FLOOD ZONE 4 ADVISORY BOARD
STAFF REPORT
JULY 22, 2025

Item 1. Call to Order
The chairperson, Kathryn Oliver, may call the meeting to order once a quorum of three members is present.

Item 2. Roll Call
District staff will conduct a roll call and ask for a round of introductions by board members and staff.

Item 3. Summary of Action Minutes: April 22, 2025 (Action Item)
Draft minutes can be found here:
Zone 4 Advisory Board Meeting: April 22, 2025 - Marin County Flood Control District

Recommended Action: Approve draft minutes of April 22, 2025

Item 4. Open Time for Items Not on the Agenda
Comments will be heard for items not on the agenda (limited to three minutes per speaker). While members of the public are welcome to address the Advisory Board, under the Brown Act Board members may not deliberate or take action on items not on the agenda and generally may only listen.

Item 5. District Staff Reports (Information Item)
A. Water Resources Division Organizational Structure Changes

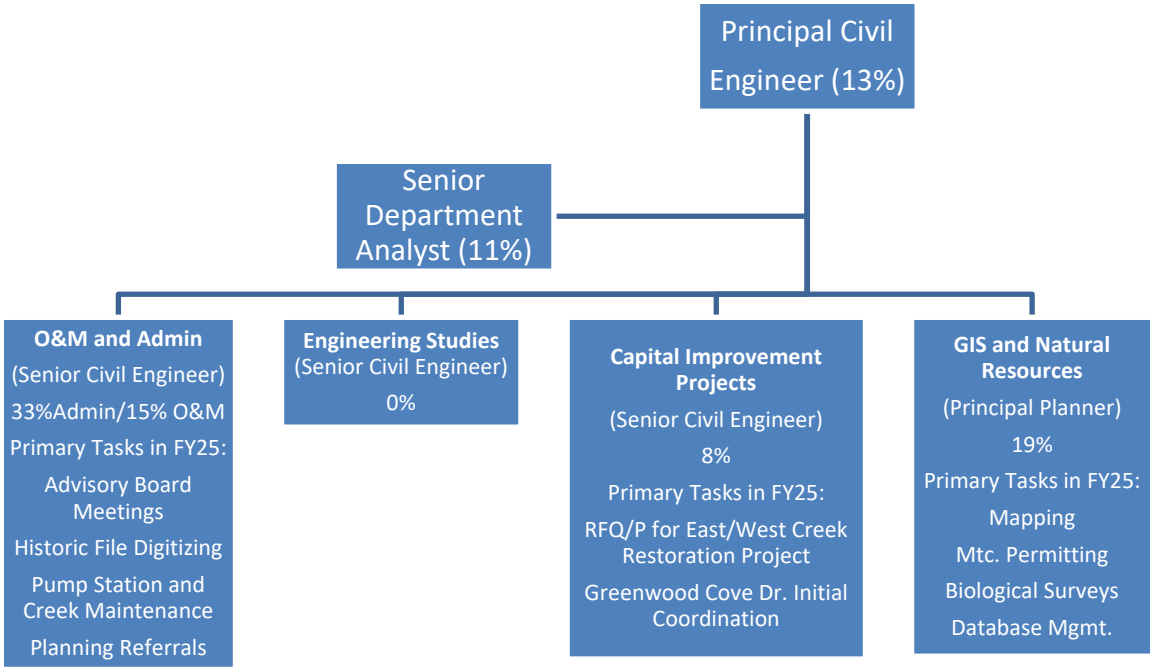
History
Advisory board members had questions at the last meeting about staff roles. Some people remember in 2018 the District representative that came to board meetings was a “Zone Engineer.” The Zone Engineer was an engineer in the Water Resources Division of the Department of Public Works (DPW), supervised by a licensed civil engineer who oversaw all Zone Engineers (except in Zone 9 which was in a separate pilot program after 2007). The Zone Engineer was assigned to oversee all aspects of zone activities in their geographical area – administrative, maintenance, and project delivery.

Recent Changes
In 2018-2019 the District had several coinciding project grant awards with deadlines in the early 2020s. When management was looking at the geography-based assignments it was evident that certain zones lacked the human resources to meet all grant deadlines. So, with the guidance of a consultant and the County’s organizational development expert, the Water Resources Division underwent a process of strategic

planning to determine a more efficient organizational structure for delivering projects. The focus was on specialization and centralization of services to the zones, and assignments based on experience and development of specific expertise rather than geography.

The shift to the new organizational structure occurred over a 5-year period which culminated in 2024. The structure, depicted in Figure 1, splits the functions of the former Zone Engineer into four specialized sections that now serve every flood zone as well as some non-District needs: 1) O&M and Admin, 2) Engineering Studies, 3) Capital Improvement Projects, and 4) GIS and Natural Resources. As before, a Principal Civil Engineer oversees all sections of the division, but now with a Senior Department Analyst assisting with budget, finance, and audit related tasks and coordination. Each section is led by either a Senior Engineer or Principal Planner and has a small team of staff serving it.

Figure 1.



Because of this change in organizational structure, once a project in Zone 4 is assigned to one of the sections overseeing engineering studies or capital improvement projects, the management of that work will move away from the section (O&M and Admin) that generally is the liaison with the advisory boards. At least one of the staff from the O&M and Admin section will continue to attend advisory board meetings, but if there are important updates or changes related to ongoing projects a representative from the Engineering Studies or Capital Improvement Projects section will attend the meeting.

Division Staff Costs

At the last meeting the advisory board asked for a breakdown of Water Resources Staff costs, so a percentage of actual staff charges ($220k total) for each of these sections is indicated in Figure 1 for fiscal year 2024-2025 (FY25). All District staff are County employees who submit two timesheets each pay period – one of which tracks in detail the actual hours (or portions of hours) that they worked each day for each zone. The Zone fund then reimburses the County for the hours each staff worked for Zone 4. In addition to the primary tasks listed in Figure 1 above for each section, tasks common across all sections often include contract administration and responding to general inquiries.

Looking Ahead

There could be additional changes to the organizational structure of the division coming up. DPW is working with the County's consultant, KPMG, LLP, on a department organizational study, which among other things will evaluate department functions and reporting structure and resourcing of projects and initiatives. We expect at the end of this calendar year KPMG will make recommendations on any beneficial changes to permanent department staffing needs, including those that support our growing infrastructure asset base and regulatory requirements.

B. East and West Creek Restoration Project

Background: Information on the scope of this project can be found on the website: https://flooddistrict.marincounty.gov/east-and-west-creeks-restoration/

Update:

Summary

The District released a Request for Qualifications and Proposals (RFQ/P) for professional design and permitting services for the scope of work described in the project website. The District has selected a consultant team, cbec eco engineering LLP ("cbec"), however the consultant's cost estimate for their services was much higher than anticipated. The District awarded cbec an initial $20k budget for existing data review and a field visit to better understand the project and refine their proposed scope and budget accordingly. A more refined scope of services and budget has now been prepared, and we recommend increasing the Zone budget by about $700,000 for cbec to take this project though final design and environmental review. If the design process kicks off in mid-2025, construction of improvements would likely occur in 2027 or 2028.

Changes to Scope and Budget

The consultant's original proposal was $1.1M to get the project through final design and environmental review. Due to uncertainty about available information and project

needs, the original proposal included:
- flow monitoring in both creeks
- Light Detection and Ranging (LiDAR) topographic surveying
- extensive hydraulic modeling including sediment transport assessment
- geotechnical investigation

Utilizing the $20k budget for data review and a field visit, cbec was able to identify several cost saving measures:
- Remove the creek stage and flow monitoring task from their scope of services with the understanding that the District will complete creek stage (water level) monitoring in both East and West Creeks to assist them in hydrologic and hydraulic model calibration. The District will be providing water level gauges at Cecilia Way crossings utilizing an available County (not District) budget for emergency preparedness.
- Based on review of available LiDAR digital elevation maps, cbec rescoped their topographic survey effort to supplement this data instead of generating new LiDAR data. They also identified a local Marin surveyor to complete the boundary and utility map work at a lower cost than the surveyors originally listed on their consultant team.
- Eliminate the geotechnical investigation from their scope of services.
- Modify the sediment transport assessment to a sediment loading rate assessment, which will address the needs for design with less time and modeling investment.

Additionally, field discussions during a site visit with staff and the subconsulting team allowed cbec to better anticipate design needs and reduce their original design budget for 30% through 100% design stages as well as Basis of Design Memorandum.

Based on these scope and budget revisions, cbec's total estimated restoration design budget for both East and West Creeks is **$692,971**.

Add-on Options
The current (reduced) scope of work **includes** the following two potential add-on projects for East Creek but does not commit to their implementation:
1) Recommend maintenance or modification of a privately built top of bank barrier along 100-130 Leland Way (about 350 feet long). ($20,000)
2) Design of a sediment basin near Karen Way to reduce sedimentation downstream where it is more difficult to access. ($20,000)

Eliminating one or both of these add-on options that were included in the proposal could reduce the cost by $20,000 each. Staff do not recommend removing them as there is no better time to evaluate these options than when the District is already

engaged in modeling various alternatives for the restoration design.

One add-on option was not included in the consultant's proposal due to uncertainty in the civil/structural engineering that would be involved and is preliminarily estimated to add $60,000 to the cost:

3) Plugging or valving of the Town of Tiburon's 6" storm drain outfall at the Cecilia way crossing. ($60,000)

Staff recommend excluding add-on option 3 from this design because it involves another agency's facility and would require analysis outside of the creek model.

A fourth add-on option that was previously considered by the advisory board, evaluating adding tide gates or valves to East Creek where it flows to the Bay, is now part of the proposed scope of Item 5.c. Greenwood Cove Drive Area Flood Study below.

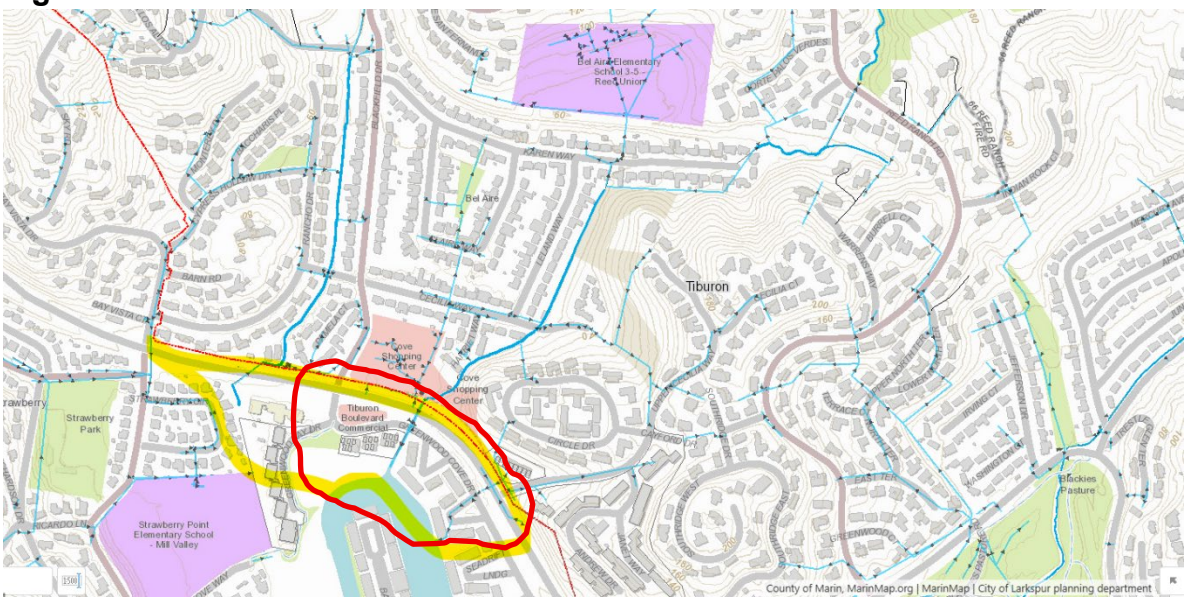
Next Steps
District staff recommend a budget of $692,971 for cbec's design and environmental services, including add-on options 1 and 2. Because the District does not have an available staff person to manage the project, staff also recommend increasing the Zone 4 professional services budget by $100,000 for project management services to be performed by Harrison Engineering, with whom we have an existing on-call contract to augment staff for these purposes. The total requested budget adjustment for professional services associated with these two contract recommendations is $792,971 and a request for actions are listed in **Item 6. Business.**

A separate project account has been set up so project-specific expenditures can be reported at future meetings.

C. Greenwood Cove Drive Area Flood Study
Background: The District is considering a flood study to evaluate readily available flood improvements along low-lying portions of Tiburon Blvd/Greenwood Cove Dr/Cecilia Way. The focus is on tidal flooding and stormwater drainage roughly in the area is circled in red in Figure 2. Because these concerns cross several jurisdictions, District staff have reached out to the County DPW Engineering and Roads Divisions, Caltrans, and the Town of Tiburon to gauge their interest and review relevant drainage studies. Both DPW Engineering and the Town of Tiburon are interested in the study. Caltrans has not stated their interest yet. It is likely that the District would fund the study, but these other agency partners would help fund the design and subsequent

construction.

Figure 2.



Update: The advisory board established a 2-member ad hoc committee to support the initiation of this project, but one ad hoc committee member subsequently resigned. The advisory board may elect an additional member under the Business item (6) of the agenda. The advisory board can nominate any member of the advisory board that they would like. Liza Bass indicated she would be absent from this meeting but expressed willingness to serve on the ad hoc committee if nominated. Shelly Dorph met with District staff in the field and may also provide an update to the full board regarding that meeting.

After meeting with Shelly Dorph, it was agreed that the study would focus on drainage from Lower Cecilia Way and around lower East Creek (i.e. not West Creek). Frequent flooding along Greenwood Cove Drive is the primary issue to be evaluated. They discussed performing a drainage and tidal flooding study, which includes a conditions assessment to better define the problem and an improvements analysis to evaluate

potential solutions. Below are details of what each of these tasks entails.

- Existing Conditions Assessment
  - Characterize historical flooding observations
  - Condition Assessment
    - Delineating ownership and agency/private responsibilities
    - O&M = clogging, sedimentation
    - Structural = cracks, deformations
  - Capacity Assessment
    - Hydrology and Hydraulic (H&H) modeling
      - What is the conveyance capacity in pipes assuming clean and pristine condition?
      - How large of a storm can be stored in East Creek during high tide without flooding? (rainfall thresholds, return period)
      - Quantify existing flood risk / level of flood protection
- Improvements Analysis
  - Define Improvement Project Alternatives
    - tide valves/gates,
    - pipe flushing,
    - raised flow path,
    - detention storage,
    - small pump station
    - other
  - Project Alternatives Analysis
    - Life-Cycle Cost
    - Schedule
    - Level of Flood Protection
    - Habitat Gain/Loss
    - Road Corridor Function
    - Permitting Complexity
  - Recommendations

Staff recommend preparing an RFQ/P for professional services to perform the Greenwood Cove Drive Flood Study as described above. If the advisory board recommends initiating this project, a budget for this first step of $200,000 is estimated to be needed. After the project is initiated a project account and website can be created for future tracking of progress.

D. Annual and Preventive Maintenance Work Program

Listed below is a summary of annual and preventive maintenance anticipated 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://flooddistrict.marincounty.gov/documents/map-of-flood-control-zone-4-bel-aire/. For questions, email floodinquiry@marincounty.gov.

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 or raised banks 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 (formerly called Building Maintenance) 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 (formerly called Fleet or Garage) performs annual servicing of the generators at Cove and Strawberry Circle Pump Stations, as well as the engine for the backup (propane) pump at Pamela Court Pump Station. Every three years, the generators also undergo load testing to ensure operational readiness. The last load test was completed in 2024 and is due again in 2027.

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 #2 pump and the Cove #2 pump were removed for servicing. Despite their relatively recent installation and use of stainless-steel parts, significant wear was found on the #1 pumps of these stations last year. The pump maintenance contractor returns the pumps to our stations with zinc anodes for corrosion protection. We hope this will slow down ongoing corrosion of the pumps. The extra work required on the Cove #2 pump is only $620, which fits within the existing budget. Unfortunately, the Zone 4A budget for Strawberry Circle does not cover the additional maintenance needs beyond the standard refurbishment, which totals $18,000. The additional work includes:

- Metalize and machine shaft seal areas to factory tolerance
- Machine discharge flange to remove pitting allowing for proper seal to discharge pipe
- Install the following new parts:
  - ➢ Level sensor with holder
  - ➢ Lower adaptor
  - ➢ Seal housing cover
  - ➢ Impeller
  - ➢ Insert ring
  - ➢ Lower volute sleeve

Some of these materials have a 4-6 week lead time. **A recommended budget adjustment is included in the Business item on the agenda.**

Vegetation and Sediment Removal
The East Creek access road and Strawberry Circle Pump Station were mowed and vegetation at the Pamela Court Pump Station trimmed. In late-Summer or early-Fall the Conservation Corps North Bay clear potential flood hazards and remove invasive species of plants while maintaining East and West Creeks. In October cattails will be trimmed. They will also clear vegetation at the debris rack at the end of Karen Way where East Creek flows into the pipes under the road before the rainy season.

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. The root mass is being removed by the Conservation Corps North Bay this summer as part of their vegetation maintenance.

Item 6. Business
As part of the new Agenda Setting Procedure, there is a separate agenda item, referred to as "Business" that includes all actions being requested. Most of the information related to these requests is provided in the District Staff Reports. The purpose of holding off on taking actions until after all Reports are done is so the advisory board has a total picture of zone needs before taking any action.

Baseline Budget
The advisory board recommended a 2-year baseline budget for fiscal years beginning July 1, 2024 and ending June 30, 2025 (current), and beginning July 1, 2025 and ending June 30, 2026 (next), at the January 23, 2024 advisory board meeting. As a reminder, baseline budgets are intended to be relatively consistent from year to year and do not include major project expenses. The Board of Supervisors adopted this fiscal year baseline budget at its May 20, 2025 budget hearing.

At the last meeting the advisory board asked for details on the baseline budget line items for Professional Services, Miscellaneous Services, and Water Resources Staff. For Water Resources staff details see Figure 1 in Item 5.A. The Professional Services and Miscellaneous Expenses in the baseline budget are intended for small, unanticipated, and/or urgent needs that can't wait for a budget adjustment. The intent of the baseline budget is to be prepared for a very wet winter. Example professional services could include a controls system engineer to troubleshoot issues at a pump station, a geotechnical engineer to evaluate a slope failure, a consultant to assist with developing an RFQ/P, etc. Example miscellaneous expenses include renting portable pumps and port-a-potties when there are

pump station issues during atmospheric rivers, renting rooms for meetings, etc.

Flood Program Actions
An action is needed related to Items 5B, C and D for pump station maintenance and projects at East and West Creek and Greenwood Cove.

Recommended Action: Recommend a budget adjustment for a consultant to provide services through final design and environmental review for the East and West Creek Restoration Project of $692,971.

Recommended Action: Recommend a budget adjustment for a consultant to provide project management services for the East and West Creek Restoration Project of up to $100,000.

Recommended Action: Recommend Advisory Board appoint an additional member to the Ad Hoc committee to advise on the Greenwood Cove Dr Area Flood Study. The committee will consist of two appointed members and will operate within a defined timeframe to complete its work. No final decisions will be made without the full governing body's review and approval.

Recommended Action: Recommend initiating a project to study Greenwood Cove Dr area flooding, with an initial consulting budget of $200,000.

Recommended Action: Recommend the Board of Supervisors adjust the Zone 4A budget by $18,000 for extensive repairs of Strawberry Circle Pump.

Item 7. Next Meeting
Advisory Board adopted a schedule of meetings on the fourth Tuesday of the months of January, April, July, and October. So, the next meeting is tentatively October 21, 2025, pending confirmation of a quorum of board members available. Special meetings can be called if needed, and regular meetings may be canceled if there is no business need.