SAN FRANCISCO BAY
RESTORATION AUTHORITY

MEMORANDUM

DATE: October 15, 2021

TO: Governing Board
San Francisco Bay Restoration Authority

FROM: Amy Hutzel, Acting Executive Officer
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San Francisco Bay Restoration Authority

SUBJECT: Project Management Challenges and Solutions

The San Francisco Bay Restoration Authority (Authority) has authorized funding for 28 projects since April 2018. One planning project, the **Sonoma Creek Baylands Strategy**, is complete, and two implementation projects, **Montezuma Wetlands Restoration Project** and **Encinal Dune Restoration and Public Access Project**, have completed construction and moved into the monitoring phase. Six projects have required time extensions, usually for one year or less, and some projects have also required changes to their scopes of work.

Delays are typical in construction projects,[1] which involve a public environmental review process, permitting with regulatory and resource agencies, permitting from local agencies, securing construction accessways and staging areas, addressing infrastructure on or adjacent to the site, preparing and revising plans and specifications, and soliciting bids and awarding contracts (following contracting requirements). Throughout this process, unanticipated delays arise. In addition, the restoration projects funded by the Authority involve construction in an aquatic environment. Aquatic restoration projects face additional design and construction considerations, and regulations are more stringent in aquatic environments than in terrestrial settings. San Francisco Bay has even greater protections than many other aquatic environments.

An Authority project manager is assigned to each project and plays a critical role in working with the grantee to identify issues that might delay the project and assist them in navigating the issues. It is impossible to predict or control all the factors that enable projects to move forward. Authority staff strive to be flexible and helpful and to work with grantees to ensure that projects are successfully completed within a reasonable amount of time. This memo describes some of the key challenges that Authority projects have faced and how the grantees, in partnership with Authority staff, have overcome them. The South San Francisco Bay Shoreline Project is described first and then other projects are used to highlight specific issues.

[1] Delays and cost increases may be greater in urban centers like the San Francisco Bay Area. The Ezra Klein Show, July 23, 2021. (Opinion | How Blue Cities Became So Outrageously Unaffordable - The New York Times (nytimes.com)

South San Francisco Bay Shoreline Project

In 2004, the US Army Corps of Engineers (USACE), Valley Water, and State Coastal Conservancy began a Feasibility Study for flood management, restoration, and public access on the entire Santa Clara County shoreline. After several years of hydrodynamic modeling and economic analysis, the agencies determined that the project needed to be broken into phases. The first phase was identified as the Alviso (City of San Jose) section. The Feasibility Study was completed in 2015 and authorized by Congress for construction in 2016. In 2018, federal funds were appropriated for the project. The project is intended to be constructed in several phases starting with reaches 1-3 of the levee, then reaches 4-5 of the levee, followed by breaching of salt pond levees over several years in order to gradually restore ponds to tidal wetlands.

Some of the issues or concerns that arose during planning included:

- Alternatives for location of levee and impacts on Alviso community and wetlands;
- Which sea level rise projections to use and preferred height of levee;
- Crossing design for Artesian Slough, the outflow from the Regional Wastewater Facility;
- Crossing design for the Union Pacific Railroad;
- Potential impacts of tidal restoration to PG&E towers in Pond A18;
- Moffett Field airport and concern about potential for bird air strike hazards;
- Differing opinions on trail alignments and trail uses;
- Water Board's interest in realigning the levee for reaches 4-5 (along Pond A18) to go through the Regional Wastewater Facility's legacy biosolids pond;
- The net loss of waters of the state due to the construction of transitional habitat along levees;
- Various real estate issues, including ability of USACE to construct a restoration project on federal lands and credit non-federal sponsors for land acquisition (this was addressed in federal law) and need for transfer of Pond A18 from the City of San Jose to the project; and
- Construction access and staging issues with City of San Jose and with Santa Clara County (who own Alviso Marina County Park).

USACE has very recently awarded a contract for construction of reaches 1-3 of the levee for approximately $129 million (using USACE, Valley Water, and Authority funding). The delays associated with that specific contracting effort are detailed below, under Bid Process Issues. Construction of the levee will take at least two construction seasons. Meanwhile, the agencies continue to struggle with ongoing issues related to reaches 4 and 5 of the levee and restoration of Pond A18. The City of San Jose is requesting payment for the transfer of Pond A18 and PG&E is requesting payment to raise their transmission towers in Pond A18. These two requests total more than $60 million. Based on the cost of constructing reaches 1-3, which is largely driven by the cost of dirt that meets various specifications, it is also anticipated that the construction of reaches 4-5 will be higher than originally anticipated. In order to construct reaches 4 and 5, and ultimately construct the future Shoreline Project phases in Palo Alto, Mountain View, and Sunnyvale, the specifications and cost of sediment for levee construction need to be addressed. Projects would also be improved by collaboration among the agencies and organizations with

jurisdiction and property interests on the shoreline, all of whom would likely benefit from increased shoreline resilience.

Bid Process Issues

In three projects, the initial bidding process was unsuccessful, but the grantees have now successfully entered into construction contracts to complete the work.

- **South San Francisco Shoreline Project:** The grant agreement was executed in late 2018. The project could not go out to bid until USACE completed a cost estimate. When the project went out to bid in 2020, all of the initial bids exceeded the amount in the approved cost estimate. Following USACE policies, the bid solicitation was cancelled because it was over the allowance for variation from the estimate. USACE then reevaluated project cost assumptions, revised the cost estimate, and rebid the project in early 2021. The one bid received was under the revised cap, and a contract for construction was awarded in August 2021. The contractor is submitting a construction schedule to USACE soon.
- **900 Innes Remediation Project:** The grant agreement was executed in September 2019 and the grantee, the City and County of San Francisco's Department of Recreation and Parks, moved forward with obtaining permits and development of its Remediation Action Plan, which was approved in 2020. After the initial bid process for remediation work in June 2020, the lowest bidder withdrew, and the City decided to rebid the project in November 2020. The grantee selected a contractor and provided all necessary information to allow Authority staff to authorize the start of construction in April 2021 and a groundbreaking ceremony was held in June 2021.
- **Deer Island Basin Project:** The grant agreement for this planning project was executed in February 2019. Authority staff authorized the project to start work in March 2019, but the subcontract was not finalized until January 2020. The delay occurred because all bids exceeded the budget and the grantee, County of Marin, had to rescope the project and negotiate with the bidders to come to an acceptable scope and cost.

Bid process delays can be reduced by grantees ensuring that cost estimates are realistic and include contingencies and cost escalation over time. However, it is difficult to develop completely accurate estimates in the Bay Area's construction market. In addition, some delays, such as a lowest bidder's withdrawal, are out the grantee's control.

Permitting Challenges

The reasons a project can be delayed in the permitting phase are many and are at the very heart of why Bay Restoration Regulatory Integration Team (BRRIT)was created. The BRRIT coordinates regulatory agencies responsible for permitting wetlands projects in the Bay Area and offers a high level of service to project applicants in the project planning stage. Understaffed regulatory agencies, policy conflicts between six (and in some cases, more) regulatory agencies, and the expense of responding to regulatory requests for information or to meet permit conditions (such as monitoring) are some of the most common reasons cited for projects being held up in the permitting phase. The BRRIT addressed each of these issues with a team of dedicated staff representing each permitting agency. Their aim is to work with project applicants in the project planning phase as early as possible, provide transparency and service to the restoration community by putting coordinated feedback in writing and identifying issues for discussion and resolution before permit applications are submitted. Tools and guidance

developed by BRRIT are available on the BRRIT website and includes some examples of monitoring requirements in previous permits to improve consistency. There is a current effort to increase consistency of monitoring requirements through the Wetlands Restoration Monitoring Program.

There are few restoration projects in the Bay Area that do not have some level of complexity (e.g., experimental design, presence of endangered species, adjacent or overlapping key infrastructure, legacy contamination, subsidence) which can make them more difficult to permit. The following provides an example of these complexities and how they affected the resource agency permitting process.

- **Lower Walnut Creek Restoration Project.** This project had complexities which included multiple endangered species, a phased approach that included public access features in a later phase with a separate landowner, invasive species vegetation management needs, and excavation of new channel features. The presence of the salt marsh harvest mouse presented challenges for construction because the California Department of Fish and Wildlife (CDFW) has no mechanism to provide an incidental take permit for fully protected species outside of scientific research, including in efforts to recover the species. The project was permitted after the grantee, the Contra Costa County Flood Control and Water Conservation District, entered into a memorandum of understanding with CDFW that included a commitment to a long-term research component that will contribute to the recovery of the species.

This project is now fully permitted and will be having a breach event on October 29, 2021. It is expected that early consultation with the Bay Restoration Regulatory Integration Team (BRRIT) and resolution of issues that are elevated to the BRRIT's Policy and Management Committee will reduce permitting delays in the future. The MOU developed with CDFW for fully protected species is serving as a model for other restoration projects.

The **South Bay Salt Ponds Restoration Project** is an example of a project that has been adversely affected by local government permitting delays. The project needs easements and agreements from the City of Mountain View for hauling, construction, placing fill, and ongoing maintenance. The project management team has been working with the City of Mountain View's staff for over six years, but has not yet received the necessary permits, easements, and agreements. As a result, the opportunity to import and place substantial amounts of available fill material has been lost and some external grant funding expired. The project team has contacted members of the Mountain View City Council to try to expedite this process. The City recently issued a temporary permit and license agreement to allow the initial import and stockpiling of fill material, but the permanent easements and other issues that would enable the project to be constructed before remaining funds expire are still unresolved. There are similar examples of challenges with local government staff in other areas, who typically permit development projects in their communities and may not have experience permitting restoration projects.

Technical Assistance Needs

Several projects have required technical assistance from Authority staff in cooperation with other technical experts. In some cases, grantees are very experienced in conducting traditional civil engineering projects but need more support in implementing nature-based projects. Authority staff has provided our own expertise and suggested experts to serve on technical advisory committees for projects to ensure that projects are optimized to achieve significant ecological benefits while also addressing flood protection, shoreline stabilization, and public access needs.

Funding Shortfalls

The **Heron's Head Park Shoreline Resilience Project** is an example of a project that was delayed due to insufficient funding. The project was included in the list of Round 2 projects recommended for funding in June 2019 but was delayed after the grantee, the Port of San Francisco, did not receive other pending grants to cover the full cost of construction. The Authority funding covers the habitat restoration and community engagement elements of the project (hiring and training of youth eco-apprentices, removal of invasive species planting native species, placement of oyster reef structures, and monitoring) and required the Port to find other funds to cover the shoreline stabilization element (placement of the sand/gravel beach material and rock headlands).

In order to move the project forward while the Port applied for additional grants, Authority staff worked with the Port to divide the project into two phases and the Authority funded the first phase in July 2020. The Port recently obtained grants from the Ocean Protection Council and California Department of Fish and Wildlife to cover most of the cost of constructing the hard elements of the project and will be able to access its own capital funds to fill any funding gaps. They also have a current grant application under consideration with the US Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program. As it turned out, the Port needed more time than expected to finalize the project design and obtain permits and will not move forward with construction elements until 2022. Authority staff will bring a staff recommendation for the second phase of the project, for which the Authority will consider funding the oyster reef placement and additional habitat stewardship and monitoring, in 2022.

Pandemic Impacts

The pandemic has resulted in a wide range of delays and changes in scope. The Authority itself, as well as some of our grantees, had to adjust to remote working and transition from paper-based operations to electronic processes, which slowed down operations during the transition. The pandemic also caused impacts and delays for grantees conducting field work and construction. They had to adjust to remote working, develop COVID-19 safety plans and procedures, observe lockdowns that prevented field work, and deal with disruptions to the supply of materials and labor for projects. In addition, grantees had to change the community engagement and field-based elements of their projects. Projects that had included bringing large numbers of elementary school students out for planting days had to switch to relying on smaller numbers of staff and community college students. Projects that had been planned to include in-person community engagement in planning process had to switch to online meetings.

Conclusion

Despite the challenges, Authority projects are achieving important gains for Bay restoration and associated public access and flood protection. Authority staff continues to work in partnership with our grantees to move these projects forward. We appreciate the interest and support of the Governing Board and would be happy to provide additional information as needed.