide cycles every two weeks or so.

The biological benefit of the pannes is that these "cook" in the warmer weather and you get a lot of phytoplankton and that is what the zooplankton feed on. In the big tidal cycles coming into the system the zooplankton be exported out to the Bay to where the fish are in feeding both in the Marsh and in the near shore Bay. We are bringing back some features that existed in nature, that have disappeared from the system.

All the fill movement will be contained onsite. We are using the excavated soil to build the habitat berm. This berm is the best thing for the habitat but it was new fill in the eyes of the Army Corps of Engineers. We went through a process that minimized fill yet still had enough of it to provide benefit to the Salt Marsh Harvest Mouse, an upland species that is on the site.

The existing site currently is pretty flat. The existing berm is a very steep one with not a lot of habitat value. What we are proposing is a more gently sloping berm, from 10 to 1 to 20 to 1, that varies along the site. This allows us to create a 400 percent increase in Salt Marsh Harvest Mouse habitat. This is a much safer structure in terms of sea level rise and wind fetch and will accommodate sea level rise as well.

You see over time a transition of habitat from wetland to transitional wetland to upland over this site. It is the primary feature that with accretion on its west side in the Marsh, it will raise and maintain itself as tidal wetland habitat.

Today we have a managed Marsh for waterfowl and a static water level, that is drained in the summer. There is no hydrologic connection. It is a pretty narrow ecotone for the Salt Marsh Harvest Mouse. When we are done we will have daily tidal exchange. We will have a lot of food web support for listed and endangered fisheries. There will be year-round waterfowl and shore bird use. There will be no hunting on this site after we are done. There will be no annual vegetation management. We will have this nice sloping habitat for the Salt Marsh Harvest Mouse as well.

We started back in 2011 acquiring the site and making our agreement with Westervelt. We stopped for a year and looped back because we looked at our original design and decided that we wanted to take into account some new information and do some test work to deal with the costs of working in a very wet soil environment. That helped us refine our design quite a bit.

We brought the new design to an expert panel which was formed of independent scientists throughout the region on wetland restoration and got their input, modified the design again and began the permitting process. We are at the end of the process and you are the last significantly discretionary permit we need. We hope to start construction next month.

We can only build during the summer season when it is dry. We have to be out of the Marsh by October 15<sup>th</sup> at the latest. We will be in a three-year construction phase to do this with the ultimate breach about three years down the line.

We went through a lot of effort with the staff on public access. We worked with the Suisun Conservation District that has its own policies with respect to public access and came up with a plan that is in-lieu plan. This site is very remote and there are issues of hunting and neighbors and so forth. Doing a whole lot on the site did not make a great deal of sense.

It would be good for us to look at the long-term nature of all the wetland restoration projects coming down the line through Eco Restore: where are they going to be? Where are the opportunities closer to publicly- transited locations? Near to publicly-owned land? With private land use conflicts and concentrate a good chunk of money to doing a comprehensive plan and project for public access that covers all of these projects. That is the notion behind this study that we will work with Eco Restore and your staff and coming up with some specific projects to enhance public access compatible with all the other activities going on in Suisun Marsh.

We are also making a monetary contribution to this study, the \$150,000 dollar contribution required under this permit that will be held by the Coastal Trust Fund. The study findings will be coming back to you explaining what we found, where we think we want to invest in public access, and that would be a comprehensive approach rather than a piecemeal approach, project-by-project, that would otherwise happen.

We will make improvements to existing fishing piers to make them more useable and safe as well as making them ADA compliant.

The study will take a comprehensive approach to this and we will have all the Suisun Marsh principal agencies including BCDC, as well as landowners and tidal restoration proponents and we will work out what we think is a good approach to enhancing access and providing interpretive guidance to the new wetland restoration that is going on in the site, and doing that in a way that existing, private landowners in the Marsh are going to be able to accept.

I would be happy to take any questions you might have.

Chair Wasserman opened the public hearing.

Commissioner Nelson had a question: You mentioned the effect of sea level rise on this wetland. We are spending a lot of time looking at sea level rise and how it affects the built environment and the habitat. You mentioned that this is in an accreting location. This is sediment that has piled up there in Suisun Bay as it has come down through the system and it is still accreting.

Have you modeled that looking out into the future; in particular, it looks as though you are proposing to leave the bulk of that levee intact, right?

Mr. Buck replied: Yes we have modeled it. What it has shown is that the sediment coming down from the Gold Rush Era is tapering off now. A lot of that has been brought down into the Bay and the wind re-suspends it. All the modeling is showing that this will continue for at least 100 years. There is enough loose sediment within the Bay that it is going to come up on a daily cycle and the berm is higher and it captures it on the high tide.

The modeling shows that this will continue and then the Marsh grasslands and so forth, the natural Marsh activity will now have water coming in and that will build like the Marsh did naturally over time.

Commissioner Nelson pressed for detail: So it is not just the berm; it is the Marsh behind the berm as well.

Mr. Buck agreed: Exactly, yes. It is both the sediment on the west side and then the Marsh activity in the internal site with the vegetation consisting of peat growing up over time. It shows that it will be a little ahead of sea level rise.

Chair Wasserman asked for clarification: When you say you will be ahead of that, do you mean by the natural accretion that you have described is going to build up higher than that?

Mr. Buck answered: Correct. It will be faster than the sea level rise. The habitats will change over time in here. Some of the wetland will move to upland and some of the transitional will move to upland. In the end we will have the same amount of habitat everywhere.

We modeled out to 50 plus years. That was reviewed by the expert panel. The two big issues with them was accretion and the location of the channel breach and if there is enough tidal energy here to maintain it naturally. At the end of the day we had everybody pretty happy. We moved the channel location based upon those discussions with the expert panel.

Commissioner McElhinney commented: On page 19 under recommendation, Natural Resources, Wetlands Policies; it states that once the project has met the success criteria it is proposed to transfer the property holdings to a public entity for future management, potentially California Fish and Wildlife. How long do you propose that it might take to meet that success criterion? What if Fish and Wildlife is not able to accept the property transfer?

Mr. Buck explained: We have a letter from Fish and Wildlife that says, "yes, we will accept the property." We have to work out details of the property transfer and make sure they have the funding. Funding is actually set up for long-term management of the site through the Department of Water Resources and that is a matter of giving them a reference for that.

Everybody in the resource world says; we do not have perfect knowledge of these systems. We are creating habitat. It is sort of a, build it and they will come. We are doing the best we can on design and we have an adaptive management monitoring plan so that every year we are going in and measuring and figuring out what has happened in the system and that we can tweak this or that.

We do have some ability with the internal tidal pannes and other features to alter easily how much water is going in and how long it is staying. The site has some manipulation features should we want to do that and enhance certain benefits.

In many respects this is new stuff for everybody. It is a hope, it is not a promise that it will restore species but it has all the right ingredients and all the right locations with all the natural features that it should be successful.

We have gone through a big wrestling exercise under the California Eco Restore Program as to how we maintain these in perpetuity. We realized that; they have got to be under public ownership with a long-term funding stream. This one will be with DFW. It will be funded through the State Water Project which is not subject to annual appropriations by the State Legislature. It has a long-term funding contractual source.

It is a pretty good set up for maintaining it. Fish and Wildlife will have the money to run it and tweak it. Our monitoring plan for the first five years is very intensive to make sure it is working. It will be an annual review cycle and we will have the ability to change things as best we can.

There is not a numeric goal we are trying to hit other than X number of acres of certain types of habitat.

Chair Wasserman commented: The concept of trying to deal with the public access issue of involving the multitude of agencies and property owners is a terrific idea. I would like you and our staff to keep an eye on that as a model as we think about public access in other areas.

Commissioner Gorin commented: I have a follow-up question regarding the public access. Collaborative planning is great and this is a really environmentally sensitive area of course. I represent Sonoma Valley with a similarly sensitive terrain. I have a great deal of public contacting me for access for all of the levees and the islands and the marshes. It is really challenging to create. I know that there is public demand to have access to the areas.

If at the end of your collaborative planning process the public and the joint agencies decide there is a need to create public access closer than just the fishing piers; will there be another opportunity for you and us to re-examine this area for potential public access?

Mr. Buck answered: The short answer is yes. This one is in the pot with all the other sites that we are looking at and existing sites. And should that study decide, well, we could do this here back at the Tule Red site and a few other things there as part of a good comprehensive planned approach, we are certainly open to that.

Again, we have a number of projects that are going to be done here. This is just the first one that you are going to see. Within the next five years there will be half a dozen more between my agency and the Department of Water Resources. There is ample opportunity to say, put something together that we think works well as a whole and hits that mark of acceptability and does some nice things with respect to public access instead of just having to hit it as a piecemeal approach.

We are not broadly opposed to doing anything on the site. At this time we felt an in-lieu approach was better. We can certainly circle back if we feel we have to.

Mr. Steven Chappell was recognized: I am the Executive Director of the Suisun Resource Conservation District. There is a letter in your package of my support of the project as well as a letter from the Delta Stewardship Council on behalf of the Suisun Marsh principal agencies which I am also a principal agency and was actively involved with the development of the Suisun Marsh Plan which lays out a programmatic approach for 5,000 to 7,000 acres of restoration over the next 30 years.

This is the first project that comes in to meet that objective. I do support the project. I would like to thank the project proponent for being open and transparent and actively engaging me, the District and the other agencies in the development of the project.

It was the first project that came into the Marsh Plan. We are learning as we go. We are going to have other projects come up and we are going to have to start thinking about this.

The opportunity to do the public access plan is really critical because we have not looked at the Suisun Marsh Plan since 1977. When I go back and look at the Plan and policies in 1977 it says, we should purchase the Bryant property and a number of others and we should provide public access. Not only have all those properties been acquired since then but additional properties have been acquired and they do have public access components and some do not.

It would be good to take a comprehensive look from where we started to where we are and then look at the Marsh Plan prospectively for the next 30 years and see where we should be going and where we can put our resources to good work to be effective instead of piecemealing.

My comments in the letter with regard to the inconsistencies between the Bay Plan and the Suisun Marsh Protection Policies; I had a conversation with staff today, I am comfortable with the recommendations of staff moving forward. If there had been a public trail as part of this I would have had some stronger opposition but public access is something that the Resource Conservation District supports.

It has to be done with the involvement of the stakeholders because the Marsh primarily is in BCDC's jurisdiction as a result of the plan of protection. The landowners wanted to protect the resource. Those landowners are predominantly waterfowl hunting clubs. We have to make sure that the existing land uses are compatible with future land uses and we are doing what is right for the resource, the wildlife, the wetlands and the landowners.

Commissioner McGrath commented: This is a great project. I first began working on wetland restorations projects about 1980. They have hit all the right notes. Anytime you see a berm like that it tells you exactly where the waves are coming from and it is accretional whether it is completely natural or sediment from the Gold Rush redistributed; it is going to go on.

What I really appreciated here was the explanation of why the internal channel was filled. It came across very clearly in the testimony.

The challenge when you have sediment coming into a system is to make sure that you have hooked up the tidal energy through the tidal prism to keep that channel open.

So there was a little bit of fill in here and in making the minimum fill finding that we have to, it is important to note if that channel stayed unfilled not only would you not have the transitional habitat but you have the potential of the channel capturing a portion of the tidal prism and starting to interfere with keeping the mouth open.

It was well explained in the comments. It makes absolute sense. They have done the science right. I am very impressed and very happy.

Commissioner Nelson had a suggestion for staff: Steve's testimony raises a concern about how the Commission applies maximum feasible public access in the context of the Suisun Marsh. We do not need to resolve that issue here because the Resource Conservation District supports this project.

I wanted to make a suggestion to the Chair and the staff to think about whether we should get ahead of that issue and schedule a briefing down the road to make sure that we are thinking that issue through because we are going to face more projects like this down the road.

Commissioner Jahns commented: I wanted to thank the staff at BCDC for working so closely with the permit applicants and for the permit applicants working so well with their network of partners to put together this project. The comprehensive plan for the Eco Restore projects in the area as well as the public access components is important.

I wanted to emphasize that this Eco Restore Program is a focused initiative by the Governor to serve as a catalyst for the type of restoration in the Delta that we have all been talking about for years and make it happen sooner and faster and bigger than it has in the past.

**MOTION:** Commissioner McGrath moved to close the public hearing, seconded by Commissioner Nelson.

**VOTE:** The motion carried with a vote of 16-0-0 with Commissioners Gilmore, Scharff, Jahns, Gibbs, Gioia, Gorin, Kim, McGrath, Nelson, McElhinney, Sears, Vasquez, Wagenknecht, Zwissler, Vice Chair Chappell and Chair Wasserman voting, "YES", no "NO", votes and no abstentions.

Ms. Soumoy presented the staff recommendation: The staff recommends that the Commission approve BCDC Permit 2016.002.00 MD to authorize the proposed project. The staff recommendations contain special conditions that require the permittee to implement a variety of measures to protect the Bay and sensitive habitats. These conditions ensure that the permittee

will take appropriate actions to avoid adverse impacts to species of concern that may occur in the project area including the conservation, avoidance and minimization measures identified in the U.S. Fish and Wildlife and NOAA Fisheries' biological opinions.

Also that the permittee will work with the Commission staff and resource agencies to finalize the Adaptive Management and Monitoring Plan for the project and also that the permittee shall provide required public access and obtain approval from Commission staff for public access improvements through a plan review.

As conditioned the staff believes the project is consistent with the MacAteer-Petris Act, the Suisun Marsh Preservation Act as well as the Suisun Marsh Protection Plan and Bay Plan policies regarding fill, managed wetlands, public access and natural resources.

Staff also requests that the Commission allow staff to make the changes noted in the errata sheet as well as minor typographical, grammatical or non-substantive corrections to the permit. With that we recommend that you adopt the recommendations.

Chair Wasserman asked: Does the applicant accept the recommendations?

Mr. Buck replied: Yes we do.

**MOTION:** Commissioner Nelson moved approval of the staff recommendation, seconded by Commissioner Vasquez.

**VOTE:** The motion carried with a roll call vote of 16-0-0 with Commissioners Gilmore, Scharff, Jahns, Gibbs, Gioia, Gorin, Kim, McGrath, Nelson, McElhinney, Sears, Vasquez, Wagenknecht, Zwissler, Vice Chair Chappell and Chair Wasserman voting, "YES", no "NO", votes and no abstentions.

Chair Wasserman moved to Item 10 on the Agenda.

**10. Public Hearing and Possible Vote on California Department of Transportation's Permit Application No. 2001.008.41 to Use Controlled Explosives to Demolish Piers E4 Through E18 of the Former East Span of the San Francisco-Oakland Bay Bridge** Chair Wasserman announced: Item 10 is a public hearing and vote on a proposal by Caltrans to use controlled explosives to demolish piers of the former East Span of the Bay Bridge. Tinya Hoang will make the presentation.

Permit Analyst Hoang presented the following: On August 8<sup>th</sup> staff mailed the summary of an application for Material Amendment No. 41 to Caltrans' permit No.2001.008 to demolish 15 piers of the former East Span of the San Francisco-Oakland Bay Bridge using controlled explosives.

The original permit authorized construction of the new East Span and also required demolition and removal of the former East Span to mitigate for the fill associated with the new bridge.

At the time the permit was issued in 2001, it was anticipated that the old pier foundations would be demolished by mechanical dismantling. That method would have involved pile driving and installation of coffer dams.

Caltrans later proposed an alternative strategy using controlled explosives to demolish the largest of the former piers, Pier E3, and undertake an initial demonstration project to see if this alternative method was viable for demolishing additional piers.

Last year, the Commission authorized the demolition of Pier E3 using controlled explosives. The activity was completed in November of 2015. In February of this year, Caltrans briefed you on the results of its demonstration project which it found to be successful.

Today, Caltrans is returning to you with a proposal to use controlled explosives to demolish Piers E4 through E18.

The proposed controlled blasting of Piers E4 and E5 would be similar to that of Pier E3 where the majority of the debris would fall into the hollow caissons that extend deep below the Bay floor.

For Piers E6 to E18 the demolition debris would fall on top of and around the remnant pier footprint at the Bay floor.

The proposed blasts would generate approximately 28,360 cubic yards of demolition debris; of this, approximately 30,150 cubic yards would be removed from the Bay and the remaining 28,210 cubic yards would be disposed at or below the Bay floor.

As proposed, the remaining material is expected to be covered with sediment over time thus resulting in minimal or no Bay fill.

As you will hear today, Caltrans proposes various monitoring, avoidance and minimization measures to ensure that the project fully complies with your law and policies.

In evaluating Caltrans' proposal, the Commission should consider the following issues: One, whether the project meets the definition of a water-oriented use, has no upland alternative and constitutes the minimum fill necessary; Two, whether the project is consistent with your policies protecting Bay biological resources; and Three, whether the project is consistent with your policies protecting water quality.

That concludes my presentation and I would like to introduce Stefan Galvez and Dr. Brian Maroney who will present additional information.

Mr. Stefan Galvez addressed the Commission: When we were before you previously, we requested that the Commission allow the implosion of Pier E3 with controlled blasting techniques. Based on those results, we would like the Commission to consider this amendment for Piers E4 through E18. What you have in front of you is an aerial photo of the Bay Bridge, East Span; Oakland being on the right hand side.

The new East Span was opened about three years ago. It is performing great, and now we have been working with the original East Span. Dr. Maroney will get into more detail about how we are proceeding to the east and removing these super-structures as well as the towers and the marine foundations.

We imploded Pier E3 November of last year. It was a total success. It was actually better than we anticipated. Overall, the levels of impact were much, much smaller than we anticipated.

We are asking you to consider the removal of E4 to E18 with the same type of controlled blast techniques.

We did not take any listed birds and our water quality impacts were smaller than anticipated.

All of our partner agencies concurred as well as BCDC staff that it is not only a viable way to remove these piers, but it is also the least environmentally damaging alternative.

The only change that we are asking you to consider is the methodology for removal of these piers. We are going a little bit deeper and we feel confident that we are consistent but we are doing a better job than was required in the original permit. We are providing ourselves with a wider margin of error and going three feet below the mudline.

We are not asking you to take action on Pier E2 which is on the Yerba Buena Island side as well as four piers on the east side, Piers E19 to E22.

This will be the last phase of this project and this is already permitted and we are not asking you for any changes.

Dr. Maroney will now go into more detail about the specifics of the project, and then we will talk about the biological aspects.

Dr. Maroney addressed the Commission: About 15 years ago, this organization and others assigned me and my staff to build a brand new bridge. We had to do things to build that bridge that Caltrans does not know how to do. We had to develop technologies.

This is the last big contract on the entire Bay Bridge Project, and I think we got it. I have to have your help for it.

BCDC is responsible for this alternative being dreamed up. We started making the engineering harder but better for the environment due to BCDC's requirements.

With your support on this last demonstration project we were successful.

We were successful at E3. I have the same contractor for this phase as I had for E3. I did not have to go low bid which is what we normally do.

We picked the best contractor, and on this kind of job, it is absolutely necessary. I also have the same QC staff working on this phase as well. I have the same hand-picked team, and you should have confidence in that.

The piers get smaller as you go east. They only get easier from here on out.

We are trying to clean up the Bay as fast as we can because removal of fill was part of the original contract.

Here you see my schedule for the project. This year, we are going to take out some very high caissons. Next year, I hope to do 6 through 11. We have identified when the proper window for us to do this with the help of our experts.

Our goal is to be done with all of this in 2018. However, we will stick around an extra year and continue to monitor things as required.

Most of the foundations are actually hollow and during the blast, this material collapses down into the hollow space well below the Bay floor. Nothing is left protruding out of the water that can rip the bottom of a boat. It will silt in over the top, and you will have a nice, smooth Bay bottom with natural sediment there.

The explosives we are using are a form of dynamite. We used about 17,000 pounds of dynamite for E3. One of the defenses to protect the fish is that we are not blasting 17,000 pounds of dynamite; each charge of dynamite is at maximum 35 pounds. We separate them with nine millisecond spacing.

This means that the amplitude or pressure wave that migrates out through the water is much smaller. This is extremely important.

This means that the blast attenuation system that knocks down the energy by about 80 percent is knocking down the energy from 35 pounds of dynamite.

We perform this work when the fish specialists tell us the right time window to do it in.

Around each pier in San Francisco Bay there is a scour hole. The foundation goes in and it obstructs the flow of water. The water accelerates around the piers, and it picks up more soil and it erodes the bottom of the Bay around those piers. We have big scour holes around every single pier.

Our intention is that we are going to be taking out this structure, and we are going to do it by going three feet below the mudline, which will give us an increased margin of safety.

We will have rubble that will pile up above the scour hole, and we intend to remove this material and ship it upland and use it as fill where it is legal to do so. We then let nature put its material right across the top through the tidal actions.

We used sonar to create a map of the Bay floor. We mapped the area around E3. You can see that right after the blast, there was a hole there. After only six months after the blast, the scour hole is filling in and so are the areas right over the pier and in the pier. This is showing us that Mother Nature is repairing itself.

Mr. Galvez commented: We are going to have an extensive hydro-acoustic monitoring program to help protect the marine environment. We have three principles that we will be employing to minimize impacts.

The first principle is seasonal avoidance or the time of the month and year in which we will be doing this work. We will also be using the blast attenuation system and third, we will be using the blast plan design that was exclusively designed for each one of these piers.

There are two components to our monitoring system. The first is the near-field monitoring program which involves a number of sensors that will be collecting data to provide a composite of the signature of the noise and the pressure levels.

We are also going to have a far-field monitoring array as well; to the north, to the south and to the west. This will give us a very good picture about our acoustic signatures.

We will be monitoring for potential effects on marine mammals. The only species that is likely to be present is the Harbor Seal.

We are obtaining an incidental harassment authorization from NMFS, Office of Protected Resources. There are two levels of harassment involved in this authorization.

Bird protection is similar to the one employed last year with the same formula utilized. There are two key species we are concerned with, the Least Tern and the Brown Pelican.

There is not a whole lot we can do with fish because, unlike marine mammals, they are not easily observable. We have determined that the best time of year to do this work is during the fall months insofar as fish are concerned.

As a voluntary measure, we are also going to do a caged-fish study. We did this last year as well.

The two key concerns in water quality are pH spikes and turbidity. We expect pH levels to spike temporarily. Turbidity was not an issue at E3, and we anticipate that this will be the case for the remainder of the work.

Chair Wasserman opened the public hearing: Do we have any questions or comments from Commissioners?

Commissioner McGrath had a question: I do have a question about E2. Is that not hollow as well? It is very close to the shore.

Dr. Maroney replied: Yes, it is hollow. You are right.

Commissioner McGrath continued: So that could be used, potentially, for some type of recreational or habitat facility or it could be imploded as well?

Dr. Maroney answered: Yes, it could be. I would hesitate to say imploded. There is a fragile building right next to it on land. Because of this, it is too early to say if we would use blasting. If I were told to take that out, I would probably go with mechanical means.

**MOTION:** Commissioner Scharff moved to close the public hearing, seconded by Commissioner Nelson.

**VOTE:** The motion carried with a vote of 15-0-0 with Commissioners Gilmore, Scharff, Jahns, Gioia, Gorin, Kim, McGrath, Nelson, McElhinney, Sears, Vasquez, Wagenknecht, Zwissler, Vice Chair Chappell and Chair Wasserman voting, "YES", no "NO", votes and no abstentions.

Ms. Hoang presented the staff recommendation: On August 12<sup>th</sup>, the staff mailed its recommendation on Material Amendment No.41 to Permit No.2001.008.00 recommending that the Commission authorize the subject project.

One matter of note today, you have been provided with an errata sheet on the recommendation. Most of the corrections noted are minor. However, there are two substantive changes to the recommendation that I would like to point out.

On page 45, there is a deletion of the requirement to use devices to deter marine mammals from the work areas based on advice from the National Marine Fisheries Service received after our mailing. In short, the National Marine Fisheries Service does not believe that this measure will provide value because the effectiveness of these devices is not fully known.

Marine mammals will be protected through Caltrans' incorporation of marine mammal exclusion zones at each of the piers to be demolished.

On page 47 of the recommendation, there is a deletion of a list of possible corrective actions to address exposed debris if adequate coverage through natural sedimentation does not occur.

At this time, staff thinks that these corrective actions could include removal of debris, additional debris management or placement of sediment on top of debris and remnant structures.

Caltrans has asked not to include this in the special conditions and staff believes that it is not necessary to include them at this time.

The final staff recommendation contains special conditions that require the permittee to take various measures to ensure project consistency with your laws and policies including: One, obtaining final approvals from the other resource agencies; Two, installing a blast attenuation system to reduce noise and sound pressure waves and thereby protecting fish and marine mammals; Three, conducting the work within a specified work window to avoid take of endangered species; Four, establishing marine mammal and bird exclusion zones around each pier to be demolished; Five, monitoring water quality; Six, monitoring sedimentation to ensure that remnant structures and debris are covered by sediment over time thereby resulting in minimal or no Bay fill; Seven, reporting back to the Commission with blast results, and finally; Eight, halting blast operations and taking corrective action if monitoring shows that the project is not occurring as authorized by the Commission.

As conditioned, the Commission staff believes that the project is consistent with your law and Bay Plan policies regarding fill, Bay biological resources and water quality, and therefore, we recommend you adopt the recommendation of approval.

Chair Wasserman asked: Mr. Galvez, are these conditions acceptable to you?

Mr. Galvez replied: Yes, Chairperson Wasserman they are.

Chair Wasserman commented: Thank you for the excellent job you have been doing including taking down the super-structure. I appreciate the excitement of the project and the excitement of shooting an air gun. (laughter)

**MOTION:** Commissioner Scharff moved approval of the staff recommendation, seconded by Commissioner Vasquez.

**VOTE:** The motion carried with a vote of 15-0-0 with Commissioners Gilmore, Scharff, Jahns, Gioia, Gorin, Kim, McGrath, Nelson, McElhinney, Sears, Vasquez, Wagenknecht, Zwissler, Vice Chair Chappell and Chair Wasserman voting, "YES", no "NO", votes and no abstentions.

Commissioner McElhinney commented: The Bay Bridge project is the largest, most complex, two-mile bridge project in California and early on BCDC staff was arm-in-arm with the project team for the new bridge. This bridge has been all about the people involved. I want to thank the staff at BCDC, the project team from Caltrans and the consultant group for all your work over the years. Dr. Maroney, you and your family have been committed from day one. We really appreciate the work of everyone involved. We will keep moving forward.

**11. Discussion and Possible Vote Regarding Rising Sea Level Policy Options.** Item 11 was postponed

**12. Adjournment.** Upon Motion by Commissioner Wagenknecht, seconded by Commissioner Nelson, the Commission meeting was adjourned at 3:06 p.m.