

FLOOD ZONE 4 ADVISORY BOARD
STAFF REPORT
October 22, 2024

Item 1. Approve Meeting Minutes: April 16, 2024

Draft minutes can be found here:

<https://marinflooddistrict.org/meetings/zone-4-advisory-board-meeting-april-16-2024/#/tab-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. County Sea Level Rise Planning Update

The Flood Zone 4 Advisory Board expressed a strong interest in participating in regional sea level rise planning efforts. The office of the County Executive will send a representative to periodic advisory board meetings, including this one, to provide updates on a sea level rise governance structure study underway. Consultant team will be conducting outreach to Southern Marin stakeholders in late fall or winter. Background information on this study can be found in the [April 16, 2024 staff report](#) and on the County's website:

<https://www.marincounty.gov/your-government/sea-level-rise>

Related Marin Civil Grand Jury Reports are published at this website:

<https://www.marincounty.gov/departments/grand-jury/civil-grand-jury-reports>

District staff have no other information on the Grand Jury reports at this time.

Item 4. Restoration of East and West Creeks

Background: On January 23, 2024, the advisory board recommended the below described scope of work for design and environmental review for proposed restoration projects on East and West Creeks, with a budget of \$400,000.

In East Creek this involves preparing plans and specifications for removing accumulated debris and sediment from Harriet Way up to Karen Way (approximately 1,320 feet long). This will include design of appropriate biotechnical bank erosion protection through this creek reach. The design engineer may, pending additional feedback from the advisory board at future meetings, also design add-on options (which would increase implementation cost above the estimate) for:

- 1) installation of a top of bank barrier along 100-130 Leland Way (about 350 feet long),
- 2) installation of a sediment basin near Karen Way to reduce sedimentation downstream where it is more difficult to access,
- 3) plugging or valving of the Town of Tiburon's 6" storm drain outfall at the Cecilia way crossing, and
- 4) gating or valving of the East Creek outfalls to the Bay.

In West Creek the scope of work includes design and environmental for the following proposed project elements:

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- 1) Remove rubble (foreign rock and broken concrete) from the creek between SR 131 and 80 Rancho Dr, and Cecilia Way and 180 Rancho Drive.
- 2) Remove concrete channel stormwater outfall around 143 Blackfield Drive and replace it with a rock lined channel and appropriate biotechnical bank erosion protection,
- 3) Remove three non-native poplars and one non-native eucalyptus from in-stream, and
- 4) Stabilize banks (e.g. rock rip-rap) to enlarge channel at location of removed in-channel trees

More details can be found on this website: <https://marinflooddistrict.org/documents/executive-summary-for-flood-risk-reduction-alternatives-at-east-and-west-creeks/>

Update: Due to staff vacancies, progress on the project has been delayed. A new engineer has just been hired and is going through the on-boarding process this month. Staff will begin preparing a Request for Proposals for consultants to carry out the design and environmental scope of work described above this winter.

Item 5. Annual and Preventive Maintenance Work Program

Listed below is a summary of annual and preventive maintenance completed this year. In addition to these pre-winter activities, District maintenance crews check the trash racks and pump stations before, during, and after storms. A map of the Flood Zone can be found here for reference: <https://marinflooddistrict.org/documents/map-of-flood-control-zone-4-bel-aire/>
For questions, email floodinquiry@marincounty.org.

A. Pump Stations

Zone 4 operates three stormwater pump stations: Cove Pump Station (installed in 1978 and significantly upgraded in 2019-2020), Pamela Court Pump Station (installed in 1990), and Strawberry Circle Pump Station, part of Zone 4A (installed in 2003-2006). These stations are essential for draining stormwater from residential and commercial areas into creeks and wetlands, where barriers have been constructed to reduce tidal flooding. Each pump station is equipped with 2-3 pumps and dual power sources, including backup generators or propane-powered backup pumps.

Routine Maintenance: The County's Facility Maintenance Division conducts annual preventive maintenance at all three pump stations, which includes the inspection, testing, and replacement of electrical and mechanical components as needed. Additionally, the County's Vehicle Maintenance Division performs annual servicing of the generators at Cove and Strawberry Circle Pump Stations, as well as the engine for the backup pump at Pamela Court Pump Station.

Every three years, the generators undergo load testing to ensure operational readiness. The last load test was completed this year. In addition, the generator at Cove Pump Station is currently receiving adjustments, specialized cleaning, and emissions system

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testing, with a total cost of \$4,566. This work is being completed utilizing the Zone 4 baseline maintenance budget.

Major Maintenance: Individual pumps and motors are removed for major maintenance on a six-year cycle, carried out by contractors. This summer, both the Strawberry Circle #1 pump and the Cove #1 pump were removed for servicing. Despite their relatively recent installation and use of stainless-steel parts, significant wear was found on key components such as the submersible pump impeller and vertical pump shaft, necessitating replacement.

For the Strawberry Circle pump, we compared the costs and lead times of repairs versus purchasing a new pump. Repairs, which included \$22,218.62 in extra work, had a lead time of 4-6 weeks. In contrast, purchasing a new pump would have cost \$40,968.75 and involved a lead time of 14-16 weeks. Given the time and cost considerations, we opted for repairs, resulting in a total maintenance cost of \$33,876.62 for Strawberry Circle. This cost exceeded the Zone 4A baseline budget by \$18,877.

The extra work required for the Cove pump was completed within the Zone 4 baseline budget. Both stations' #2 pumps are scheduled for the same maintenance in 2025, and it is anticipated that they may require similar repairs.

Recommended Action: Recommend the District Board of Supervisors increase the Zone 4A baseline budget for maintenance services by \$18,877 to cover the additional costs associated with the severely worn condition of the Strawberry Circle Pump #2.

B. Vegetation and Sediment Removal

In Spring and late-Summer the East Creek access road and Strawberry Circle Pump Station are mowed and vegetation at the Pamela Court Pump Station is trimmed. In September the Conservation Corps North Bay cleared potential flood hazards and removed invasive species of plants while maintaining East and West Creeks. In October cattails were trimmed. They also cleared vegetation at the debris rack at the end of Karen Way where East Creek flows into the pipes under the road before fall.

Sediment was removed from East Creek in 2022, and typically is needed approximately every 5 years. Staff met with a resident about a suspected bank failure. This turned out not to be a bank failure but rather a minor buildup of sediment on root mass with some light vegetation growing on it. This is typical in creek channels and is likely to scour away with a heavy flow. If not, this sediment will be removed as part of the next sediment removal cycle for East Creek, potentially next year if needed. Meanwhile the situation will be monitored by our storm patrol crew and assessed again in the Spring by an engineer.

Analysis completed as described in Item 4 above suggests that sediment removal on East Creek reduces flood risk, however the District's programmatic sediment removal on West Creek at Cecilia Way is considerably less beneficial. Based on that, we don't anticipate continuing the practice of spot-sediment removal in West Creek at Cecilia Way.

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Item 6. Next Meeting

The next meeting is scheduled for January 28, 2025, at 6:30pm at the Westminster Presbyterian Church.