FLOOD ZONE 1 ADVISORY BOARD
OCTOBER 26, 2023

STAFF REPORT

Item 1. Approval of Meeting Minutes: February 10, 2022

The advisory board is being asked to approve the minutes from the February 10, 2022 meeting. There was not a quorum when the advisory board met earlier this year to vote on approval of the meeting minutes. The draft minutes can be found here: https://marinflooddistrict.org/meetings/zone-1-advisory-board-meeting-february-10-2022/

Recommended Action: Approve minutes.

Item 2. Open Time for Items Not on the Agenda

Comments will be heard for items not on the agenda (limited to three minutes per speaker).

Item 3. Deer Island Basin Complex Wetland Restoration Design (R. Leventhal)

Background: The SF Bay Restoration Authority (SFBRA) Governing Board approved funding for design, preparation of construction plans and specifications and permitting for the first phase of Deer Island Basin Tidal Wetlands Complex Restoration Project. The District's Deer Island Basin Complex includes both the Deer Island Basin and the two stormwater ponds (Ducks Bill and Herons Beak) along Novato Creek.

Following a solicitation for proposals, competitive selection, and negotiation, the cost for the proposed scope exceeded available budget. Staff worked with SFBRA staff to modify the scope to scale back the design for the Deer Island Basin restoration element to a preliminary design level while leaving the scope for the restoration of the two ponds adjacent to Novato Creek unchanged. Restoration of the two ponds would effectively widen Novato Creek and increase the floodplain between the SMART Bridge and Highway 37. The cost for this reduced scope still exceeds the $630,000 grant by $108,540 so the balance is coming from Flood Control Zone 1 funds. On January 28, 2020, the District awarded the contract to ESA and we have been working closely with them on the project design. Your board recommended an amendment in the amount of $146,573 in December for additional geotechnical and permitting needs. On January 25, 2022, the District Board of Supervisors authorized an addendum to ESA for $145,593.

Status Update: The District Board of Supervisors approved a CEQA Initial Study and Mitigated Negative Declaration in September 2023. The project team has completed its review of the 50% plans. The next submittal will be the final design report and the 90% plans and specifications for review. The current cost estimate with contingencies is approximately $11M with a large portion going to reconstructing the Lynwood levee to mitigate seepage issues. The District has a $1M County funding commitment using American Rescue Plan Act funds. In September 2023, the District applied for a National Fish and Wildlife Foundation (NFWF) grant for $8M to construct the Bird Pond restoration portion (approximately 70 aces) of the larger project and staff conducted a

virtual site tour in October 2023 with NFWS staff which seemed to go very well. We expect to hear from NFWF in late 2023 or early 2024. This grant still leaves approximately $2M in short fall so the District is submitting a grant for this amount to the San Francisco Bay Restoration Authority (SFBRA) for this funding gap amount. We anticipate hearing back from SFBRA in January 2024.

Item 4. Novato Creek Bypass Study (formerly called Arroyo Avichi-Baccaglio-Scottsdale-Lynwood Complex or ABSL Flood Study)

Background: A limited evaluation of potential flood reduction benefits for potential projects at Scottsdale Pond was included in the Novato Watershed Study. In November 2020 staff recommended that a more detailed analysis of Novato Creek and the bypass system from Arroyo Avichi through Baccaglio Basin, Scottsdale pond and marsh, and Lynwood Basin be performed leveraging the City of Novato stormdrain model and the new Countywide LiDAR surface data. Below is a summary of elements included in the Novato Creek Bypass study based on feedback from the advisory board at the November 2020 meeting and the Old Town Novato Flood Group:

- Identify opportunities along Novato and lower Warner creeks and through the bypass system for new flow gates, perimeter barriers, pump stations, and increased stormwater detention that improve flood mitigation in downtown Novato and Nave Gardens. This includes alternatives to existing systems (i.e. move pump station from Lynwood Basin to Scottsdale). This analysis is key because of the large potential costs for repairing the Lynwood Pump in its current location (estimated at $3M) meant that the alternatives evaluation within this scope is important to decide on next steps for this pump station.

- Evaluate potential project alternative benefits for smaller flood events (e.g. 10-year event) than the 50-year.

- Evaluation of the trade-offs between projects that benefit Nave Gardens/South Novato Blvd and their impacts elsewhere.

- Review with City potential storm drain improvements that may be more effective in conjunction with potential Zone 1 projects in the study, and any opportunities for flow gates in City's road right of way.

Status Update: Water level data was collected during the 2022/2023 rainy season and, due to several atmospheric rivers that came through the area last year, we were able to collect data from many storm events and this provided excellent data for model calibration. The consultant, Wood-Rodgers (WR), developed and calibrated their hydraulics model and is now modeling a suite of alternatives. WR will do a presentation of their initial preliminary findings of their work and next steps towards completing the project. Later this year or early 2024, a draft and final report of findings and alternatives analysis of potential project improvements will be completed for District review and will be presented at a future AB meeting.

Item 5. Novato Creek Sediment Removal Project

Background: Removing sediment from Novato Creek between the Sonoma Marin Area Rail Transit (SMART) Bridge and Diablo Avenue and portions of Arroyo Avichi and Warner Creek is a recurring maintenance activity typically done every four years following completion of the Novato Flood Control Project by Flood Zone 1 in the 1980s and 1990s. The last sediment removal project occurred in 2020.

Before this winter's storms it was visually evident that there was no significant accumulation of sediment; it is unusual to see so little sediment 2 years after the last sediment removal. Based on this, staff are planning for sediment removal in 2025. We don't yet know how much sediment accumulated during last winter's storms, but the District has hired a contractor to perform topographic and bathymetric surveys in the coming few weeks. Sites will then be evaluated under our Stream Maintenance Program permit for smaller-scale maintenance needs in 2024. The current sediment removal design contract has the following project scope:

- Conduct Creek Topographic Surveying and Calculation of Required Dredging Volumes and Locations
- Plan and Conduct Sediment Sampling and Analysis
- Prepare Sediment Dredge and Disposal Alternatives Assessment Technical Memorandums
- Permitting and CEQA Support
- Prepare 60%, and 90% Plans, Specifications, and Construction Cost Estimate of the Selected Alternative (PS&E)
- Bid Package Preparation (100% PS&E)

Due to inflation the project cost is anticipated to be significantly higher than in the past. We are looking at options for cost savings, including potentially using a hydraulic/suction dredge approach for the lower reach and discharging directly to Deer Island Basin to help it adapt to sea level rise under the future restoration project.

Status Update: The District has entered into a contract with consultant Haley & Aldrich for Professional Engineering, Sediment Sampling & Analysis, and Surveying Services. This is a $400,650 contract and the contract term will extend until July 28, 2026. Additionally, a separate contract is awarded to consultant WRA to update the environmental review and permitting and help determine if partial hydraulic dredge approach is going to be cost effective given environmental considerations. Haley & Aldrich and WRA will work together in environmental, permitting, and related issues until the end of the contract term. Cinquini & Passarino, a sub-consultant for the prime consultant Haley & Aldrich, will start field work for topographic and bathymetric survey at the end of October or early November. Haley & Aldrich will commence sediment sampling in early November for chemical and possible biological sediment analysis. The chemical sediment sample analysis will be conducted by Eurofins, a qualified firm sub-contracted by Haley & Aldrich for this task.

Item 6. Operations and Maintenance Update

a. Programmatic Maintenance Permitting Status

After over a decade of coordination, the District received approval from environmental regulatory agencies for a 5-Year Programmatic Stream Maintenance Permit. This work was done primarily by staff, saving a significant amount of money. Listed below is a summary of the key steps and milestones in the process.

In 2011 District staff began working with State environmental regulatory agencies now requiring programmatic maintenance permits for agencies working in waterways. Creek/ditch maintenance activities requiring programmatic permitting include vegetation management, sediment and debris removal, erosion control, maintenance and repair of flood control structures, and levee maintenance. The process began by developing a Stream Maintenance Program (SMP) Manual (see the latest version of it here: https://marinflooddistrict.org/documents/marin-county-stream-maintenance-manual-2023/) and then applying for permits from relevant agencies, which for most sites includes the CA Department of Fish and Wildlife and the San Francisco Bay Regional Water Quality Control Board.

CA Department of Fish & Wildlife issued a Routine Maintenance Agreement for the District's creek maintenance that can be viewed here: https://marinflooddistrict.org/documents/ca-department-of-fish-and-wildlife-creek-maintenance-activities-permit-2021/

The San Francisco Bay Regional Water Quality Control Board (RWQCB) adopted a new Order on July 12 that can be found here: https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2023/R2-2023-0011.pdf

b. Preventive Maintenance Program Status

i. *Pump Station Maintenance*

Individual pumps and motors are scheduled for major maintenance on a six-year interval. The Cheda #1 pump and motor and Lynwood #2 pump and motor were up for major preventative maintenance this year. The budget for this work was $90,000, but actual costs this year were well under budget at around $30,000.

In addition to the major preventive maintenance cycle, all of the pumps in the zone are operated and checked monthly during the summer and more frequently during the winter season even if there is a dry period. Each year before the rainy season each pump station's electrical components are tested and the engines maintained.

Power interruptions to the Lynwood Pump station continue to be a frequent occurrence, largely due to large flying birds in the adjacent pond. PG&E has been working with District staff to develop a plan to improve reliability of power at the pump station by moving power distribution lines onto one of the District's levees. This effort is on hold because it was complicated by close proximity to the Deer Island Basin Complex Restoration Project. In the meantime, the District is maintaining lower water levels than usual in Lynwood Basin in order to minimize immediate pumping needs during storms.

ii. *Vegetation Management*

Vegetation maintenance within flood control owned properties and easements occurs July through October. Maintenance work includes trimming of vegetation in the channel and debris removal. Most of the work is performed under contract with the North Bay Conservation Corps (CCNB) – the portion of the contract for Zone 1 is $400,000 and is budgeted in the zone's baseline budget. Pre-inspections of the creeks and channels are conducted to determine maintenance needs and to prioritize work. Maintenance operations continue throughout the summer so that creeks and channels throughout the Zone are ready for the winter season flows. The final step is cutting of cattails which occurs in October right before the rains. Additional tree, rodent control, and fence maintenance is typically needed outside the CCNB contract.

iii. *Sediment Management*

To increase flow capacity, sediment removal was conducted in Vineyard Creek at Center Road this year by a County Road Maintenance crew. A creek restoration project in 2009-2010 was designed to help sediment accumulate at this location where it is easy to access and minimizes impact to fish. It's generally needed every few years and is covered under the zone's baseline budget.

Item 7. Updating Hydrology for Stafford Dam

District staff are collaborating with the North Marin Water District (NMWD) on a proposed updated hydrologic and hydraulic analysis intended to benefit both flood control and dam safety. This winter, staff will recommend that the District Board of Supervisors 1) initiate the project, 2) award a contract for this analysis, and 3) approve an agreement amendment with NMWD to reimburse the contracting costs. The cost to the Zone only consists of staff time to manage the contract, which can be done within the baseline staff budget.

Recommended Action: Recommend the District Board of Supervisors approve 1) a resolution of intent to approve a project to update the hydrology and hydraulic analysis for Stafford lake, 2) approve an approximately $150k contract for updated hydrology and hydraulic analysis for Stafford Dam, 3) approve an amendment to the District's existing 1985 agreement with NMWD for management of the dam, adding that NMWD fully reimburse these contracting costs to the Zone.

Item 8. Schedule Next Meeting

The next regular meeting is tentatively scheduled for February 2024. Special meetings may be held for project updates.