

MARIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SANTA VENETIA FLOODWALL SUPPLEMENTAL ENVIRONMENTAL REVIEW AND DRAFT SUBSEQUENT MITIGATED NEGATIVE DECLARATION

RESPONSE TO COMMENTS

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1. Comments and Responses

This document contains the comment letters on the Santa Venetia Floodwall Supplemental Environmental Review and draft Subsequent Mitigated Negative Declaration (SER/SMND) received during the public review period, which ran from August 28 through September 28, 2026, and responses to those comments.

Each comment letter or email is designated with a letter (A through K) in the upper right-hand corner of the page. Individual comments are labeled with a number in the margin. Immediately following each comment letter or email is an individual response to each numbered comment. Only comments on the scope of the Project and on the analysis and conclusions in the SER/SMND are responded to: comments expressing the commenter's support for or opposition to the Project, and comments addressing other issues not within the scope of the Project or subject to the California Environmental Quality Act (CEQA), are not responded to.

Changes to the text of the SER prompted by comments are indicated by ~~strike-throughs~~ for deletions and underline for additions.

Comments were received from the following individuals:

Letter Designation	Commenter's Name and Affiliation (if any)
A	Robert Dobrin
B	Robert Dobrin
C	Dean Church
D	Mary Moscoe
E	Josh Dieterich
F	Mary Jo Pritchard
G	Carey Levash
H	William Adkison
I	William Tucker
J	Jason Annecone
K	Robert Dobrin
L	California Department of Fish and Wildlife

During the comment period, on September 23, 2026, the Flood Control Zone 7 Advisory Board held a public meeting at the Marin County Civic Center. The agenda for the meeting including item 5b, Project Update and Environmental Review, during which a presentation was made updating the Advisory Board on the Floodwall Project and the background and current status of the environmental review. No comments were accepted on the environmental analysis; those wishing to comment were instructed to submit written comments, and the deadline for submittal of comments was stated. The agenda for the meeting, the agenda packet, and a link to a recording of the meeting are available at the Zone 7 website, <https://flooddistrict.marincounty.gov/meetings/zone-7-advisory-board-meeting-september-23-2026/#/tab-agenda>.

From: Robert Dobrin <electrachime@gmail.com>
Sent: Monday, August 31, 2026 2:03 PM
To: EnvPlanning
Subject: Unlinked Document Request from Santa Venetia Floodwall -2026 Draft SER

You don't often get email from electrachime@gmail.com. [Learn why this is important](#)

Hello, I am trying to locate an unlinked document referenced in the Santa Venetia Floodwall - 2026 Draft SER

The document in question is the Kleinfelder memo as noted on page 54 of the document:

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment Memorandum by Rob Aramayo.
April 15.

Please email me a copy of the document or let me know where I can find the document.

Thank you.

Robert Dobrin
415.786.1273

Letter A. Robert Dobrin

A-1 The requested document was provided to the commenter.

Robin Fies

From: Robert Dobrin <electrachime@gmail.com>
Sent: Wednesday, September 2, 2026 10:38 AM
To: EnvPlanning
Subject: Comments submitted for Supplemental Mitigated Negative Declaration Gallinas Creek Floodwall
Attachments: SantaVenetiaFloodWallCommentsFound.pdf

Hello,

I submitted timely comments on January 16, 2024, as did others, in advance of preparation of the latest Draft Santa Venetia Floodwall Supplemental Environmental Review and Subsequent Mitigated Negative Declaration, a Supplement to the 2019 Gallinas Levee Upgrade Initial Study/Mitigated Negative Declaration (IS/MND).

Typically, the County of Marin has responded to comments to CEQA documents including Negative Declarations. Have these comments already been addressed? I don't see much in the new document. Will comments already been submitted be addressed or do they need to be resubmitted?

Attached is a copy of my 2024 comments.

Thank you

Robert Dobrin
415.786.1273

January 16, 2024

Mr. Luis Damerell - Project Manager
Marin County Flood Control and Water Conservation District
3501 Civic Center Drive, Suite 304
San Rafael, CA 94903

Dear Mr. Damerell;

Thank you for the opportunity to comment on the Supplemental Mitigated Negative Declaration (SupNegDec) for the Proposed Santa Venetia Floodwall - Supplement to the 2019 Gallinas Levee Upgrade Initial Study/ Mitigated Declaration (2019NegDec). Following are deficiencies in the present CEQA document.

Sheet Pile Wall Materials Not Specified

The materials proposed for the construction of the the sheet pile floodwall are not disclosed with any specificity. The environmental review states the sheet piles will be fabricated “*from a proprietary composite material*” (emphasis added) (SupNegDec p. 8). The composition of the materials must be understood and studied. For example, It must be known whether water immersion will leach toxic chemicals into Gallinas Creek, ground water or the earth. Knowing only the material is “proprietary” does not disclose enough information to make any meaningful conclusions about the sheet pile’s environmental impact.

Furthermore, the manufacture of composite materials is energy intensive. Therefore, the impact of the material’s manufacture on the climate must be analyzed. The materials may use petroleum products and/or other toxic materials such as recycled automobile tires.

All impacts of the materials that will be used for the flood wall’s construction, including any materials that will be used to bind or join seams must be fully analyzed from manufacture to the end of their useful life and subsequent disposal. Possible detrimental impacts may include, but are not limited to, wildlife, groundwater, surface water, construction workers and sensitive receptors. Compliance with California 65, the Safe Water and Toxic Enforcement Act of 1986, is also required.

Demolition of existing public and private structures must be studied and mitigated

The impacts of demolition and disturbance of private and public structures has not been adequately analyzed.

Demolition of existing improvements inventoried in Table 1.2 (SupNegDec p.13) will disturb many decades old structures in and adjacent to Gallinas Creek. Some of these structures were built with construction materials containing hazardous toxins such as creosote and arsenic based wood preservatives. Pipes and drains may contain lead. Demolition or disturbance of docks, gangways, pilings, stairs and decking may release toxins.

Much, and perhaps all, of the 6500 linear feet of the current timber reinforced berm (TRB) is constructed of pressure treated fir (SupNegDec p.13) which is likely to contain Chromated Copper Arsenate (CCA) or other toxins. The TRB was constructed in the early 1980s before virtually all uses of CCA treated lumber were prohibited in January of 2004.

Disturbing and disposing of the TRB and other improvements, including the fill within the TRB may cause impacts not disclosed or mitigated in this Negative Declaration. These toxins may jeopardize the health of wetlands, wildlife, sensitive receptors and construction workers. The SupNegDec does not analyze the disposal of these materials or the fill.

Inventory of Structures to be Demolished is Not Accurate

The inventory of structures in Table 1.3 is not dated so it is impossible to determine if additional structures have been added or if any have been enlarged or removed.

As recently as September of 2023, Zone 7 Flood Control Zone Staff has cited the need for permanent easements, in part because they do not have access to the entirety of the proposed project site for inspection or

repair. Thus, Table 1.3 can not be accurate as all properties along the proposed project's length have not been inspected by County Flood Control Staff for improvements that may need to be demolished and removed.

Furthermore, the Negative Declaration is internally inconsistent. Figure 1-13 (SupNegDec p.22) shows an "Accessory Dwelling Unit or Similar" built over the existing Timber Reinforced Berm, however "Accessory Dwelling Unit(s) or Similar" is not included anywhere in the Table 1.8 inventory.

An accurate and recently dated inventory is required in order to draw conclusions about the environmental impacts of disturbance or demolition of existing structures to make way for this project.

Easements Create Foreseeable Changes to the Environment

CEQA guidelines state in Section 15126.2(d), a growth-inducing impact could occur if:

...the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Acquisition of the easements proposed for the construction of this project may lead to foreseeable development and population growth contrary to the conclusion in Section 14 of the 2019NegDec. The area of the proposed permanent easements has increased by as much as 80% since the 2019NegDec (up to 18 feet wide now vs 10 feet wide in 2019). This will allow for even greater, more intensive, use of the land burdened by the easements. for flood control or other purposes. The easements create a significant change in land use which may lead to greater population, traffic, public and/or commercial use in the areas protected by the levee.

For example, if in the future, the easements make possible construction of a levee that meets the Federal Emergency Management Agency's definition of 100 year flood protection, the area protected by such a levee would be eligible for the development of denser housing, hospitals or schools that is currently limited in the existing flood plain by local, California and Federal regulations. As discussed below, it is reasonably foreseeable that broad easement language would lead to undisclosed environmental impacts.

The California Supreme Court has held in *Union of Medical Marijuana Patients, Inc. vs City of San Diego* (August 2019) that proposed land use changes, as we have here, are indeed a CEQA project that requires study and may not be deferred.

It should be noted that Flood Control Staff insists this project is not feasible without permanent easements. It should be further noted that it is impossible to evaluate foreseeable growth impacts of these easements since their scope was not available during the 2019NegDec comment period nor is it available now. However, during a communication for the subsequently abandoned TRB project described in the 2019NegDec, the County Real Estate division provided an easement document with the following language:

(A) Permanent Easement for, but not limited to, the purposes of laying down, locating, constructing, reconstructing, removing, replacing, repairing, maintaining, operating and using, as the District may see fit, for flood control purposes including levees, flood barriers, drainage water facilities, channels, ditches, culverts, and all necessary fences, protective barriers, fixtures, facilities, and access for use in connection there with or appurtenant thereto, in, under, over, along, upon, and across said easement...

Clearly the above easement language remove an "obstacle to population growth" that is not addressed in the 2019NegDec nor the SupNegDec:

The precise scope of the easements, along with any future opportunities they afford, must be disclosed and analyzed as part of this project or as a separate project.

Sincerely,

Robert Dobrin

Letter B. Robert Dobrin

- B-1 Comments on the 2023 SER and responses to those comments are included in Appendix A of this current document.
- B-2 This comment letter from 2023 is included in the response to comments document in Appendix A as Letter G. Responses to these comments follow the letter in Appendix A.

Robin Fies

From: dean church <dpchurch@pacbell.net>
Sent: Thursday, September 3, 2026 1:37 PM
To: EnvPlanning
Subject: SV Floodwall

You don't often get email from dpchurch@pacbell.net. [Learn why this is important](#)

My only comment regarding the wall is to encourage the government to get on with it and do the work. The delays are putting thousands of people in danger, and dare I say, exposing the City of San Rafael and Marin County to the danger of major liability (in court I suppose).

There always seem to be money found for fire mitigation. Year after year, protecting the homes in the hills, and of course the more modest places in the flat lands. We all know wildfires are a huge issue. But the flooding is also going to take place. Sooner or later. Maybe this winter, with the Super El Nino, etc.

Find the resources and get the project going. Holding it up until homeowners pay some sort of tax isn't fair. You don't do that for fire mitigation.

It won't be easy dealing with all of the crazy people who live along this wall, and who are, for some insane reason, fighting the easements. Again, that is an excuse you should not use to delay this any longer.

Thanks for the input.

Dean Church
120 Hawthorn Way
San Rafael
415.336.3879

Letter C. Dean Church

- C-1 This comment addresses the merits of the Project and Project funding. It does not address the environmental analysis and requires no response pursuant to CEQA.

From: No-Reply
Sent: Thursday, September 3, 2026 7:11 PM
To: EnvPlanning
Subject: Re: Santa Venetia flood Well [SENT FROM A PUBLIC FORM]

Contact Us

Email To: EnvPlanning@MarinCounty.gov

Hosted <https://www.marincounty.gov/departments/cda/planning/environmental-planning/current-ceqa-projects/santa-venetia-floodwall-project>

To: Environmental Planning General Contact

From: Mary Moscoe

Sender's
Email mmoscoe@comcast.net
Address:

Subject: Santa Venetia flood Well

Message: We hundred percent support the flood wall project and we hope It starts as soon as possible

2026-09-03 07:10PM -0700
IP:

Letter D. Mary Moscoe

- D-1 This comment addresses the merits of the Project and not the environmental analysis. It requires no response pursuant to CEQA.

From: No-Reply
Sent: Tuesday, September 8, 2026 10:22 AM
To: EnvPlanning
Subject: Re: Santa Venetia Floodwall Project [SENT FROM A PUBLIC FORM]

Contact Us

Email To: EnvPlanning@MarinCounty.gov

Hosted Page: <https://www.marincounty.gov/departments/cda/planning/environmental-planning/current-ceqa-projects/santa-venetia-floodwall-project>

To: Environmental Planning General Contact

From: Josh Dieterich

Sender's
Email Address: joshua.dieterich@gmail.com

Subject: Santa Venetia Floodwall Project

Message: Dear Planners,

1 I write in support of the current proposal for a new composite sheet pile floodwall to upgrade/replace the existing timber-reinforced berm atop the Vendola Drive levee. This investment in our neighborhood's flood resilience is timely and necessary to prevent a catastrophic flood event in our low-lying community.

2 Living in Santa Venetia since 2012 has allowed me to witness the changing king tide events that affect the landscape. They have increased in height in the time I have lived here, and will only increase in the future as the warming of our planet causes changes in our climate. Climate change is real and we must prepare for the impacts. With an unprecedented El Nino event shaping up this winter, we may see increased rainfall. Should a major rain event coincide with king tides, Gallinas Creek could rise significantly, overwhelming the existing flood protection infrastructure.

3 In past efforts to address this issue, absentee landlords and other resistant property owners have been allowed to slow or stall progress. I encourage the county to overcome these short-sighted holdouts by using eminent domain to access the properties along the creek. Don't wait until it is too late to save our community.

Sincerely,

Josh Dieterich

2026-09-08 10:06AM -0700

IP:

Letter E. Josh Dieterich

- E-1 This comment addresses the merits of the Project and not the environmental analysis. It requires no response pursuant to CEQA.
- E-2 Rising sea level as a consequence of climate change and the need for increased flood protection for the Santa Venetia neighborhood were considered in the Basis of Design for the Project, which is discussed in SER Chapter 1, Project Description.
- E-3 The method of acquiring easements is not itself an environmental issue.

Robin Fies

From: mjnola <mjnola11@gmail.com>
Sent: Thursday, September 10, 2026 11:18 AM
To: Flood Inquiry; EnvPlanning
Subject: proposed santa venetia flood wall

You don't often get email from mjnola11@gmail.com. [Learn why this is important](#)

Hello

Please continue with the proposed Santa Venetia Floodwall and Levee upgrade.
I live on the end of Mark Twain Ave on the Gallinas Creek and adjacent to the Santa Venetia neighborhood.
We purchased the house after the last redredging of Gallinas Creek and at that time at low tide it was a 6ft draw.
Because of all the silt that has come in over the years and lack of dredging by the county the creek is wider and spreading and affecting my home.
Any news you can provide me as to preventing another flood and King Tide disaster in the area or news on redredging or planning for flood prevention in the upcoming El Nino winter I would greatly appreciate it.
Thank you
Mary Jo Pritchard

Letter F. Mary Jo Pritchard

- F-1 This comment primarily addresses the merits of the Project, not the environmental analysis. Dredging of Gallinas Creek is not a part of the Project, though proposed dredging is considered under the cumulative impacts discussion in SER Section 2.21, Mandatory Findings of Significance.

From: Carey Cyber <carecyber@gmail.com>
Sent: Saturday, September 26, 2026 10:27 AM
To: Flood Inquiry; EnvPlanning
Subject: TIMBER BERM QUESTION

You don't often get email from carecyber@gmail.com. [Learn why this is important](#)

Hello Marin County Flood Control,

Thanks for the postcard. I appreciate all your work to protect us from flooding.

After reviewing the [Santa Venetia Floodwall - 2026 Draft SER\[PDF\]](#)

Here are conditions I have pertaining to the project.

- 1 [The Timber Reinforced Berm in my yard is in good condition, as is my Boat Dock. These items shall not be removed. It would be best practice to have the Sheet Pile Floodwall - IN ADDITION to my current berm, and I thank you for your understanding.
- 2 [The berm is currently doing a great deal of flood prevention and my intent is to add the composite sheet piles in addition to the berm to improve, not demolish the existing berm. My concern with regards to this is the composite material can degrade over time even though it is estimated to have a lifespan of 25-49 years.
- 3 [My house is next to Pump station 1. We have there steel piles at the head of the pump station. These are to remain. I was very relieved to see in Appendix D that my willow tree will remain as was discussed last time in a visit from Assemblymember Connolly.
- 4 [Again, Thank you for your dedication and generosity in consideration of our neighborhood and County. I wish you success on this endeavor.

Regards,
Carey Levash

Letter G. Carey Levash

- G-1 Removal of the existing Timber Reinforced Berm is part of the Project, as described in SER Chapter 1, Project Description, and analyzed throughout the document.
- G-2 Please see the discussion of the Flood District's consideration of alternatives for increasing flood protection in the Santa Venetia neighborhood in SER Chapter 1, Project Description. See also the Basis of Design and Project Alternatives document referenced in Chapter 1. The full citation is below. That document is available at the Project website.
- G-3 This comment does not address the environmental analysis. The Flood District confirms that the existing steel sheet piles at Pump Station 1 will remain.
- G-4 This comment addresses the merits of the Project and not the environmental analysis. It requires no response pursuant to CEQA.

References:

Civic Knit, Engeo, DAC Associates, and CSW|ST2, 2023. Santa Venetia Floodwall, Basis of Design and Project Alternatives, Marin County, California. Prepared for the Marin County Flood Control and Water Conservation District, March 2023. Version 2.0

From: hitekdrifter <hitekdrifter@aol.com>
Sent: Sunday, September 27, 2026 8:13 PM
To: EnvPlanning
Subject: Proposed Santa Venetia Floodwall Project

[You don't often get email from hitekdrifter@aol.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Attention to Robin Bartlett

Dear Robin Bartlett,

I read through the posted environmental review project webpage for proposed Seawall.

In summary, as a retired engineer, I think it's a great approach, and go with it as soon as you find the funding. I remember how it lost by 3 votes for the parcel tax on Santa Venetia parcels,

The main comments on the environmental impact and the project in general that come to mind are:

1. Some environmentalists are bending over backwards to try to not disturb the Ridgway Rail population, which means construction can only occur when the tides are the highest, and risk of flooding is the greatest. I have lived here for 20 years, and the marshland has roughly doubled in area in that time, due to the ongoing silting in since the last dredge of 1993. I see rails a few times a year, and they aren't that close to the seawall and appear to be moving further away. They will survive a few weeks of disturbance in any given area, IMO. It would be safer, faster and easier to do the seawall construction all year rather than wait for the most hazardous tidal time windows to do it.
2. Concerns about construction noise are, IMO, a minor concern compared to the concern of the neighborhood being flooded. Come on people, it's just a few weeks of noise in your immediate area! I can live with that. And once the construction is done, the neighbor will be as quiet as it currently is.
3. This isn't an environmental concern, but a financial one, but having spent 15 years on the CSA#6 advisory board, I became convinced that Gallinas creek will not be dredged again in our lifetime. There is no longer sufficient funding anymore, and the projected cost is growing faster than funds are being collected. Furthermore, the original incentive to dredge is gone, there is no commercial or military activity along the creek anymore. The only beneficiaries would be for those who live along the creek (me included), who also happen to have the floodwall/berm in our back yards. I would say to just kill the proposed dredging project entirely, it seems to just exist to provide billing hours for a few county engineers and support personnel. My opinion is that it would be best to take the current collected funds and apply it to seawall improvement and maintenance. It isn't that large a sum, but it can't hurt. And by now, the silt has pretty much reverted the creek to it's natural state, and there will always be a substantial tidal waterway. And FWIW, environmentalists have been fighting it anyway, to save the Ridgway rails.

4 I OK, not much else comes to mind, I hope you all find the funding and upgrade the wall ASAP. I probably won't be living here anymore by the time it gets done, but I hope it gets done.

Thank you for listening.

Best Regards,
William Adkison
133 Vendola Dr

Sent from my Communicator

Letter H. William Adkison

- H-1 All comments received during the formal comment period are considered public record, and so are included in this document.
- H-2 This comment addresses the merits of the Project and other issues unrelated to the environmental analysis. It requires no response pursuant to CEQA.
- H-3 The Project, as described in SER Chapter 1, Project Description, does not propose year-round construction. Potential impacts on Ridgeway's rail and California black rail, both special status species that are known to be present in the marshes along Gallinas Creek, are considered in SER Section 2.4, Biological Resources. See in particular topic a, which discusses impacts on special status species. Impacts on both rail species are found to be potentially significant, and the SER includes Revised Mitigation Measure BIO-1 and Mitigation Measure BIO-2 to reduce impacts to less than significant.
- H-4 Impacts of construction noise are discussed in SER Section 2.13, Noise, and found to be less than significant. Vibration impacts, however, are found to be potentially significant, and so the SER includes Mitigation Measure NOI-1. See also the response to comment I-9, which addresses vibration impacts.
- H-5 Dredging of Gallinas Creek is not a part of the Project, though proposed dredging is considered under the cumulative impacts discussion in SER Section 2.21, Mandatory Findings of Significance.
- H-6 This comment addresses the merits of the Project and not the environmental analysis. It requires no response pursuant to CEQA.

Robin Fies

From: William Tucker <Wmta@wmta.com>
Sent: Monday, September 28, 2026 1:48 PM
To: EnvPlanning
Cc: Christopher Blunk
Subject: Comments on Santa Venetia Floodwall Project SER and Subsequent MND, William Tucker, PE
Attachments: PDF - SER_Comments_2026-09-28.pdf; AltBOD_w0 appendix_1.5..pdf

Ms. Reid,

1a [Attached are my comments on the Santa Venetia Floodwall Project Supplemental Environmental Review and proposed Subsequent Mitigated Negative Declaration (August 2026), with Attachment A, my Alternate Basis of Design, 1.5. The report body is attached, and Appendices A–F are available on request.

Please include these comments in the record before the Board of Supervisors, and please confirm that you received them.

Thank you,

William Tucker, PE Civil Engineer, California C 26071

Wm. Tucker Associates 70 Vendola Drive, San Rafael, CA 94903

(415) 717-0196 · wmta@wmta.com

Email: Wmta@wmta.com

WM. TUCKER ASSOCIATES

Consulting Engineers · 710 C Street, Suite 10, San Rafael, CA 94901

September 28, 2026

Rachel Reid, Environmental Planning Manager
Marin County Community Development Agency
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903
By email: EnvPlanning@MarinCounty.gov

Re: Comments on the Santa Venetia Floodwall Project Supplemental Environmental Review and proposed Subsequent Mitigated Negative Declaration (August 2026)

Ms. Reid:

I support a sheet pile floodwall for Santa Venetia and want it built as soon as it can be. These comments address what stands between the neighborhood and a finished wall.

I am a California licensed civil engineer (C 26071) and principal of Wm. Tucker Associates, San Rafael. My practice for more than fifty years has been sheet pile structures, deep foundations, and construction on Bay Mud. I am also a resident of Santa Venetia. These comments are submitted in my professional capacity and address the engineering content of the document and the construction program it describes. Page references are to the document's printed pagination.

The central issues are the construction season, phasing, and interim protection (comments 1 through 4), and what the project asks of the owners of the 115 parcels whose easements it needs (comment 11). Section D proposes changes to the project description that would let the District resolve those issues within this document, rather than in a later addendum or new review. My aim is a document the Board can adopt that keeps the District's options open. I ask that these comments be included in the record before the Board of Supervisors and that the District respond to each in writing. I also ask that responses to the engineering comments identify the civil and geotechnical engineers of record; the document does not name them, and the title block of the November 2, 2022 construction drawings (Project No. 2200112) leaves "Prepared Under the Direction of" blank.

A. CONSTRUCTION CALENDAR AND FEASIBILITY

- Rail surveys and an adjustable work window.** Revised Mitigation Measure BIO-1 prohibits work, direct line of sight, or any increase in ambient noise within 700 feet of locations where Ridgway's rail (January 15–August 31) or black rail (February 1–August 31) have been detected and are likely nesting, and any work within 250 feet of nest sites in season (p. 47). The document's evidence of rail location is a reconnaissance site visit, database searches, third-party records, and eBird checklists, all from the Marsh Preserve and Santa Margarita Island rather than the alignment (p. 42). No protocol-level survey has been conducted; BIO-1 defers surveys to annual efforts after adoption and provides that the 700-foot buffer "may be reduced" in later coordination with CDFW and USFWS (p. 47). The 155-day schedule in Table 1-4 (p. 26) appears to assume the buffer will not apply. **Request:** Revise BIO-1 so that protocol-level surveys under the 2017 USFWS marsh bird protocol, covering the Preserve, Santa Margarita Island, and the creek fringe along the full



alignment, are completed before each construction season, and so that the allowed work period for that season is set reach by reach from the findings. Reaches with no detections within the buffer distance would be open for the full season; reaches with detections would be scheduled outside the nesting windows, including the September 1 – January 15 season (comment 12). The construction schedule would then be adjusted each year to the survey results rather than fixed in advance.

2. **The May–October season falls inside nesting season.** The 2019 IS/MND placed marsh-adjacent work outside nesting season, September through January (p. 43). The SER moves the season to May–October (p. 23) without noting the change or giving a reason, then attributes both of its new findings — a new significant impact to nursery sites (p. 52) and substantially more severe impacts to rails and salt marsh harvest mouse (p. 43) — to that season and the marsh crossings. Of the six months proposed, only September and October fall outside every nesting window the document identifies; May through August are inside all three. The only driver visible in the document is that erosion control is required in the wet season, October 15–April 15 (Table 1-4, p. 26), and that rolling removal of the timber berm must be “coordinated with tide and weather predictions to reduce the potential for localized flooding” (p. 14). A method that removes the existing barrier as it goes cannot run through storm season. The season conflict is a consequence of that method, not of the site. **Request:** State whether a September-through-January season was evaluated and on what basis it was rejected; and state whether the District has evaluated construction with the timber berm left in place as flood protection until the new wall is closed, which removes the flood-season constraint and the daily demolition gap (see comments 11 and 12).

3. **Build the wall in two or three consecutive seasons.** The document’s alternatives are one season or phases over up to ten years (p. 23). With the buffer in force, the period that is both outside nesting season and outside the wet season is September 1 to October 14, approximately 30 working days a year; at the stated 100 lineal feet per day the 7,800-foot wall alone takes three such windows. A floodwall protects only to the elevation of its lowest point: until the last phase is in place, protection is that of the lowest remaining timber section. Each phase ends with sheet piles run into the core of a forty-year-old timber structure as the seal (p. 23) — a junction between a rigid wall and a settling timber box, carried through a winter — and each phase is a new mobilization, procurement, survey, and permit condition. The document contains no winterization or interim-protection provision for a season that ends incomplete, and does not analyze the impacts of up to ten construction seasons or the flood risk of the interim years against the failure probability Chapter 1 itself cites. **Request:** State the District’s plan to fund, permit, and construct the wall in two, or at most three, consecutive seasons, and the year it expects to begin. For each season boundary, state the flood protection elevation of the system, the design of the wall-to-berm junctions, and the condition of the corridor over the winter. If the TRB is left in place until the new wall is closed (comment 11), the neighborhood keeps its existing protection between seasons and the junction problem does not arise.

4. **Interim protection.** The levee overtopped and breached in two places on January 3, 2026, at a tide of about 8.8 feet NAVD88, and the County proclaimed a local emergency on January 13, citing \$2.6 million in damage. On any schedule the document contemplates, the neighborhood will spend several more winters behind the existing berm. The rail buffer does not apply from September 1 through January 14. **Request:** State the interim protection plan for those winters — a crest survey identifying every reach below the January 2026 high water, the temporary barriers or raising to be



placed at those reaches, the deployment trigger and staffing, the condition and operation of the outfall tide gates and pump stations, the berm repair program, and the emergency contractor and materials to be held on call — and whether the District has evaluated reconstructing the reaches that breached now as permanent sections of the floodwall built to the final design.

5. **Schedule, funding, and approvals.** The document gives no year for the start of construction, lists funding approval — including a possible ballot initiative — among the approvals still required (p. 26), and makes phasing contingent on funds. The approvals list (p. 26) also omits the Bay Conservation and Development Commission, whose jurisdiction covers the channel, mudflat, and shoreline band; Section 7 consultation under the federal Endangered Species Act, which the Corps permit will require for Ridgway’s rail and salt marsh harvest mouse; NEPA if federal funds are used; and the Proposition 218 process a ballot measure would require. Each is a schedule driver. **Request:** State the anticipated start year, the current cost estimate for the project as described, the funding secured and sought, the criteria that would trigger phasing, the order in which sections would be built, and the permitting schedule anticipated including the approvals above.

B. ENGINEERING BASIS

6. **Embedment and seepage.** Chapter 1 states the sheet piles would be embedded 6 to 18 feet, with depth to be determined in final design. Section 2.7 concludes the piles would be driven through the fill and into the Young Bay Mud, isolating the wall from liquefaction and reducing the effect of settlement. The document also reports 5 to 17 feet of fill over the Bay Mud. A pile embedded 6 feet through 17 feet of fill does not reach the Bay Mud; the geology conclusions depend on a penetration the project description does not require. **Request:** State a minimum penetration into the Young Bay Mud in the project description, or revise the Section 2.7 conclusions to match the embedment actually proposed. Section 2.10 evaluates the wall as a groundwater barrier only for the 68-foot below-grade section, though the entire 7,800-foot wall is embedded below the water table (2.0 to 5.5 feet); evaluate seepage and landside drainage for the full length, or state that the wall is not a cutoff and how seepage through the levee fill is addressed.
7. **Trench: method or exception.** The typical section on the November 2, 2022 drawings places the new wall on the centerline of the timber berm, with the berm fill regraded landside and a “pre-installation trench, depth/width varies (VIF)” to receive the sheets. The SER describes trenching as a 2-foot-wide by 30-inch-deep contingency for obstructions (p. 18). Table 1-2 (p. 16) quantifies 7,000 feet of berm removal, 1,800 cubic yards of soil, and 200 tons of concrete, but no trench excavation and no disposal of the berm’s pressure-treated timber, which California regulates as treated wood waste. **Request:** State whether the trench is the method or the exception, its depth relative to groundwater and tide, how the levee section and flood protection are maintained while it is open, and provide the wall height and embedment tables the typical section refers to. State whether a constructability review of the plan has been performed and by whom.
8. **The Meadow Drive crossing.** Chapter 1 describes a passive flip-up floodgate across Meadow Drive with concrete wing walls keyed into steel sheet pile sections and a 335-foot steel reach west of the bridge. The November 2, 2022 drawings show the permanent wall beginning at Station 11+45, east of the bridge, and label the crossing “temporary flood barrier as approved by engineer ... (by others)” at a roadway elevation of about 10. The document cites a January 16, 2026 plan set that has not been made public. The crossing is at about Elevation 10, and it is the one opening in

8
cont.

the line of protection. **Request:** Identify which document describes the project the Board is being asked to approve; state whether the floodgate and the west reach have been designed and by whom; and, if the crossing is a temporary barrier, state what it is, who deploys it, on what trigger, and how it meets the 100-year protection the project objective requires.

9

9. **Noise and vibration basis.** The analysis rests on one measurement of composite sheet installation at one station in November 2022 — 80 dB and 86 VdB at 50 feet — extrapolated to 93 VdB at 30 feet and 102 VdB at 15 feet (pp. 108–110); the peak noise event was a boulder strike (p. 108) in fill the document describes as obstruction-laden. The project now includes 27-foot steel sheets driven with a larger excavator at the locations closest to residences. The document cites the FTA 85 VdB annoyance threshold and estimates 93 VdB at every residence 30 feet from the alignment, then addresses only structural damage; the annoyance exposure along the corridor, over a 155-day season, receives no significance finding and no mitigation. **Request:** Confirm that the analysis bounds steel installation with the larger equipment, or extend it; make a significance finding on the 93 VdB exposure; and state whether non-vibratory installation (hydraulic press-in) was evaluated, which would remove the Meadow Drive impact and most of the buffer distance the 700-foot measure is calibrated to.

C. EASEMENTS AND PRIVATE IMPROVEMENTS

10

10. **Easements and private improvements.** The project requires permanent and temporary easements up to 18 feet wide on 115 parcels, water-access rights on up to 16 of them, and temporary access on up to ten more (p. 14), although the County’s September 23, 2026 Zone 7 reports refer to approximately 110 parcels and earlier reports to 111; the permanent/temporary split is not stated. Replacement of docks, decks, and stairs is “generally the responsibility of the property owners,” with the District reserving an option it will decide before construction (p. 14); unpermitted structures may be removed and not replaced (p. 11); Section 2.7 states docks and gangways would be replaced. These statements do not agree. As of March 2023, sixteen easements had been secured. **Request:** State the width and rights the permanent easement conveys; the term of the temporary easements and how a temporary easement is reconciled with a program that may run ten years; how compensation is determined and which improvements the District will replace; and whether the remaining easements will be acquired by negotiation or eminent domain, on what schedule, and how construction on a continuous alignment can begin before they are in hand.

D. PROJECT DESCRIPTION — KEEPING THE DISTRICT’S OPTIONS OPEN

The comments above identify problems. This section proposes solutions that can be written into the project description now, so the District can use them in final design and in easement negotiations without a new environmental document. Each describes an option, not a requirement.

11

11. **Existing timber berm, docks, and easements.** This is the most important comment in this letter. The project description requires demolition and removal of the TRB along the full alignment (p. 14; Table 1-2, 7,000 lineal feet), and with it the removal of 13,500 square feet of docks, 4,500 square feet of decks, and 3,945 square feet of stairs (Table 1-2). Replacement is “generally the responsibility of the property owners” (p. 14). Owners along the alignment who have docks, decks, or stairs are therefore being asked to give them up as well as the strip of land. Removing the old wall is what drives that ask. If the TRB stays in place and the new wall is installed just outboard of it, docks and walkways can remain in service, and the easement request to each owner becomes



much smaller. Because easements, not construction, are what the schedule depends on, this is also the change most likely to shorten it. As written, the document fixes TRB removal as part of the project, and the District would lose that option at the negotiating table. **Request:** Add the option of leaving the TRB in place as flood protection during construction and as a secondary barrier afterward, with the sheet pile wall installed immediately outboard of it, and of leaving docks, walkways, and gangways in place, with access to them provided over the new wall.

12. **Construction season.** The project description limits all work, in every phase, to the May–October season (p. 23). The document itself identifies September through January as outside nesting season (p. 43) and attributes the substantially more severe impacts to rails and salt marsh harvest mouse to the May–October timing and the marsh crossings (p. 43). **Request:** Permit land-side construction from September 1 to January 15 as an allowed work season, in addition to May–October. With the TRB left in place during construction (comment 11), work in this season does not reduce flood protection.

13. **Seepage cutoff.** The document provides a clay check dam or similar materials at the pipeline crossings (p. 8) and does not otherwise address seepage through the levee fill (see comment 6). **Request:** Include grouting beneath the TRB as an allowed seepage-cutoff method along the alignment.

14. **Wall dimensions and installation.** The document analyzes exposed heights of less than 1 foot to 6 feet and embedment of 6 to 18 feet, with longer sheets of about 27 feet only near Meadow Drive (pp. 13–14). Obstructions are addressed by trenching (p. 18). **Request:** Describe exposed heights of up to about 7 feet, embedment as required by final design, and sheet lengths of up to about 28 feet anywhere on the alignment; and include spot pre-ripping and extract-and-redrive as allowed obstruction methods alongside the trench.

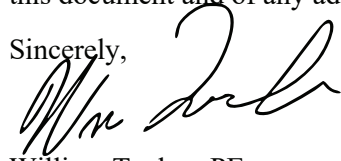
15. **Easements.** The document describes permanent and temporary easements “up to 18 feet wide” without stating the split (p. 14). **Request:** Confirm that this description allows a narrower permanent maintenance easement, with the balance of the working corridor held as a temporary construction easement that expires after construction.

16. **Seasonal tide gate.** The 2019 Initial Study screened out a tide gate on Gallinas Creek without study. The Basis of Design (r2.0, March 2023, pp. 13–14) set it aside on a lump-sum estimate of \$55 to \$85 million, with no quantities, unit costs, or contingency shown. The estimate rests on a pump station sized for the South Fork’s 100-year flow of 1,300 cfs occurring at a high tide. The Basis of Design notes that water would be stored in the creek while the gate is closed, but presents no calculation of storage volume, water level behind the gate, or closure duration. A gate closed only around the peak of the highest winter tides may need far less pumping capacity than the full 100-year flow, and could reduce the height and length of wall needed and the easements it requires. **Request:** Provide the basis for the estimate; state the probability assumed for the 100-year flow coinciding with a king tide; provide the storage and closure analysis behind the pump sizing; state whether a smaller pump station using channel storage was evaluated; identify the agencies and the basis for the statement that State and Federal regulators would not accept this alternative; and state whether the project description can keep this option available without a new environmental document.

17 Comments 11, 12, and 14 reduce disturbance compared with what the document analyzes: less demolition, no marsh crossings where the work is done from the land side, and work outside the nesting windows. None of them removes anything from the project as described: water access by barge would remain available at parcels that cannot be reached from the land side. Comment 13 adds a limited land-side activity within the same work zone. These options are described together in the attached Alternate Basis of Design, Draft 1.5 (Attachment A). I am not asking the District to adopt that report. I am asking that the environmental document not rule out its methods, so the District has them available if they prove useful in final design. In that spirit, I provided the Alternate Basis of Design and a draft of these comments to the Director of Public Works before submittal and invited his comments.

18 I would welcome a meeting with the District's engineers and its biological consultant on comments 1 through 4 and Section D, and a written response to each. Please send me notice of the Board hearing on this document and of any addendum, subsequent document, or response to comments.

Sincerely,



William Tucker, PE
Civil Engineer, California C 26071
Principal, Wm. Tucker Associates
Resident, Santa Venetia

cc: Marin County Flood Control and Water Conservation District, Zone 7
Attachment: A — Alternate Basis of Design, Draft 1.5

Attachment A — Alternate Basis of Design, Santa Venetia Levee: Lightweight Steel Sheet Pile System

19 Wm. Tucker Associates, William Tucker, PE. Draft 1.5 (Contractor Peer Review Draft), September 2026.
Report body attached as a separate PDF; Appendices A–F available on request. The report is a preliminary alternate basis of design offered for review; it is not a construction document.

WM. TUCKER ASSOCIATES

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ALTBOD REPORT ALTERNATE BASIS OF DESIGN

Santa Venetia Levee — Lightweight Steel Sheet Pile System
An Independent Alternative to the County of Marin's Composite Sheet Pile Design

COMPLETE EDITION — WITHOUT APPENDICES A–F

William Tucker, PE (#26071)

September 28, 2026

COMMENTS AND QUESTIONS INVITED — FROM ALL READERS

This report is offered openly. Its purpose is to get a wall built. Questions, corrections, disagreements, and suggestions — from contractors, engineers, County staff, and residents alike — are welcome and will be considered in the next revision.
Write to [**wmta@wmta.com**](mailto:wmta@wmta.com).

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cont.

Executive Summary

ALTBOD Report — Alternate Basis of Design, Santa Venetia Levee: Lightweight Steel Sheet Pile System. William Tucker, PE (#26071) · Wm. Tucker Associates, 710 C Street, Suite 10, San Rafael, CA 94901 · September 2026, Draft 1.5. Preliminary — offered for peer review, not for construction. This summary is written to be read on its own; the full report follows it.

The Santa Venetia levee protects a residential neighborhood of about 900 homes along Las Gallinas Creek [County BOD p. 1]; County materials place roughly 600 homes at direct flood risk. A breach occurred on January 3, 2026, and the geotechnical record indicates a probability of up to 90 percent that the existing timber-reinforced berm (TRB) — the wood-plank wall that tops the levee — could fail before it is ever overtopped [County BOD p. 2]. The County has advanced a composite sheet pile floodwall designed to El. 11.0 NAVD88, currently estimated at \$25–30 million.

This report presents an independent alternate basis of design for the same flood-protection objective, offered for review by contractors, engineers, and community members.

Proposed Alternative. A lightweight cold-formed steel sheet pile barrier is installed from the land side, one foot creekside of the existing timber wall, and becomes the primary flood barrier at El. 11.0 NAVD88 — the same design level the County has adopted. A cement grout curtain beneath the TRB seals the seepage paths through the old fill that the record has documented since 2013. The steel sheet pile wall also reinforces the existing levee and protects it from rodent burrowing and erosion. The levee and TRB remain in place as a second line of defense; nothing is demolished. Dock walkways that cross the alignment are temporarily modified, then repaired and returned to service; the docks themselves are not touched.

Key Features

- 6-foot permanent maintenance easement plus a 12-foot temporary construction easement returned after construction — together matching the 18-foot working footprint in the County's drawings.
- Land-side installation with conventional equipment; no barges, no marine construction.
- Steel sheet pile is established practice in Bay Mud; the County's own Bolinas seawall (2014) is the local precedent.

Most of the alignment requires 4 feet of exposed wall or less. The steel barrier models at \$5–8 million on supplier budget pricing; with access, right-of-way, and related work, the indicative total program is **\$12–15 million**, built up openly in Section 14 and Appendix B for contractor verification.

Where the difference actually lies. Both designs protect to the same elevation on the same data; they differ in what they ask of the neighborhood. The County's program needs permanent right-of-way across 115 waterfront parcels, and sixteen easements were in hand as of its March 2023 update — acquisition, not construction, is what has held the wall up. This design asks each owner for a 6-foot permanent strip, takes nothing down, and leaves every dock in place. It also stays out of the water: no barge, no marsh crossings, no in-water work, and a September–January season the County's own August 2026 environmental review identifies as outside nesting season [SER p. 43] — so it avoids the new significant impacts that review discloses for its own May–October, water-based program rather than mitigating them. The fastest credible path to a built wall is the design whose easement an owner will sign.

A note on counts. Three counts appear in this report, each in its own context: about 900 homes in the neighborhood, roughly 600 of them at direct flood risk per County materials, 115 waterfront parcels whose owners must grant easements (the SER's count [SER p. 14]; County materials before August 2026 said 111), and roughly 600–890 parcels in a potential assessment district.

Project setting. Santa Venetia is an unincorporated community in Marin County, adjacent to San Rafael, on low ground at the inside bend of the South Fork of Las Gallinas Creek — a tidal channel connecting through the Santa Venetia Marsh Preserve to San Pablo Bay. The levee runs along the creek bank at the rear-yard line of the 115 waterfront parcels; private docks and walkways cross it. The TRB was installed in 1983 as a temporary measure and is still in service four decades later; the levee has settled, the timber is weathered, and king-tide street flooding is recurring.



Figure 1 — Santa Venetia and the South Fork of Las Gallinas Creek. The levee and wall alignment follow the creek bank along the rear-yard line of the waterfront parcels; the Santa Venetia Marsh Preserve lies downstream to the northeast. [Aerial: Google Earth.]

The full report follows: design basis and durability (Sections 4–9), the easement and property case (Sections 10–12), constructibility (Section 13), the cost build-up (Section 14), schedule (Section 16), and the numbered questions put to contractors (Section 19). Every figure in this summary is preliminary until contractor-verified. Questions, corrections, and better ideas are welcome at wmta@wmta.com.

1. Introduction & Purpose

This Alternate Basis of Design (AltBOD) for the Santa Venetia flood protection system was prepared independently by Wm. Tucker Associates. It considers the County's March 2023 Basis of Design (BOD v2.0) section by section, and addresses in full the topics beyond that document's scope — easements, protection of the existing levee, maintenance cost, docks, schedule.

The author, William Tucker, PE (California #26071), is a consulting engineer specializing in sheet-pile design and foundations in Bay Mud, and a Santa Venetia homeowner. The work was performed at the author's own expense, with no funding from the County, any contractor, supplier, or outside organization.

Purpose and review path. This draft is written first for contractor review: three or four heavy-civil contractors experienced in sheet pile and limited-access flood work are being asked to pressure-test the constructibility case and the cost model. Their comments will be incorporated, and the contractor-verified version transmitted to the County with an invitation to review. The objective: a wall standing in a reasonable timeframe.

The thesis: the wall is a commodity; the easement is the project. Any competent sheet pile system can hold back 5.5 feet of water at this site. The governing challenge is acquiring right-of-way across 115 residential parcels. This report therefore treats the easement basis (Section 10) as the design centerpiece, and selects the wall system for how little land it permanently requires and how simply it installs.



Figure 2 — Neighborhood street flooding, Santa Venetia [date to confirm]. Photograph: W. Tucker.

2. First Principles

The County's Basis of Design and this one differ less in engineering than in what each treats as the governing problem.

- **This is an access problem, not a structural engineering problem.** Any competent sheet pile system can retain ~5.5 feet of water over Bay Mud here. The governing problem is access across 115 private back yards — the legal right to reach the wall line and the practical means of building on it. Right-of-way is the critical path, the dominant cost driver, and the variable that decides whether the project happens at all.
- **Minimize the permanent ask of each homeowner.** Per-parcel signature probability is the economic heart of the program. A 6-foot permanent strip plus a temporary easement that expires is a far more realistic ask, 115 times over, than 18 permanent feet of a 60-foot back yard.
- **Keep the existing protection in place.** Never reduce protection during construction; keep the old barrier as a redundant second line afterward. A design that demolishes the existing protection before the new one exists carries an exposure window; this one does not.
- **Compare total installed cost and time-to-build, not material unit price.** A cheaper sheet that needs pre-excavation, special handling, demolition, and barge access is not a cheaper wall. Standard equipment, established practice, no field test, no barge, no marine permits, no demolition — every element removed from the critical path is schedule risk that cannot materialize.

One data point anchors all of this: 84 percent of the alignment requires 4 feet of exposed wall or less, and 63 percent requires 3 feet or less [GHD LiDAR — Appendix A]. Most of this project is a low wall at the edge of a back yard; the design, easement, equipment, and cost should all look like that fact.

3. Existing Reports & Data

This AltBOD adopts the same source documents as the County BOD [County BOD p. 3]: the Kleinfelder Geotechnical Data Report (2013), USACE hydrology/hydraulics (2013), AECOM tidal datums (2016), FEMA SF Bay Coastal Study (2016), CEQA Negative Declaration (2019), the GHD studies and submittals (2020–2022), the 2019 drone LiDAR survey, and the County BOD v2.0 with its Appendices A–C. One County document postdates the rest and is addressed throughout this report: the *Santa Venetia Floodwall Supplemental Environmental Review / Subsequent Mitigated Negative Declaration* (Sicular Environmental Consulting for the District, August 2026), cited as [SER p. N]. An earlier SER circulated December 12, 2023 – January 16, 2024 and was not adopted [SER p. 7, fn. 6]. Full citations are in the References.

Two observations frame the shared record. First, the County performed no new borings, survey, or hydraulic modeling for its BOD; this report stands on exactly the same data, so disagreements between the two documents are disagreements of design judgment, not of site facts. Second, sheet pile is the County's own selected technology — studied, estimated, and field-tested. The question is not whether to build a sheet pile wall, but which system, on what footprint, acquired how, and installed by what method.

4. Existing Conditions

4.1 Topography

The County base mapping (GHD LiDAR plus aerial survey) is adopted, with its stated limitation that "the surveys are not of sufficient detail to accurately reflect the existing TRB" [County BOD p. 4]. Because this report's alignment is defined by the physical TRB (Section 10.2), a high-resolution handheld LiDAR (BLK2GO) corridor scan tied to survey control is proposed as an early task.



Figure 3 — Existing conditions along the TRB: (a) weathered timber wall at the rear-yard line; (b) gangway crossing the TRB to a private dock; (c) 2026 repair excavation along the timber wall; (d) repair lumber staged for berm patching.
<mark>[Locations/dates to confirm.]</mark> Photographs: W. Tucker.

4.2 Geotechnical

The geotechnical basis is the Kleinfelder Geotechnical Data Report (July 2013) — the same investigation the County's BOD stands on — interpreted in light of the author's five decades of foundation work in San Francisco Bay Mud, including the Bolinas wall in the same county.

Kleinfelder's Reach 2 profile (the wall alignment): artificial fill 5–17 feet thick — soft to stiff lean clay and silt with layers of loose to medium dense sands and gravels — over 45–50 feet of very soft Young Bay Mud, over stiff clay and dense sand; groundwater 2.0–5.5 feet below grade and tidal [GDR §9.2.2, p. 29; tidal fluctuation p. 24]. Design parameters follow Kleinfelder's own table ($c = 200$ psf, $\phi = 16^\circ$, $\gamma = 92$ pcf [GDR Table 11.3, p. 46]), with the strength-with-depth profile from the KCPT-2 sounding. GDR elevations are NGVD29; add ~2.7 feet for NAVD88. The County's BOD parameter table [County BOD p. 6] is consistent and adopted for comparison.

Data limits, stated honestly: the borings reach only 19.5 feet and the CPTs sit 100–150 feet landside of the toe, so deep strength under the embankment rests on CPT correlation and published San Pablo Bay Mud relationships, supplemented by the author's judgment — a lineage Appendix A states explicitly. The County

notes that "structural demands will drive the design sheet pile depth as opposed to a seepage analysis" [County BOD p. 6] — shared here, with seepage additionally addressed by grouting beneath the TRB (Section 7). Settlement per the record: less than 1 foot over 30 years [County BOD p. 7].



Figure 4 — Site and boring location plan: borings KC-1 through KC-10 and KT-3, CPT locations, and the investigation sections along the alignment — the geometry behind the data limits stated above. After Kleinfelder, 2013, Plate 1; reproduced at full size in Appendix F.

For constructibility the profile reads simply: 5–17 feet of old fill — where the obstructions live — over soft Young Bay Mud, easy driving for any sheet (Sections 6, 13.5).

4.3 Water Surface

Adopted from the County BOD [County BOD pp. 8–10]: FEMA 100-year stillwater 9.8 ft NAVD88 (2017 FIS); USACE 2013 100-year water surface $\approx$ 9.1 ft; 100-year creek flow 1,300 CFS; selected design height El. 11.0 NAVD88 [County BOD p. 10]. This report holds the identical level. With rear-yard grades $\approx$ El. 5.5, the barrier retains about 5.5 feet of head at the design event. Two notes for completeness: the County record includes no wave-runup or freeboard analysis, and its structural analysis used a 10-ft water surface against an 11-ft crest [County BOD p. 23] — the steel section's structural reserve (Section 6.2) absorbs both.

4.4 Environmental Resources

The environmental baseline has changed since the County BOD. The 2019 CEQA Negative Declaration committed that "All access will be from the landside of the levee between the houses" [County BOD p. 11] and carried a September 1 – January 15 work window, Section 404 jurisdiction below El. 6.0, hand vegetation removal, and silt fence and fiber rolls. The County's August 2026 Supplemental Environmental Review / Subsequent MND supersedes that framework: it proposes a May–October season that sits inside the nesting windows its own biology section identifies — Ridgway's rail January 15 – August 31, black rail February 1 – August 31 [SER p. 47], general nesting birds February 1 – August 15 [SER p. 44] — while the SER itself identifies

September through January as "outside nesting season" [SER p. 43], and no rationale for the change is given. It also formalizes water access by barge and mudflat crossings (Section 13.4), and discloses one new significant impact (nursery sites) and substantially more severe impacts to Ridgway's rail, black rail, and the salt marsh harvest mouse, all attributed to the season and the marsh crossings [SER pp. 43, 52]. This report keeps the framework the 2019 document cleared: all work September 1 – January 15 – outside all three nesting windows – from the land side, with no marsh entry and nothing below El. 6.0. The impacts the SER mitigates, this design avoids (Section 13.10).

4.5 Corps of Engineers 2013 Hydrology and Hydraulics — What the Design Flow Really Is

Where the 1,300 cfs comes from. The County BOD states that "the 100-year flow in Las Gallinas Creek is 1,300 CFS as determined by the US Army Corps of Engineers" [County BOD p. 8]. That figure is the rounded 1,305 cfs from Appendix B of the Corps' December 2013 HH&C report — the Noble Consultants/Multech South Fork study of May 2009. That study modeled the South Fork only (2.98 sq mi at Junction 8) in HEC-HMS, with a 24-hour storm from the San Rafael Civic Center gage IDF curves (100-year 24-hour depth 9.188 in), SCS curve numbers at AMC 2.5, and a Clark unit hydrograph: "The peak discharge for the 100-year flood at the confluence of the North Fork and the South Fork was computed to be 1,305 cfs" [USACE 2013, App. B, PDF p. 72 (printed p. 41); Tables 8, 11, 12, 14]. The exact figure 1,300 does not appear in the report.

The Corps replaced it. The Corps' own 2011 re-run (Appendix C) modeled the whole 7.2-square-mile watershed at antecedent runoff condition 2 and superseded the 2009 numbers. It is the hydrology the Corps' hydraulic model actually used: "This present hydraulic analysis was conducted based on the updated hydrologic analysis conducted by the Corps (USACE-SPN, 2011)" [App. D p. 11, PDF p. 175; main text, PDF p. 6]. The two flow sets compare as follows.

Table 4.5-1 — 100-year (1%) creek flows in the Corps record

Location	2009 Noble/Multech (App. B)	2011 USACE-SPN (App. C) — used in hydraulics
Basis	South Fork only, 2.98 sq mi; AMC 2.5	Whole watershed, 7.2 sq mi; ARC 2
South Fork outlet at the North Fork confluence	1,305 cfs (Junction 8)	1,596 cfs (Reach 11, RS 62+02); 90% band 792–3,215 cfs
Levee, Junction 14 (RS 84+15)	—	1,577 cfs
Below the confluence (both forks)	—	3,159 cfs (Junction 8)

App. B flows from Tables 8 and 12 (PDF pp. 70, 82); App. C flows from Table 5.1 (PDF p. 130); 90% band from Table 5.7 (PDF pp. 135–136); river stations from App. F (PDF p. 382). County BOD pages are printed pagination.

Creek flow does not set the flood stage. Appendix F ran the hydraulic model over many combinations of creek flow and Bay tide (a coincident-frequency analysis). The combined coastal-plus-riverine 1% stage is 6.4 ft NGVD29 [main text Table 2, PDF p. 9 (printed p. 8); App. F Table 4, PDF p. 395]; the riverine-only 1% stage at index station 80+75 is 5.1 ft [App. F Table 3, PDF pp. 393–394]. The Corps' conclusion: "The contribution of the riverine component is so small that the difference between the coastal and combined stage-probability values is negligible" [App. F, PDF p. 394]. Flood stage at Santa Venetia is set by the Bay tide, not by creek flow.

Design implication — the author's engineering opinion, not a Corps finding. Because the tide sets the stage, a structure at Santa Venetia should be sized as a tide gate that closes against the high tide and drains the creek on the ebb — not as a river gate with a pump station sized to pass the full 100-year creek flow. The County's 2022 alternatives priced the latter on the 1,300 cfs basis: "We estimate the cost to construct this tidal gate, floodwall, and pump system to range from \$55 to \$85 million" [County BOD pp. 13–14]. For consistency: on that same pump-the-peak logic, the Corps' current 1,596 cfs would call for a larger station, not a smaller one. The saving comes from sizing to the tide, not from the flow number. This does not change the Section 5 position on the regional screening; it defines how any gate should be sized if one is reconsidered.

Check required. The Corps' "negligible" finding applies with the creek open to the Bay. With a gate closed, creek inflow is stored behind the gate. At the 1% South Fork flow, $1,596 \text{ cfs} \times 3,600 \text{ s/hr} \div 43,560 \text{ sq ft/acre} \approx 132 \text{ acre-feet per hour}$. The gate design must show that channel and marsh storage below the levee crest holds that volume over the tidal closure period (plus any drain-down time), or pumping is needed for the difference.

That storage-versus-closure-time check is the next calculation, and it should be run before any gate alternative is priced.

Sources for this section.

USACE San Francisco District (USACE-SPN). Las Gallinas Creek — Hydrologic, Hydraulic and Coastal (HH&C), December 2013. Main text: PDF p. 6 (2011 hydrology used in hydraulics; Table 1), PDF p. 9 (Table 2).

— Appendix B: Noble Consultants, Inc. & Multech Engineering Consultants, Inc., Las Gallinas Creek Hydrologic Analysis, South Fork Drainage Basin, Final Report, May 2009. PDF p. 49 (IDF depths), pp. 69–70 (Table 8), p. 72 (printed p. 41, 100-year peak 1,305 cfs), pp. 77–78 (Table 11), p. 82 (Table 12), p. 85 (Table 14).

— Appendix C: USACE-SPN, Las Gallinas Creek Hydrologic Analysis, Final Report, August 2011. PDF p. 130 (Tables 4.10 and 5.1), pp. 135–136 (Table 5.7).

— Appendix D: Noble Consultants, Inc., Las Gallinas Creek H&H & Coastal Analysis, Final Report, 2012. Page 11, PDF p. 175.

— Appendix F: USACE-SPN, Las Gallinas Creek — Hydraulic Loading (coincident-frequency analysis), 2013. PDF p. 382 (flow-change stations), pp. 393–394 (Table 3), p. 394 (joint-probability finding), p. 395 (Table 4).

Marin County Flood Control & Water Conservation District. Santa Venetia Floodwall — Basis of Design and Project Alternatives, Version 2.0 (r2.0), March 2023. Printed p. 8 (1,300 cfs); pp. 13–14 (tidal gate, floodwall, and pump system, \$55–\$85 million).

5. Regional Solution / Extension of Project Limits

This report does not dispute the County's regional screening: a regional tide gate and pump station was screened out at \$55–85 million as unfundable [County BOD p. 14], since stored floodwater would load the TRB, which needs replacement regardless. Project limits extend the barrier to El. 11.0 at both ends, with temporary measures at the Meadow Drive Bridge approach excluded [County BOD p. 15]. This report tracks the same framing and limits.

6. Project Alternatives — Steel vs. Composite

6.1 The County's Evaluation — Adding the Right-of-Way Criterion

The County BOD evaluated three alternatives [County BOD p. 3]: rebuilding the TRB in plastic timber (\$12.3M, two seasons), a precast concrete wall ("not technically feasible" in the soft soils), and composite (vinyl/fiberglass) sheet pile, which its scoring matrix selected 18 points to 11 over the TRB [County BOD pp. 17–18, 26].

This report adds one criterion: right-of-way. The County's nine-criteria matrix scores construction dollars only — right-of-way appears nowhere — yet every alternative costs \$9–13 million to build while access across 115 back yards [SER p. 14] carries ~\$10 million in the County's program figures and much of the schedule. Footprint drives signature probability, price per parcel, and time to a recordable easement. Re-run the comparison with the easement in the matrix and the ranking changes.

Steel sheet pile — the most widely used flood barrier technology in the world — was not scored in the County's 2023 evaluation, even though the BOD describes composite by comparing it to steel: composite "functions similarly to the more traditional steel option," but "the material is not as strong as steel and thus can deflect under load especially when not backed by soil or anchor" [County BOD p. 19]. The County's position has since moved: the August 2026 SER names the wall material as "composite or steel" at a maximum width of about 14 inches, and specifies steel outright at Meadow Drive [SER pp. 8, 13]. Steel is now inside the County's own project description; what is still missing is the scoring. This section fills in that column so the two systems can be compared side by side.

6.2 How the Two Systems Behave in This Ground

At an obstruction. The upper 5–17 feet of the alignment is old fill — timber, gravel, concrete debris, buried shoreline work [County BOD p. 5]; the boring logs also show layers of loose to very dense sand and gravel with clay, and angular gravels, in the fill [GDR §9.2]. Below it, Young Bay Mud is easy driving. The constructibility question lives entirely in the fill. Composite cannot penetrate hard ground: on obstruction it refuses or is damaged, and it cannot be driven through dense gravel without first cutting a slot through the very crest the wall is meant to protect. The County's own November 2022 field test proved it at this site — refusal at 12 inches in compacted gravel and debris, installation only by trenching 48–60 inches deep [County BOD p. 109], with backfill recompacted to 83–90 percent against a 90 percent spec [County BOD pp. 110, 112]. Steel takes a driving shoe and a vibratory or impact hammer through the same material; an isolated refusal is handled locally — extract, spot-excavate, reset (Section 13.5).

What that costs the composite design. The County estimate carries "Pre-Installation Trench, 5,350 LF @ \$120 = \$642,000" — trenching 75 percent of the alignment — plus TRB removal at \$406,250, since the trench cannot be dug with the TRB in the way [County BOD p. 105]: over \$1 million of demolition and excavation before the first sheet. On most of the alignment the composite design is not a driven wall at all — it is a 10-foot-wide, 4–5-foot-deep excavation through the levee zone, sheets set in the trench, the levee rebuilt around them at compaction the field test could not achieve. The August 2026 SER walks this back without explaining the change: obstructions are now to be handled by a 2-foot-wide, 30-inch-deep trench with the sheet driven into the trench bottom [SER p. 18] — a fraction of the 48–60-inch systematic trench in the BOD and its field test. The reduced trench is carried in Table 1; the field-test record it contradicts stands unamended.

In the corridor. Composite panels are wide and awkward for a small machine between houses, with deflection concerns and guide-frame practice in obstructed ground. The steel SKS section is compact — 27.56-inch lay, under 500 pounds per 15-foot sheet — picked, pitched, and driven by the same excavator-mounted vibratory hammer with no special tooling (handling comparison is the author's construction judgment — contractors, see Contractor Review Question 6, Section 19).

What each system does to the rest of the project. The composite design removes the TRB, which removes the walkways and gangways crossing it — roughly \$1.28M of dock, deck, and stair demolition and replacement in the County estimate [County BOD pp. 105–106] — and leaves a single line of defense during construction. The steel design drives one foot creekside of the TRB and touches none of it: two barriers, no exposure window, walkways in service.

Four steel properties round out the case. *Strength and reserve* — headroom above the El. 11.0 case: capacity to cap or extend the wall later as sea level rises, without replacing it (quantified in Appendix A). *No field test required* — steel in Bay Mud is established practice; the composite field test returned refusal, trenching, and a factor of safety of 0.5, which the County's own Appendix A calls "not acceptable from the analytical point of view" [County BOD pp. 38, 102] against the FEMA-referenced 1.5 [County BOD pp. 34, 103]. *Durability* — welded interlocks, no joint-sealant dependency; corrosion managed by section allowance (Section 9). *Reversibility* — sheets can be extracted, adjusted, or extended, which keeps the permanent property right narrow (Section 10). The local precedent is the County's own Bolinas seawall, built 2014 (Section 9).

6.3 What the Ground Itself Demands

The mud gives a wall nothing to push against. Reach 1 sits on 40–45 feet of very soft Young Bay Mud, Reach 2 on 45–50 [GDR §9.2], with design strength of about 200 psf. Soil that soft offers a cantilevered wall almost no support near the surface, so the wall has to go deep — and its performance is governed by stiffness, not just strength. That is where the materials separate sharply: vinyl sheet pile has roughly 1/70th the stiffness (elastic modulus) of steel, and FRP roughly 1/10th to 1/6th. A composite wall in this ground would deflect by inches at the top at exactly the moment it needs to hold back a tide.

The water load is real. With sea-level rise, 100-year water surfaces run +6.4 to +8.5 ft NGVD29 ($\approx$ +9.1 to +11.2 NAVD88) [GDR §1.4], freeboard requirements are 2.6 feet in Reach 1 and 2 feet above stillwater in Reach 2 [GDR §1.5], and landside toe elevations drop as low as +0.5 to +3.0 in Reach 1 [GDR §3.2]. In the lowest sections that is an unbalanced head approaching 8 feet, on a wall that must also stand above a crest still settling 3–5 inches per decade [GDR §10.2]. This is not the low-head, decorative duty composite sheet pile is normally specified for.

Earthquakes separate the materials. The record rates liquefaction potential high in the levee fill and in the alluvium below the mud, lateral spreading high, and ground lurching high [GDR §10.3]. Lateral spreading loads a wall by dragging it along with the moving soil. Steel bends, yields, and keeps working — it stays essentially watertight and can be repaired. PVC and FRP are brittle: they crack, their interlocks unzip, and there is no reserve after that. The flood case still sizes the section (Section 17), but seismic behavior is a strong reason to build it in a ductile material.

The ground will hang on the wall. The levee has settled about two feet since the 1960s and is still moving; Kleinfelder warns that "if new loads are placed on the levee, significantly greater settlement will occur" [GDR §10.2]. As settlement continues, the soil drags down on the sheets — "downdrag." Steel sections and interlocks carry that load; composite interlocks have little axial capacity and can pull apart. It also drives a design choice: the sheet tips should stop in the mud rather than bear on the stiff soils below, so the wall settles gently with the levee instead of becoming a hard point — which puts even more premium on a stiff section, and on the lightest section that does the job.

The honest case for composite — and the answer. Composite's real advantages are corrosion resistance and light weight for tight access: Reach 2 crest widths average 3 feet, homes sit 20–100 feet off the levee, and there is no vehicular access along it [GDR §§3.2, 9.1]. Both are answered without giving up the seismic case. Corrosion is a solved problem — sacrificial thickness or coating in the splash and air zones, where the loss actually occurs; steel buried in undisturbed Bay Mud corrodes very slowly (Section 9). And tight access is solved with shorter spliced steel sections or a press-in rig — not by accepting a wall that cannot take the earthquake load.

6.4 The Comparison in One Table

Table 1 — Steel vs. composite: design and program comparison

	County — Composite (EverComp EC 80.5)	AltBOD — Steel (Nucor SKL/SKS)
Material	Vinyl/fiberglass [p. 19]; SER now says "composite or steel," ~14 in. max width [SER p. 8]	Cold-formed steel, welded interlocks
Behavior at obstruction	Refuses or is damaged; field-test refusal at 12 in. [p. 109]	Drives through; isolated refusal handled locally (§13.5)
Pre-excavation	BOD: 48–60 in. trench on 75% of alignment, \$642,000 [pp. 105, 109]; SER now: 2-ft × 30-in. trench at obstructions [SER p. 18]	None carried; obstruction handling as scattered events
Existing TRB / levee	Removed (\$406,250) — single barrier, exposure window [pp. 16, 105]	Remains in service — two barriers, no exposure window
Recompaction	83–90% achieved vs. 90% spec [pp. 110, 112]	Not applicable — no trench
Stiffness in soft Bay Mud	Vinyl $\approx 1/70$ th of steel's modulus, FRP $\approx 1/10$ – $1/6$; top deflection in inches (§6.3)	Full steel stiffness — governs in this ground
Earthquake behavior	Brittle — cracks, interlocks unzip, no reserve (§6.3)	Ductile — yields and keeps working; repairable
Downdrag from settling levee	Low axial/interlock capacity; can pull apart (§6.3)	Sections and welded interlocks carry it
Handling	Wide panels; deflection concerns; guide/protection practices	≈ 490 -lb sheets; excavator side-grip hammer; no special tooling
Field test	Required; returned FS 0.5, refusal, trenching [App. C]	Not required — established practice (Bolas 2014)
Construction access	Barge from Buck's Landing, spudded in channel, up to 20 mudflat crossings; May–Oct season [SER pp. 19, 23]	Land-side only; Sept–Jan window, outside nesting season [SER p. 43]
Docks & walkways	Removed; replacement "generally the responsibility of the property owners" [SER p. 14]	TRB stays — walkways remain; ~30 local repairs (§11)

Reserve for sea-level rise	Sized to limit; no extension capacity	Structural headroom to cap/extend (App. A)
Maintenance	"Specialized equipment and trained labor" [p. 26]	Repairable in place with common equipment (§9)
Permanent easement	18 ft per Sheet C5.0	6-ft strip + 12-ft temporary easement
Production basis	>100 LF/day claimed incl. trenching [p. 113]	62 LF/day carried (conservative) (§13.6)
Indicative program cost	~\$25–30M	\$12–15M (§14) — contractor verification pending

Bracketed page numbers in this table cite the County BOD (printed pagination) unless marked SER; [App. C] is the County BOD's Appendix C.

The bottom line for a builder. Even if composite sheets carry a lower material price, the composite *system* buys a demolition program, a trenching program, a recompaction problem its own field test could not close, and a season with the neighborhood's protection removed. The steel *system* buys sheets and driving time. Total installed cost — not material unit price — is the basis of comparison (to be tested against contractor pricing — see Contractor Review Questions 2 and 6, Section 19).

7. Levee Protection

Protection of the existing levee — stability, erosion, armoring — is beyond the scope of the County BOD; this section supplies it. The steel sheet, driven along the outboard face of the TRB and grouted beneath it, does three things at once: it forms a positive seepage cutoff through the fill into the Young Bay Mud (minimum 5'-0" penetration carried for cutoff, independent of the deeper structural embedment); it armors the waterside toe of the aging levee against tidal erosion; and it converts the levee and TRB from primary defense into a protected, redundant second line.

Burrowing protection. Animal burrows are a recognized way levees fail, and the County BOD notes the TRB alternative "will require ... continued gopher abatement" [County BOD p. 17]. A continuous driven-steel wall is a permanent, passive barrier through the burrow zone — it ends the abatement program instead of budgeting for it forever.

What the 2013 record says fails — and what holds. Kleinfelder's risk analysis is clear about what fails: at near-crest water the combined probability of failure is 84–94 percent — the origin of the "up to 90 percent" figure — driven by "redwood boxes, encroachments and erosion" [GDR §§11.4–11.5, pp. 51–54; Plate 14 and App. E]. What holds is the ground itself: seepage under the foundation scored "very low," because 45–50 feet of Bay Mud is its own seal [GDR §11.2, pp. 40–41], and every documented seepage problem runs through the man-made fill (rodent tunnels, toe seepage, utility penetrations [GDR §§5, 9.1, pp. 19–20, 27]). So no deep cutoff is needed: a steel sheet through the fill into the Mud seals exactly the defects the record documents, with the grout curtain closing the remaining paths at the timber line. This design retires the failure drivers the County's own consultant identified and relies on the foundation that same consultant found adequate. Nothing is demolished or regraded on the levee itself — the neighborhood is never less protected during construction than it was the day before work began. Under the County design, the TRB is removed as part of the work [County BOD pp. 16, 105].

8. Recommendation & Design Basis

Recommendation: lightweight cold-formed steel sheet pile (Nucor Skyline SKL/SKS series), installed from the land side along the outboard face of the existing TRB. The recommendation rests less on the wall than on what it makes possible: a 6-foot permanent easement owners will sign, land-side-only construction the CEQA document already assumes, and retention of the existing levee as a second barrier.

8.1 Governing Design Basis

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cont.

- **Design maximum water level:** El. 11.0 NAVD88 — identical to the County BOD [County BOD p. 10]. Rear-yard grade $\approx$ El. 5.5; retained head $\approx$ 5.5 ft.
- **Alignment:** ~one foot creekside of the TRB face — no contact, no demolition, no pre-excavation; everything behind the wall line stays as it is. The offset stays within the permanent strip (Section 10.3) and the County's own C5.0 creekside dimension.
- **Embedment:** minimum 5'-0" into Young Bay Mud for levee protection and seepage cutoff; full structural embedment per Appendix A, whichever governs.
- **Section:** Nucor Skyline SKL/SKS; single row; welded interlocks. Section selection and deflection check in Appendix A.
- **Grout curtain** beneath the TRB where required for cutoff continuity.
- **Factor of safety:** $FS \geq 1.5$ against rotation per the FEMA-referenced criterion the County adopted [County BOD p. 34]. For reference, the County's composite section requires 14 feet of embedment for FS 1.5 at 6 feet of exposure [County BOD p. 103], and its field test achieved FS 0.5 [County BOD pp. 38, 102].

Visual profile. With the design level at El. 11.0 and the berm averaging ~El. 9.75, the new wall tops out only one to two feet above the existing timber along most of the alignment. From the back yard, the owner sees what is already there — a low wall at the property edge, a foot or two taller. The per-parcel exhibits (Section 10.6) will show it to scale.

Key principle: the steel sheet pile becomes the primary flood barrier. Protection no longer depends on the condition of the earthen levee or the timber TRB — both remain as redundancy, not reliance.

9. Long-Term Durability & Maintenance

The County BOD states a 30-year project design life alongside a 50-year product claim but contains no O&M plan [County BOD pp. 8, 10, 23]. This section supplies one for steel.

Service life. Steel is protected two ways: by sacrificial oversizing — extra section thickness beyond structural demand, so the wall can corrode for decades without losing required capacity — and by coating. ("Coating" here includes galvanizing: galvanizing is a coating, a zinc layer bonded to the steel; a shop-applied epoxy system is the other common option.) Exposure here is limited: most of every sheet sits in anaerobic Bay Mud where corrosion is very low, and the exposed face stands in air above a brackish creek, wetted mainly at high water. "Steel rusts" is a perception; at this site it is a designed-for condition (corrosion basis, allowance, and design service life stated in Appendix A). A coating — galvanizing or epoxy — is optional at roughly \$600K, small against the program, and the section performs uncoated within its sacrificial allowance. The welded interlock eliminates the composite system's joint-sealant dependency ("SwealSeal" [County BOD p. 23]).

Maintenance regime. Inspection is an annual walkdown plus a post-event check, performable by District staff without equipment or specialty training. Repair, if ever needed, is common steel work — cut, weld, patch, or extract-and-replace with the same light equipment that installed the wall; any Bay Area marine contractor or steel fabricator can do it. The County says of its own system: composite is "not easily repaired if damaged"; replacement "requires specialized equipment and trained labor" [County BOD p. 26].

Sea-level rise adaptability. If future criteria raise the required crest, the wall's structural reserve allows it to be raised in place — a welded cap extension or added section height — with the same light equipment, entirely within the 6-foot strip already acquired. Adaptation becomes an increment of steel, not a second program. A composite section sized to its limit has no comparable path: raising it means replacing it, and replacing it re-opens the property question.

The local record. The Bolinas (Wharf Road) seawall — designed by the author, built for the County of Marin in 2014, steel sheet pile in Bay Mud — has required no maintenance known to the author in roughly twelve years, and dated photographs show it in good condition. The proposed wall is based on that design.



Figure 5 — Bolinas (Wharf Road) steel sheet pile seawall, designed by the author for the County of Marin: (a) installation, October 2014; (b) in service, August 2021 — no maintenance performed; (c) steel sheet detail October 2014

. Photographs: Wm. Tucker.

10. Right-of-Way & Easement Basis

Right-of-way is the cost and schedule driver of the project, treated here as a design subject in its own right. Final legal descriptions and instruments will be prepared by counsel before any acquisition campaign or formal submittal.

10.1 What the County Record Contains

Scope of the BOD. Right-of-way sits outside the County BOD: the wall "is located on private property that is entirely single-family residential use" [County BOD p. 16], owner restoration is referred to "negotiations between the property owner and Marin County's Real Estate Division" [County BOD p. 32], and property rights are otherwise beyond its scope. The absence of recorded right-of-way has been documented since 2013 — Kleinfelder: "With only minor exception, the District or County does not possess right-of-way for levee maintenance ... An easement for the levee is not in place." [GDR §11.4.2, p. 52].

The \$10 million line. The only located public source for the right-of-way figure is the County's December 3, 2025 cost summary: Planning & Design \$0.8M / Environmental \$0.2M / Right of Way \$10M / Construction \$14M — \$25M total. No engineer's estimate, appraisal basis, or per-parcel arithmetic supporting the \$10M has been located, and the arithmetic it implies — roughly \$90,000 per parcel — is an order of magnitude above the County's own reported offers of \$5,000–\$10,000 (~\$0.6–1.1M total).

What the County says is inside the number. Per Supervisor Sackett, the figure is substantially transactional — surveys, legal descriptions, processing across ~111 parcels and that work is still ahead: a \$5M County loan to the Flood District was moved in June 2026 to begin it. Transactional cost is exactly what this report's approach collapses: because the parcels are lots on recorded subdivision maps and the alignment follows one physical structure, a single corridor control survey (Section 10.2) replaces ~111 bespoke boundary surveys with templated record-reference descriptions. If the \$10M is mostly surveys and legal work, it is not a market price for property rights it is transactional cost, and that is precisely what the corridor-survey approach reduces.

The SER's easement description. The August 2026 SER states easements "both permanent and temporary" up to 18 feet wide across 115 parcels, plus up to 16 water-access easements and up to 10 additional temporary access parcels, with a work zone of 10–18 feet [SER p. 14]. The permanent/temporary split is never stated, and there is still no instrument and no cost basis. But the concession matters: the County has now written a two-instrument structure — permanent plus temporary — into its own project description, which is exactly the structure this report proposes (Section 10.3). What remains in dispute is only the width of the permanent piece.

The drawings: an easement the design itself treats as mostly temporary. Sheet C5.0 (100% Construction Documents, 11/02/22) dimensions the 18-foot easement as 3 ft creek side + 2 ft wall zone + 13 ft land side — the 13-foot strip annotated for grading, compaction, and reseeding as construction access, ending at a temporary construction fence. By the County's own labels, 13 of the 18 feet are construction-phase; the permanent functional footprint is about 5 feet. No recorded easement instrument has been located — that the County intends all 18 feet permanently is an inference from its drawings and budget figure, flagged, not asserted.

10.2 Alignment Basis

The alignment fixes the footprint on each parcel, which drives signature probability, price, and schedule. This design defines it by an existing physical structure — the outboard face of the TRB — and that choice pays off: one stationed centerline survey plus record boundary research generates all ~115 easement descriptions as uniform-width strips referenced to the station line. Because the parcels are lots on recorded subdivision maps, each description can simply reference the map ("the northeasterly 6.0 feet of Lot 14, Block 6, Map of Santa Venetia..."), and field work shrinks to a single corridor retracement along the 1.5-mile alignment followed by templated per-parcel packages. Two checks: rear boundaries along a tidal creek may be high-water lines that move legally with the water — examine the recorded maps; and confirm the wall alignment falls inside the described strips after retracement.

Step 1 of the entire program — for any wall design — is a corridor control survey tied to the recorded maps: one crew, weeks, design-agnostic. A BLK2GO scan on the same control puts the as-built TRB line, record geometry, and easement strips in one coordinate system — the basis for every drawing and parcel exhibit.

10.3 The AltBOD Right-of-Way Basis

Two instruments per parcel:

- **Permanent maintenance easement:** a 6'-0" uniform strip at the creekside face of the TRB, containing the steel sheet line. It grants inspection and maintenance access only — the owner grants rights over the wall corridor that has stood at the yard's edge for decades, not new ground.
- **Temporary construction easement, 12 ft additional:** fenced for the work, then released, graded, compacted, reseeded, and restored (Section 15). Expires by its terms; compensated as rental value; routine, and not a program risk.

In one line: 6 permanent feet plus 12 temporary feet gives construction the same 18-foot footprint the County's drawings show — then returns two-thirds of it. The County's instrument keeps all 18 feet forever.

Table 2 — Right-of-way basis comparison

	County design	AltBOD design
Wall width	~14 in., "composite or steel" [SER p. 8]	6–8-in. steel
Permanent easement	Up to 18 ft, "both permanent and temporary" — split never stated [SER p. 14]	6-ft strip at the wall line
Construction access	Inside the permanent take	12 ft temporary, released & restored
Easement basis document	None — no easement content in BOD	This section + per-parcel exhibits
ROW in cost estimate	No line item [App. B]	Explicit, itemized (§14.3, App. B)

10.4 The Legal Framework — the Narrow Take Is a Lawful Baseline

No statute fixes the width. No California statute sets a minimum permanent-easement width for levees or floodwalls. The quantified analogues are all smaller than 18 feet and all conditional — even the Central Valley Flood Protection Board regime (California's strictest, and inapplicable to a tidal Bay levee) defines its corridor as the section plus ~10 feet landward, yielding to "the real property rights acquired" [23 CCR]. Eighteen feet is a choice, not a floor.

Federal practice favors the minimum interest. USACE policy requires the sponsor to "acquire the minimum interest in real estate" supporting construction and O&M: its standard permanent estate expressly covers a floodwall, and construction areas are Temporary Work Area Easements that expire and revert. The USACE vegetation-free-zone corridor (ETL 1110-2-571) is measured from the structure and expressly bends to the acquired real-estate interest — small for a 6–8-inch wall. The Las Gallinas system is a locally owned, non-federal levee: privately built, maintained by the District since its 1953 formation, with USACE's role in the record limited to studies and reconnaissance [GDR §§1.2, 5] and the County program funded through FEMA grants rather than a federal project authorization. USACE real-estate practice is therefore persuasive here, not binding — and it points the same direction: toward the minimum interest.

California law recognizes exactly this structure. CCP §1240.030 conditions any taking on "the greatest public good and the least private injury"; §1240.110 recognizes lesser interests including temporary occupancy. Civil Code §806 fixes an easement's scope by its grant: maintenance access is legally distinct from — and narrower than — reconstruction rights, and courts read easements narrowly. Compensation runs the same way: a temporary easement is paid as rental value for its term, while a permanent take is paid as a permanent loss of property value, so shifting 12 feet from permanent to temporary is both easier to sign and cheaper per parcel [CCP §§1263.310–.410]. The published authority on scope is *Scruby v. Vintage Grapevine, Inc.* (1995) 37 Cal.App.4th 697 — the easement holder must impose "as slight a burden as possible" on the burdened parcel, and use beyond the grant is surcharge. The District's acquisition authority derives from its enabling statute, the Marin County Flood Control and Water Conservation District Act [Stats. 1953; Wat. Code App. ch. 68].

Precedent. The South San Francisco Bay Shoreline Project separates its perpetual Flood Protection Levee Easement from term-limited Temporary Work Area Easements; the Napa River project acquired urban sheet pile floodwalls on a reported 15-foot permanent strip plus temporary easements (per *Napa Valley Register* reporting, July 2024). The County itself has moved this direction — Supervisor Sackett: the easement is "just to construct this wall and to do annual maintenance, and if we ever need to replace it again, we have that right."

This report extends that logic, then removes the replacement rationale with a barrier durable enough not to need it.

10.5 Why the Narrow Permanent Take Is Defensible

The original concept was no permanent easement at all — a reversible barrier under license or temporary rights. The County's Public Works Director stated the counter-position directly: permanent easements are good public policy and required for funding (Christopher Blunk, PE, meeting with W. Tucker — March 2026. This report accepts both points: the two-instrument structure concedes a recorded, perpetual right — satisfying funding and policy — while sizing it to what the barrier actually needs. The dispute is not whether the District holds a permanent right; it is whether that right must be 18 feet wide. A steel barrier with a multi-decade life and an in-place repair path (Section 9) needs maintenance access, not perpetual reconstruction rights; Bolinas is the County's own evidence the steel maintenance burden approaches zero. The 6-foot instrument gives the District a recorded, perpetual, Prop-218-defensible right; asks the owner for the corridor at the yard's edge rather than the back yard; and the construction footprint expires. FEMA's accreditation rule itself imposes no easement requirement [44 CFR 65.10]; FEMA compatibility and possible County preference for broader rights are addressed in Section 17 of this report.

10.6 Per-Parcel Exhibits

Every parcel needs its own exhibit (115) regardless of wall design — for recording, negotiation, and assessment definition. With corridor control established, each is hours of drafting from one base map rather than a \$5–10K bespoke survey. The exhibit is also the kitchen-table document: every owner sees their own yard drawn with the strip on it. Some fraction of acquisition difficulty is likely a drawings problem, not a terms problem.

11. Existing Docks & Waterfront Structures

The County BOD prices "Dock Removal — 13,500 SF" at \$253,125 and leaves everything after removal to real-estate negotiations [County BOD pp. 32, 105]. This section supplies a dock inventory approach, a replacement scope, and a design concept for how a dock crosses the new wall — because docks are the structures most affected by the project, the likeliest driver of owner objection, and a design that strands docks will not collect 115 voluntary signatures.

Liability containment and the retention advantage. The County design removes the timber wall and builds several feet above the old grade, so every dock crossing comes out — the SER's demolition inventory runs 7,000 LF of TRB, 13,500 SF of dock, 4,500 SF of deck, 3,945 SF of stairs, and 62 trees [SER p. 16]. What changed in August 2026 is who pays to put it back: replacement of docks, decks, and stairs "would generally be the responsibility of the property owners," with the District reserving an option it will decide before construction [SER p. 14], and unpermitted structures may be removed and not replaced [SER p. 11]. The BOD estimate's ≈\$1.28M of removal and replacement [County BOD pp. 105–106] has become removal only — the rebuilding cost now lands on the same owners whose signatures the program needs. The AltBOD drives a 6–8-inch sheet a foot outside the existing wall: the TRB stays, walkways and gangways remain in service, and reconstruction is limited to structures in direct conflict with the sheet line — a local repair (cut, frame, reconnect at the penetration), where the District's obligation ends. Observed use of many docks appears low, arguing further for repair-at-penetration over wholesale replacement.

Inventory method and penetration concept. The dock inventory, produced from the corridor LiDAR scan and current aeriels and keyed to parcels, classifies every waterfront structure: (A) no conflict; (B) minor conflict — trim and re-support at the line; (C) direct conflict — framed penetration required. At Condition C the concept is a framed opening with a welded steel collar, the crossing member re-supported each side, and a lockable gate where the crossing serves as yard access — a standard detail, fabricated once and repeated. The classification appears on each parcel exhibit, so every owner sees their dock's condition and remedy before signing.

Design intent: preserve owner access at every dock — penetrations with gates, local set-offs, or coordinated modification, resolved parcel by parcel. No stranded docks. Dock access disturbed during construction is restored as part of the work, costed in Appendix B. County acquisition terms reportedly differ for dock parcels (\$10K vs. \$5K) — unverified; whether the County's Construction Documents address docks beyond the removal line item is an open PRA question.



Figure 6 — Private walkways and docks along the alignment: (a) walkway between homes leading to the creek; (b) dock at Las Gallinas Creek. Under this design these remain in service. Photographs: W. Tucker.

12. Easement Acquisition Strategy & Cost

The constraint. Three facts stack up: a barrier with a gap in it fails, so the alignment needs every parcel; the County has said it will fund only voluntary acquisitions — its own constraint, not a FEMA mandate (44 CFR 65.10 imposes no easement requirement); so 115 owners must actually sign [SER p. 14]. The only alternative is eminent domain, and the schedule alone rules that out: contested acquisitions plausibly add two to three years (counsel to confirm typical timelines), while the County's own estimate grows 8–12 percent per year [\$10.4M (2022) → \$13.7M (2025), County BOD p. 106] — five years of delay adds half again to construction cost. The likelihood that each owner signs is therefore the governing variable of the whole program, which is exactly why narrowing the ask is the design decision that matters most. By the County's own project update, the District holds permanent easements on 16 of the 111 properties and "cannot make a showing of ownership or control at this time" [County Public Works, *Santa Venetia Floodwall Project Update*, March 2023]; the SER now counts 115 parcels [SER p. 14].

Why the small take signs. An owner asked for a 6-foot strip at the yard's edge plus a construction easement that expires is being asked a materially different question than one asked for 18 permanent feet of a 60-foot back yard. The price is lower, the appraisal simpler, the yard comes back, and the exhibit shows plainly what is and is not granted. Signature probability — not survey savings — is the economic heart of the approach; per-parcel transaction costs are largely fixed regardless of width.

The Proposition 218 connection. Any funding path likely runs through a Prop 218 assessment vote, and the failed 2021 measure shows residents hesitate without a demonstrated path to construction. A credible, contractor-verified alternative makes a yes vote a vote for a wall rather than an open-ended assessment.

Residual risk, stated honestly. The narrow ask improves the odds on each parcel but does not change the basic math: a continuous barrier needs all 115 voluntary signatures, and this report cannot engineer its way past an owner who declines. What it can do is shrink the ask, price it fairly, and show every owner exactly what is being asked of them. The signature campaign itself is a community undertaking outside this report's scope.

13. Constructibility & Means and Methods

This section is written to be tested and challenged by builders: equipment, sequence, production, and logistics stated so every assumption can be priced or corrected. The questions on which contractor judgment is requested are consolidated in Section 19 (Contractor Review Questions); the parenthetical pointers in this section and Section 14 refer to that list by number.

13.1 Access & the Working Corridor

All work proceeds from the land side, within the 12-foot temporary easement plus the 6-foot permanent strip — the same 18-foot footprint in the County's drawings. The County BOD's physical constraints are adopted: equipment width under 10 feet between houses, 10-foot working corridor plus swing room, no work below El. 6.0, utilities protected in place, erosion controls per plan [County BOD pp. 11, 28–29, 114–115]. The work window carried here remains September 1 – January 15 — the window the 2019 clearance used and the period the County's own August 2026 SER identifies as "outside nesting season" [SER p. 43]; the SER's move to a May–October season (Sections 4.4, 13.4) is a problem this design does not have. Entry is between houses at selected access parcels; once fenced, the corridor is continuous, so the crew walks the wall line. Sheets arrive by flatbed at the nearest street access and shuttle to the work front — sub-500-lb sheets move with the excavator or a small telehandler, no crane (delivery and shuttle logistics — see Contractor Review Question 5, Section 19).

Field-verified access (site walk, July 3, 2026). Natural equipment access exists at Pump Stations 2 and 3. Pump Station 1 has none — and also needs the locally heavier braced or tied-back section (Section 13.7), a compounding condition to plan deliberately. Pump Station 5 needs some development as an entry point. A limited number of tight stretches will require procured access, budgeted in the easement program.

13.2 Equipment Spread

Deliberately ordinary: one Cat 313-class excavator (sub-10-foot) with a side-grip vibratory hammer — the same machine class the County's field test used in this corridor [County BOD pp. 28–29, 108] — plus a small support machine, a welding rig, and a compact grout plant. Crew of six. No crane, no barge, no mandrels, no guide frames, no specialty tooling. Carried at \$10,000/day all-in (Section 14).

13.3 Installation Sequence

Work proceeds parcel-block by parcel-block (8–12 parcels) to minimize the time any yard is fenced:

- Set out the wall line from corridor control; fence the temporary easement; photo-document every parcel (the before-record for restoration).
- Drive sheets along the outboard face of the TRB — one foot creekside, no contact, no demolition — to design tip elevation.
- Weld interlocks and cap; place the grout curtain where required.
- Release the block: strip the fence, grade, compact, reseed per the County's own restoration spec, reconnect dock access, move forward.

At the carried rate the work front occupies a parcel for days, not weeks — and because the TRB never comes out, no parcel ever stands unprotected behind an open excavation.

13.4 The Access Contrast

The 2019 CEQA document committed to land-side access; the BOD's construction analysis then found land access "extremely limited" and recommended a tide-dependent modular barge [County BOD pp. 11, 29–30]. The August 2026 SER resolves that tension by formalizing the water program and superseding the land-side commitment: a barge staged at Buck's Landing, moved only on high tides — possibly at night — and spudded in the channel for up to 12 hours at a time, with up to 20 mudflat crossings 20–200 feet long by slide pontoon and amphibious excavator [SER pp. 19, 23]. That program requires a CDFW \$1600 streambed alteration agreement, \$401 water-quality certification, a USACE \$404 permit, and a Rivers & Harbors \$10 permit [SER p. 26] — and it is the stated source of the SER's new significant impact to nursery sites and its more severe impacts to Ridgway's rail, black rail, and the salt marsh harvest mouse [SER pp. 43, 52]. The steel alternative needs none of it: no barge, no marsh crossings, no in-water work, no marine permits — the 2019 land-side commitment, kept.

13.5 Obstructions & Driving Conditions

The 2013 borings say precisely where the work is: a thin dense crust (blows 50+ in the top 2–4 feet at two borings) over loose to medium dense gravelly fill over very soft Bay Mud, with angular gravel, occasional cobbles, and "asphalt and brick fragments" at one boring [GDR App. A, Plates A-2–A-9]; the worst refusal zones in the record are on Reach 1, not this alignment — the 50-blow refusals are all in borings KC-4, KC-5, and KC-9, every one of them on the Reach 1 public-access levee (locations: Figure 4) [GDR §6.1, p. 21; App. A, Plates A-6, A-7, A-11]. The protocol follows the ground: spot pre-ripping of the upper 2–4 feet with the excavator bucket where the crust is dense — minutes per station, no trench, no import backfill; on an isolated deeper refusal, extract, spot-excavate, reset, re-drive. Fifty years of driving sheets in Bay Area fill says this profile is routine for steel and a season-long fight for anything brittle. The estimate carries obstruction handling as scattered events within the daily cycle, not a trenching program (judgment and frequency — see Contractor Review Question 6, Section 19).

13.6 Production & Schedule Fit

The model carries 27 sheets/day $\approx$ 62 LF/day, single crew — deliberately conservative against the County's own >100 LF/day field-test claim *including pre-trenching* [County BOD p. 113]. At the conservative rate, ~7,100 LF takes ~115 working days against a ~95-day window — slightly over one season with one crew, comfortably one season with two crews or at the County's claimed production (production rate — see Contractor Review Question 3, Section 19 — the single most schedule-sensitive number in this report).

The SER's own schedule is the cautionary case: it proposes 100 LF/day over a 90–120-workday May–October season [SER p. 23], while its Table 1-4 totals 155 workdays [SER p. 26] — and because rolling TRB demolition must be "coordinated with tide and weather predictions to reduce the potential for localized flooding" [SER p. 14] and wet-season erosion controls begin October 15 [SER p. 26], only about 44 days (September 1 – October 14) are both outside the nesting windows and outside the wet season. A 155-day schedule does not fit in a 44-day window. The AltBOD season has no such conflict: the TRB never comes out, so there is no flood-season prohibition and no October deadline.

13.7 Utility Crossings

Six identified utility crossings are handled per the County's own detail or a short setback panel — \$25K each. More significant, four pump-station discharge pipelines pass through the levee — the same four the 2013 report flags for "backflow or seepage around the pipelines" [GDR §5, p. 20]. At each, over-excavate locally and install an engineered penetration (welded sleeve, link-type seal), backfill and compact: the detail carries the pipeline through the new wall and closes a seepage path documented since 2013 — \$50K per station (detail and unit cost — see Contractor Review Question 9, Section 19).

13.8 Working Next to Houses

Driving is vibratory, not impact — the County's field test measured ~90 dB at 25 feet with low ground vibration [County BOD p. 114], comparable to a lawn mower at close range, for the days the work front is at a parcel. Work hours per County ordinance; advance notice before each fence goes up; the block sequence keeps disruption at any home short; pre-construction photos protect both owner and District (vibration/condition survey protocol to be confirmed with contractors — standard practice). On noise and vibration this report

claims no advantage: the driving equipment is the same machine class either way, and the SER's estimate of 102 VdB at 15 feet at the west-end homes (#55, #57, and #61 Meadow Drive) — at the structural-damage threshold, with crack monitoring and repair-or-compensate mitigation (NOI-1) [SER p. 110] — applies to a steel sheet exactly as to a composite one. The pre-construction condition survey carried here is the same standard practice.

13.9 Spoils, Dewatering & Site Water

A driven wall generates essentially no spoils — the sheet displaces soil. Spot obstruction excavation produces small, local volumes handled in the corridor. No dewatering: no open excavation, no exposed groundwater. Grout returns are contained and disposed per specification (scope check — see Contractor Review Question 11, Section 19).

13.10 Environmental Considerations of the Steel System

Steel is chemically inert in service — no plasticizers, resins, or additives to leach; uncoated steel weathers to a stable oxide, the basis on which Foster City defends natural-steel sheet pile on its Bay levee, and the condition of the Bolinas wall after twelve years. (The County's composite vendor was still "checking to determine if they have data on chemical leaching" [County BOD p. 25].) The land-side method eliminates the County plan's largest exposures — no barge, no marsh crossings, no in-water work, nothing below El. 6.0, no marine permitting — and keeps the September–January season the SER itself identifies as "outside nesting season" [SER p. 43]. The contrast is now explicit in the County's own record: the SER discloses a new significant impact to nursery sites and substantially more severe impacts to Ridgway's rail, black rail, and the salt marsh harvest mouse, all attributed to the May–October season and the marsh crossings [SER pp. 43, 52]; BIO-1 obliges the District to "avoid all take" of three fully protected species [SER p. 48]; and the mitigation rests on a reconnaissance-level survey with protocol rail surveys deferred to annual efforts and a 700-foot buffer that "may be reduced" later [SER pp. 42, 47]. This design does not mitigate those impacts — it avoids them: no nesting-season work, no marsh entry, no rail survey, no biological monitor, no exclusion fencing, no five-year restoration obligation. CEQA path for the AltBOD — addendum vs. new review — to be confirmed with counsel; the avoidance posture should make it the easier document.

14. Cost Basis

The County BOD's cost content is a construction estimate — \$10.4M (2022) escalating to \$13.7M (2025) [County BOD pp. 105–106]; its ~\$25M program figure appears in later materials (Section 10.1). The AltBOD cost basis is presented at two levels, read together: **Section 14.2 models the direct cost of the wall itself** (Table 4); **Section 14.3 adds everything else the program needs** — mobilization, grout, utility and dock work, restoration, the easement program, engineering, contingency — to reach the program estimate (Table 5). The workbook is Appendix B (July 2, 2026); its accuracy rule applies here: every figure is sourced or highlighted for verification, and nothing is final until contractor-verified.

14.1 The Wall, Specified

The product. Nucor Skyline SKS 14: 27.56-inch lay, 14.19 psf, ~6–8 inches deep, 15-foot lengths, ~489 lb per sheet; 3,092 sheets ~ 756 tons plus a continuous cap at \$50/LF. Interlocks welded at the exposed face; base estimate uncoated with a sacrificial thickness allowance (galvanizing an option). Priced per the Nucor ROM of April 17, 2026: \$2,175/ton delivered (~\$1.09/lb); galvanizing +\$600/ton. Nucor's own take-off (3,048 pieces, 745 tons) confirms the quantity model within 2 percent, and Nucor recommends the SKS 14's heavier section for "extra static reserve" — the sacrificial-thickness strategy in the supplier's words (ROM pricing "not guaranteed"; reconfirm at tender; excludes tax, cap system, corner fabrication).

Table 3 — Wall quantities by exposure bracket

Exposed height	Length (LF)	Sheet length	Embedment	Sheets	Steel (tons)
≤3 ft (incl. transitions)	4,319	12 ft	9–11 ft	1,881	368
4 ft	1,518	16 ft	12 ft	661	172
5 ft	682	20 ft	15 ft	297	97
6 ft	379	24 ft	18 ft	165	65
7 ft	202	28 ft	21 ft	88	40
TOTAL (variable-length design)	7,100	—	min 5 ft into YBM	3,092	741
Uniform 15-ft basis (carried)	7,100	15 ft	8–14 ft	3,092	756

Lengths from the GHD LiDAR height distribution at El. 11.0 (Appendix A); pile length = 4× exposed height, 12-ft minimum. The variable-length design (≈742 tons) vs. the uniform basis (756 tons) makes the carried model a slightly conservative envelope (≈2% over). <mark>~700 LF of transition/low sections carried at minimum length — close with the corridor scan.</mark>

Crew, equipment, and day rate. Six people at \$1,000/man-day fully loaded plus the Section 13.2 spread at \$4,000/day: **\$10,000 per working day.**

The cycle — why 27 sheets/day is credible. In Bay Mud, driving is minutes per sheet; the day is governed by corridor handling — shuttle, pitch, set, drive, advance. Twenty-seven sheets in a ten-hour day is one every ~20 minutes, sustained — about half the handling pace the County's field test demonstrated with this machine class (one composite sheet per 10 minutes *including trench work* [County BOD p. 113]). At 27/day the wall takes 115 working days; at the County's demonstrated pace, under 60 (production — see Contractor Review Question 3, Section 19 — the most cost- and schedule-sensitive input in this report).

The arithmetic. \$10,000/day ÷ 62 LF/day = \$161/LF installation; materials \$282/LF; directs \$443/LF; overhead 10%, profit 15%, wall contingency 10% → ≈\$617/LF, \$4.38M for 7,100 LF. Every input is a number a bidder can check; none is hidden in a lump sum.

What moves the number. In size order: production rate (27 → 40 sheets/day saves ~\$380K and closes the season with one crew); steel price (±\$100/ton ≈ ±\$75K); sheet length (the Appendix A variable-length design trims tonnage). Access is where the real uncertainty lives: the plan is Section 13.1's; the dollars carrying it are setup/access \$150K, trestle/access contingency \$500K, and — largest of all — the production rate, a corridor-handling rate, not a driving rate. A contractor who prices this access plan differently changes the estimate more than any material price will; the photo set and LiDAR scan exist so pricing is done on conditions, not guesses.

14.2 Wall Direct Cost Model

Table 4 — Wall direct cost model (Appendix B, Wall Cost tab)

Parameter / Item	Value	Basis
Wall length	7,100 LF	Use 7,100 for this report
Section	Nucor Skyline SKS 14	14.19 psf, 27.56-in lay — actual section data
Sheet length	15 ft uniform	Conservative; variable-length design (App. A) reduces tonnage
Sheets / steel weight	3,092 sheets ≈ 756 tons	≈489 lb per sheet
Steel price	\$2,175/ton delivered	Nucor ROM 4/17/26 — Verify
Materials (sheets + cap @ \$50/LF)	\$2.00M	Uncoated basis; galvanizing optional (\$9)
Crew & equipment spread	\$10,000/day	6-man crew + equipment + misc.
Production	27 sheets/day ≈ 62 LF/day	Conservative vs. >100 LF/day field-test claim [p. 113] — see Contractor Review Question 3, Section 19

Installation (115 working days)	\$1.15M	Single crew
Overhead / profit / contingency	10% / 15% / 10%	Applied in sequence
TOTAL WALL COST	≈ \$4.38M (≈ \$617/LF)	see Contractor Review Questions 2–4, Section 19

14.3 Program Estimate

Table 5 — Program estimate (Appendix B, Program Estimate tab)

Component	Amount	Note
Steel sheet pile wall (Table 4)	\$4.38M	Includes OH, profit, 10% wall contingency
Mobilization / demobilization	\$0.20M	see Contractor Review Question 4, Section 19
Equipment setup & access	\$0.15M	
Grout curtain beneath TRB	\$0.35M	Allowance — extent per App. A; see Contractor Review Question 8, Section 19
Utility crossings (6)	\$0.15M	Allowance 25,000
Pump-station pipeline penetrations (4)	\$0.20M	Welded sleeve + link seal; closes GDR p. 20 seepage paths
Dock penetration repairs	\$0.23M	~30 locations × \$7.5K; see Contractor Review Question 10, Section 19
Erosion control & TCE restoration	\$0.15M	Grade/compact/reseed per County spec
Trestle / access contingency	\$0.50M	Carried unless contractor review retires it — see Contractor Review Question 7, Section 19
Construction subtotal	\$6.31M	
Easement program (corridor survey, exhibits, title/appraisal/escrow, per-parcel consideration @ \$15K, administration)	\$2.59M	Itemized in App. B — the section the County never wrote
Engineering design (8%) + administration (10%)	\$1.18M	EL11 v2 rates
Program contingency	\$0.43M	10% of non-wall construction + easement program
PROGRAM MODEL TOTAL	≈ \$10.5M	\$9.9–11.1M across per-parcel sensitivity
CARRIED PROGRAM RANGE	\$12–15M	Headroom rationale in §14.4

Indicative financing, for context only: at ~660 assessment parcels, 30 years, 5%, the model total services at roughly \$86/parcel/month (parcel count estimated at between 600–890 in project materials).

14.4 Why the Report Carries \$12–15M

The \$12–15M range sits deliberately above the \$10.5M model. The difference is headroom for four named reasons: contractor-identified scope (this document exists to find what the model misses); the unresolved per-parcel consideration structure (Section 12); escalation to the actual construction year, not yet carried; and allowances not yet retired (trestle/access, grout extent, dock count). If review confirms the model the range tightens; if it finds gaps the range absorbs them. Either way the comparison holds: the County's program stands at \$25–30M on its own June 2026 presentation.

14.5 Comparison to the County Program

Table 6 — Program comparison (County figures from Dec. 3, 2025 phase table and County BOD App. B)

Component	County	AltBOD model	Note
Planning & design	\$0.8M	\$0.52M	AltBOD: 8% of construction
Environmental	\$0.2M	—	Within CEQA already cleared
Right-of-way / easement program	\$10.0M	\$2.59M	County \$10M has no located basis
Construction	\$14.0M	\$6.31M	County: \$10.4M (2022) → \$13.7M (2025) per BOD App. B
Administration + program contingency	—	\$1.09M	County carries none visibly
TOTAL	\$25M (now \$25–30M)	≈\$10.5M model / \$12–15M carried	County June 8, 2026 presentation shows \$25–30M

One structural driver deserves emphasis: roughly **\$2.94M of the County estimate is demolition and rebuilding of things this design leaves standing** — TRB removal (\$406,250), pre-installation trenching (\$642,000), dock/deck/stair removal (\$557,588), replacement stairs and ramps (\$725,000), fencing and gates (\$607,969) [County BOD App. B, pp. 105–106]. The balance of the difference is the easement program: itemized here at ~\$2.6M against the County's \$10M line. One caution on comparing programs after August 2026: the SER shifts dock, deck, and stair replacement to "generally the responsibility of the property owners" [SER p. 14], so part of the County program's cost does not disappear — it moves off the County's books and onto the 115 owners whose signatures the program needs. This design leaves those structures standing either way.

15. Restoration

Owners repair their own yards. Each owner receives a restoration allowance — on the order of \$10,000–20,000, paid at completion — to repair fences, landscaping, and yard improvements as they see fit (amount preliminary; reconcile with the per-parcel payment structure in §12 and App. B). The owner controls their own yard; the District's obligation is a fixed number, not an open-ended punch list; closeout is a payment, not a negotiation; and the allowance is visible consideration that helps the easement sign. At 115 parcels (\$1.2–2.3M) it is comparable to the \$1.34M of contractor-built fencing and stairs in the County's estimate [County BOD p. 106]. Beyond the allowance, restoration is minimal because disturbance is minimal.

Closeout mechanics. Block by block: fence comes down; contractor grades, compacts to the County's 90 percent spec, hydroseeds, resets fence panels; owner and District walk the parcel against the pre-construction photos; the allowance is paid and the temporary easement released of record — target 30 days from the work front leaving.

16. Schedule / Time-to-Build

For reference, the County BOD anticipated construction "commencing in 2025" [County BOD p. 8]; the County FAQ now says 2028 at the soonest.

The binding constraint is acquisition, not construction. Survey must precede recordable easements on any path; the \$5M County loan moved June 8, 2026 begins that work. Procurement plus a corridor's worth of boundary work plausibly puts recordable plats in mid-to-late 2027, with ~99 easements still to negotiate (16 of 115 held). The AltBOD path shortens the only thing that matters: corridor survey in weeks, templated exhibits in weeks after, and a 6-foot ask owners will actually sign to compress negotiation — the historical bottleneck.

16.1 Preliminary Construction Schedule

The work window carried is September 1 – January 15 — roughly 95 working days per season, the period the County's own SER identifies as "outside nesting season" [SER p. 43]. At the conservative carried rate (62 LF/day, single crew), ~7,100–7,500 LF takes 115–120 days — slightly over one window; at the County's claimed >100 LF/day (composite, including trenching [County BOD p. 113]) steel should close the season comfortably. Honest range: one season with two crews or at claimed production; a short second season at the conservative single-crew rate (see Contractor Review Question 3, Section 19 — the schedule firms when the contractor panel answers).

An unfinished season is also a design property, not just a schedule risk. The SER contains no winterization or interim-protection plan for its own May–October program; its only phasing statement is that sheet piles would be "extended into the center of the remaining TRB to create a seal," with phasing possibly running up to 10 years, each winter spent behind that hybrid barrier [SER p. 23]. An unfinished AltBOD run is different in kind: new steel standing in front of an intact TRB — better than the existing condition in any month, of any year.

Table 7 — Preliminary program schedule

Milestone	Duration	Notes
Corridor control survey + retracement	4–8 weeks	One crew; design-agnostic; §10.2
Legal descriptions + per-parcel exhibits	4–6 weeks	Templated; overlaps survey
Easement execution campaign	3–6 months	Governing variable — narrow ask; §12
Permits / CEQA consistency	2–4 months	Overlaps acquisition;
Procurement + steel delivery	2–3 months	Overlaps; Nucor rolling schedule — confirm
Installation — season 1 (Sept 1 – Jan 15)	~95 working days	1 crew ≈ 5,900–6,200 LF; 2 crews complete
Completion / restoration (season 2 if needed)	4–8 weeks	Remainder + TCE release

16.2 What Moves the Date

- Signature pace.** The easement campaign is the only activity on the critical path ahead of mobilization; every month saved is a month off the wall date. The narrow ask is the schedule tool as much as the cost tool.
- Production rate.** The difference between 62 LF/day carried and the County-claimed >100 is the difference between two seasons and one (see Contractor Review Question 3, Section 19).
- Steel delivery.** Mill rolling schedules overlap acquisition and should not govern (confirm current Nucor lead times).

Everything else runs in parallel. The program is managed to one number: signatures per month.

17. Risks, Assumptions & Open Items

- **Easement permanence.** The claim that the County acquires substantially more permanent right than the wall needs is inferred from Sheet C5.0 and the ~\$10M budget figure; no recorded instrument has been located. The SER now describes the take as "both permanent and temporary" without ever stating the split [SER p. 14] — the two-instrument structure conceded, the width still undefended.
- **Agency preference for broader rights.** The District may want reconstruction rights, sea-level-rise allowance, or liability buffer. The response is engineering: reserve capacity (extend/cap in place) and in-place repairability remove the reconstruction rationale.
- **FEMA compatibility.** 44 CFR 65.10 requires a qualifying public agency with O&M jurisdiction and a maintenance plan — no easement requirement. Whether the chosen grant path adds site-control conditions is a counsel question. Flanking Alternative B (full-FEMA structure) is retained if needed.
- **Structural basis.** Embedment and section selection are preliminary until Appendix A calculations are completed by W. Tucker, PE; Nucor pricing to be confirmed current.
- **Seismic case.** The GDR rates fill liquefaction and lateral-spreading potential HIGH and defers non-steady-state analyses to final design [GDR §§10.3, 11.3.2, pp. 4, 32–34, 45]. The judgment carried: the seismic case does not control — normal maximum water against the sheet is ~El. 8, free-standing height is low, the El. 11.0 flood case governs the section, and the County's own BOD performed no liquefaction analysis for a composite wall of equal or lesser capacity. Appendix A documents that non-controlling judgment and its basis (W. Tucker, PE).
- **Wall-top vs. the 2013 freeboard criterion.** Kleinfelder's stillwater-plus-2-feet computes to ~11.1 ft NAVD88 on 2013 stillwater [GDR §§1.4–1.5, pp. 3, 8–9]; both designs sit at El. 11.0, deliberately identical, and the steel section's capacity to cap or extend is the designed answer to that margin and sea-level rise.
- **Cost inflation compounds every other risk.** The County's own estimate escalates 8–12 percent per year, and the Nucor ROM re-prices at tender. Inflation converts delay into budget growth on whichever program is running; the cheapest hedge is the shortest credible schedule — the design criterion this report was built around. Escalation is named headroom in the \$12–15M range.
- **Cost model assumptions pending contractor review.** Production rate, daily spread cost, mobilization, trestle/access contingency, grout extent, dock count — each a numbered question in Section 19.
- **Unverified figures.** Dock-parcel payment terms; Bolinas zero-maintenance record; CSW contract scope (was a boundary survey scoped and descoped?); finance plan status (promised end-2025, not located as of June 2026). The easement count is now sourced: 16 of 111 per the County's March 2023 project update (§12).
- **Signature success rate.** The narrow-take thesis predicts higher uptake but does not guarantee 115 of 115; Appendix B carries sensitivity; the community campaign (outside this scope) is the mitigation.
- **Quotation and figures.** County documents are public records, not public domain: short attributed quotes, figures redrawn "after" the source. Counsel review before public release. Not legal advice.

18. Conclusion

Two designs, same site, same data, same El. 11.0 protection level — compared line by line in Table 1. The alternative meets the same flood-protection objective while materially reducing the cost, the schedule, and above all the property ask. The neighborhood stands behind a barrier assessed at up to 90 percent likelihood of failure; the fastest credible path to a wall is a design whose easement owners will readily sign. The bottom line: a steel barrier into the Bay Mud that protects the existing levee long-term, preserves every dock, and sits on an easement a homeowner can sign — at an indicative \$12–15 million.

Next steps: (1) complete Appendices A–B; (2) peer review by three or more heavy-civil contractors and one or two independent engineers against the Section 19 review questions; (3) transmit the contractor-verified draft to the County — Director of Public Works and project manager, cc Supervisor Sackett — with an invitation to review and a defined comment window; any flaw found gets fixed, any objection answered in the final text; (4) publish, with the County's comments incorporated or with the record showing it was offered for review. Verification first, County review second, publication last.

An open invitation. Any reader — contractor, engineer, County staff, or resident — with a question, correction, or better idea is invited to send it to wmta@wmta.com. Every comment will be considered in the next revision. The purpose of this report is not to win an argument; it is to get a wall built.

19
cont.

19. Contractor Review Questions

This section consolidates the questions on which contractor judgment is specifically requested. Each is cross-referenced from the point in the report where the assumption is used; each names the figure carried, where it comes from, and what a different answer would change. Reviewers are asked to answer with their own numbers — the report will be revised to the contractor-verified figures, and the \$12–15M range (Section 14.4) tightens or moves accordingly. Answers, corrections, and better ideas: wmta@wmta.com.

Question 1 — Method and equipment spread (Sections 13.1–13.2). Is a land-side vibratory installation — one Cat 313-class excavator with a side-grip hammer, a small support machine, a welding rig, and a compact grout plant, crew of six, no crane, no barge, no guide frames — a realistic spread for driving 15-foot SKS 14 sheets along a 10-foot working corridor between houses? What, if anything, would you add to the spread, and why?

Question 2 — Crew and equipment day rate (Section 14.1). The model carries \$10,000 per working day all-in: six people at \$1,000/man-day fully loaded plus \$4,000/day for the Section 13.2 spread. Is that a bid-able number for this corridor in the 2027–2028 construction years? On the same basis, does the total installed cost comparison in Section 6.2 hold — that a driven steel wall is cheaper installed than a composite wall that requires TRB removal, pre-trenching, and recompaction, regardless of material unit price?

Question 3 — Production rate (Sections 13.6, 14.1, Table 4, 16.1, 16.2). The model carries 27 sheets/day $\approx$ 62 LF/day, single crew, against the County's own field-test claim of over 100 LF/day for composite sheets including pre-trenching [County BOD p. 113]. This is the single most cost- and schedule-sensitive input in the report: at 27/day the wall takes $\sim$ 115 working days and runs slightly past one September–January season with one crew; at 40/day it closes the season with one crew and saves roughly \$380K. What sustained rate would you carry, and would you run one crew or two?

Question 4 — Mobilization and demobilization (Table 5). \$0.20M is carried for mobilization and demobilization of the Section 13.2 spread. Is that adequate for a land-side program with street-access entry points, and does it change if two crews are run?

Question 5 — Delivery and shuttle logistics (Section 13.1). Sheets are assumed to arrive by flatbed at the nearest street access and shuttle to the work front with the excavator or a small telehandler, no crane. Given the parcel-block sequence (8–12 parcels per block) and the field-verified access points at Pump Stations 2, 3, and 5, is that shuttle plan workable, and what does it do to the daily cycle?

Question 6 — Obstructions and sheet handling (Sections 6.2, 13.5). The 2013 borings show a thin dense crust over gravelly fill with cobbles and brick/asphalt fragments over very soft Bay Mud, with the worst refusals on Reach 1 rather than this alignment (Figure 4). The estimate carries obstruction handling as scattered events within the daily cycle — spot pre-ripping of the upper 2–4 feet, extract-and-reset on an isolated deeper refusal — not as a trenching program. Do you agree with that judgment and its frequency? Separately, is the handling comparison in Section 6.2 (a compact sub-500-lb steel sheet versus a wide composite panel in an obstructed corridor) consistent with your experience?

Question 7 — Trestle and access contingency (Table 5, Section 14.1). \$0.50M is carried as a trestle/access contingency, plus \$0.15M for equipment setup and access; entry development at Pump Stations 1 and 5 is not yet carried. Can the contingency be retired on the Section 13.1 access plan, and if not, what would you carry for access — including the Pump Station 1 and 5 entries?

Question 8 — Grout curtain beneath the TRB (Table 5). \$0.35M is carried as an allowance for the grout curtain where required, with the extent to be set in Appendix A. Is that allowance reasonable for the extent you would expect, and what unit rate would you apply?

Question 9 — Utility crossings and pump-station pipeline penetrations (Section 13.7). Six utility crossings are carried at \$25K each and four pump-station discharge pipelines at \$50K each (local over-excavation, welded sleeve, link-type seal, backfill and compact). Do those unit costs and details hold, and does the locally heavier braced or tied-back section at Pump Station 1 — not yet carried — change your answer?

Question 10 — Dock penetration repairs (Table 5, Section 11). About 30 dock penetration locations are carried at \$7,500 each (\$0.23M). Is the count consistent with what the corridor photo set shows (Appendix D), and is the unit cost realistic for a driven-sheet detail that leaves the dock standing?

Question 11 — Spoils, dewatering, and grout returns (Section 13.9). The design is carried with essentially no spoils, no dewatering, and grout returns contained and disposed per specification. Is there scope

in this corridor that the model is missing — spot-excavation disposal, site water handling, containment — that you would carry as a line item?

19
cont.

References

County materials are public records; quotations are short and attributed, and figures derived from County documents are redrawn and cited "after" the source. Items marked [on file] are available to reviewers on request.

- Marin County Flood Control & Water Conservation District. *Santa Venetia Floodwall — Basis of Design and Project Alternatives*, Version 2.0 (PRELIMINARY). CSW|ST2 / ENGEO / DAC Associates / CivicKnit, March 2023. [Cited as County BOD p. N, using the document's printed page numbers.]
- Marin County — Santa Venetia Levee Upgrade, 100% Construction Documents, Sheet C5.0 typical section, 11/02/2022.
- Marin County DPW. Santa Venetia project cost summary (phase table), December 3, 2025.
- Marin County Flood Control District, Zone 7 budget hearing — record and staff presentation, June 8, 2026 (\$5M loan motion; \$25–30M program figure).
- Kleinfelder. *Geotechnical Data Report, Las Gallinas Levee System, San Rafael, California*. July 3, 2013 (File 96670/OAK13R0247). [Cited as GDR; §N refers to its section numbers and p. N to its printed page numbers ("Page N of 58").]
- GHD. *Flood Barrier Study* (2020); *100% Design Submittal* (2021); *Revised Opinion of Probable Construction Cost* (2022); *Value Engineering Summary* (2022).
- USACE. *Las Gallinas Creek Hydrology, Hydraulics & Coastal analysis*, December 2013.
- FEMA. *San Francisco Bay Area Coastal Study* / effective FIS, 2016–2017.
- FEMA. 44 CFR §65.10; 44 CFR Part 80.
- USACE. ETL 1110-2-571 (vegetation-free zone); *South San Francisco Bay Shoreline Study, Real Estate Plan*, Appendix H, 2015.
- California Code of Civil Procedure §§1240.030, 1240.110, 1240.120, 1263.310–.410; Civil Code §806; *Scrubby v. Vintage Grapevine, Inc.* (1995) 37 Cal.App.4th 697; Marin County Flood Control and Water Conservation District Act, Stats. 1953, Wat. Code App. ch. 68.
- Nucor Skyline. SKS-series data sheet; ROM preliminary budget, 2026. [On file.]
- Wm. Tucker Associates. *Repair of Wharf Road, Bolinas* — construction documents, County of Marin, 2013–2014; site photographs 2014–2025.
- Wm. Tucker Associates. *Sheet Pile Estimate — SKS14* (2026); *Santa Venetia VE Cost Estimate — EL11 v2* (2026); *AltBOD Appendix B — Cost Estimate workbook* (July 2026).
- Marin County Public Works. "Funding Secured for Santa Venetia Levee System"; project FAQ (Jan 2026); Fact Sheet (Feb 2026); "Santa Venetia Floodwall Project Update to be Presented" (March 2, 2023 — easement status: 16 of 111).
- Sicular Environmental Consulting, for Marin County Flood Control & Water Conservation District. *Santa Venetia Floodwall — Supplemental Environmental Review / Subsequent Mitigated Negative Declaration*. August 2026. [Cited as SER p. N, using the document's printed page numbers.] An earlier SER/Subsequent MND circulated December 12, 2023 – January 16, 2024 and was not adopted [SER p. 7, fn. 6].
- *Napa Valley Register*. "Napa project to protect properties from peak flood level," July 2024 (floodwall easement widths).

List of Figures

- **Figure 1** — Santa Venetia and the South Fork of Las Gallinas Creek (aerial). Executive Summary.
- **Figure 2** — Neighborhood street flooding, Santa Venetia. Section 1.
- **Figure 3** — Existing conditions along the TRB (four photographs). Section 4.1.
- **Figure 4** — Site and boring location plan (after Kleinfelder, 2013, Plate 1). Section 4.2.
- **Figure 5** — Bolinas (Wharf Road) steel sheet pile seawall, 2014 installation and current condition. Section 9.
- **Figure 6** — Private walkways and docks along the alignment. Section 11.

Planned additions before final: annotated County Sheet C5.0 easement cross-section (§10.1); AltBOD typical wall section (§8); construction sequence exhibit (§13.3); Appendix A calculation exhibits.

Letter I. William Tucker

- I-1a This comment is preamble; please see the comments and responses that follow.
- I-1b This comment is a summary of the comments that follow. Please see the responses below.
- I-1c The commenter requests changes to SER Mitigation Measure BIO-1 to include protocol-level rail surveys each season prior to the start of work. Revised Mitigation Measure BIO-1, which is included in SER Section 2.4, Biological Resources, already includes such surveys, as stated in the measure:

“Protocol-level surveys will be conducted annually in Las Gallinas marsh and Santa Venetia marsh in all suitable habitat for Ridgway's (California clapper) rail (CCR) or California black rail (CBR). Protocol-level surveys for rails shall follow the methods detailed in the USFWS Site-Specific Protocol for Monitoring Marsh Birds (2017). No work activities, visual disturbance (direct line of sight) and/or increase in the ambient noise level shall occur within 700 feet of areas where CCR and/or CBR have been detected and are likely to be nesting during the breeding season (January 15 - August 31 for CCR, February 1 - August 31 for CBR), though this buffer distance may be reduced depending on site conditions and the nature of the proposed work, in coordination with CDFW and USFWS.”

The surveys would be repeated prior to each work season where work is planned within suitable nesting habitat.

- I-2 The May to October season was selected in order for construction to occur in the dry season; the SER requires this timing both to protect water quality (SER Section 2.10, Hydrology and Water Quality) and in response to CDFW's 2024 comment on the construction period (see Appendix A, response to comment A-3) to minimize potential impacts on fish. The District understands the season is within the rail nesting season, and thus will use the surveys under MM BIO-1 and biological monitoring to guide the contractor's work and avoid impacts to listed species.
- I-3 The Project proposes a construction season of May 1 – October 15, with the end date in October depending on weather; any work after October 15 would only occur after installation of erosion control features (SER Chapter 1, Project Description, Table 1-4). As discussed in Chapter 1, installation of the entire floodwall is expected to take 90-120 workdays, and so could be completed in one season. Lack of funding and detection of special status species could limit the amount of work that could be completed in one season. Therefore, the Project Description anticipates that construction may occur in one or more years over a period up to 10 years in phases. If phased construction is necessary, the most vulnerable areas of the existing levee would be prioritized, and the existing Timber Reinforced Berm (TRB) would be kept in place where the sheet pile wall had not replaced it, to

4x4 EMBEDDED POSTS
TYP 2 @ EA. END OF TRB

SHEET PILE CAP, TYP.

CL

SHEET PILE, TYP.
SEE DETAIL 1, THIS SHEET

12"

12"

12"

24" MIN

24" MIN

WHERE APPLICABLE,
STORM WATER / SEWER
UTILITY CROSSING

SEE POST FOOTING EMBEDMENT SCHEDULE
ON DETAIL 2, THIS SHEET,
8'-0" MAX OR AS APPROVED BY ENGINEER

12"x12" BENTONITE SEAL AROUND WALL,
BOTH SIDES (TYP.)

DRILL HOLE THROUGH CSP
FOR $\frac{3}{4}$ " Ø THRD ROD

$\frac{3}{4}$ " MAX GAP AT
CSP PENETRATIONS

12"x12" CONCRETE PLUG @
TRB AND SHEET PILE POINT
OF CONNECTION (TYP.)

NOTES:

1. PROVIDE $\frac{3}{4}$ " MAX GAP AT SHEET PILE & CAP PENETRATIONS.
2. CONCRETE PLUG HEIGHT 1" PER SCHEDULE SHOWN ON DETAIL 2, THIS SHEET.
3. PROVIDE 12" MIN. CLEAR FROM EDGE OF EXISTING UTILITY TO EDGE OF FOOTING.

3 **TIMBER REINFORCED BERM AT UTILITY CROSSINGS**
SCALE: N.T.S.

Figure RTC - 1

-
- 64

- investigation of the existing levee has not been conducted. Disposal of pressure-treated lumber is discussed in SER Section 2.19, Utilities and Service Systems.
- I-8 The current Project plan set is available to the public at the Marin County Department of Public Works, 3501 Civic Center Drive, San Rafael, during regular business hours.
- I-9 As documented in SER Appendix C (Noise Appendix), vibration field testing and observations were conducted by using a vibratory hammer mounted on an excavator arm to install composite sheet piles, which is the same sheet pile installation method that is proposed for the proposed Project. The measured vibration level of 86 VdB at 50 feet was measured at soil conditions determined to be the best representation of the backyard soils along the proposed levee alignment and were used as the basis for estimating vibration levels at nearby residences. Although several other soil conditions were evaluated during the vibration testing program, those conditions were not considered representative of typical backyard conditions along the levee.

Because the proposed Project design identified the specific sheet pile installation methodology and excavator specifications that would be used, field testing was conducted under those exact conditions at the request of Marin County to provide the most accurate estimate of vibration impacts at nearby residences. Although only composite sheet pile installation was observed during field testing, a similar vibratory hammer would be used for steel sheet pile installations. Other alternative installation methods mentioned by the commenter, such as hydraulic press-in systems, were not evaluated because they are not part of the proposed Project and were not used during the field testing. If alternative methods that generate lower vibration levels were used, vibration levels at nearby residences could be lower than those evaluated in SER Section 2.13.

As discussed in SER Section 2.13, construction activities would occur only during Marin County's adopted hours of construction, and therefore construction would not result in a significant noise impact. Section 2.13 identified a potentially significant impact where vibration levels could exceed the 102 VdB significance threshold for structural damage. This exceedance could occur at the three nearest residences (west of Meadow Drive Bridge) that are within 15 feet of the proposed sheet pile installation activities. This impact was analyzed in the SER by assuming the measured vibration level of 86 VdB at 50 feet (which is 95 VdB at 25 feet). This measured value is conservative and is applicable to steel sheet pile installation given it is above the typical range for a vibratory pile driver as detailed by the Federal Transit Administration¹ and a similar vibratory hammer would be used. As detailed in SER Section 2.14 (Table 2.13-1), steel sheet pile installation could

¹ Per the Federal Transit Administration, the typical range for a vibratory pile driver is 93 VdB at 25 feet.
Source: Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06; Table 12-2). https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf

- generate a vibration level of 102 VdB at 15 feet. Mitigation Measure NOI-1 would reduce this potentially significant vibration impact at the residences west of Meadow Drive Bridge to a less-than-significant level. Steel sheet pile installations east of Meadow Drive Bridge could occur as close as 30 feet from the nearest residence. Using a reference level of 95 VdB at 25 feet, the resulting vibration levels would be 93 VdB at 30 feet and below the 102 VdB significance threshold. Vibration from steel sheet pile installation east of Meadow Drive Bridge would therefore be less than significant.
- I-10 Not all easements have been secured. As stated in SER Chapter 1, the District may, at its discretion, replace or compensate property owners for structures demolished in order to construct the Project.
- I-11 The Project described and analyzed in the SER proposes to remove the existing TRB and construct the sheet pile floodwall along the levee crest. The commenter proposes an alternative to the Project that was not, and need not be considered in the SER: an environmental review to support a Mitigated Negative Declaration need not consider alternatives.
- I-12 The District proposes to construct the Project during a work season running from May to October, as described and analyzed in the SER. Alternative work seasons are not considered. Please see the response to the previous comment.
- I-13 As described in SER Chapter 1, Project Description, pipes would be routed through the sheet pile wall with a clay check dam (SER p. 8); alternatively, a TRB section would be used at outfall crossings. See Figure RTC-1, above.
- I-14 As described in SER Chapter 1, Project Description, the floodwall would be elevated between 2 and 8.5 feet above ground level. Sheets up to 27 ft long would be required in the area around Meadow Drive. The Project plan set, available at the Marin County Department of Public Works, illustrates embedment depth and exposed height by station.
- I-15 This comment does not address the environmental analysis of the Project presented in the SER. Easement details, such as those requested by the commenter, do not have a bearing on the environmental analysis.
- I-16 As stated in the response to comment I-11, an environmental review to support a Mitigated Negative Declaration need not consider alternatives. The SER does not consider alternatives.
- I-17 Please see the response to the previous comment.
- I-18 Please see the response to comment I-11.

Robin Fies

From: Jason Annecone <jason@jasonsinsurance.com>
Sent: Monday, September 28, 2026 3:31 PM
To: EnvPlanning
Cc: jason@sanfrancisco.com
Subject: Public Comment – Santa Venetia Floodwall Project (111 Vendola Drive)
Attachments: Comment_Letter_111_Vendola_Dr.pdf

You don't often get email from jason@jasonsinsurance.com. [Learn why this is important](#)

Dear Ms. Reid,

Attached please find my comments on the 2026 Draft Subsequent Environmental Review / Subsequent Mitigated Negative Declaration for the Santa Venetia Floodwall Project regarding my property at 111 Vendola Drive.

I support the flood-protection project moving forward. My comments are focused on the parcel-specific details affecting my property, including restoration and compensation for affected improvements, easement terms and wall alignment, and construction access and restoration.

I would welcome the opportunity to discuss these items directly with the District and engineering team as the project progresses.

Given today's comment deadline, would you please confirm receipt of this email and attached letter and that my comments will be included in the administrative record? I am happy to resend them in another format if necessary.

Thank you,

Jason Annecone
111 Vendola Drive
San Rafael, CA 94903
jason@jasonsinsurance.com

Jason Annecone
111 Vendola Drive
San Rafael, CA 94903
jason@jasonsinsurance.com

September 28, 2026

Rachel Reid, Environmental Planning Manager
Marin County Community Development Agency
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903

Re: Public Comment on the 2026 Draft Subsequent Environmental Review / Subsequent Mitigated Negative Declaration - Santa Venetia Floodwall Project (111 Vendola Drive)

Dear Ms. Reid,

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cont.

I am writing as the owner of 111 Vendola Drive, a property directly along the proposed floodwall alignment, to submit comments on the revised 2026 Draft SER/Subsequent MND for the Santa Venetia Floodwall Project, in advance of the September 28, 2026 comment deadline. I support the levee upgrade moving forward, and I would like to see it built as soon as funding allows - the existing berm is past its design life and the community bears real flood risk in the meantime. My comments below are aimed at getting the details right at my specific property, not at delaying the project.

1. Compensation and restoration of my current access

The 2026 Draft SER states the District would either compensate for removed structures at fair market value or replace them in kind, at the District's discretion. A fair-market-value figure for an existing dock, deck, trees, and fencing is likely to understate the actual cost of rebuilding comparable access today. I am aware that the District has already completed comparable work elsewhere on this same block, the Santa Venetia Demonstration TRB at 101 Vendola Drive (GHD plan set, September 2020; as-built February 2021), which fully restored berm, stair, and water access, and that the October 2022 Zone 7 Flood Advisory Board materials show similar site-specific access solutions elsewhere on this levee - useful reference points for what "comparable" access should mean here.

I am requesting that any improvements removed, damaged, or made unusable as a result of the project be restored to substantially equivalent condition and functionality by the District, or that I receive compensation sufficient to accomplish that restoration based on documented replacement and restoration costs or another mutually agreed methodology. This should include, as applicable, my dock, deck, trees, fencing, landscaping, grading and drainage, irrigation or utilities, hardscape, and existing water and backyard access. I would like the specific restoration and compensation approach for my property to be discussed and documented before construction affecting these improvements begins.

2. Easement terms and wall alignment at my parcel

2

The Draft SER proposes permanent and temporary easements of up to 18 feet in width across the 115 affected parcels, and I understand from the 2022 materials that this width reflects space needed on both sides of the wall for inspection and maintenance access, not simply the wall footprint itself. I am requesting clarification of the exact width and location of the easement proposed for my parcel, and I am specifically requesting that the District consider aligning the wall at my property as straight and as far toward the landward/western side of the existing levee centerline as engineering constraints allow, to preserve maximum clearance for the existing accessory structure at the northwest corner of my property, near the levee.

I would like to review the specific alignment for my frontage with your engineering team before it is finalized. When available, please also provide a parcel-specific plan or easement exhibit for 111 Vendola Drive showing the

2
cont. Y proposed wall alignment, permanent and temporary easements, construction limits and staging areas, and their relationship to existing improvements on my property. For clarity, my support for the overall project and participation in this environmental review should not be construed as consent to any particular easement, property acquisition, wall alignment, construction access arrangement, or impact to existing improvements.

3. Construction access, disruption, and restoration

3 T The Draft SER describes 90-120 workdays of construction, 7 a.m. to 5 p.m. Monday through Saturday, with the option of water-based (barge) access that could include nighttime work timed to high tides. I am requesting more detail on how construction access and staging will be managed directly in front of and adjacent to 111 Vendola Drive, including: expected duration of active construction at my specific location; whether nighttime barge work is anticipated near my property and, if so, on what schedule and with what noise mitigation; how my access to my own dock and backyard would be maintained or restored during construction; and how portions of my property disturbed or damaged by construction will be restored following completion of the work.

4 T I would welcome the opportunity to discuss these items directly with your engineering team, and I ask that this letter be included in the administrative record for the Subsequent MND. Please contact me at jason@jasonsinsurance.com with any questions or to schedule a site-specific conversation about 111 Vendola Drive.

Thank you for your attention to these concerns, and for the District's continued work on this project.

Sincerely,

Jason Annecone
111 Vendola Drive, San Rafael, CA 94903

Letter J. Jason Annecone

- J-1 This comment addresses the merits of Project, and also how the Project will affect the commenter's property. The comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- J-2 This comment addresses how the Project will affect the commenter's property, and does not address the environmental analysis. It does not require a response pursuant to CEQA.
- J-3 This comment addresses how the Project will affect the commenter's property, and requests details that are beyond the scope of the environmental review. It does not address the environmental analysis and therefore does not require a response pursuant to CEQA.
- J-4 All communications received during the comment period, including this letter, are included in the Administrative Record for the Project.

From: Robert Dobrin <electrachime@gmail.com>
Sent: Monday, September 28, 2026 3:56 PM
To: EnvPlanning
Subject: Additional Long Fin Smelt Comment
Attachments: DobrinSERComments2026.pdf; DobrinSER Comments2.pdf

Please accept this email as a supplemental comment on the August 27, 2026 Supplemental Environmental Review (SER) for the Santa Venetia Floodwall Project. Please include this email in the administrative record together with my previously submitted comment letter, which I incorporate by reference.

My earlier letter discussed the SER's incorrect identification on page 45 of the San Francisco Bay-Delta DPS of longfin smelt as a "federal candidate species," even though the species was federally listed as endangered effective August 29, 2024. It also questioned the SER's related conclusion that no additional mitigation is required.

I would like to add two related points to that comment.

First, the biological analysis cited by the SER appears to predate the federal endangered listing. The SER refers to an April 15, 2024 Kleinfelder biological memorandum. That memorandum predates the August 29, 2024 effective date of the federal endangered listing by more than four months.

The District should therefore disclose whether the April 2024 biological analysis was subsequently reviewed or updated after the federal listing became effective. In particular, please explain whether the conclusions concerning longfin smelt occurrence, habitat, construction impacts, significance, and the need for additional mitigation were reconsidered using the species' correct federal status and the scientific information underlying the final listing.

Simply changing "candidate" to "endangered" would not answer this question if the underlying biological analysis itself predates the listing.

Second, please clarify the status of consultation under Section 7 of the federal Endangered Species Act. If FEMA funding, a federal permit, or another federal authorization provides a federal nexus for this project, please identify the federal action agency and state whether consultation concerning the federally endangered longfin smelt has occurred, is underway, or will be required.

If consultation has occurred, please identify the resulting effects determination and any applicable avoidance measures, work windows, monitoring requirements, incidental-take provisions, or other conditions relevant to construction in or adjacent to Gallinas Creek.

These points supplement rather than replace the longfin-smelt comments in my earlier letter. My concern remains that the SER's error may reflect reliance on a biological analysis prepared under an outdated regulatory and biological framework, rather than simply an incorrect label on page 45.

3 Please include this supplemental comment with my earlier comment letter in the administrative record and address these issues as part of the District's response to comments.

Thank you.

Begin forwarded message:

From: Robert Dobrin <electrachime@gmail.com>

Subject: CEQA Comments – Santa Venetia Floodwall Project – 2026 Draft SER/Subsequent MND

Date: September 28, 2026 at 3:21:30 PM PDT

To: "EnvPlanning@marincounty.gov" <EnvPlanning@MarinCounty.gov>

Dear Environmental Planning Staff,

Attached are my comments regarding the 2026 Draft Supplemental Environmental Review/Subsequent Mitigated Negative Declaration for the Santa Venetia Floodwall Project.

4 Please accept the attached letters and all accompanying materials as my comments on the environmental review and include them, in their entirety, in the administrative record for the project.

Please confirm receipt of this email and the attachments. Note that there are two separate comment letters, each with different content.

Thank you,

Robert Dobrin
Santa Venetia

Robert Dobrin

415-786-1273 215 Vendola Drive San Rafael California 94903 electrachime@gmail.com

September 27, 2026

Via Email and Written Submission

Marin County Community Development Agency
Environmental Planning Division
Attn: Rachel Reid, Environmental Planning Manager
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903

RE: Santa Venetia Floodwall Project - Comments on Revised 2026 Draft SER/Subsequent MND

Dear Ms. Reid:

I am submitting these comments on the revised 2026 Supplemental Environmental Review and Subsequent Mitigated Negative Declaration for the Santa Venetia Floodwall Project. Please include this letter and the cited materials in the administrative record.

I support effective flood protection for Santa Venetia. My concern is whether the present environmental document gives the public and decision makers a sufficiently clear account of what the proposed 11-foot floodwall will protect against, how long that protection is expected to last, what assumptions are built into the design, and what happens if those assumptions prove too optimistic.

A handful of things still bother me, and I think they deserve straight answers and careful fact-checking before the Subsequent MND is adopted.

The most important are the apparent lack of a stated freeboard allowance in the wall-height calculation; residual risk from overtopping, failure, settlement and drainage problems; the effect of sea-level rise over the 30-year design life; the changed federal status of longfin smelt; the environmental consequences of water-based construction and demolition; the seven utility/outfall penetrations; the status of easements on private property; and the possibility that structural protection will change risk perception, investment and exposure behind the wall - the phenomenon generally discussed in the flood-risk literature as the "levee effect."

FLOODWALL HEIGHT, FREEBOARD, AND THE 30-YEAR DESIGN LIFE

The SER states that the Project's objective is to protect Santa Venetia from the 100-year flood for a 30-year design life. To establish the wall elevation, the District considered FEMA's 9.8-foot base flood elevation, the USACE 2013 estimate of approximately 9.1 feet, 1.1 to 2.0 feet of projected sea-level rise by 2060, and 0.5 to 0.6 feet of land settlement. Table 1-1 then gives a range of 10.7 to 11.7 feet as the 'Floodwall Elevation Needed for 100-Year Flood Protection in 2060.' The selected wall elevation is 11 feet. The SER explains that some residents considered a wall higher than 11 feet unacceptable because of effects on views. (SER p. 13.)

That leaves an important engineering question unanswered: does the 10.7-to-11.7-foot calculation include any freeboard? The table appears simply to add the 9.1-foot USACE water-surface elevation, sea-level rise and settlement. If there is a separate freeboard or safety allowance, the SER should identify it and explain its basis. If there is not, the document should explain how an 11-foot crest meets the stated 100-year protection objective through 2060 when the upper end of the District's own calculation is 11.7 feet.

This is not a minor numerical point. At the upper end of the stated range, 11 feet is 0.7 foot - 8.4 inches - below 11.7 feet, before any additional freeboard is identified. The analysis would be much easier to understand if the District simply showed, for the opening year, an intermediate year, and the end of the design life: design water-surface elevation + sea-level rise + settlement/subsidence + required freeboard = required crest elevation. The resulting margin, or deficit, could then be compared directly with the proposed 11-foot crest.

The same section should explain more fully why the 9.1-foot USACE estimate is used rather than FEMA's 9.8-foot base flood elevation. The SER says the District considers the USACE value more representative of local conditions. (SER p. 13.) Given the 0.7-foot difference and the narrow margin involved, a sensitivity analysis using both supported elevations would be useful.

The possibility of later raising the wall to 12 feet does not resolve the present question. The SER says the wall may be designed to accommodate future raising, but also says a future increase above 11 feet is not part of the current Project and would undergo later CEQA review. (SER p. 13.) If raising the wall is expected to be necessary to maintain the stated protection level, the SER should say when that need is expected to arise, what physical work would be required, and whether the current embedment, access rights and

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easements are being designed for it. If future raising is merely an option, it should not be used implicitly to support the present 30-year performance claim.

RESIDUAL FLOOD RISK AND THE JANUARY 2026 EVENT

The Project should reduce the frequency of flooding, but that is different from eliminating flood risk. For a neighborhood that will rely on a long floodwall, the consequences of overtopping or failure are part of the picture the public should be able to understand.

The SER should therefore address representative failure and exceedance conditions, including overtopping, localized low points, breach, seepage or piping, differential settlement, loss of crest elevation, failure at utility penetrations, pump or power failure, backflow through drainage infrastructure, compound tide/storm/runoff conditions, and events larger than the nominal 1-percent-annual-chance event. What would help residents most is a set of plain, readable maps showing where the water could go, how deep it could get, how long it could stay, and what that would mean for homes, roads and emergency access.

The January 2026 flood is particularly useful because it is not a hypothetical event. The SER reports that winter storms coinciding with king tides caused levee overtopping, limited flooding, and approximately \$2.6 million in private and public damage to levee infrastructure. (SER p. 4.) The District should explain whether observed water levels, seepage, overtopping locations, pump performance and drainage behavior from that event were compared with the assumptions used for the new wall. If the event revealed conditions not captured by older studies, the environmental document should say so and explain how the design was adjusted.

THE LEVEE EFFECT, MARIN'S OWN PLANNING DOCUMENTS, AND RESIDUAL EXPOSURE

There is also a broader risk-management issue that is largely absent from the SER. Flood-control literature has long recognized that structural protection can reduce ordinary flood frequency while changing behavior behind the protective structure. Better protection may encourage additional investment or redevelopment, reduce perceived risk, or make residents and institutions less likely to take nonstructural precautions. This is often called the 'levee effect' or the safe-development paradox.

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What makes this especially relevant here is that Marin's own planning documents already connect flood protection with what happens on the land behind it. This is not an idea imported from somewhere else.

The Santa Venetia Community Plan, at page 38, discusses securing easements along the levee and specifically says the County should explore requiring dedication of easements in conjunction with new construction or major remodels on properties protected by the levees. The same page discusses sea-level rise, notes that the sea-level-rise model accounts for the protective effect of existing levees, and even raises the possibility of purchasing highly threatened properties from willing sellers where protective measures are not cost-effective. (Santa Venetia Community Plan, p. 38.)

That seems pretty straightforward to me. Our own Community Plan treats the levee, new construction, major remodeling, sea-level rise and long-term property decisions as connected subjects. Marin also explains that community and area plans contain local land-use policies used to evaluate discretionary planning applications.

The County's 2020 Adaptation Land Use Planning guidance makes the same point at a broader level. It says adaptation should involve plans, policies and projects that can respond to changing conditions, and explains that Marin is looking at how land-use planning tools can be used for adaptation 'in concert with capital improvements,' whether those improvements are green or gray. (Adaptation Land Use Planning: Guidance for Marin County Local Governments, p. 6.) A 7,800-foot floodwall is about as clear an example of a gray capital improvement as I can imagine.

So I think the SER needs to ask a very simple question: what happens in Santa Venetia after the wall is built? Over thirty years, houses will change hands, homes will be remodeled, ADUs may be added, older structures may be replaced, property values and insurance requirements may change, and people who never experienced the old flooding may move here. Will the new wall affect any of those decisions? Could a levee described as providing '100-year protection' change how safe people think the neighborhood is? Could more people or more valuable property eventually become dependent on the wall?

The new floodwall may or may not trigger a building boom. That is not the point. The point is that Marin's own planning documents recognize the connection, and the outside research says the phenomenon is real enough to examine.



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A 2026 systematic review by Angela J. Catalano and Damon M. Hall reviewed 62 peer-reviewed studies published from 2015 through 2024 and describes the levee effect as an interdisciplinary flood-risk issue involving development, economics, policy, vulnerability and risk perception. Ding and colleagues, writing in Nature Sustainability in 2023, found an association between levee construction and accelerated urban expansion within protected floodplains in their national study. Nicole Hutton's California-focused work on Yuba County likewise examined the relationship among levee improvements, floodplain regulation, insurance and development. This not a fringe concept but accepted science.

These studies do not prove what will happen here. They do show why it is incomplete to describe the Project only in terms of reducing flood probability. The County should also look at residual exposure and reasonable nonstructural measures - risk communication, continued floodproofing, emergency planning and land-use measures - so that '100-year protection' does not quietly turn into 'no flood risk' in people's minds.

The same issue applies to FEMA mapping and insurance. If the Project could reasonably affect future flood-map treatment, insurance requirements, lending decisions, rebuilding choices or public perception of risk, the SER should explain what is known and what is not. If the County concludes these effects are too speculative or too small to matter, it should give us the evidence and reasoning for that conclusion.

For those of us who will actually live behind this wall, residual risk is not an academic phrase. Santa Venetia will still be low-lying. Sea level will still be rising. Settlement will still occur. A wall designed around a particular event and a particular set of assumptions can be exceeded. The environmental review should tell us plainly what risk remains, how that risk may change over the 30-year design life, and how the County plans to keep future residents from mistaking flood protection for a guarantee.

THE SER'S 'NO CONFLICT' CONCLUSION CONTRADICTS IMPORTANT PARTS OF MARIN'S OWN PLANNING DOCUMENTS

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The SER concludes that the Project 'does not conflict with relevant CWP and SVCP policies' and therefore finds the land-use impact less than significant. I do not think the record supports that blanket conclusion as presently written.

In fact, that conclusion contradicts - or at the very least cannot be reconciled without considerably more analysis with - specific provisions of the Santa Venetia Community Plan and Marin County's own sea-level-rise adaptation planning.



Santa Venetia Community Plan - page 38.

Page 38 directly connects flood protection with future development and land-use decisions. Under 'Levee Easements,' the Plan says the County should pursue land use policies that include potentially requiring easement dedication (to prevent more intensive use) in conjunction with new construction or major remodels on properties adjacent to the levee.

On that same page, the Community Plan discusses funding to elevate homes to comply with FEMA requirements; possible acquisition from willing sellers of properties in highly threatened areas where protective measures are not cost-effective; increasing flooding and inundation caused by sea-level rise; and sea-level-rise mapping that accounts for the protective effect of existing levees. Santa Venetia Community Plan, p. 38.

Those provisions are hard to square with an environmental analysis that treats construction of substantially improved structural flood protection as essentially separate from future land-use decisions behind the wall. The Community Plan itself recognizes that the levee, new construction, major remodeling, home elevation, FEMA requirements, property decisions and future flood risk are related subjects.

Marin Adaptation Land Use Planning guidance - page 6.

Marin County's Adaptation Land Use Planning: Guidance for Marin County Local Governments makes the connection even more directly. On page 6, Marin explains that its work explores how 'land use planning tools can be used for adaptation and in concert with capital improvements, whether they are green or gray.' Marin County, Adaptation Land Use Planning (2020), p. 6.

The proposed 7,800-foot Santa Venetia floodwall is plainly a major gray capital improvement. Marin's own adaptation guidance therefore says that land-use planning and capital improvements should be considered in concert. The SER, by contrast, evaluates construction of the floodwall but does not meaningfully analyze how providing this new level of structural protection could affect redevelopment, substantial remodeling, investment, floodproofing, insurance decisions, risk perception, or the amount of property ultimately dependent on the wall.

That is more than an omitted discussion of the academic 'levee effect.' It is difficult to reconcile with Marin County's own stated approach to sea-level-rise adaptation.



The contradiction matters because this wall is supposed to last 30 years. During that time houses will be sold, remodeled and replaced; ADUs may be constructed; property investment will continue; FEMA maps and insurance requirements may change; and new residents who never experienced earlier flooding will move into the neighborhood. Those are exactly the kinds of long-term decisions for which Marin's planning documents connect land use and flood protection.

The SER also reasons that increased flood protection would 'preserve, and not alter, the character of the community.' That cannot simply be assumed. Improved flood protection can preserve existing homes while also changing redevelopment, investment and risk perception behind the protective structure. Saying the wall preserves the community, and then using that assumption as a reason not to examine how the wall could change decisions behind it, is circular reasoning.

Community and Marin County Planning documents do not prohibit the constructions of a floodwall. The problem is narrower: the SER affirmatively concludes that the Project does not conflict with relevant planning policies, while Marin's own planning documents say that flood protection, land-use decisions, new construction, major remodeling, home elevation and long-term adaptation are interconnected.

Before adopting the MND, the County should identify the specific Countywide Plan and Santa Venetia Community Plan provisions, if any, it relied on for its no-conflict finding and explain how that conclusion can be reconciled with Santa Venetia Community Plan page 38 and Marin's Adaptation Land Use Planning guidance page 6. If the County believes the floodwall will have no reasonably foreseeable effect on redevelopment, substantial remodeling, ADUs, property investment, FEMA mapping, insurance requirements, floodproofing, risk perception or residual exposure during its 30-year life, it should say so plainly and identify the evidence supporting that conclusion.

State and regional planning guidance points in the same direction

The same concern is not limited to Marin's own planning documents. California and Bay Area flood-planning agencies also treat structural flood protection, land use, residual risk and long-term adaptation as connected issues.

California Department of Water Resources guidance is especially direct. DWR explains that levee improvements can reduce the probability of flooding but can also increase flood risk if additional development occurs in the protected flood-prone area. DWR also emphasizes

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that residual risk remains because a flood can exceed the design level or a levee can fail unexpectedly. That is essentially the same concern raised here: better protection is valuable, but the environmental analysis should not stop with the reduction in flood probability. It should also ask what happens to exposure and development behind the wall over time.

To be sure, not every DWR standard for California levees in general legally apply to Santa Venetia. The point is that California's own flood-management agency recognizes the relationship between levee improvements, development and residual flood risk. That makes it difficult to dismiss the levee effect as merely an academic concern.

The San Francisco Bay Conservation and Development Commission's Bay Plan points in the same direction. Its climate-change and shoreline-protection policies call for shoreline planning to consider future sea-level rise, uncertainty, the useful life of a project, existing and planned flood protection, and the consequences if flood defenses fail. BCDC also recognizes that structural shoreline protection can create a false sense of security and can have cumulative effects when projects are considered together.

Those regional policies are relevant to the questions already raised in this letter about freeboard, overtopping, settlement, emergency access and residual risk. They also raise another practical question for a low-lying neighborhood: whether rising groundwater and landward drainage problems have been adequately considered along with surface-water protection. A wall that keeps Bay water from coming over the shoreline does not necessarily answer every pathway by which higher Bay levels can affect water conditions behind the wall.

Plan Bay Area 2050+, adopted by ABAG and MTC in March 2026, likewise treats sea-level-rise adaptation as part of a coordinated regional resilience strategy and identifies shoreline adaptation investments, including levees and other protective infrastructure. I do not suggest that Plan Bay Area changes Marin's local land-use authority or independently prohibits this Project; the Plan itself says cities and counties retain that authority. It is useful here because it confirms the current regional planning approach: sea-level-rise infrastructure is part of a larger land-use, investment and resilience picture, not simply a stand-alone construction activity.

Taken together, these state and regional materials reinforce the basic problem with the SER's planning discussion. Characterizing the proposed flood wall as solely a construction project does not answer the long-term planning questions created by placing major

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structural protection around a low-lying community for the next 30 years. The County should explain how its no-conflict finding accounts for local, state and regional planning documents that say otherwise.

LONGFIN SMELT AND THE CHANGED BIOLOGICAL SETTING

The longfin smelt discussion needs particular attention because the SER uses an outdated federal status. On p. 45, the SER describes longfin smelt as a 'state-listed and federal candidate species.' The San Francisco Bay-Delta distinct population segment of longfin smelt was federally listed as endangered effective August 29, 2024. The species remains state-listed as threatened. I'm scratching my head trying to figure out how the District missed this.

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This matters because the SER itself acknowledges that the 2019 IS/MND did not analyze special-status aquatic biological resources or Essential Fish Habitat; the earlier project was expected to use land-based construction. The revised Project is different. It may use a barge in South Fork Gallinas Creek, the barge may sit on the channel bottom at low tide, and water access and marsh crossings are now part of the construction approach. The SER acknowledges that federally listed sturgeon and steelhead and longfin smelt may enter the channel from San Pablo Bay. It also acknowledges that juvenile or adult longfin smelt may stray into Gallinas Creek. (SER pp. 42, 45.)

The SER concludes that only stray juveniles are likely during the May-to-October work period, that Gallinas Creek does not provide suitable spawning habitat, that mobile fish can avoid the barge, and that no noise impact is expected from vibratory hammering approximately 50 feet from the channel. It then concludes that no additional aquatic-species mitigation is required. (SER p. 45.) Those conclusions should be revisited under the species' actual federal endangered status and the current construction plan. Simply correcting the word "candidate" would not amount to a meaningful revision.

The County should disclose the current occurrence information on which it relies, the dates and methods of relevant surveys, and any consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The analysis should address the actual construction mechanisms that could affect aquatic species: barge grounding, channel-bottom disturbance, turbidity, sediment resuspension, vibration or hydroacoustic effects, accidental spills, effects on prey or habitat, and disturbance of contaminated sediment. If federal or state take authorization, seasonal work windows, biological



monitoring, or stop-work criteria are required, those requirements should be identified now to the extent they are known.

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The proposed federal critical-habitat designation for the Bay-Delta DPS of longfin smelt should also be described accurately as proposed, not final, and its relevance to the Project area should be explained. More generally, biological mitigation should be tied to the final construction footprint, including water-access routes, marsh crossings, staging, demolition, pile installation, outfall work and restoration areas. It would be helpful to know exactly where water access is proposed and understand the biological impacts in those specific areas.

WATER ACCESS, DEMOLITION, AND CONTAMINATED MATERIALS

The revised construction method also creates issues beyond listed species. The SER states that the work area is larger and that up to 20 water-access routes may cross marsh vegetation. It also discusses removal of docks, gangways and associated structures, and acknowledges that some older dock pilings are likely to be creosote-treated. Removal can disturb PAH-enriched sediment in the creek or tidal flat. (SER pp. 91-92.)

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Those disclosures are useful, but the inventory of what will actually be removed should be current and field verified. The Project description says that docks, gangways, decks, stairs, small buildings, trees, vegetation, portions of the existing berm, old concrete retaining walls, fences and gates may be removed to create the work zone. (SER pp. 11, 14.) The SER inventory was based on aerial photographs accessed in 2023, which may actually be older. Aerial photography is somewhat useful for planning, but it cannot reliably identify construction materials, foundations, utility connections, asbestos, lead paint, underground improvements, obscured structures, contents of structures, or the condition and composition of dock pilings and decks.. Where the inventory relies on older aerial imagery, the County should identify what has been confirmed on the ground.

The demolition analysis should likewise cover the consequences of the removal work itself: debris handling, lead and asbestos where applicable, creosote-treated timber, PAH-contaminated sediment, dust, noise, access, vegetation loss, utility interruption and aquatic disturbance. If replacement or restoration is described as work to be performed later by property owners or "others," the SER should make clear what is actually part of the Project and what environmental assumptions depend on later restoration.

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SEVEN UTILITY/OUTFALL PENETRATIONS

The seven locations where storm-drain and sewer-main outfalls cross the levee deserve more than a generic description. The SER says the pipelines will pass through the sheet-pile wall and that clay check dams or similar materials will be used to maintain continuous flood protection. (SER p. 8.) Because these are interruptions in a continuous flood barrier, the final design should identify the seepage and piping controls, backflow protection, settlement accommodation, inspection and maintenance requirements, and expected behavior during high exterior water levels or pump failure. These details are not properly deferred to final design and at a minimum the environmental document should establish objective performance standards.

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EASEMENTS AND PROJECT FEASIBILITY

The SER states that permanent and temporary easements, up to 18 feet wide, are proposed on 115 privately owned parcels, with as many as 16 easements also allowing water access for construction. (SER p. 14.) The Easement Requirement is already contentious, but whether they are genuinely needed or not is probably not a CEQA issue. The question is whether the Project that has been analyzed can actually be built and maintained in the configuration described.

The County should disclose the status of the property rights they claim are mandatory and what would happen if a those easements cannot be obtained. Would that force a changed alignment, different access route, more waterside work, additional demolition, or a different construction method? These are reasonably foreseeable environmental consequences that should be addressed. The same applies to alleged grant or funding conditions requiring site control or long-term maintenance access, to the extent that failure to acquire right of way could materially affect design or feasibility.

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ALTERNATIVES, EMERGENCY PLANNING, AND CUMULATIVE EFFECTS

Given the 10.7-to-11.7-foot design range, the environmental record would also benefit from a straightforward comparison of the selected 11-foot wall with a higher or explicitly adaptable design where technically feasible. The comparison should not focus only on views. It should include remaining freeboard, residual risk, biological and property effects, future construction disturbance, lifecycle cost and the likelihood of having to return later to raise the wall.

Emergency planning should be evaluated under the same residual-risk scenarios. The County should identify principal evacuation routes, water depths that would make those



routes unusable, expected warning time for overtopping versus breach, emergency-responder access, and backup power or pump contingencies.

Finally, the cumulative analysis should consider other reasonably foreseeable drainage, pump-station, shoreline, levee, habitat-restoration and sea-level-rise adaptation projects, as well as redevelopment that may interact with the floodwall. For biological resources, that means considering the incremental loss or disturbance of marsh and aquatic habitat in the context of already imperiled species. For flood risk, it means considering structural protection, changing hazard levels, future redevelopment and future exposure together rather than as separate subjects. That is also more consistent with Marin's own adaptation guidance, which says land-use planning and capital improvements should work in concert.

THE COMMENTS FROM 2023-24 SHOULD NOT HAVE STAYED IN A DRAWER

There is one process issue that, to me, is pretty simple. The County's current project page says a Response to Comments was prepared in 2024 for the earlier Draft SER, but it was 'not previously released' because that version of the SER was never certified. Those earlier comments and the County's responses are now posted with the 2023/2024 documents.

I understand that the earlier SER was not adopted, and I am not claiming that CEQA automatically required the County to publish a written response to every comment on an MND at that time. But once the County decided to come back with a revised SER in 2026, I do not see a good reason why material that had already been prepared about this same project should have been kept from the public until the new review was underway. The old comments matter because they show what residents and agencies were worried about the first time around. The County's responses matter because they show which concerns the County thought were answered, which ones led to changes, and which ones remain disputed.

That is especially important here because the project did not stand still between 2024 and 2026. The design changed, the construction methods changed, the January 2026 flood gave everyone new real-world information, and longfin smelt went from being described as a federal candidate to a federally endangered species. A person sitting down to comment on the 2026 document should not have to discover late in the process that there was already a whole round of comments and responses sitting on the shelf.

CEQA's public-review process works best when people can see the same basic record the agency is using. At a minimum, the District should explain when the 2024 Response to

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Comments was completed, why it was not released earlier, when it was first made available to the public, and whether any of those earlier comments or responses affected the 2026 document. If an earlier response has been overtaken by a design change, new science, the January flood, or a change in a species' legal status, the County should say that plainly rather than simply carrying the old answer forward.

This is not about playing 'gotcha' with the County. It is about giving neighbors a fair shot at understanding the history of a project that runs through people's backyards and is supposed to protect the community for decades. When comments have already been made and answers have already been written, putting them on the table early makes for a better public discussion and a better record.

The late release of these comments several days after the release of the SER may have deprived the public of the statutory review period for the SER.

CEQA PROCESS AND REQUESTED RESPONSE

I am not trying to tell the District how to engineer the wall, although I do believe valuable, feasible and cost-effective suggestions have been ignored by staff and their consultants.

instead, these comments are requests for enough information to understand the consequences of the solution the District has chosen - the very reason for the existence of the California Environmental Quality Act. Where final design details cannot reasonably be fixed now, mitigation should contain enforceable performance standards rather than leave the environmental result to an undefined later decision. CEQA Guidelines section 15126.4 addresses that problem directly.

The County should also take a hard look at whether the corrections and added analysis now needed are substantial enough to require recirculation under CEQA Guidelines section 15073.5. If substantial evidence shows that the revised Project may have a significant environmental effect that cannot be mitigated or avoided, the appropriate document is an EIR rather than a mitigated negative declaration.

I believe all of my comments deserve an answer, and in particular I request a written response addressing:

1. whether the 10.7-to-11.7-foot design range includes freeboard.
2. how the 11-foot crest performs at the upper end of the District's stated range.

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3. the basis for choosing the 9.1-foot USACE elevation over FEMA's 9.8-foot BFE.
4. residual-risk mapping and emergency-access consequences.
5. how the January 2026 flood informed the design.
6. the levee effect, including Marin's own planning documents and whether the floodwall could affect redevelopment, substantial remodeling, ADUs, property investment, FEMA mapping, insurance behavior or public perception of risk.
7. how residual exposure may change over the 30-year design life and what nonstructural risk-reduction and risk-communication measures will continue after the wall is built.
8. reconsideration of longfin-smelt impacts under the species' current federal endangered status.
9. current aquatic-species consultation, monitoring and take requirements.
10. site-specific performance standards for the seven utility/outfall penetrations.
11. a current field-verified demolition inventory and analysis of contaminated materials.
12. status and environmental consequences of unresolved right of way issues.
13. a meaningful comparison of the 11-foot design with higher or adaptable alternatives.
14. how the Project is consistent with the Santa Venetia Community Plan and Marin's Adaptation Land Use Planning guidance, both of which connect flood protection with land-use and long-term adaptation decisions.

Santa Venetia needs reliable flood protection. A careful environmental review can support that goal by making the design assumptions and remaining risks understandable before the Project is approved. I respectfully request that the District address these issues in the final environmental record and provide additional public review as appropriate. .

Thank you for considering these comments.

Respectfully submitted,

Robert Dobrin

REFERENCES

Marin County. Santa Venetia Community Plan, p. 38 (levee easements, new construction and major remodels, sea-level-rise mapping, threatened properties). https://assets.marincounty.gov/marincounty-prod/public/2024-03/santavenetiacomm-plan_bos-approved.pdf

Marin County. Adaptation Land Use Planning: Guidance for Marin County Local Governments (February 2020), p. 6. https://assets.marincounty.gov/marincounty-prod/public/2024-05/slr_adaptation_gp_guide_final.pdf

Marin County. Community and Area Plans (explaining that community plans contain local land-use and development policies used to evaluate discretionary planning applications). <https://www.marincounty.gov/departments/cda/planning/plans-policies-and-regulations/community-and-area-plans>

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California Department of Fish and Wildlife. Longfin Smelt (*Spirinchus thaleichthys*) species information.

U.S. Fish and Wildlife Service. Proposed Critical Habitat for the San Francisco Bay-Delta DPS of Longfin Smelt (2025).

Marin County Flood Control District. Santa Venetia Floodwall Project, Revised 2026 Draft Supplemental Environmental Review / Subsequent Mitigated Negative Declaration (August 2026).

California Code of Regulations, title 14, sections 15073.5 and 15126.4.

Marin County. "Santa Venetia Floodwall Project," Current CEQA Projects page (2026), including the County's statement that the 2024 Response to Comments was prepared but not previously released because the related SER/Subsequent MND was never certified.

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September 28, 2026

Via Email and Written Submission

Marin County Community Development Agency
Environmental Planning Division
Attn: Rachel Reid, Environmental Planning Manager
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903

RE: Santa Venetia Floodwall Project - Comments on Revised 2026 Draft SER/Subsequent
MND

Dear Ms. Reid:

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Comments on the Santa Venetia Floodwall Supplemental Environmental Review
Permanent Easements, Property Rights, and Grant Funding

Please consider these comments regarding the property access rights in the SER. These
comments are in addition to my general comments submitted in a separate comment
letter.

SUMMARY

I support effective flood protection for Santa Venetia. But before the District asks roughly 115 private property owners to give up permanent property rights, I think the public deserves a clear explanation of why those particular permanent easements are actually necessary.

The SER says the Project “proposes” permanent and temporary easements on private property, with easements extending up to 18 feet in width and affecting approximately 115 privately owned parcels. (SER, p. 14.) That is a significant part of this Project, not a minor administrative detail.

My concern is fairly simple:

The District appears to prefer permanent easements, but the SER does not adequately explain why permanent easements—as opposed to some other legally enforceable means of providing the property rights actually needed to construct, access, operate, inspect, repair, and maintain the floodwall—are required.

This distinction is especially important if grant funding is being offered as the reason.

FEMA administers several different hazard-mitigation programs, and its Hazard Mitigation Assistance guidance expressly recognizes construction or modification of “dikes, levees, floodwalls” and similar structures as a type of non-localized flood-risk-reduction project. FEMA's requirements therefore need to be examined under the particular grant program being considered for this Project.¹

I have not found in the FEMA materials reviewed a general FEMA rule saying that every FEMA-funded floodwall constructed across private property must be secured through a permanent easement. FEMA materials addressing work on private property in other programs illustrate an important distinction: FEMA can require an applicant to establish legal authority to conduct work on private property without treating a permanent easement as the only possible means of establishing that authority. For example, FEMA's Public Assistance materials discuss legal authority and rights-of-entry for certain work on private property. That is a different FEMA program and does not establish the requirements for this Project, but it demonstrates why ****“FEMA requires adequate legal authority” and “FEMA requires this particular permanent easement” should not be treated as interchangeable statements.****²

FEMA does impose explicit perpetual property restrictions in a very different setting: FEMA-funded acquisition of property for open space. In those acquisition projects, the governmental recipient must maintain the acquired property as open space in perpetuity and impose deed restrictions. Significantly, FEMA identifies flood-control structures including levees, floodwalls, and dikes as uses generally not allowed on those deed-restricted properties.³

That distinction matters. FEMA's perpetual deed restrictions for a program that acquires private property and converts it permanently to open space should not simply be imported into a project where homeowners continue to own and occupy their properties and the District proposes to construct a floodwall across portions of those properties.

If a particular FEMA, state, or other grant program does require permanent easements for the Santa Venetia Floodwall, the District should identify the program and cite the provision that imposes that requirement.

If the funding agency instead requires adequate site control, legal authority, access, maintenance rights, or another enforceable long-term property interest, the District should disclose that requirement and explain why the proposed permanent easement is necessary to satisfy it.

And if permanent easements are not mandated by a funding agency at all, but instead are the District's preferred method of securing long-term control of the floodwall corridor, the District should say that plainly and explain why it prefers permanent easements over potentially less burdensome legal instruments.

Put simply, there are three different propositions that should not be blurred together:

The District needs legally sufficient property rights to build and maintain the floodwall.

A particular grant program may impose requirements concerning site control, access, maintenance, or long-term protection of the funded improvement.

That grant program specifically requires the approximately 115 property owners here to grant the particular permanent easements proposed by the District.

The first proposition seems obvious. The second may well be true once a funding program is identified. But the third does not automatically follow from the first two, and the SER does not identify the grant requirement that establishes it.



19
cont.

That is why I think the District should show its work.

Finally, this is not merely a private real-estate question. CEQA requires the District to analyze the Project that will actually be implemented and its reasonably foreseeable physical consequences. If the availability or form of property rights affects the floodwall alignment, construction access, demolition of existing improvements, waterside construction, maintenance access, future raising or reconstruction of the wall, or whether portions of the Project can actually be constructed as described, those consequences belong in the environmental analysis.

Before approving the Project, the District should therefore identify the funding program, identify the actual property-right requirement, explain why the proposed permanent easements are necessary to satisfy it, disclose reasonable alternatives considered, and analyze the foreseeable environmental consequences if the required property rights cannot be obtained.

1. The SER proposes substantial permanent interests in private property.

The SER describes a Project that would be constructed largely along privately owned waterfront parcels and states that permanent and temporary easements would be obtained. It describes easements of up to approximately 18 feet and identifies approximately 115 privately owned parcels that would be affected. (SER, p. 14.)

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Importantly, permanent easements are part of the Project Description itself, which states that “the District proposes to acquire permanent easements from property owners” where the floodwall crosses private property. The need for those easements—and what happens if they cannot be obtained—is therefore part of the Project as described, not merely a later property or financing issue.

Yet the SER does not clearly tell property owners what rights the District actually needs, which rights are required by engineering or maintenance needs, which are required by a funding agency, and which simply reflect the District's preferred method of controlling the floodwall corridor. Those are all distinct issues.

A permanent easement is not the only conceivable legal instrument that can provide a public agency with enforceable rights over private property. Depending on the actual requirements of the Project and its funding, other arrangements might potentially provide rights of construction, inspection, maintenance, repair, replacement, emergency access, or long-term operation.



20
cont.

I am not suggesting that any particular alternative necessarily works here. I am asking the District to explain why it does not work before concluding that permanent easements are necessary.

2. "FEMA may fund the Project" is not the same as "FEMA requires permanent easements."

This distinction deserves to be made very clearly.

FEMA's Hazard Mitigation Assistance Program and Policy Guide expressly recognizes non-localized flood-risk-reduction projects, including construction or modification of dikes, levees, floodwalls, seawalls, and similar improvements, as mitigation project types.¹

But identifying a project as potentially eligible for FEMA mitigation assistance does not, by itself, answer what particular property interest the applicant must obtain from every private property owner.

FEMA materials concerning other work on private property demonstrate the distinction. In its Public Assistance program, for example, FEMA examines an applicant's legal basis and authority for conducting activities on private property and, for certain activities, requires documentation of rights-of-entry.² Again, Public Assistance is not necessarily the funding source for this Project. The relevance of this guidance is narrower: FEMA itself distinguishes between having sufficient legal authority to conduct federally funded work and any particular form of property ownership.

The District's own prior description of the FEMA requirement supports this distinction. In 2023, Marin County stated that a condition of the FEMA Hazard Mitigation Grant Program was that the District "own or control" property included in the project. The County did not say that FEMA specifically required permanent easements. It reported that the District then held permanent easements on only 16 of 111 affected properties and therefore could not demonstrate the required ownership or control. (4).

If the District believes the applicable FEMA mitigation program goes further and specifically requires permanent easements for this floodwall, it should identify that requirement.

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cont.

The District should identify:

- the FEMA grant program
- the particular regulation, guidance, grant condition, or other provision containing the property-control requirement;
- the property rights that provision actually requires;
- whether FEMA requires a permanent easement specifically, or instead requires adequate long-term site control, maintenance authority, or access; and
- whether another enforceable property-right instrument could satisfy the same requirement.
- The same disclosure should be made for any state, regional, or other grant program the District expects to use.
- At present, the public is being asked to evaluate permanent easements without being told which grant program actually requires them—or whether any identified grant program requires them at all. That seems backwards.

22

3. FEMA's perpetual open-space requirements should not be confused with requirements for constructing a floodwall.

There is an important FEMA distinction worth putting directly into the record. FEMA does have a program under which permanent restrictions on private property are unquestionably required: FEMA-funded acquisition of hazard-prone properties for conversion to open space. For those projects, FEMA states that, as a condition of the grant, the governmental recipient must maintain the property as open space in perpetuity, with a deed restriction controlling future use.³ In other words, FEMA knows how to require specific property restrictions when it wants to. In its open-space acquisition program, FEMA does so expressly and in unmistakable terms. That makes it all the more reasonable to ask the District to identify the comparable FEMA provision if it contends that permanent easements are required for this floodwall project.

The open space grant is an acquisition project. It is not the same thing as constructing a floodwall while homeowners retain ownership and continue to occupy their properties. The distinction is especially striking because FEMA states that flood-control structures—including levees, floodwalls, and dikes—are generally not allowable uses on property acquired and deed-restricted under the open-space acquisition program.³

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cont.

In other words, FEMA's clearest example of mandatory perpetual property restrictions involves a program fundamentally different from the Santa Venetia Floodwall. The District should therefore not rely generally on "FEMA requirements" as an explanation for permanent easements. It should identify the specific FEMA program being pursued for this floodwall and the specific property-control requirement applicable to that program.

4. If permanent easements are the District's preference, the District should say so and explain why.

The SER's wording is worth paying attention to. It says the Project "proposes" permanent and temporary easements. (SER, p. 14.) That sounds different from saying that a funding agency has mandated permanent easements. But if the District has reasons for preferring the easements it should say so.

23

The public should not be left with the impression that permanent easements are an unavoidable federal funding requirement unless the District can identify the requirement that makes them unavoidable.

The District should distinguish among: what the engineers need, what the maintenance program needs, what the law requires, what a particular grant program requires, and what the District simply prefers. Those things may overlap, but they are not necessarily the same thing.

5. The easement issue also has a CEQA dimension.

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CEQA does not ordinarily decide what form of property interest a public agency should acquire. CEQA does not itself require the District to obtain easements. But that does not mean the acquisition issue can simply be separated from the environmental review. CEQA looks at the whole of the action and its reasonably foreseeable physical consequences. Here, the proposed floodwall crosses a long stretch of private waterfront property. If the District cannot obtain the property rights assumed by the SER, what happens?

- Does the wall move?
- Does its alignment change?
- Does construction move closer to the creek or farther inland?
- Are additional structures, decks, fences, landscaping, utilities, or other improvements affected?
- Does the District need different construction access?

24
cont.

- Does more work occur from the waterside?
- Are some segments redesigned?
- Could the District use a different flood-protection design?
- Could the Project be delayed, phased differently, or not constructed on certain parcels?

Those questions can have environmental consequences. That is why the SER should not simply assume that the proposed easement program will succeed without explaining the consequences if it does not.

25

6. The District should evaluate reasonable means of obtaining the rights it actually needs.

I am asking for an analysis as to why the District has settled on easements as the only answer. The District should identify the actual rights it needs for initial construction, inspection, routine maintenance, vegetation management, emergency entry and repair, reconstruction or replacement, future modification or raising of the floodwall, and compliance with whatever funding obligations actually apply.

Once those rights are identified, the District can explain why the proposed permanent easement is reasonably necessary to provide them. That would give homeowners something concrete to evaluate instead of asking them to accept the conclusion first and learn the justification later.

26

7. The SER should disclose what happens if homeowners do not voluntarily grant the proposed easements.

This is another practical question that deserves a straightforward answer. With approximately 115 privately owned parcels involved, it is reasonably foreseeable that not every property owner will immediately, or ever, agree to the easement requested by the District. The environmental document should therefore explain what the District intends to do if voluntary acquisition is unsuccessful.

- Would the District modify the easement or Negotiate another form or agreement?
- Change the alignment?
- Redesign that portion of the wall?
- Use eminent domain?
- Alter construction access?
- Proceed with some portions of the Project but not others?

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cont.

Those possibilities could result in different physical effects from the Project analyzed in the SER. The point is the environmental analysis should not depend on an important implementation assumption without telling the public what happens if that assumption proves wrong.

8. The District has not identified the specific grant program that supposedly drives the easement requirement.

This is particularly important because grant funding has repeatedly been discussed in connection with this Project. If permanent easements are necessary to qualify for a particular grant, identifying that grant should be straightforward. The District should provide the name of the program, the responsible agency, the applicable property-control requirement, and the relevant grant guidance. The District should also state plainly whether it has independently determined that permanent easements are necessary for the Project regardless of the eventual funding source, and, if so, identify the engineering, maintenance, operational, legal, or other basis for that determination.

27

If several potential funding sources are still being considered and they have different property-control requirements, the SER should say that. If no funding source has yet been selected, then the District should not present one particular property arrangement as though it were dictated by an unidentified future grant.

There is an important difference between: *"We need adequate property rights to build and maintain the floodwall,"* and: *"We need these permanent easements because our grant requires them."* The second statement requires identifying the grant and showing us the requirement.

Requested Response

Before approving the Project, I respectfully ask the District to supplement or clarify the record by:

- Identifying the specific permanent and temporary property rights required for the Project and explaining why each is necessary.
- Identifying every grant program upon which the District is presently relying, or reasonably expects to rely, that imposes a property-control or site-control requirement.
- Providing the actual provision of each grant program that allegedly requires permanent easements.

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cont.

- Clarifying whether any funding agency specifically requires a permanent easement, as opposed to adequate site control, maintenance authority, access rights, or another enforceable long-term property interest.
- Explaining why the District prefers permanent easements and whether narrower or otherwise less burdensome enforceable instruments were considered.
- Disclosing the present status of property-right acquisition for the approximately 115 affected private parcels.
- Explaining what happens if one or more owners decline to voluntarily grant the proposed easement.
- Evaluating whether unsuccessful acquisition could change the alignment, construction method, access, demolition requirements, waterside work, maintenance program, future wall modifications, phasing, or other physical characteristics of the Project.
- Analyzing any reasonably foreseeable environmental effects resulting from those changes.
- Correcting any suggestion that FEMA categorically requires permanent easements unless the District can identify the FEMA program and provision establishing that requirement for this Project.

Conclusion

I am not suggesting that the District does not need reliable long-term rights to construct and maintain a public floodwall. Obviously it does. What I question is the jump from that sensible proposition to the conclusion that approximately 115 property owners therefore need to provide the particular permanent easements proposed in the SER.

28

If permanent easements are the only way to accomplish the project the District should be able to show us why. And if the reason is a grant requirement, please identify the grant and show us the requirement. And if permanent easements are simply the District's preferred approach, please say that plainly and explain why reasonable alternatives were rejected.

For a project that will permanently affect so many private properties, I don't think that is too much for the community to ask.

Thank you for your attention to these comments.

Robert Dobrin

Footnotes

1. FEMA, Hazard Mitigation Assistance Program and Policy Guide, Part 4, § D.2.4, "Flood Risk Reduction" (identifying non-localized flood-risk-reduction projects as including construction or modification of "dikes, levees, floodwalls, seawalls" and other structures). FEMA's guidance therefore expressly contemplates floodwalls as an HMA project type; that fact alone does not establish that FEMA requires a particular form of permanent easement over every privately owned parcel crossed by such a project.

2. FEMA's Public Assistance materials provide a useful comparison, although Public Assistance is a different program and is not cited here as establishing the requirements for the Santa Venetia Floodwall. FEMA explains that, when a government conducts certain activities on private property, FEMA examines the government's legal basis and authority and may require rights-of-entry and related documentation. This demonstrates why the general concepts of legal authority and permission to enter private property should not automatically be equated with a requirement for a particular permanent easement.

3. FEMA, Acquisition of Property for Open Space Fact Sheet (2019). FEMA explains that property acquired through its Hazard Mitigation Assistance acquisition program must be maintained as open space in perpetuity and subject to a deed restriction. The same FEMA guidance identifies flood-control structures, including "levees, floodwalls, dikes," as uses generally not allowed on such deed-restricted property. This illustrates the important distinction between FEMA's acquisition/open-space program, where perpetual restrictions are explicit, and a floodwall construction project in which private owners retain their properties.

4. Marin County, "Santa Venetia Floodwall Project Update to be Presented," News Release (Mar. 2, 2023) ("A condition of the FEMA Hazard Mitigation Grant Program is that the District own or control the property included in a project for which it is seeking funding"; noting that the District then held permanent easements on 16 of 111 properties).

Letter K. Robert Dobrin

- K-1 The commenter is correct that the longfin smelt San Francisco Bay-Delta Distinct Population Segment (DPS) was listed as federally endangered on August 29, 2024 (89 FR 61029). Critical habitat was proposed January 15, 2025 (90 FR 3765) in the San Francisco Bay estuary in Contra Costa, Napa, Sacramento, Solano, and Sonoma Counties. The proposed critical habitat listing does not include Marin County. The body of knowledge regarding longfin smelt biology, distribution and habitat preferences is not changed by the confirmation of its endangered status; the SER considered the newest science available for this species in the region.

In summary, Gallinas Creek is not suitable longfin smelt spawning habitat, because longfin smelt preferentially spawn in fresh water, over gravel or sandy substrates, and avoid brackish water for reproduction (Moyle, 2022; Rahman et al., 2023). Gallinas Creek is primarily a tidal slough with a muddy bottom (Cleengineering, 2018) with salinity levels approaching nearby San Pablo Bay (Kleinfelder, 2024). Lewis et al. (2019) sampled smaller channels abutting San Pablo Bay, including Gallinas and Miller Creeks, with negative results for longfin smelt. Larval longfin smelt were detected in the Petaluma River, Sonoma Creek, and Napa River, exclusively upriver in freshwater areas. While juvenile or adult longfin smelt could occasionally enter Gallinas Creek from the Bay, the Santa Venetia Floodwall area lacks suitable substrate and salinity to support spawning. Mobile juvenile and adult fish would be able to avoid the barge if they were present in the channel, and no noise impacts would be expected to fish or other aquatic species from vibratory hammering on the berm approximately 50 feet from the channel. Thus, no impact would be expected to longfin smelt at any life stage from construction of the Project.

Please see also the response to comment L-2, below.

References: (all of the references below were cited in the SER, Section 3.4, Biological Resources. The date of the Kleinfelder citation has been corrected.

Cleengineering, 2018. Data Report: Characterization of the Sediment from the Las Gallinas Dredging Project: San Rafael, CA. Sediment Characterization Sampling and Analysis Results (SAR). January 28.

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment Memorandum by Rob Aramayo. prepared for Marin County Flood control District. May 7, 2024.

Lewis L., A. Barros, M. Willmes, C. Denny et al. 2019. Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary. University of California, Davis. https://www.researchgate.net/publication/349428334_Interdisciplinary_St

udies_on_Longfin_Smelt_in_the_San_Francisco_Estuary. DWR Contract #4600011196.

Moyle, P.B. 2002. Inland Fishes of California, University of California Press.

Rahman, M., L. Lewis, N. Fangue, R. Cannon, T-C Hung. 2023. Effects of Salinity on Fertilization, Hatching, and Larval Performance of Longfin Smelt *Spirinchus thaleichthys*. Aquaculture Research, Vol. 2023, No. 3, August 2023. <https://doi.org/10.1155/2023/9984382>

- K-2 Because no impact to longfin smelt is expected from the Project, Section 7 consultation was not required for this species.
- K-3 All communications received during the comment period, including this letter, are included in the Administrative Record for the Project.
- K-4 Please see the response to the previous comment.
- K-5 This comment summarizes the issues raised in the subsequent comments. Please see the responses below.
- K-6 As discussed in SER Chapter 1, Project Description, the proposed floodwall's design height of 11 feet would provide approximately 1.2 feet of freeboard above the current FEMA base flood elevation (BFE; the estimated elevation of the 100-year flood) of approximately 9.8 feet. With expected land subsidence and sea level rise, this design height is expected to provide protection from the 100-year flood for approximately 30 years, though with diminishing freeboard. The 30-year design life is based on assumptions regarding the future rate of land subsidence and the rate of sea level rise, so the actual period of effective flood control could be longer or shorter. As further described in Chapter 1, the Project would be designed to enable raising the floodwall to 12 feet elevation, without replacing the entire structure. This would likely extend protection for some additional length of time, depending primarily on the future rate of sea level rise.
- K-7 Once completed, the floodwall would be at a uniform height of 11 feet. The design of the floodwall is also intended to reduce or eliminate seepage and piping, and to resist subsidence.

The environmental analysis compares the impacts of the proposed Project to existing conditions. The Project is expected to improve flood protection, compared to the existing condition. The level of analysis requested by the commenter is beyond the scope of the environmental analysis.

- K-8 As discussed in the Santa Venetia Floodwall, Basis of Design and Project Alternatives report, (Civic Knit et al, 2023), a sheet pile floodwall was determined to be the most cost-effective method of providing protection from recurrent flooding

for the entire Santa Venetia neighborhood. A “levee effect,” such as that described in the comment, is not expected, since the Santa Venetia neighborhood is already fully built-out. The Project may influence some property owners to make improvements to their properties, such as repairs, remodels, additions, or development of ADUs, that they may have been more hesitant to undertake in the absence of the Project. Such improvements, individually and cumulatively, would not be expected to have a significant effect on the environment; indeed, actions of these kinds are typically exempt from CEQA review (see, for example, State CEQA Guidelines, Sections 15301, 15302, 15303, 15304, 15315, and 15332).

As stated in the 2019 Gallinas Levee Upgrade Project Initial Study/Mitigated Negative Declaration, Section IV.14 Population and Housing, topic e,

The Project would increase the level of flood protection for approximately 700 homes in the Santa Venetia neighborhood. By reducing the likelihood of flooding, the Project may be expected to help maintain property values. These changes would tend to have positive economic impacts, that could result in residential property owners investing in maintaining and remodeling their homes. While this may result in a slight increase in construction-related impacts, including consumption of materials and energy, and generation of air emissions and noise, impacts would likely be short-term and less than significant.

Reference:

Civic Knit, Engeo, DAC Associates, and CSW|ST2, 2023. Santa Venetia Floodwall, Basis of Design and Project Alternatives, Marin County, California. Prepared for the Marin County Flood Control and Water Conservation District, March 2023. Version 2.0

- K-9 A CEQA environmental review document is not itself a policy document. CEQA requires consideration of whether a project would cause a significant environmental impact (that is, a physical impact on the environment) due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The 2019 IS/MND, Section IV-11, Land Use and Planning, contains an extensive discussion of the consistency of the Project then being considered (reconstruction of the TRB) with relevant environmental policies in the Marin Countywide Plan and the SCVP. The SER, Section 2.11, Land Use and Planning, confirms the consistency findings of the 2019 IS/MND, and considers consistency with relevant policies contained in the Marin County Climate Action Plan 2030, which was adopted after completion of the 2019 IS/MND. Both the 2019 IS/MND and the SER conclude, based on careful consideration of relevant policies, that the Project would not have a significant impact on the environment due to a conflict with a land use plan, policy, or

regulation adopted for the purpose of avoiding or mitigating an environmental impact.

The SER need not consider or compare the Project to other approaches to sea level rise and flood protection, such as managed retreat or raising existing structures above flood elevation, as suggested by the commenter: an environmental review to support a Mitigated Negative Declaration need not consider project alternatives.² The SER does not consider project alternatives.

It is noted that the Santa Venetia Community Plan (SVCP; Marin County, 2017), page 38, cited by the commenter as containing policies that should be included in the analysis of policy consistency in the SER, does not in contain policies; as the section header on page 38 states, this page contains “concepts for consideration.” Furthermore, the other document cited by the commenter as a relevant planning document, *Adaptation Land Use Planning: Guidance for Marin County Local Governments* (Marin County, 2020), does not establish County policy, but, as the title suggests, provides guidance to local governments in considering adaptation to sea level rise in their land use planning processes.

The commenter does not provide any evidence that the Project would have a significant impact on the environment due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact.

- K-10 Consideration of the particular consequences of the Project on potentially encouraging development in the Santa Venetia neighborhood would be speculative. Uncertainties in future rates of sea level rise increase the speculative nature of any such consideration. Please refer to the response to comment K-8.
- K-11 Please see the response to comment K-1.
- K-12 The level of detail regarding structures to be removed, materials from which these structures are constructed, etc., is not currently available and is not required for the environmental analysis. The SER considers various aspects of demolition of existing structures, including potential impacts on water quality (Section 2.10, Hydrology and Water Quality, topic a); air and noise emissions (Section 2.3, Air Quality, and Section 2.13, Noise); and disposal of contaminated materials (Section 2.19, Utilities and Service Systems). No significant impacts associated with demolition, removal, and disposal of structures are identified. The commenter does not provide any evidence to support a fair argument that such an impact would occur.

² State CEQA Guidelines, Section 15063(d).

- K-13 The level of detail requested by the commenter is not available at this time. Please refer to the response to comment K-7. The SER considers the environment impacts of the Project, compared to existing conditions.
- K-14 The feasibility of Project construction and maintenance is contingent upon acquisition of easements along the alignment of the proposed floodwall, as stated in SER Chapter 1, Project Description. As previously stated, an environmental review to support a Mitigated Negative Declaration need not consider project alternatives.
- K-15 As previously stated, an environmental review to support a Mitigated Negative Declaration need not consider project alternatives. Potential impacts on emergency access are considered in SER Section 2.17, Transportation/Traffic, topic d, and found to be less than significant. Because the Project would increase the level of flood protection in the Santa Venetia neighborhood, it would decrease the need to evacuate the area due to flooding. Because the Project proposes no changes to roads, it would not adversely affect established evacuation routes. The cumulative impact analysis in SER Section 2.21, Mandatory Findings of Significance, topic b, includes several planned or current flood control, stormwater infrastructure, and creek maintenance and restoration projects. No significant cumulative impacts are identified. The commenter does not provide any evidence that the Project would result in a significant impact with regard to emergency access or cumulative effects.
- K-16 The previous SER, published in draft form in December 2023, has been superseded by the current SER. Responses to comments on the 2023 SER, completed in 2024 but not distributed at that time, are included in the current document as Appendix A.
- K-17 The Project is described in sufficient detail in SER Chapter 1, Project Description, to provide the public and decision makers with an understanding of the Project, and to support the environmental analysis. The level of detail requested by the commenter is not available at this time and is not needed for environmental review pursuant to CEQA. Additional detail will become available, if the Project is approved, at later stages of the planning and implementation process.
- With regard to the 14 topics listed in this comment, please see the responses above.
- K-18 Please see the response to the following comment.
- K-19 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-20 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.

- K-21 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-22 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-23 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-24 Please see the response to comment K-14.
- K-25 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-26 Please see the response to comment K-14.
- K-27 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-28 This comment does not address the environmental analysis and does not require a response pursuant to CEQA.
- K-29 Please see the responses to the comments that refer to these footnotes.

From: Sierra, Jessica@Wildlife <Jessica.Sierra@Wildlife.ca.gov>
Sent: Friday, October 9, 2026 9:17 AM
To: EnvPlanning
Cc: state.clearinghouse@lci.ca.gov; Beaton, Jordan@Wildlife; Day, Melanie@Wildlife; Weightman, Craig@Wildlife; kim_squires@fws.gov
Subject: Santa Venetia Floodwall Project-SCH2019079013
Attachments: Santa Venetia Floodwall Project-SCH2019079013-Bartlett-BEATON10082026.pdf

Good morning,

Please see the attached letter for your records. If you have any questions, contact Jordan Beaton, cc'd above.

Thank you,

Jessica Sierra

Analyst I/ Administrative Support Analyst

California Department of Fish and Wildlife – Bay Delta Region

2109 Arch Airport Rd., Stockton, CA 95206

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STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE



GAVIN NEWSOM, Governor
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October 8, 2026

Robin Bartlett, Principal Engineer
Marin County Flood Control and Water Conservation District
3501 Civic Center Drive, Suite 304
San Rafael, CA 94903
EnvPlanning@marincounty.gov

Subject: Santa Venetia Floodwall Project, Supplemental Mitigated Negative Declaration, SCH No. 2019079013, Marin County

Dear Robin Bartlett:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt a Supplemental Mitigated Negative Declaration (MND) from the Marin County Flood Control and Water Conservation District (District) for the Santa Venetia Floodwall Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW previously provided comments for the original and Subsequent MNDs in letters dated August 20, 2019, and January 17, 2024, respectively.

CDFW is submitting comments on the Supplemental MND to inform the District, as the Lead Agency, of our concerns regarding potentially significant impacts to biological resources associated with the Project, and recommended mitigation measures, as further described below and in **Attachment 1**.

CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact fish, plant, and wildlife resources (Pub. Resources Code, § 21000 et seq.; Cal. Code Regs., tit. 14, § 15386). CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as a permit pursuant to the California Endangered Species Act (CESA) or Native Plant Protection Act (NPPA), Lake and Streambed Alteration (LSA) Agreement, and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Pursuant to our authority, CDFW has the following concerns, comments, and recommendations regarding the Project.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Robin Bartlett, Principal Engineer
 Marin County Flood Control and Water Conservation District
 October 8, 2026
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PROJECT DESCRIPTION SUMMARY

Proponent: Marin County Flood Control and Water Conservation District

Objective: The Project changes prompting the Supplemental MND include adding a section of sheet pile installation approximately 600 feet long and construction of a floodgate within the roadway. The Project involves constructing a sheet pile floodwall along the top of an existing earthen levee totaling an approximate length 7,800 feet and a maximum width at approximately 14 inches. This structure would replace an existing timber-reinforced berm floodwall and provide improved protection from floods to approximately 900 homes located on the landward side of the floodwall. Sheet piles would be installed using a vibratory hammer. A 10- to 18-foot-wide work zone along the length of the floodwall would be cleared to facilitate construction. In addition to land access from Vendola Drive, the contractor may access the work zone from South Fork Gallinas Creek. Water access would involve using an amphibious excavator to move material from a barge in South Fork Gallinas Creek to a slide pontoon, and from the pontoon to the work zone. Water access would occur at approximately 20 designated areas, each up to 30 feet wide and 100 feet long.

Location: The Project is located in the unincorporated Community of Santa Venetia in the City of San Rafael, Marin County, State of California, between the South bank of South fork Gallinas Creek from 5 to 825 Vendola Drive, with an approximate centroid of 38.0131° Latitude, -122.5191° Longitude.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in "take" of plants or animals listed or candidate species under CESA, either during construction or over the life of the Project.² **The Project has the potential to impact longfin smelt (*Spirinchus thaleichthys*), a CESA listed as threatened species, as further described below.** Issuance of a CESA ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA ITP.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species. (Pub.

Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064, & 15065.).

² "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (Fish & G. Code, § 86).

Robin Bartlett, Principal Engineer
Marin County Flood Control and Water Conservation District
October 8, 2026
Page 3

Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

Lake and Streambed Alteration

An LSA Notification, pursuant to Fish and Game Code section 1600 et seq., is required for project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream.

Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. **The Project would impact Gallinas Creek therefore an LSA Notification would be required. The Project has submitted an LSA Notification (EPIMS-MAN-14846-R3) to CDFW; thank you for notifying pursuant to Fish and Game Code section 1600 et seq.** CDFW will consider the CEQA document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

Raptors and Other Nesting Birds

CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nests or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

California Fully Protected Species

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except as follows:

- Take is for necessary scientific research;
- Efforts to recover a fully protected, endangered, or threatened species, live capture and relocation of a bird species for the protection of livestock; or
- They are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (Fish & G. Code, §§ 3511, 4700, 5050, & 5515).

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 Marin County Flood Control and Water Conservation District
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1

Specified types of infrastructure projects may be eligible for an ITP for unavoidable impacts to fully protected species if certain conditions are met (Fish & G. Code, § 2081.15). Project proponents should consult with CDFW early in the project planning process. **The Project also has potential to impact the following California fully protected species: salt marsh harvest mouse (*Reithrodontomys raviventris*) and Ridgeway's rail (*Rallus obsoletus*) which are both also CESA listed as endangered species, and California black rail (*Laterallus jamaicensis coturniculus*), also CESA listed as threatened species. Thank you for including Mitigation Measures BIO-1b to avoid impacts to salt marsh harvest mouse, Ridgeway's rail, and California black rail.**

COMMENTS AND RECOMMENDATIONS

2

CDFW offers the comments and recommendations below to assist the District in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Based on the Project's avoidance of significant impacts on biological resources with implementation of mitigation measures, including those CDFW recommends below which are also included in **Attachment 1, and in CDFW's prior CEQA comment letters for the Project mentioned above**, CDFW concludes that a MND is appropriate for the Project.

I. Environmental Setting Related Impact Shortcoming

Mandatory Findings of Significance: Does the Project have the potential to substantially reduce the number or restrict the range of an endangered, rare, or threatened species?

COMMENT 1: Longfin Smelt

Issue, specific impacts, why they may occur and be potentially significant: The MND does not adequately evaluate and mitigate potential impacts to longfin smelt. The MND identifies that longfin smelt adults may be present in the Project area during construction and provided a study titled Gallinas Creek Longfin Smelt Assessment, prepared by Kleinfedler, dated May 7, 2024, concluding that Gallinas Creek does not provide suitable spawning habitat for longfin smelt, indicating that longfin smelt larvae would not be present. However, in April 2025 the University of California, Davis (UCD) and the Wetland Regional Monitoring Program (WRMP) conducted trawl efforts and captured two longfin smelt, one of which was a young juvenile longfin smelt as shown in the photograph dated April 23, at the mouth of Gallinas Creek suggesting spawning may have occurred upstream (see: Fish in the Bay – May 2025, WRMP San Pablo Bay Trawls, Part 3 – Gallinas Creek to Hamilton Wetlands. – Otolith Geochemistry & Fish Ecology Laboratory, <https://www.ogfishlab.com/2025/05/22/fish-in-the-bay-may-2025-wrmp-san-pablo-bay-trawls-part-3-gallinas-creek-to-hamilton-wetlands/>). In April 2026 the UCD/WRMP conducted surveys in Gallinas Creek and noted “an occasional Longfin Smelt upstream

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during the spawning season" which supports the potential of longfin smelt spawning in Gallinas Creek (see: Fish in the Bay – North Bay Trawls in April 2026. – Otolith Geochemistry & Fish Ecology Laboratory, <https://www.ogfishlab.com/2026/04/17/fish-in-the-bay-north-bay-trawls-in-april-2026/>, and according to the table at the end of the article, two longfin smelt were caught in Gallinas Creek in April 2025 (as stated above) and one longfin smelt was caught in November 2025. Additionally, in an e-mail communication to CDFW, UCD/WRMP sampling crew staff indicated that seven longfin smelt were caught in Gallinas Creek during trawl efforts in January 2026 (January to March is considered the peak spawning season for longfin smelt), two adult males and two adult females, further suggesting spawning may be occurring. Therefore, CDFW concludes that longfin smelt larvae may be present in the Project area during spawning season.

The Project could result in mortality of longfin smelt larvae if they are crushed between the substrate and the barge, amphibious excavator, slide pontoon, or construction matting during in-water work access activities, as larvae are not sufficiently developed to move away from these Project activities.

Longfin smelt is CESA listed as threatened species and the San Francisco Bay-Delta Distinct Population Segment is a federal Endangered Species Act listed as endangered species and therefore is considered a threatened and endangered species pursuant to Section 15380 of the CEQA Guidelines. Impacts to longfin smelt could substantially reduce the species' population, which would be considered a Mandatory Finding of Significance pursuant to Section 15065, subdivision (a) of the CEQA Guidelines. Therefore, if longfin smelt are present in the Project area and would be impacted, Project impacts to longfin smelt would be *potentially significant*.

Recommended Mitigation Measure: CDFW recommends that the MND include the mitigation measure below to reduce potential impacts to longfin smelt larvae to less-than-significant and comply with CESA.

Mitigation Measure BIO-1c (Longfin Smelt Avoidance): All in-water Project activities shall be conducted between August 1 and November 30, when longfin smelt larvae are not expected to be present in the work area, unless otherwise approved in writing by CDFW. If take of longfin smelt may occur, the Project shall obtain a CESA ITP from CDFW and comply with the ITP and shall also consult with U.S. Fish and Wildlife Service (USFWS). The Project shall adhere to the work period and all other requirements of the LSA Agreement issued by CDFW for the Project.

Please be advised that the LSA Agreement for the Project will likely include the above recommended mitigation measure and those in our prior CEQA comment letters for the Project, as applicable, and additional measures to protect fish and wildlife resources.

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ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be filled out and submitted online at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish & G. Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

CONCLUSION

CDFW appreciates the opportunity to comment on the Supplemental MND to assist the District in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Jordan Beaton, Environmental Scientist, at Jordan.Beaton@wildlife.ca.gov or (707) 980-5172; or Melanie Day, Senior Environmental Scientist (Supervisory), at Melanie.Day@wildlife.ca.gov or (707) 210-4415.

Sincerely,

DocuSigned by:

 B77E9A6211EF486...
 Erin Chappell
 Regional Manager
 Bay Delta Region

Attachment 1. Draft Mitigation and Monitoring Reporting Plan

ec: Office of Land Use and Climate Innovation, State Clearinghouse (SCH No. 2019079013)
 Kim Squires, U.S. Fish and Wildlife Service - Kim.Squires@fws.gov
 Craig Weightman, CDFW Bay Delta Region - Craig.Weightman@wildlife.ca.gov

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ATTACHMENT 1

Draft Mitigation and Monitoring Reporting Plan

4	Biological Resources (BIO)			
	Mitigation Measure (MM)	Description	Timing	Responsible Party
	BIO-1c	Longfin Smelt Avoidance: All in-water Project activities shall be conducted between August 1 and November 30, when longfin smelt larvae are not expected to be present in the work area, unless otherwise approved in writing by CDFW. If take of longfin smelt may occur, the Project shall obtain a CESA ITP from CDFW and comply with the ITP and shall also consult with USFWS. The Project shall adhere to the work period and all other requirements of the LSA Agreement issued by CDFW for the Project.	During in-water activities for Duration of Project Construction	Project Applicant

Letter L. California Department of Fish and Wildlife

- L-1 This comment reviews California Department of Fish and Wildlife's (CDFW's) role in reviewing CEQA documents, and the agency's applicable regulatory authority
- L-2 CDFW commented on the previous, 2023 version of the SER in a letter dated January 17, 2024, identifying the potential for impacts to longfin smelt in Gallinas Creek and suggesting mitigation measures to avoid such impacts (see comment A-3 in Appendix A to this current document). In response, the 2023 SER was modified to discuss the presence of longfin smelt in Gallinas Creek, specifically stating that juvenile or adult fish may stray in from San Pablo Bay. The SER also was modified to state that Gallinas Creek is not suitable longfin smelt spawning habitat, because longfin smelt preferentially spawn in fresh water, over gravel or sandy substrates, and avoid brackish water for reproduction (Moyle, 2022; Rahman et al., 2023). Because Gallinas Creek is primarily a tidal slough with a muddy bottom (Cleengineering, 2018), lacking suitable substrate for egg attachment, and with salinity levels approaching nearby San Pablo Bay (Kleinfelder, 2024), spawning is not likely. Following their review of the Flood District's response to their comment, CDFW stated in an email on August 1, 2024 that they now agreed that take of smelt from the Santa Venetia Floodwall Project was unlikely, stating that, "based on the best available research at this time CDFW believes that the project as described will not impact longfin smelt..." (Damerell and Single, 2024).

In the current comment, CDFW, having changed staff in the interim, again notes the potential for longfin smelt in Gallinas Creek, and again recommends revision of the SER to identify a significant impact to longfin smelt. CDFW again suggests inclusion in the SER a mitigation measure to avoid such impacts (see comment L-4). The current comment cites recent survey data in San Pablo Bay and Gallinas Creek, noting the presence of adult smelt during spawning season in the lower reaches of Gallinas Creek, as well as juvenile smelt on occasion.

The Flood District appreciates the new occurrence data for this species, but the presence of adult and juvenile smelt in the creek was already acknowledged in the SER, following the earlier comment from CDFW (SER Section 2/4, Biological Resources, page 45). The new survey information CDFW provides does not include evidence of spawning occurring, nor does it locate longfin smelt near the Santa Venetia Floodwall Project area in South Fork Gallinas Creek. The Flood District observes that, while juvenile and adult longfin smelt have been repeatedly found in lower Gallinas Creek, larvae have never been detected. Given the conditions in upper Gallinas Creek, particularly the South Fork, including a largely stagnant, tidal slough, and the lack of suitable substrate or hospitable salinity conditions in the Project area to support spawning, the Flood District maintains that

there is no evidence to support a conclusion that these fish are successfully reproducing in Gallinas Creek.

Because mobile juvenile and adult fish would be able to avoid aquatic equipment used for Project construction if they were present in the channel, and no noise impacts would be expected to fish or other aquatic species from vibratory hammering on the berm, approximately 50 feet from the channel, the Flood District reaffirms its conclusion that any impact to longfin smelt would be less than significant.

References:

Cleengineering, 2018. Data Report: Characterization of the Sediment from the Las Gallinas Dredging Project: San Rafael, CA. Sediment Characterization Sampling and Analysis Results (SAR). Revised February 23, 2018).

Damerell, Lu (Marin County Public Works); and Alex Single (CDFW), 2024. Email correspondence re: Santa Venetia Floodwall Project, Subsequent Mitigated Negative Declaration, SCH No. 2019079013, Marin County. Various dates between June 26 and October 2, 2024.

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment. Memorandum by Rob Aramayo, prepared for Marin County Flood control District. May 7, 2024.

Moyle, P.B. 2002. Inland Fishes of California, University of California Press.

Rahman, M., L. Lewis, N. Fangue, R. Connon, T-C Hung. 2023. Effects of Salinity on Fertilization, Hatching, and Larval Performance of Longfin Smelt *Spirinchus thaleichthys*. Aquaculture Research, Vol. 2023, No. 3, August 2023. <https://doi.org/10.1155/2023/9984382>

- L-3 No reportable observations were made during the conduct of the environmental review. The required fees will be paid upon filing of the Notice of Determination.
- L-4 Please see the response to comment L-2. No additional mitigation is required.

2. Changes to the Supplemental Environmental Review/Subsequent Mitigated Negative Declaration

Several changes consisting of minor modifications and clarifications are made to the Supplemental Environmental Review/Subsequent draft Mitigated Negative Declaration (SER/SMND), either in response to comments, as a result of Tribal consultation, or as staff-initiated changes. None of these changes are in response to comments received on this version of the SER/SMND. Comments received on the previous version of the document, published in 2023, prompted several changes, which were incorporated in the current version. Please refer to the comments and responses on the earlier version, included in Appendix A.

Tribal Consultation with the Federated Indians of Graton Rancheria (FIGR), detailed in SER Section 2.18, Tribal Cultural Resources, was ongoing at the time of publication of the SER/SMND. During the circulation period for the SER/SMND, the District received comments from FIGR requesting changes to the text of cultural resources mitigation measures.

None of the changes, which are shown below, alter conclusions regarding impacts or mitigation measures. No recirculation is required for these minor modifications, per State CEQA Guidelines section 15073.5(c)(4). Changes to the text of the SER are shown as follows: deletions are ~~struck through~~; additions are underlined.

Chapter 1 Project Description

For the purpose of clarification, the following text is added to the discussion of Project Schedule and Duration on page 23 of the SER:

All work would take place within the May-to-October work season, and equipment and materials would be moved in and out of the area at the beginning and end of each work season. Any work after October 15, or after the commencement of fall rains, may be subject to permit conditions such as installation of erosion controls imposed by California Department of Fish and Wildlife or other agencies.

Section 2.4 Biological Resources

As stated in the response to comment K-1, the discussion of the status of longfin smelt, on page 45 of the SER, is updated as follows:

Federally listed sturgeon, steelhead, and the state- ~~and federally-listed~~ ~~and federal candidate~~ species longfin smelt may enter the channel from San Pablo Bay and may be present in the work area at the time of construction.

Section 2.5 Cultural Resources

The following changes to Section 2.5, Cultural Resources, are made at the request of FIGR, as explained in the introduction to this chapter. In the revised text below, revisions to these mitigation measures previously presented in the SER/SMND have been incorporated; new deletions are ~~struck through~~; new additions are underlined):

Revised Mitigation Measure CUL-1: Archaeological Monitoring. The District will retain the services of a qualified archaeologist who has expertise in California precontact settings, and a Federated Indians of Graton Rancheria (FIGR) Tribal cultural monitor ~~representative with cultural ties to the Project area~~ to monitor all Project related ground-disturbing activities into native soils in the southwestern Project area from the southern terminus of the Project area west of Meadow Drive downstream to the portion of the levee at 115 Vendola Drive. Upon completion of ground disturbance in the southwestern Project area, the District shall retain the archaeological consultant and FIGR Tribal cultural monitor consultants on an on-call basis in the event of inadvertent discoveries throughout the remainder of the construction period. If any previously undiscovered archaeological materials are discovered during construction all work shall stop until the qualified archaeologist and the FIGR Tribal cultural monitor and Tribal Heritage Preservation Officer (THPO) ~~representative~~ have the opportunity to evaluate the find and provide additional treatment recommendations. If the resource is considered significant by the archaeologist and ~~the FIGR Tribal representative~~, all ground disturbance shall be halted until appropriate additional mitigation measures are implemented, as determined necessary by the qualified archaeologist, the lead agency, and the FIGR THPO Tribal representative. Mitigation measures may include, but are not limited to: planning construction to avoid the resource; deeding the resource into a permanent conservation easement; capping or covering the resource with soil prior to construction; planning parks, greenspaces, or other open space to incorporate the resource; excavation of the resource, if it would otherwise be damaged or destroyed by the Project.

Revised Monitoring Measure CUL-1:

Prior to commencement of any construction activities in the southern portion of the levee, the District shall employ the services of a qualified archaeologist and FIGR Tribal cultural monitor ~~representative culturally affiliated with the Project area~~ to perform the construction monitoring. The archaeologist and the FIGR Tribal cultural monitor

~~representative~~ shall both be contractually empowered to stop work, if archaeological materials are discovered. The archaeologist and the ~~Tribal representative~~ will report to the District's Project Manager.

Revised Mitigation Measure CUL-2: Construction Personnel Training. A qualified archaeologist and a FIGR Tribal cultural monitor ~~representative with cultural ties to the Project area~~ shall be retained to conduct a cultural resources training session with construction personnel prior to the commencement of any ground disturbing activities. Training will include (1) the reasons for archaeological and Tribal resource monitoring; (2) regulatory policies protecting archaeological and Tribal resources and human remains; (3) basic identification of archaeological and Tribal resources; and (4) the protocol to follow in case of a discovery of such resources. Construction contractors shall maintain records of employees who have completed the training. Training shall be repeated at least annually. At least one trained crew member (trained within the previous year) must be present during all Project construction activities that involve ground disturbance.

Revised Monitoring Measure CUL-2

Prior to the commencement of construction activities, the District shall employ a qualified archaeologist and a FIGR Tribal cultural monitor ~~representative with cultural ties to the Project area~~ to conduct the cultural resources training. Construction contracts shall include the training and record keeping requirements. The District's Project Manager shall be responsible for ensuring all contractors' compliance with training requirements.

3. Summary and Conclusion

This document includes comments received by Marin County Flood Control and Water Conservation District during the public review period for the Supplemental Environmental Review/Subsequent Mitigated Negative Declaration (SER/SMND) for the Santa Venetia Floodwall Project, and responses to those comments. This document shall be considered along with the SER/SMND when the SER/SMND is adopted. Minor revisions presented in Chapter 2 do not alter conclusions regarding the significance of impacts or the effectiveness of mitigation measures. There have been no changes to the Project or changed circumstances under which the Project would be undertaken requiring further analysis or leading to revisions in the SER/SMND. None of the circumstances described in State CEQA Guidelines § 15073.5(b) have occurred, meaning recirculation of the SER/SMND is not required.

The conclusion of the SER/SMND remains unchanged: the Project, with the incorporation of mitigation measures identified in the previous, 2019 Initial Study/Mitigated Negative Declaration, as well as new and revised mitigation measures identified in the SER/SMND, would have only less-than-significant environmental impacts. None of the comments provides substantial evidence to support a fair argument that the Project would have a significant effect on the environment. Therefore, per State CEQA Guidelines § 15064(f)(1), an Environmental Impact Report (EIR) is not required.

Appendices

- A. Response to Comments on the 2023 SER
- B. Distribution List
- C. Report Preparers
- D. Mitigation Monitoring and Reporting Program

Appendix A: Response to Comments on the 2023 SER

MARIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

**SANTA VENETIA FLOODWALL SUPPLEMENTAL ENVIRONMENTAL REVIEW AND
DRAFT SUBSEQUENT MITIGATED NEGATIVE DECLARATION**

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1. Comments and Responses

This document contains the comment letters on the Santa Venetia Floodwall Supplemental Environmental Review and draft Subsequent Mitigated Negative Declaration (SER/SMND) received during the public review period, and responses to those comments. Each comment letter or email is designated with a letter (A through J) in the upper right-hand corner of the page. Individual comments are labeled with a number in the margin. Immediately following each comment letter or email is an individual response to each numbered comment. Only comments on the scope of the Project and on the analysis and conclusions in the SER/SMND are responded to: comments expressing the commenter's support for or opposition to the Project, and comments addressing other issues not within the scope of the Project or subject to the California Environmental Quality Act (CEQA), are not responded to.

Changes to the text of the SER prompted by comments are indicated by ~~strike-throughs~~ for deletions and underline for additions.

Comments were received from the following individuals and organizations:

Letter Designation	Commenter's Name and Affiliation (if any)
A	Erin Chappell, California Department of Fish and Wildlife
B	Clare Krebsbach
C	Michelle Slade
D	Phillis Bennett
E	Monica Caston
F	Lynn Roth
G	Robert Dobrin
H	Rochelle Karter
I	Ellen Stein
J	Aaron Lai, Shimmick Construction



State of California – Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
 Bay Delta Region
 2825 Cordelia Road, Suite 100
 Fairfield, CA 94534
 (707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Letter A

January 17, 2024

Luis Damerell, Project Manager
 Marin County Flood Control and Water Conservation District
 3501 Civic Center Drive, Suite 304
 San Rafael, CA 94903
Envplanning@MarinCounty.org

Subject: Santa Venetia Floodwall Project, Subsequent Mitigated Negative Declaration,
 SCH No. 2019079013, Marin County

Dear Mr. Damerell:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt a Subsequent Mitigated Negative Declaration (MND) from the Marin County Flood Control and Water Conservation District (District) for the Santa Venetia Floodwall Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW previously provided comments in response to the originally circulated MND.

CDFW is submitting comments on the Subsequent MND to inform the District, as the Lead Agency, of potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under CEQA pursuant to CEQA Guidelines section 15386 for commenting on Projects that could impact fish, plant, and wildlife resources. CDFW is also considered a **Responsible Agency** if a Project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA) or Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program, or other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources.

PROJECT DESCRIPTION SUMMARY

Proponent: Marin County Flood Control and Water Conservation District

Objective: Construct an approximately 7,200-foot-long, 11 feet high, and 14-inch-wide composite sheet pile floodwall on the south (right) side of South Fork Gallinas Creek.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Luis Damerell
Marin County Flood Control and Water Conservation District
January 17, 2024
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This structure would replace an existing timber-reinforced berm floodwall and provide improved protection from floods to approximately 900 homes located on the landward side of the floodwall. Sheet piles would be installed using a vibratory hammer. An upgraded timber-reinforced berm floodwall would be installed at six locations where outfalls or access constraints make installing sheet pile unfeasible.

A 10- to 18-foot-wide work zone along the length of the floodwall would be cleared to facilitate construction. In addition to land access from Vendola Drive, the contractor may access the work zone from South Fork Gallinas Creek. Water access would involve using an amphibious excavator to move material from a barge in South Fork Gallinas Creek to a slide pontoon, and from the pontoon to the work zone. Water access would occur in ten designated areas, each up to 30 feet wide and 100 feet long.

Location: The unincorporated Community of Santa Venetia, Marin County, between South Fork Gallinas Creek and Vendola Drive, and between 7 Vendola Drive on the upstream end to 825 Vendola Drive on the downstream end, with an approximate center point 230 feet northwest of the intersection of Vendola Drive and La Pasada Way at 38.0131°N, -122.5191°W (NAD 83).

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in “take” of plants or animals listed under CESA either during construction or over the life of the Project. **The Project has potential to impact longfin smelt (*Spirinchus thaleichthys*), CESA listed as threatened species, as further described below. The Project also has potential to impact salt marsh harvest mouse (*Reithrodontomys raviventris*), CESA listed as endangered species, Ridgeway’s rail (*Rallus obsoletus*), CESA listed as endangered species, and California black rail (*Laterallus jamaicensis coturniculus*), CESA listed as threatened species. Thank you for including mitigation measures to avoid impacts to salt marsh harvest mouse, Ridgeway’s rail, and California black rail, which are also Fully Protected species as further described below.** Issuance of an ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain an ITP.

CEQA requires a Mandatory Finding of Significance if a Project is likely to substantially restrict the range or reduce the population of a threatened or endangered species. (Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064, &

Luis Damerell
Marin County Flood Control and Water Conservation District
January 17, 2024
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15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

Lake and Streambed Alteration

1 An LSA Notification, pursuant to Fish and Game Code section 1600 et seq., is required for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to LSA Notification requirements. **As described in the Subsequent MND (page 23), the Project would impact a stream, therefore, an LSA Notification would be required. The Project has submitted an LSA Notification (EPIMS-MAN-14846-R3) to CDFW. Thank you for notifying pursuant to Fish and Game Code section 1600 et seq.** CDFW would consider the CEQA document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement until it has complied with CEQA as a Responsible Agency.

Fully Protected Species

Fully Protected species, such as Ridgway's rail, also CESA listed as endangered species, salt-marsh harvest mouse, also CESA listed as endangered species, and California black rail, also CESA listed as threatened species, as described above, may not be taken or possessed at any time and no licenses or permits may be issued for their take except as follows:

- Take is for necessary scientific research;
- Efforts to recover a fully protected, endangered, or threatened species, live capture and relocation of a bird species for the protection of livestock; or
- They are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (Fish & G. Code, §§ 3511, 4700, 5050, & 5515).

Specified types of infrastructure projects may be eligible for an ITP for unavoidable impacts to fully protected species if certain conditions are met (Fish & G. Code, § 2081.15). Project proponents should consult with CDFW early in the Project planning process.

Luis Damerell
Marin County Flood Control and Water Conservation District
January 17, 2024
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COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the District in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Based on the Project's avoidance of significant impacts on biological resources with implementation of mitigation measures, including those CDFW recommends below and in **Attachment 1**, CDFW concludes that an MND is appropriate for the Project.

I. Environmental Setting and Related Impact Shortcoming

MANDATORY FINDING OF SIGNIFICANCE. Does the Project have the potential to substantially reduce the number or restrict the range of an endangered, rare, or threatened species?

COMMENT 1: Longfin smelt

Issue: The Subsequent MND does not evaluate potential impacts to longfin smelt. A report titled "Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary" documented longfin smelt within similar habitat near the Project location (Lewis et al. 2019). Based on the presence of potential habitat and proximity to known spawning locations, South Fork Gallinas Creek is an area where longfin smelt may occur and spawn.

Specific impact and why impact would occur: The Project could result in mortality of longfin smelt larva if they are crushed between the substrate and the amphibious excavator, slide pontoon, or construction matting during in-water work access activities, as larva are not sufficiently developed to move away from these Project activities. In addition, mortality of adults and larvae may result from hydroacoustic impacts caused by pile driving. Project activities which result in impacts including mortality would be a violation of CESA unless the Project obtains an ITP from CDFW.

Evidence impact would be potentially significant: Longfin smelt is CESA listed as threatened species and therefore is considered a threatened species pursuant to Section 15380 of the CEQA Guidelines. Impacts to longfin smelt could substantially reduce the species' population, which would be considered a Mandatory Finding of Significance pursuant to Section 15065, subdivision (a) of the CEQA Guidelines. Therefore, if longfin smelt are present in the Project area and would be impacted, Project impacts to longfin smelt would be potentially significant.

Recommended Mitigation Measures: For an adequate environmental setting and to reduce impacts to longfin smelt to less-than-significant, CDFW recommends including the following mitigation measures in the Subsequent MND.

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Longfin Smelt Avoidance. Access to the Project via water shall be conducted only between August 1 and November 30, when longfin smelt larva are not expected to be present in the work area, unless otherwise approved in writing by CDFW. The Project shall adhere to the work period and all other requirements of the LSA issued by CDFW for the Project.

Hydroacoustic Monitoring and Noise and Vibration Reduction. Pile driving shall not occur in the water. Sound pressure levels generated by work within the bed, bank, or channel of a stream, or by pile driving within 100 feet of surface water, shall be monitored and kept below thresholds that result in injury to fish, currently 206 decibel peak Sound Pressure Level (SPL) and 187 decibel cumulative Sound Exposure Level (SEL), at mid-depth, 10 meters from where work is occurring. If the SPL or SEL thresholds will be exceeded, Permittee shall contact CDFW within 24 hours and before continuing construction.

If SPL and SEL thresholds in the above measure may be exceeded, the Permittee will furnish, install, operate, and maintain a sound attenuation system to reduce noise generated. A design of the attenuation system shall be submitted to CDFW for written approval 14 days prior to initiation of construction (i.e., isolation casings, confined bubble curtain, unconfined bubble curtain, wood pile cushions). The system must be operating prior to beginning pile driving activity within a reasonable dispersal distance of the water where it is feasible for injurious sound levels to reach the water. If the attenuation system fails, pile driving shall immediately stop and may not resume at the location until the system is put back into operation.

Pile Driving Equipment. All piles shall be installed using a vibratory hammer. An impact hammer shall not be used.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB field survey form can be filled out and submitted online at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the

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Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying Project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the Subsequent MND to assist the District in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Alex Single, Environmental Scientist, at (707) 799-4210 or Alex.Single@wildlife.ca.gov; or Melanie Day, Senior Environmental Scientist (Supervisory), at Melanie.Day@wildlife.ca.gov or (707) 210-4415.

Sincerely,

DocuSigned by:

Erin Chappell

B77E9A6211EF486

Erin Chappell
Regional Manager
Bay Delta Region

Attachment 1. Draft Mitigation and Monitoring Reporting Plan

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2019079013)

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REFERENCES

- CDFW. 2023. California Natural Diversity Database (CNDDDB) Management Framework. California Department of Fish and Wildlife. Sacramento, CA. Website <https://wildlife.ca.gov/Data/BIOS> [accessed 20 December 2023].
- Lewis, L., et al. 2019. Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary. University of California, Davis. Davis, CA. Website https://www.researchgate.net/publication/349428334_Interdisciplinary_Studies_on_Longfin_Smelt_in_the_San_Francisco_Estuary [accessed 22 December 2023].

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ATTACHMENT 1

Draft Mitigation and Monitoring Reporting Plan

Biological Resources (BIO)			
Mitigation Measure (MM)	Description	Timing	Responsible Party
MM BIO-6	<i>Longfin Smelt Avoidance.</i> Access to the Project via water shall be conducted only between August 1 and November 30, when longfin smelt larva are not expected to be present in the work area, unless otherwise approved in writing by CDFW. The Project shall adhere to the work period and all other requirements of the LSA issued by CDFW for the Project.	During Water Access for Duration of Construction	Project Applicant
MM BIO-7	<i>Hydroacoustic Monitoring and Noise and Vibration Reduction.</i> Pile driving shall not occur in the water. Sound pressure levels generated by work within the bed, bank, or channel of a stream, or by pile driving within 100 feet of surface water, shall be monitored and kept below thresholds that result in injury to fish, currently 206 decibel peak Sound Pressure Level (SPL) and 187 decibel cumulative Sound Exposure Level (SEL), at mid-depth, 10 meters from where work is occurring. If the SPL or SEL thresholds will be exceeded, Permittee shall contact CDFW within 24 hours and before continuing construction. If SPL and SEL thresholds in the above measure may be exceeded, the Permittee will furnish, install, operate, and maintain a sound attenuation system to reduce noise generated. A design of the attenuation system shall be submitted to CDFW for written approval 14 days prior to initiation of construction (i.e., isolation casings, confined bubble curtain, unconfined bubble curtain, wood pile cushions). The system must be operating prior to beginning pile driving activity within a reasonable dispersal distance of the water where it is feasible for injurious sound levels to reach the water. If the attenuation system fails, pile driving shall immediately stop and may not resume at the location until the system is put back into operation.	For Duration of Construction	Project Applicant
MM BIO-8	<i>Pile Driving Equipment.</i> All piles shall be installed using a vibratory hammer. An impact hammer shall not be used.	For Duration of Construction	Project Applicant

Letter A. Erin Chappell, California Department of Fish and Wildlife

- A-1 This comment reviews California Department of Fish and Wildlife's (CDFW's) role in reviewing CEQA documents, and the agency's applicable regulatory authority.
- A-2 The County appreciates CDFW's comments on the SER measures for fully protected species salt marsh harvest mouse, Ridgway's rail, and California black rail and will implement the measures included in the SER and LSAA (EPIMS-MAN-14846-R3), when issued.
- A-3 CDFW states that Gallinas Creek may constitute spawning habitat for the federal candidate species longfin smelt, and that smelt eggs or larvae may be harmed by barge activity in the creek substrate during project construction. In addition, CDFW expresses concern that acoustic impacts from pile driving may affect juvenile and adult smelt which may stray into the creek.

This response evaluates the potential for longfin smelt to reproduce in Gallinas Creek and the potential for the Project to harm this species, based on information contained in this comment, a literature survey, and new information from a recent report on this subject commissioned by the District (Kleinfelder, 2024).

Longfin smelt preferentially spawn in fresh water, over gravel or sandy substrates, and avoid brackish water for reproduction (Moyle, 2022; Rahman et al., 2023). Gallinas Creek is primarily a tidal slough, with a muddy bottom (Cleengineering, 2018) and salinity levels approaching those of nearby San Pablo Bay (Kleinfelder, 2024). The comment cites a study by Lewis et al. (2019) which conducted sampling in the smaller channels abutting San Pablo Bay, including Gallinas and Miller Creeks, with negative results for longfin smelt. Larval longfin smelt were detected in the Petaluma River, Sonoma Creek, and Napa River exclusively upriver in freshwater areas.

While juvenile or adult longfin smelt could occasionally enter Gallinas Creek from the Bay, the Santa Venetia Floodwall area lacks suitable substrate and salinity conditions to support longfin smelt spawning. Therefore, there would be no impact to longfin smelt eggs or larvae from the Project.

Regarding potential hydroacoustic impacts to adult and juvenile fish, the Project would not conduct pile driving in the water, nor use impact hammers for pile driving. Impact hammers would not be effective for the Project due to their potential to damage the composite sheet piles. Sheet piles would be installed in upland areas within the existing earthen levee, as described in SER/SMND Chapter 1, Project Description. The hammer used to install the sheet piles operates using vibration,

not impact. This, in combination with the weight and the hydraulic pressure of the excavator, pushes the sheets into the ground. Piles would be driven to a depth of approximately 6 to 18 feet.

This method of sheet pile installation, in dry ground and using a vibratory hammer, would generate much lower sound levels than impact hammers (see SER/SMND Appendix C, Noise Technical Report, which reports noise and vibration levels recorded during a test of sheet pile installation at the Project site). Pile driving would not approach the injury level to fish, which, as stated in the comment, is 206 decibel peak, and 187 decibels cumulative. Underwater sound would be attenuated by the location of the sheet pile installation within the earthen berm. Thus, substantial adverse effects on adult or juvenile longfin smelt that might stray into the channel from San Pablo Bay would not occur.

As stated in SER/SMND, Section 2.4, Biological Resources, other juvenile or adult fish species, including steelhead or sturgeon, if present in Gallinas Creek during construction, would be able to swim away from mechanical disturbances related to Project construction. The same is true of juvenile or adult longfin smelt.

In summary, the Project would not have the potential to cause any substantial adverse impact to any life stage of longfin smelt.

Clarification of Construction Period

While not commented upon by CDFW in their comment letter, there is some ambiguity in the SER/SMND description of the planned construction period for the Project that is relevant to the analysis of potential impacts on longfin smelt and other sensitive species.

In Section 1, Project Description, the SER/SMND states that, “Work would commence in early May and would be completed by October, requiring one construction season to finish installation.” This may be interpreted as meaning that work would end by the beginning of October, by the end of September, or sometime during October. In Section 2.4, Biological Resources, the construction period is incorrectly stated in several instances as “May through September” or “May to September.”

In order to complete the work in one construction season, the District anticipates that work may be required to continue through to the end of October. This is suggested in SER/SMND Table 2-4, Project Timeline, which states that erosion control will be installed during sheet pile installation if construction occurs during the wet season after October 15.

The continuation of work into October would not be expected to have any substantial adverse effect on longfin smelt or other sensitive species, since October is outside of the nesting or spawning period for these species. The

Biological resources mitigation measures specified in the SER/SMND, in combination with anticipated conditions that would be contained in the Lake and Streambed Alteration Agreement that would be issued by CDFW for the Project, would continue to ensure no substantial harm to listed species, if construction continues in October. To remove the ambiguity regarding the duration of the construction period, and to incorporate the new information and analysis regarding longfin smelt, the following portions of the SER/SMND are revised as follows (deletions are ~~struck through~~; additions are underlined):

SER/SMND Section 1, Project Description, page 20:

Construction Schedule and Duration

The new floodwall would be installed at a rate of about 100 lineal feet per workday, requiring approximately 90-120 workdays to complete. Work would commence in early May and would be completed by the end of October, requiring one construction season to finish installation. Any work after October 15, or after the commencement of fall rains, may be subject to permit conditions such as installation of erosion controls imposed by California Department of Fish and Wildlife or other agencies.

SER/SMND Section 2.4, Biological Resources, topic a (page 42):

Fish and Other Aquatic Resources

The 2019 IS/MND did not address potential impacts to special-status aquatic biological resources or Essential Fish Habitat. Impacts to aquatic species were not expected from land-based construction on the timber-reinforced berm. The revised Project would use a barge to access the berm from South Fork Gallinas Creek, and the barge would sit on to the bottom of the channel at low tide. Federally listed sturgeon and steelhead may be present in the channel at the time of construction. However, the Project's work schedule from May through September October would avoid overwintering fish and fish nursery sites; only stray juvenile fish would be likely to be present in the summer months. Longfin smelt, a state threatened and federal candidate species, may also be present in Gallinas Creek. Although recent region-wide surveys (Lewis et al., 2019) were negative for this species in the vicinity of Gallinas Creek, juvenile or adult fish may stray in from San Pablo Bay. Gallinas Creek does not contain suitable spawning habitat for this species, due to high salinity levels (Kleinfelder, 2024) and muddy bottom substrate (Cleengineering 2018); thus, there would be no impact to longfin smelt larvae or eggs. Mobile juvenile and adult fish would be able to avoid the barge if they were present in the channel, and no noise impacts would be expected to aquatic species from vibratory hammering on the berm approximately 50 feet from the channel. Damage to the

channel bottom from the barge would be temporary for the duration of construction; no long-term damage to Essential Fish Habitat is expected. Any increase in sediment delivery to the channel would be mitigated to a less-than-significant level by use of erosion control measures, as included in Mitigation Measure BIO-4 from the 2019 IS/MND. Thus, the current Project would not have a new or substantially more severe significant impact on aquatic species, and no additional mitigation is required.

SER/SMND Section 2.4, Biological Resources, topic a (page 40):

Salt Marsh Harvest Mouse, Ridgway's (California Clapper) Rail and Black Rail

The work proposed in 2019 within tidal marsh habitat was limited to pipe replacement and removal at the pump stations, planned to occur outside nesting season (September through January). The current Project plans to use water access to move materials to the worksite with a slide pontoon pulled by an amphibious excavator from the barge, which would be moored in the Gallinas Creek channel, across the marsh to the levee. Both the amphibious excavator and the slide pontoon would cross and temporarily disturb marsh vegetation at the water access points (see Project Description Figure 1-13) during installation of the composite floodwall. This work would occur from May to ~~September~~ through October, and has the potential for a substantially more severe significant impact than previously identified to nesting rails and salt marsh harvest mouse, if present, due to both its timing and the greater potential for damage to marsh habitat.

SER/SMND Section 2.4, Biological Resources, topic d (page 49):

Impact to nursery sites, specifically bird nesting habitat in the marsh, is a new significant impact, not previously identified in the 2019 IS/MND, due to the anticipated May to ~~September~~ through October work season. The temporary crushing of marsh vegetation beneath the barge and pontoons would have the potential to destroy bird nests, and the noise and other disturbance associated with construction could promote nest abandonment. This impact is potentially significant, but would be reduced to a less-than-significant level by implementation of revised Mitigation Measure BIO-1 and Mitigation Measure BIO-2, as well as Marin County Development Code requirements for protecting nesting birds. With implementation of Mitigation Measures BIO-1, as revised, and BIO-2 and Development Code Sec. 22.20.040(G), this impact would be reduced to less than significant.

Additionally, the following references are added to the end of the Section 2.4, Biological Resources:

References:

Cleengineering, 2018. Data Report: Characterization of the Sediment from the Las Gallinas Dredging Project: San Rafael, CA. Sediment Characterization Sampling and Analysis Results (SAR). January 28.

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment Memorandum by Rob Aramayo. April 15.

Lewis L., A. Barros, M. Willmes, C. Denny et al. 2019. Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary. University of California, Davis. Davis, CA. https://www.researchgate.net/publication/349428334_Interdisciplinary_Studies_on_Longfin_Smelt_in_the_San_Francisco_Estuary. DWR Contract #4600011196.

A-4 No reportable observations were made during the conduct of the environmental review.

A-5 The required fees will be paid upon filing of the Notice of Determination.

A-6 The District appreciates CDFW's comments.

A-7 These references were reviewed in preparation of the above responses.

A-8 Please see the response to comment A-3.

References:

Cleengineering, 2018. Data Report: Characterization of the Sediment from the Las Gallinas Dredging Project: San Rafael, CA. Sediment Characterization Sampling and Analysis Results (SAR). January 28.

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment Memorandum by Rob Aramayo. April 15.

Lewis L., A. Barros, M. Willmes, C. Denny et al. 2019. Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary. University of California, Davis. Davis, CA. https://www.researchgate.net/publication/349428334_Interdisciplinary_Studies_on_Longfin_Smelt_in_the_San_Francisco_Estuary. DWR Contract #4600011196.

Moyle, P.B. 2002. Inland Fishes of California, University of California Press.

Rahman, M., L. Lewis, N. Fangue, R. Connon, T-C Hung. 2023. Effects of Salinity on Fertilization, Hatching, and Larval Performance of Longfin Smelt *Spirinchus thaleichthys*. Aquaculture Research. <https://doi.org/10.1155/2023/9984382> .

Letter B

Robin Fies

From: Clare Krebsbach <ckrebsbach@comcast.net>
Sent: Monday, December 18, 2023 9:44 AM
To: EnvPlanning
Subject: Santa Venetia Floodwall

[You don't often get email from ckrebsbach@comcast.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Dear Mr. Damerell,

Please do everything possible to expedite the building of the levee. We NEED it. I have lived in Santa Venetia for 43 years, and know well the hazards of a levee that doesn't hold back the tide.

Thank you,
Clare Krebsbach
112 Vendola Dr.

Letter B. Clare Krebsbach

B-1 This comment addresses the merits of the Project, not the environmental analysis.

Letter C

Robin Fies

From: Michelle Slade <micheslade@gmail.com>
Sent: Monday, December 18, 2023 3:45 PM
To: EnvPlanning
Subject: Supplemental environmental review

You don't often get email from micheslade@gmail.com. [Learn why this is important](#)

Hi Luis,

1 | Can you please explain the wooden structure replacement project along the odd numbers of Vendola? I just received a notice of availability and am confused - is this the same project as the levee project that was meant to occur a few years ago?

Thanks,
Michelle Slade
23 Vendola Drive
San Rafael

Michelle E. Slade
SladeByDesign
Interior Design / Project Consulting
Ph. +1 415.215.1521
micheslade@gmail.com

Letter C. Michelle Slade

C-1 Please see Chapter 1, Project Description, in the SER/SMND.

Letter D

Robin Fies

From: philis bennett <astrophil@att.net>
Sent: Tuesday, December 19, 2023 9:28 AM
To: EnvPlanning
Subject: santa venetia berm

You don't often get email from astrophil@att.net. [Learn why this is important](#)

1 | i am concerned about the vast amount of plastic involved in this project
and how it will be eventually discarded and/or released and eroded into the water and its effects on wildlife. thank you

philis bennett
astrophil@att.net

57 vendola drive
santa venetia 94903

Letter D. Philis Bennett

D-1 Please see the response to comment G-2.

Letter E

From: no-reply@marincounty.org
To: [Luis Damerell](#)
Subject: Santa Venetia Flood Wall Proposal
Date: Tuesday, December 19, 2023 9:47:03 AM

Monica Caston with email address castonm@comcast.net would like information about:
HI Lu,

1

Where can I locate the current design/ photos that is proposed for public comment on this project.
Thanks
Monica

Letter E. Monica Caston

E-1 Please see Chapter 1, Project Description, in the SER/SMND.

Letter F

Robin Fies

From: no-reply@marincounty.org
Sent: Sunday, January 14, 2024 8:32 AM
To: EnvPlanning
Subject: Santa Venetia Berm

Lynn Roth with email address lynnroth@karter.com would like information about:

1 The County is aware of this situation, several people including Luis Demerol have been out to the property and I am at odds with their conclusion. My property at 119 Vendola has a very large eucalyptus tree growing out of the berm and it is compromising the integrity of the berm by lifting it towards the water. If that tree fell it would certainly rip out a portion of the berm. I maintain that the County, whose mission it has been to maintain the berm is responsible for letting that tree become a problem - long before I was an owner. I disagree that it is my responsibility and that I should trade the expense for removing the tree for an easement. Easements to property are not for free and secondly, I would not sign an easement without knowing the entirety of the final plan. So far my concerns have not been answered. I want this statement to be on record. Thank you, Lynn Roth 1 /13 2024:

Letter F. Lynn Roth

- F-1 This comment does not address the environmental analysis. Hazards posed by an existing tree growing on the berm are an existing condition, not a consequence of the Project.

Letter G

Robert Dobrin 215 Vendola Drive San Rafael California 94903 robertd@vendola.org

January 16, 2024

Mr. Luis Damerell - Project Manager
Marin County Flood Control and Water Conservation District
3501 Civic Center Drive, Suite 304
San Rafael, CA 94903

Dear Mr. Damerell;

1 Thank you for the opportunity to comment on the Supplemental Mitigated Negative Declaration (SupNegDec) for the Proposed Santa Venetia Floodwall - Supplement to the 2019 Gallinas Levee Upgrade Initial Study/ Mitigated Declaration (2019NegDec). Following are deficiencies in the present CEQA document.

Sheet Pile Wall Materials Not Specified

[The materials proposed for the construction of the the sheet pile floodwall are not disclosed with any specificity. The environmental review states the sheet piles will be fabricated “*from a proprietary composite material*” (emphasis added) (SupNegDec p. 8). The composition of the materials must be understood and studied. For example, It must be known whether water immersion will leach toxic chemicals into Gallinas Creek, ground water or the earth. Knowing only the material is “proprietary” does not disclose enough information to make any meaningful conclusions about the sheet pile’s environmental impact.

[Furthermore, the manufacture of composite materials is energy intensive. Therefore, the impact of the material’s manufacture on the climate must be analyzed. The materials may use petroleum products and/or other toxic materials such as recycled automobile tires.

[All impacts of the materials that will be used for the flood wall’s construction, including any materials that will be used to bind or join seams must be fully analyzed from manufacture to the end of their useful life and subsequent disposal. Possible detrimental impacts may include, but are not limited to, wildlife, groundwater, surface water, construction workers and sensitive receptors. Compliance with California 65, the Safe Water and Toxic Enforcement Act of 1986, is also required.

Demolition of existing public and private structures must be studied and mitigated

[The impacts of demolition and disturbance of private and public structures has not been adequately analyzed.

[Demolition of existing improvements inventoried in Table 1.2 (SupNegDec p.13) will disturb many decades old structures in and adjacent to Gallinas Creek. Some of these structures were built with construction materials containing hazardous toxins such as creosote and arsenic based wood preservatives. Pipes and drains may contain lead. Demolition or disturbance of docks, gangways, pilings, stairs and decking may release toxins.

[Much, and perhaps all, of the 6500 linear feet of the current timber reinforced berm (TRB) is constructed of pressure treated fir (SupNegDec p.13) which is likely to contain Chromated Copper Arsenate (CCA) or other toxins. The TRB was constructed in the early 1980s before virtually all uses of CCA treated lumber were prohibited in January of 2004.

[Disturbing and disposing of the TRB and other improvements, including the fill within the TRB may cause impacts not disclosed or mitigated in this Negative Declaration. These toxins may jeopardize the health of wetlands, wildlife, sensitive receptors and construction workers. The SupNegDec does not analyze the disposal of these materials or the fill.

Inventory of Structures to be Demolished is Not Accurate

[The inventory of structures in Table 1.3 is not dated so it is impossible to determine if additional structures have been added or if any have been enlarged or removed.

1 [As recently as September of 2023, Zone 7 Flood Control Zone Staff has cited the need for permanent easements, in part because they do not have access to the entirety of the proposed project site for inspection or

1 □ repair. Thus, Table 1.3 can not be accurate as all properties along the proposed project's length have not been inspected by County Flood Control Staff for improvements that may need to be demolished and removed.

11 □ Furthermore, the Negative Declaration is internally inconsistent. Figure 1-13 (SupNegDec p.22) shows an "Accessory Dwelling Unit or Similar" built over the existing Timber Reinforced Berm, however "Accessory Dwelling Unit(s) or Similar" is not included anywhere in the Table 1.8 inventory.

1 □ An accurate and recently dated inventory is required in order to draw conclusions about the environmental impacts of disturbance or demolition of existing structures to make way for this project.

Easements Create Foreseeable Changes to the Environment

CEQA guidelines state in Section 15126.2(d), a growth-inducing impact could occur if:

...the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

1 □ Acquisition of the easements proposed for the construction of this project may lead to foreseeable development and population growth contrary to the conclusion in Section 14 of the 2019NegDec. The area of the proposed permanent easements has increased by as much as 80% since the 2019NegDec (up to 18 feet wide now vs 10 feet wide in 2019). This will allow for even greater, more intensive, use of the land burdened by the easements. for flood control or other purposes. The easements create a significant change in land use which may lead to greater population, traffic, public and/or commercial use in the areas protected by the levee.

For example, if in the future, the easements make possible construction of a levee that meets the Federal Emergency Management Agency's definition of 100 year flood protection, the area protected by such a levee would be eligible for the development of denser housing, hospitals or schools that is currently limited in the existing flood plain by local, California and Federal regulations. As discussed below, it is reasonably foreseeable that broad easement language would lead to undisclosed environmental impacts.

The California Supreme Court has held in *Union of Medical Marijuana Patients, Inc. vs City of San Diego* (August 2019) that proposed land use changes, as we have here, are indeed a CEQA project that requires study and may not be deferred.

It should be noted that Flood Control Staff insists this project is not feasible without permanent easements. It should be further noted that it is impossible to evaluate foreseeable growth impacts of these easements since their scope was not available during the 2019NegDec comment period nor is it available now. However, during a communication for the subsequently abandoned TRB project described in the 2019NegDec, the County Real Estate division provided an easement document with the following language:

(A) Permanent Easement for, but not limited to, the purposes of laying down, locating, constructing, reconstructing, removing, replacing, repairing, maintaining, operating and using, as the District may see fit, for flood control purposes including levees, flood barriers, drainage water facilities, channels, ditches, culverts, and all necessary fences, protective barriers, fixtures, facilities, and access for use in connection there with or appurtenant thereto, in, under, over, along, upon, and across said easement...

Clearly the above easement language remove an "obstacle to population growth" that is not addressed in the 2019NegDec nor the SupNegDec:

The precise scope of the easements, along with any future opportunities they afford, must be disclosed and analyzed as part of this project or as a separate project.

Sincerely,

Robert Dobrin

Letter G. Robert Dobrin

- G-1 The SER/SMND fully meets the requirements of CEQA and was prepared in accordance with the State CEQA Guidelines and the Marin County Environmental Impact Review Guidelines. The commenter does not demonstrate that the SER/SMND contains any deficiencies.
- G-2 A detailed analysis of the potential for the proposed composite sheet pile flood wall to degrade water quality as a result of contact with stormwater runoff, tidal or flood waters, or groundwater over the life of the Project is presented in Initial Study Section 2.10 under Topic 10a. As described in Section 2.10, the use of composite sheet piles is an industry long-term standard practice for use in shoreline protection, sea walls, and marinas, and use of composite sheet piles was the recommendation following comprehensive analysis of alternative materials for the proposed Project. The EverComp range of sheet piles produced by Everlast Synthetic Products were analyzed in the Basis of Design report completed for the proposed Project. Such composite sheet piles are resistant to UV degradation, limit seepage, and are corrosion resistant and durable in environments with high corrosive potential, such as when submerged in salt water, or in more extreme environmental conditions, such as when exposed to abnormal pH levels, extreme temperatures, or corrosive chemicals. Based on the analysis and supporting evidence, the Initial Study conclusion that the resistance to corrosion and breakdown under extreme environmental conditions minimizes and/or avoids the potential for contamination of soil and water over the life of the composite sheet piles is well supported.
- G-3 Analysis of air emissions (including GHG emissions) and other toxic or hazardous materials or emissions associated with manufacture of a product that would be used in construction of the Project is beyond the scope of a CEQA analysis.
- G-4 The Project will comply with all regulatory and legal requirements regarding handling and disposal of hazardous and non-hazardous materials and worker safety. Please see SER/SMND Section 2.9, Hazards and Hazardous Materials, topics a-c; and Section 2.19, Utilities and Service Systems, topic e.
- G-5 Demolition of existing structures is described in SER/SMND Chapter 1, Project Description, and analyzed in Chapter 2, Supplemental Environmental Review Checklist.
- G-6 Please see the response to comment G-4.
- G-7 Please see the discussion of disposal of pressure-treated lumber on page 116 of the SER/SMND.

- G-8 There are no known contaminants in the fill material making up the existing berm. The commenter does not provide any evidence that there are contaminants in the fill or other elements of the TRB, other than pressure-treated wood. Please see responses to comments G-4 and G-7.
- G-9 The list of structures, infrastructure, trees, and vegetation that would be removed or demolished during Project construction presented in Table 1.2 (not Table 1.3, as erroneously stated in the comment) is current as of the release of the SER/SMND in December 2023.
- G-10 Table 1.2 is based mostly on a review of air photos.
- G-11 Figure 1-13 is schematic and does not show an actual accessory dwelling unit. It is consistent with the statement on SER/SMND page 13: To create the work zone, the contractor would need to remove docks, gangways, decks, stairways, *small buildings*, trees, vegetation, TRB, and landscaping from the levee. (emphasis added).
- G-12 SER/SMND Chapter 1, Project Description, describes the proposed Project at a sufficient level of detail for environmental analysis under CEQA. The impacts of demolition are included in the analyses in Chapter 2, Supplemental Environmental Review Checklist.
- G-13 The potential for the Project to induce substantial, unplanned population growth is considered in Section 2.14, Population and Housing. That analysis concludes that there would not be a significant impact of this kind. The Santa Venetia neighborhood is fully built-out. Any incremental increase in population that might be indirectly prompted by a decrease in flood risk in the neighborhood would not be expected to be substantial. The commenter provides no substantial evidence to support a fair argument that any such impact would be significant.

The proposed easements themselves would not directly result in any adverse environmental impacts, but would enable construction and future maintenance of the Project, the impacts of which are discussed in SER/SMND Chapter 2, Supplemental Environmental Review Checklist. Easements would prohibit other structures on the land within the easements, so development or intensification of use that could result in increased population would not occur.

References

Civic Knit, Engeo, DAC Associates, and CSW|ST2, 2023. Santa Venetia Floodwall, Basis of Design and Project Alternatives, Marin County, California. Prepared for the Marin County Flood Control and Water Conservation District, March 2023. Version 2.0

Wentland, David P.E. and Coastal Engineer, 2013. A Designer's Introduction to Development, Design, and Application of Vinyl and Composite Sheet Pile.

Letter H

Robin Fies

From: Robin Fies
Sent: Wednesday, January 17, 2024 8:51 AM
To: EnvPlanning
Subject: FW: Comments to Mitigation

From: Rochelle Karter <rochelle@karter.com>
Sent: Tuesday, January 16, 2024 4:00 PM
To: Luis Damerell <Luis.Damerell@MarinCounty.gov>
Subject: Comments to Mitigation

1 Regarding this CEQA Negative Declaration Review, the requirements state that the Initial Study include the description of the ultimate project. This was completed and accepted. Since that project was found to not be viable, mostly due to budget concerns, a completely new project has been recommended by consultants. Is it proper to only provide a supplement and Mitigated Negative Declaration, which this is, when a very large percent of the information has had major revision, including materials, machinery, work area requirement, depth, species accommodation, costs and access, etc., are all different from the Initial Study?

Some of the current project description does not seem to reflect prior plans and statements made to those of us who have the current "berm" on our properties in Flood Zone 7. Some of these plans may pertain to environmental issues, but since the plans are in no way complete it is difficult to comment on their possible effects.

For instance, the access described MAY be from the water side through barges and such type of equipment, or MAY be through land and via our properties. The actual equipment and its sizes and availability have not been secured (some were hopefully to be available through new German design). Water access has been told to us over many prior years to be absolutely not permissible by more agencies than are listed in this review, BCD, Army Corp of Engineers and some others. The Gallinas creek is so silted in that it seems difficult to imagine without first dredging (which has been denied due to environmental concerns in the past).

P. 20 does not reference the pre-construction removal of structural elements such as docks, fences, stairs, decks, the storage of these, and any environmental effects.

P.45 states that future monitoring requiring maintenance insures that any future construction would be done with only hand tools. Can this assurance be made?

Other environmental concerns may include additional substantial erosion and how this effects the slumping of our properties.

I was present for some of the "testing" of sheet piling installation performed by the Consultant. They did not use the material suggested herein plans, but used metal sheet piling which has different ratings. In cursory investigations it appears that the type of material subsisted for our installation in this report requires a major earthen build-up on the property side;. This has not been explained or described.

It was told to us for many years that whatever the material or method, be it sheet piling or wood construction, that it had to be exactly the same and one unit throughout in order to provide flood protection, with no breaks. Now it is stated that where there are current or required exits/pipes for extraction of water from the street sewers and pumps,,beneath the TRB, a different portion or type of TRB would be inserted. Which is accurate?

We definitely need upgraded flood protection. There are many issues, as always, for this project. Many in the Zone have always contended that the only solution would be a locking gate east of the North canal entry. This has always been stated to be too expensive, need too much manual activation (but no more than required for many others gates throughout Marin or for the maintenance required for pumps that are now manually activated). The current cost of this project has not been determined. Perhaps this should be re-evaluated. And the current "plan" is very far from being assured viability.

1 Lastly, I do not understand why we do not add height and depth to the many that are rebuilt and repaired each year with our Flood Zone 7 funds. It was stated at the last meeting that all the new and still viable ones will be destroyed for the new project because funding cannot be applied for except for continuous projects. I find this rule or law or determination to be illogical and think it should be challenged by those who represent us.

Thank you,
Rochelle Karter

Letter H. Rochelle Karter

- H-1 Pursuant to the State CEQA Guidelines Section 15162, changes to a previously approved project require examination of the proposed changes, changed circumstances, and new information to determine whether the revised project would result in new significant impacts or a substantial increase in the severity of a previously identified significant impact. The SER/SMND fulfills this requirement. As discussed in SER/SMND Chapter 3, Summary and Conclusion, the Project would result in one new and one substantially more severe significant impact, but these can be reduced to less than significant with identified mitigation measures. Consequently, a Subsequent Mitigated Negative Declaration (SMND) may be prepared, pursuant to State CEQA Guidelines Section 15162.
- H-2 Project plans, as described in SER/SMND Chapter 1, Project Description, are substantially complete, and sufficiently detailed for the environmental analysis.
- H-3 The SER/SMND considers the potential for impacts associated both with water access and land access. Water access would, as suggested by the commenter, require permits from several agencies, as discussed in SER/SMND Chapter 1, Project Description.
- H-4 Demolition of existing structures is described on SER/SMND page 13, and analyzed throughout Chapter 2, Supplemental Environmental Review Checklist.
- H-5 The restriction to use of hand tools only in revised Mitigation Measure BIO-1 applies to construction in sensitive habitats. All mitigation measures are mandatory and are legally enforceable, and will be the responsibility of the District. See SER/SMND Appendix A: Mitigation Monitoring and Reporting Program.
- H-6 The potential for the Project to result in increased erosion is examined in SER/SMND Section 2.7, Geology and Soils. No new or substantially more severe significant impact is identified. The commenter does not provide substantial evidence to support a fair argument of a significant impact of this kind.
- H-7 The commenter is mistaken: the sheet pile installation test conducted on November 2, 2022, used composite sheet piles, not metal. Building up earthen material on the land side of the levee would not be required for the Project.
- H-8 Because of the depth to which the sheet piles must be driven, a different method of achieving flood control is necessary at the location of the pipe outfalls, as described in SER/SMND Chapter 1, Project Description.
- H-9 Project cost or financial feasibility is not considered in a CEQA document. Alternatives to a project must be examined in an Environmental Impact Report (EIR), but not in an Initial Study, or in a supplement to an Initial Study. Project

alternatives were considered in the 2023 Basis of Design Report (Civic Knit et al, 2023).

H-10 Please see the response to comment H-9. Reconstruction of the TRB was considered as an alternative in the 2023 Basis of Design Report (Civic Knit et al, 2023)

References:

Civic Knit, Engeo, DAC Associates, and CSW|ST2, 2023. Santa Venetia Floodwall, Basis of Design and Project Alternatives, Marin County, California. Prepared for the Marin County Flood Control and Water Conservation District, March 2023. Version 2.0

Letter I

Robin Fies

From: ellen stein <sfeval1@yahoo.com>
Sent: Thursday, January 18, 2024 12:03 PM
To: EnvPlanning; Luis Damerell
Subject: Fw: Public Comment for proposed Santa Venetia Floodwall

You don't often get email from sfeval1@yahoo.com. [Learn why this is important](#)

I sent this email from another email account and it seems as though it did not go through. Please let me know if you received this.

Thank You,
Ellen Stein

----- Forwarded Message -----

From: Ellen Stein <sfskyway@hotmail.com>
To: ellen stein <sfeval1@yahoo.com>
Sent: Thursday, January 18, 2024 at 11:57:11 AM PST
Subject: Fw: Public Comment for proposed Santa Venetia Floodwall

From: Ellen Stein <sfskyway@hotmail.com>
Sent: Wednesday, January 10, 2024 1:47 PM
To: envplanning@marincounty.org <envplanning@marincounty.org>; Luis Damerell <ldamerell@marincounty.org>
Subject: Public Comment for proposed Santa Venetia Floodwall

Marin County Flood Control District,

I have concerns about the 15-ton 8 feet wide excavator required to install the sheet piles . I am unsure how that piece of equipment will navigate through my property without damaging anything. I hope my property is not one of the ten properties selected to allow equipment access. In previous reports, the land and where the levee sits are on and has been settling over the years. Subsidence of 12 inches by 2050 is predicted in this report. Has there been any study or analysis on what affect the 15-ton piece of equipment will have on that land? The report also states that even the weight of a timber levee can cause potential settling. I also have concerns about what damage the vibration may have on structures, concrete platforms and plants within the vicinity of the project within my yard.

The flood wall is described as 14 inches wide, yet the work zone has gone from 10 feet (previously) to 18 feet wide for easements. The report also indicates that the sheet pile needs an anchor or backed up soil for more stability. We have been told that easements are necessary in order to get any Grants, but we have never seen anything in writing to verify that. It appears there is a push to get easements for the greatest amount of land needed before the project is finalized with a definitive plan and funding. I am not willing to agree to an easement until I know exactly what will be constructed and that it is a viable project with funding. It is not even apparent that all the permitting agencies have given approval for this project. It seems there are still aspects of this project that need to be worked out and finalized. Unfortunately, I honestly don't believe we will ever get the funding for this project to move forward and have taken steps to provide flood barriers to protect my home.

Sincerely,

Ellen Stein
211 Vendola Drive

Letter I. Ellen Stein

- I-1 The equipment proposed to construct the Project would not cause additional settlement. Settlement that occurs within the Project area is caused by the placement of fill on the original ground surface. This creates additional weight on subsurface layers of soil, which over time squeezes out water from the soil pores, causing the ground to subside. This occurs over a long period of time, typically decades. The weight of the equipment that would be used for Project construction would be a short-term load and would not cause ground water to be forced out of the soil. In addition, the equipment's tracks spread the pressure of the machine over a large surface area, reducing the pressure on the ground and preventing any localized settling or subsidence.

- I-2 Ground vibration from equipment operation is not expected to be of sufficient intensity to result in damage to structures, as discussed in SER/SMND Section 2.13, Noise and Vibration, topic b. See also SER/SMND Appendix C, Noise Technical Report.

- I-3 The width of the easements would be sufficient to enable equipment access for Project construction. The proposed sheet pile wall would not need anchors or to be backed by soil. The Project has not been approved.

Letter J

Robin Fies

From: Aaron Lai <alai@shimmick.com>
Sent: Monday, December 11, 2023 2:56 PM
To: EnvPlanning
Subject: FW: Proposed Santa Venetia Floodwall Update
Attachments: NOA_Proposed_SV_Floodwall.pdf

You don't often get email from alai@shimmick.com. [Learn why this is important](#)

Hi Luis,

Thanks for sending this over. I am Aaron Lai, from Shimmick Construction, a general contractor and we are very interested in bidding the above project. May I know when is the anticipated bid advertisement for this project?

Thank you and best regards,

Aaron Lai
Project Manager, Northwest Division
Foster City Levee Improvement Project
Cell: (415) 265-1167
alai@shimmick.com

Shimmick
1 Harbor Center, Suite 200
Suisun City, CA 94585
shimmick.com

From: Marin County Flood Control and Water Conservation District <camarin@public.govdelivery.com>
Sent: Monday, December 11, 2023 2:38 PM
To: Aaron Lai <alai@shimmick.com>
Subject: Proposed Santa Venetia Floodwall Update

You don't often get email from camarin@public.govdelivery.com. [Learn why this is important](#)

You are subscribed to Marin County Flood Control District – Flood Zone 7: Santa Venetia

The Marin County Environmental Planning Division has released the Supplemental Environmental Review and Subsequent Mitigated Negative Declaration for the Proposed Santa Venetia Floodwall.

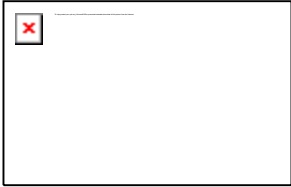
The project's environmental [webpage](#) includes the NOA (also attached) and the environmental review documents.

If you wish to comment, please email envplanning@marincounty.org before the end of the review period on Tuesday, January 16, 2024 at 4:00 p.m.

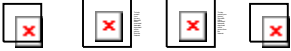
Note: You have received this email because of your previous request to receive electronic notifications about meetings for the advisory board to Flood Zone 7 or events of the Marin County Flood Control and Water Conservation District. Please email ktownsend@marincounty.org and ask to be removed from this list should you no longer wish to receive notifications.

1

- [NOA Proposed SV Floodwall.pdf](#)



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This email was sent to alai@shimmick.com using GovDelivery Communications Cloud on behalf of: County of Marin, California

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1



From: no-reply@marincounty.org
To: [Luis Damerell](#)
Subject: Enquiry on Proposed Santa Venetia Floodwall Update
Date: Monday, December 11, 2023 3:48:26 PM

Aaron Lai with email address alai@shimmick.com would like information about:
Hi, may I know when is the anticipated date for the construction of this project?

Robin Fies

From: Aaron Lai <alai@shimmick.com>
Sent: Monday, January 8, 2024 9:30 AM
To: EnvPlanning
Subject: Proposed Santa Venetia Floodwall

You don't often get email from alai@shimmick.com. [Learn why this is important](#)

Hi Luis,

My name is Aaron Lai from Shimmick Construction. We are interested in bidding the above project. May I know when would the construction bid be advertised for this work?

Thank you and best regards,

Aaron Lai

Project Manager, Northwest Division
Foster City Levee Improvement Project
Cell: (415) 265-1167
alai@shimmick.com

Shimmick

1 Harbor Center, Suite 200
Suisun City, CA 94585
shimmick.com

Letter J. Aaron Lai, Shimmick Construction

J-1 This comment does not address the environmental analysis.

2. Changes to the Supplemental Environmental Review/Subsequent Mitigated Negative Declaration

Several changes are made to the Supplemental Environmental Review/Subsequent Mitigated Negative Declaration (SER/SMND) in response to the comments received, and to clarify that the District intends the construction period for the Project to continue through the end of October. These change only amplify and clarify the text and do not alter conclusions regarding impacts or mitigation measures. No recirculation is required for these minor modifications, per State CEQA Guidelines section 15073.5(c)(4). (deletions are ~~struck through~~; additions are underlined):

SER/SMND Section 1, Project Description, page 20:

Construction Schedule and Duration

The new floodwall would be installed at a rate of about 100 lineal feet per workday, requiring approximately 90-120 workdays to complete. Work would commence in early May and would be completed by the end of October, requiring one construction season to finish installation. Any work after October 15, or after the commencement of fall rains, may be subject to permit conditions such as installation of erosion controls imposed by California Department of Fish and Wildlife or other agencies.

SER/SMND Section 2.4, Biological Resources, topic a (page 42):

Fish and Other Aquatic Resources

The 2019 IS/MND did not address potential impacts to special-status aquatic biological resources or Essential Fish Habitat. Impacts to aquatic species were not expected from land-based construction on the timber-reinforced berm. The revised Project would use a barge to access the berm from South Fork Gallinas Creek, and the barge would sit on to the bottom of the channel at low tide. Federally Listed sturgeon and steelhead may be present in the channel at the time of construction. However, the Project's work schedule from May through ~~September~~ October would avoid overwintering fish and fish nursery sites; only stray juvenile fish would be likely to be present in the summer months. Longfin smelt, a state threatened and federal candidate species, may also be present in Gallinas Creek. Although recent region-wide surveys (Lewis et al., 2019) were negative for this species in the vicinity of Gallinas Creek, juvenile or adult fish may stray in from San Pablo Bay. Gallinas Creek does not contain suitable spawning habitat for this species, due to high salinity levels (Kleinfelder, 2024) and

muddy bottom substrate (Cleengineering 2018); thus, there would be no impact to longfin smelt larvae or eggs. Mobile juvenile and adult fish would be able to avoid the barge if they were present in the channel, and no noise impacts would be expected to aquatic species from vibratory hammering on the berm approximately 50 feet from the channel. Damage to the channel bottom from the barge would be temporary for the duration of construction; no long-term damage to Essential Fish Habitat is expected. Any increase in sediment delivery to the channel would be mitigated to a less-than-significant level by use of erosion control measures, as included in Mitigation Measure BIO-4 from the 2019 IS/MND. Thus, the current Project would not have a new or substantially more severe significant impact on aquatic species, and no additional mitigation is required.

SER/SMND Section 2.4, Biological Resources, topic a (page 40):

Salt Marsh Harvest Mouse, Ridgway's (California Clapper) Rail and Black Rail

The work proposed in 2019 within tidal marsh habitat was limited to pipe replacement and removal at the pump stations, planned to occur outside nesting season (September through January). The current Project plans to use water access to move materials to the worksite with a slide pontoon pulled by an amphibious excavator from the barge, which would be moored in the Gallinas Creek channel, across the marsh to the levee. Both the amphibious excavator and the slide pontoon would cross and temporarily disturb marsh vegetation at the water access points (see Project Description Figure 1-13) during installation of the composite floodwall. This work would occur from May to ~~September~~ through October, and has the potential for a substantially more severe significant impact than previously identified to nesting rails and salt marsh harvest mouse, if present, due to both its timing and the greater potential for damage to marsh habitat.

SER/SMND Section 2.4, Biological Resources, topic d (page 49):

Impact to nursery sites, specifically bird nesting habitat in the marsh, is a new significant impact, not previously identified in the 2019 IS/MND, due to the anticipated May to ~~September~~ through October work season. The temporary crushing of marsh vegetation beneath the barge and pontoons would have the potential to destroy bird nests, and the noise and other disturbance associated with construction could promote nest abandonment. This impact is potentially significant, but would be reduced to a less-than-significant level by implementation of revised Mitigation Measure BIO-1 and Mitigation Measure BIO-2, as well as Marin County Development Code requirements for protecting nesting birds. With implementation of Mitigation Measures BIO-1, as revised, and BIO-2 and

Development Code Sec. 22.20.040(G), this impact would be reduced to less than significant.

The following references are added to the list on pages 51-52:

References:

Cleengineering, 2018. Data Report: Characterization of the Sediment from the Las Gallinas Dredging Project: San Rafael, CA. Sediment Characterization Sampling and Analysis Results (SAR). January 28.

Kleinfelder, 2024. Gallinas Creek Longfin Smelt Assessment Memorandum by Rob Aramayo. April 15.

Lewis L., A. Barros, M. Willmes, C. Denny et al. 2019. Interdisciplinary Studies on Longfin Smelt in the San Francisco Estuary. University of California, Davis. Davis, CA. https://www.researchgate.net/publication/349428334_Interdisciplinary_Studies_on_Longfin_Smelt_in_the_San_Francisco_Estuary. DWR Contract #4600011196.

3. Summary and Conclusion

This document includes comments received by Marin County Flood Control and Water Conservation District during the public review period for the Supplemental Environmental Review/Subsequent Mitigated Negative Declaration (SER/SMND) for the Santa Venetia Floodwall Project, and responses to those comments. This document should be considered along with the SER/SMND when the SER/SMND is adopted. One comment prompted revisions to the SER/SMND Section 2.4, Biological Resources. The revisions only clarify and add specificity to the analysis, and do not alter conclusions regarding the significance of impacts or the effectiveness of mitigation measures. There have been no changes to the Project or changed circumstances under which the Project would be undertaken requiring further analysis or leading to revisions in the SER/SMND. None of the circumstances described in State CEQA Guidelines § 15073.5(b) have occurred, meaning recirculation of the SER/SMND is not required.

The conclusion of the SER/SMND remains unchanged: the Project, with the incorporation of mitigation measures identified in the previous, 2019 Initial Study/Mitigated Negative Declaration, as well as new and revised mitigation measures identified in the SER/SMND, would have only less-than-significant environmental impacts. None of the comments provides substantial evidence to support a fair argument that the Project would have a significant effect on the environment. Therefore, per State CEQA Guidelines § 15064(f)(1), an Environmental Impact Report (EIR) is not required.

Appendices

A. Distribution List

B. Report Preparers and Resumes

Appendix A:
Marin County Water Conservation and Flood Control
District Distribution List for the SER/SMND

Distribution List for the SER/SMND

Category	Company/Organization	FirstName	LastName	Address	City	State	Zip
A Proj Sponsor							
B Clearinghouses	ABAG Clearinghouse	Attn: Dayle	Farina	375 Beale St., Suite 700	San Francisco	CA	94105
B Clearinghouses	State Clearinghouse			1400 Tenth Street	Sacramento	CA	95814
B Fed	U.S. Army Corps of Engineers		Branch Chief	1455 Market Street, FL 17	San Francisco	CA	94103
B Fed	U.S. Fish & Wildlife Service		Supervisor	2800 Cottage Way #W-2606	Sacramento	CA	95825
B Fed	U.S. Fish & Wildlife Service San Francisco Bay National Wildlife Refuge Complex	Winnie	Chan	9500 Thornton Ave.	Newark	CA	94560
B State Agencies	Air Resources Board			P.O. Box 2815	Sacramento	CA	95812
B State Agencies	BAAQMD/Planning & Research	Suzanne	Bourguignon	939 Ellis Street	San Francisco	CA	94109
B State Agencies	CA Air Resources Board	Mary D.	Nichols, Board Chair	P.O. Box 2815	Sacramento	CA	95812
B State Agencies	CA Coastal Commission			45 Fremont Street, Suite 2000	San Francisco	CA	94105
B State Agencies	CA Coastal Conservancy			1330 Broadway #1300	Oakland	CA	94612
B State Agencies	CA Dept. Fish & Wildlife	Karen	Weiss		CA		
B State Agencies	CA Dept. of Boating and Waterways		Division Chief	2000 Evergreen St., Suite 100	Sacramento	CA	95815-3888
B State Agencies	CA Dept. of Conservation	Div of Mines & Geology		801 K St., Ste. 2015	Sacramento	CA	95814
B State Agencies	CA Dept. of Fish & Wildlife	Karen	Weiss	2825 Cordelia Road, Suite 100	Fairfield	CA	94534
B State Agencies	CA Dept. of Water Resources		Chief	P.O. Box 942836	Sacramento	CA	94236
B State Agencies	CA EPA			1001 I Street	Sacramento	CA	95814
B State Agencies	CA Native American Heritage Commission			915 Capitol Mall, Rm 364	Sacramento	CA	95814
B State Agencies	CA Natural Resources Agency	John	Laird, Secretary	1416 9th Street, Suite 1311	Sacramento	CA	95814
B State Agencies	CA Office of Emergency Services		Environmental Officer	3650 Shriever Ave.	Mather	CA	95655
B State Agencies	CA Office of Historic Preservation			P.O. Box 942896	Sacramento	CA	94296-0001
B State Agencies	CA Regional Water Qlty Control Board	Nicole	Fairley	1515 Clay Street, #1400	Oakland	CA	94612
B State Agencies	CA Resources Agency		Office of the Secretary	1416 9th Street, 13th Floor	Sacramento	CA	95814
B State Agencies	CA State Lands Commission	Jennifer	Lucchesi, Executive Officer	100 Howe Ave, Suite 100-South	Sacramento	CA	95825
B State Agencies	CA State Water Resources Control Brd	Div of Water Quality		1001 I Street, P.O. Box 2000	Sacramento	CA	95812-2000
B State Agencies	CalEPA	Matthew	Rodriguez, Secretary for	1001 "I" Street	Sacramento	CA	95814
B State Agencies	SF Bay Conservation & Development Comm.			455 Golden Gate Ave., Suite 10600	San Francisco	CA	94102-7019
C Local Gov	City of San Rafael Community Development	Paul	Jensen, Community	1400 Fifth Avenue, P.O. Box 151560	San Rafael	CA	94915-1560
C Local Gov	Marin/Sonoma Mos. & Vector Con. Dis	Philip	Smith, District Manager	595 Helman Lane	Cotati	CA	94935
C Serv District	Flood Control 7 Adv. Brd.				San Rafael	CA	94903
C Serv District	Las Gallinas Sanitary Dist.		District Manager	300 Smith Ranch Rd.	San Rafael	CA	94903
C Water Dist.	Marin Municipal Water District		Environmental Services	220 Nellen Avenue	Corte Madera	CA	94925
D CDA Staff	Community Development Agency	Tammy	Taylor	3501 Civic Center Drive, #308	San Rafael	CA	94903
D CDA Staff	Community Development Agency	Rachel	Reid	3501 Civic Center Drive, #308	San Rafael	CA	94903
D CDA Staff	Marin County CDA-Planning	PC Secretary		3501 Civic Center Drive, #308	San Rafael	CA	94903
D County Official	Marin County BOS	Supervisor Damon		3501 Civic Center Drive, #329	San Rafael	CA	94903
D Marin County Dept	Marin Co. Counsel	Jenna	Brady	3501 Civic Center Drive, Rm. 275	San Rafael	CA	94903
D Marin County Dept	Marin Co. DPW	Counter		3501 Civic Center Drive, Rm. 304	San Rafael	CA	94903
D Marin County Dept	Marin Co. DPW, Land Use	Berenice	Davidson	3501 Civic Center Drive, Rm. 304	San Rafael	CA	94903
D Marin County Dept	Marin Co. Sheriff's Department/OES			3501 Civic Center Dr., #145	San Rafael	CA	94903
D Marin County Dept	Marin County Administrator	Matthew	Hymel	3501 Civic Center Drive, Rm 325	San Rafael	CA	94903
D Marin County Library	Marin Co. Library, Civic Center			3501 Civic Center Dr., Rm. 427	San Rafael	CA	94903
E Environmental Grp	Marin Audubon Society	Barbara	Salzman	48 Ardmore Road	Larkspur	CA	94939
E Environmental Grp	Gallinas Watershed Council	Judy	Schriebman				
E Environmental Grp	Marin Conservation League	Linda Novy	President	1623A Fifth Avenue	San Rafael	CA	94901
F Media	Marin Independent Journal			4000 Civic Center Drive, Floor 3	San Rafael	CA	94903
F Media	Newspointer			523 4th Street	San Rafael	CA	94901
F Media	Pacific Sun			835 Fourth Street, Ste. B	San Rafael	CA	94915
G Private	San Rafael Airport						
G Private	Residents within 625 ft buffer + entire Zone 7						

Appendix B: Report Preparers

The Supplemental Environmental Review/Subsequent Mitigated Negative Declaration, as well as this response to comments document, were prepared by Sicular Environmental Consulting and Natural Lands Management, under contract to the Marin County Flood Control and Water Conservation District. Report preparers included the following:

Sicular Environmental Consulting

Dan Sicular, Ph.D., Project Manager and Principal Author

Subcontractors to Sicular Environmental Consulting:

Sutro Science

Peter Hudson, PG, CEG, Geology and Soils, Hazards and Hazardous Materials

Justin Taplin, MS, Hydrology and Water Quality

Environmental Science Associates

Brian Pittman, CWB, Biological Resources

Liza Ryan, MS, MPH, Biological Resources

RCH Group

Paul Miller, Managing Principal, Senior Noise Analyst

Dan Jones, Air Quality Analyst

Luis Rosas, Noise Analyst

Achasta Archaeology

Susan Morley, M.A., RPA

Brenna Wheelis, Associate Archaeologist

Document Preparation:

Brian Vahey, Eagle Eye Editing

Linda Uehara, September People Graphic Arts

Resumes of technical analysts follow.

DANIEL T. SICULAR, Ph.D.

Principal, Sicular Environmental Consulting and Natural Lands Management

Dan Sicular is the Principal of Sicular Environmental Consulting and Natural Lands Management, a Bay Area-based firm specializing in CEQA environmental review, sustainable forest management, and habitat restoration. Dan is an experienced CEQA practitioner, having written and managed numerous Environmental Impact Reports and Initial Studies for projects ranging from State permitting programs, to solid waste landfills and mining operations, to urban development projects. In late 2017 and early 2018, Dan served as the Consulting Environmental Planning Manager for the Marin County Community Development Agency, filling in for the regular Environmental Planning Manager while she was on maternity leave. In this position, Dan worked closely with staff from the Marin County Community Development Agency, Public Works Department, and County Counsel's Office, providing oversight and guidance for several CEQA and NEPA environmental reviews. This experience, in addition to completion of several EIRs, Supplemental Environmental Reviews, and Initial Studies for the County, has given Dan an intimate knowledge of Marin County environmental review standards, practices, and procedures.

Positions Held

Current

Principal, Sicular Environmental Consulting and Natural Lands Management (2016-present)

Past

Consulting Environmental Planning Manager, Marin County Community Development Agency (Sept. 2017- March 2018)

Forest Manager, Pacific Forest Trust, San Francisco, CA (2015-2016)

Senior Project Manager, Environmental Science Associates, San Francisco, CA (1994-2015)

Instructor, University of California, Berkeley Extension Environmental Management Program (1991-1994)

Instructor, San Francisco State University Environmental Resources Program (1990-1993)

Education

Ph.D., Geography, University of California, Berkeley (1989)

M.A., Geography, University of California, Berkeley (1984)

B.A., Southeast Asian Studies, University of California, Berkeley (1982)

Relevant Experience

San Geronimo Valley Golf Course Club House Parcel Environmental Constraints Manager (Project Manager). Dan prepared an environmental constraints analysis for Marin County, examining the feasibility of developing a portion of the former San Geronimo Valley Golf Course. Dan and his team focused on major environmental topics, including fisheries and other biological resources, hydrology, geology, hazardous materials, aesthetics, land use and planning, and cultural resources. The final report was completed in September 2021.

San Rafael Rock Quarry Supplemental Environmental Review (Project Manager). Dan assisted Marin County with preparation of a CEQA Supplemental Environmental Review and EIR Addendum for the proposed extension of the reclamation timeline for the San Rafael Rock Quarry. The Addendum was adopted, and the extension granted, by the Board of Supervisors in November 2021. The extension allows for continued mining through at least 2044. Dan previously managed the completion of an EIR for the Quarry (see below). The Supplemental Environmental Review covered the full range of environmental topics.

Dipsea Ranch Land Division Initial Study (Project Manager). Under contract to the Marin County Community Development Agency, Dan prepared a CEQA Initial Study for the Dipsea Ranch Land Division Project. The Project consisted of subdivision of an existing 8-acre parcel located on Panoramic Highway on

the southern slope of Mount Tamalpais, to create three lots. A Mitigated Negative Declaration for the Project was adopted by the Planning Commission in April, 2020, and, after appeal, upheld by the Board of Supervisors in October, 2020. The Project garnered intense opposition from neighbors. Dan and his team prepared written responses to the extensive comments submitted during the public review period, and responded, on a very short timeline, to additional comments received during the appeal.

Marin County Department of Public Works/Flood Control and Water Conservation District, Environmental Planning and Coordination Services (*Project Manager*). Dan is assisting the District with coordination and review of environmental review documents for the Ross Valley Watershed Program. These have included the San Anselmo Flood Risk Reduction Final EIR, the Corte Madera Creek Flood Risk Management Project Draft EIS/EIR, and the Corte Madera Creek Flood Risk Management Project Phase 1 EIR.

Gallinas Levee Upgrade Initial Study, Marin County Department of Public Works/Flood Control and Water Conservation District (*Project Manager*). Dan prepared a CEQA Initial Study for the planned raising of the timber reinforced berm atop the Gallinas Levee, which protects the Santa Venetia neighborhood from tidal and riverine flooding of Las Gallinas Creek. The Initial Study was completed in June, 2019 and a Mitigated Negative Declaration was adopted for the project in October, 2019.

Alta Way Extension Initial Study, Marin County. *Project Manager*. Dan prepared a CEQA Initial Study for a proposed grading permit to extend an existing residential street in the Tamalpais Valley to access ten legal lots of record. Working closely with Community Development Agency and Department of Public Works staff, Dan navigated complex technical and planning issues as well as public controversy over the project. The Initial Study concludes that the project would have the potential for significant effects on the environment, and that an EIR should be prepared. The Initial Study was completed in April, 2018.

Marin County Federal Housing Grants Program NEPA Assistance, Marin County Community Development Agency (*Project Manager*). Since 2018, Dan has assisted the Community Development Agency with completion of NEPA reviews for the Federal Housing Grants Program. Grants, which originate with funding from the Department of Housing and Urban Development, are given for new construction and rehabilitation low-income housing. Each grant requires compliance with NEPA through preparation of an environmental review document.

Marin County Emergency Operations Facility EIR, *Project Manager*. (ESA) Dan was ESA's project manager for preparation of an EIR for Marin County's proposed Emergency Operations Facility, which was being considered for location on the County Civic Center campus. Working with staff from the County Administrator's Office and Community Development Agency, Dan and his team examined in detail six potential locations for the facility, including four sites on the Civic Center campus as well as two off-site locations. Of paramount importance in the EIR was a consideration of the compatibility of the Emergency Operations Facility with the 2005 *Marin County Civic Center Master Design Guidelines*, which are intended to ensure that all future development on the Campus is consistent with Frank Lloyd Wright's original Master Plan. The EIR was unusual in conducting an economic analysis and architectural study of the alternative locations. Work was stopped on the EIR just before the Draft was due to be published in April 2011, as the Board of Supervisors began focusing attention on the Marin Commons office complex site, one of the alternatives being examined in the EIR; because this site was an existing office complex, purchasing and repurposing it for the Emergency Operations Facility were exempt from CEQA review.

San Rafael Rock Quarry EIR, Marin County. *Project Manager* (ESA). Working with the Marin County Department of Public Works and Community Development Agency, Dan and his team at ESA managed the preparation an EIR for the San Rafael Rock Quarry's Amended Reclamation Plan and Surface Mining and Quarrying Permit. The quarry, located at Point San Pedro near the City of San Rafael, extracts and processes

rock for use as aggregate, road base, rip-rap, and other products. Operation of the quarry had become a matter of considerable controversy, due to impacts on the residential neighborhood that adjoins the quarry property. Of particular concern to the site's neighbors were blasting, truck traffic, and a degraded view shed. The project included an analysis of potential impacts of planned post-reclamation use of the site, which included cutting a channel between the 400-foot deep main quarry bowl and San Pablo Bay in order to create a lagoon and ship channel. A mixed commercial, residential, and marina development was planned for the site. The Final EIR was certified, and the project approved by the Marin County Board of Supervisors, in 2009.

Redwood Landfill Expansion EIR, Marin County. *Project Manager (ESA)*. While at ESA, Dan managed the completion of a Subsequent EIR for the proposed expansion of the Redwood Landfill, located near Novato in Marin County. Dan worked closely with County Environmental Health Services and Community Development Agency staff to develop an alternative to the project that refocuses the facility on materials and energy recovery, rather than landfill disposal, and that limits the size of the expansion and daily waste intake to levels commensurate with the County's needs. Ultimately, the County approved the alternative, after certifying the EIR in 2008. Subsequently, Dan worked with the County on preparation of Supplemental Environmental Review leading to an Addendum to the EIR, examining a materials recovery facility and expansion of the existing composting operation.

Other EIRs

While at ESA, Dan managed through to certification the following Environmental Impact Reports (lead agency and date of certification provided; asterisk (*) indicates that the EIR withstood legal challenge):

Cold Creek Compost Facility EIR, Mendocino County (1998)*

Blue Line Transfer Station/Materials Recovery Facility EIR, South San Francisco (1999)

Ostrom Road Landfill Expansion, Yuba County (1999)*

Yolo County Central Landfill EIR, Yolo County (2005)

Redwood Landfill EIR, Marin County (2008)*

Shasta and Scott River Watershed-wide Permitting Programs EIRs, CA Depart. of Fish and Wildlife (2009)

San Rafael Rock Quarry Expansion and Reclamation Plan EIR, Marin County (2009)

San Francisco Bay and Delta Sand Mining EIR, California State Lands Commission (2012)*

Pilarcitos Quarry Expansion and Reclamation Plan EIR, San Mateo County (2012)

Sonoma County Compost Facility EIR, Sonoma County Waste Management Authority (2013)

Landbank Central and Wolfe Campus EIR, City of Sunnyvale (2014)

Roblar Road Quarry Supplemental EIR (as a Subcontractor to ESA), Sonoma County (2019)

Brian Pittman, CWB

Wildlife Program Manager/Sr. Wildlife Biologist



EDUCATION

M.S., Environmental Studies, San Jose State University

B.A., Biology, University of California, Santa Cruz

25 YEARS EXPERIENCE

CERTIFICATIONS/REGISTRATION

Certified Wildlife Biologist - The Wildlife Society, 2004

California Scientific Collecting Permit ID# 003068

Federal Recovery Permit #TE-027422-6 (fairly shrimp, California tiger salamander, and California red-legged frog)

NMFS Federal Recovery Permit #16506 (coho salmon and steelhead)

FAA-certified Unmanned Aircraft System (UAS) pilot

TRAINING

2017 Salt Marsh Harvest Mouse Workshop (2-day with field I.D. & handling)

CDFW California Aquatic Bioassessment Workshop

Wetland Delineation Training Course, U.S. Army Corps of Engineers

Desert Tortoise Survey Techniques Workshop, Desert Tortoise Council

Brian is a *Certified Wildlife Biologist* with 25 years of practice leading projects with complex regulatory, mitigation, and construction/environmental compliance backgrounds. He is fluent with biological resources characterization and management throughout California and routinely coordinates with scientists, planners, and resource agency staff to identify and resolve issues affecting sensitive or regulated resources. Brian is trained in the permitting procedures and requirements under CEQA, NEPA, the federal and California Endangered Species Act(s), California Fish & Game Code, and federal and California Clean Water Acts. He holds a 10(a) federal Recovery Permit for vernal pool branchiopods, California red-legged frog, and California tiger salamander; and he performs a wide range of focused biological surveys throughout the State. He is also a co-investigator on a federal 10(a) permit for Central California Coast coho salmon and steelhead.

Relevant Experience

City of San José, San José-Santa Clara Regional Water Facility Headworks Improvements and New Headworks Facilities Project, San José, CA. Senior Biologist.

Brian was the lead biologist assisting the City with a Golden Eagle Avoidance Plan and a Golden Eagle Take Permit application. Brian directly negotiated permit conditions with the USFWS and CDFW and managed nest monitoring during the nestling and fledgling phases of an active golden eagle nest in the vicinity of the project. The project includes construction of a new Headworks facility as well as various pipeline and existing facility improvements to accommodate operation of the new facility within the existing San José-Santa Clara Regional Wastewater Facility.

Santa Clara Valley Water District, Purified Water Project, Santa Clara County, CA. Senior Biologist.

As lead biologist, Brian coordinated closely with field crews who conducted biological reconnaissance surveys, nesting bird surveys, and western burrowing owl surveys in support of the project. Brian was lead reviewer of the biological resources report and will be the senior reviewer of the forthcoming Biological Resources EIR section for the project.

Contra Costa County Flood Control & Water Conservation District, Lower Walnut Creek Channel Restoration Project, Martinez, CA. Senior Biologist.

Brian is the Project Director and an agency-designated lead biologist for the Lower Walnut Creek Channel Restoration Project. Construction activities, including vegetation removal and channel excavation will be largely completed in late 2021. Focused monitoring activities, which have been ongoing since April 2021, include daily compliance monitoring for California black rail and salt marsh harvest mouse during the manual removal of coastal salt marsh habitat.

Mill Site Remediation at Site OU-E Permitting and Construction Monitoring Support: Georgia Pacific, Ft. Bragg, CA. Senior Biologist.

Brian was the senior biologist for a project involving soil remediation work at a former timber mill site. He provided oversight for biological monitoring during project construction. ESA is currently supporting long-term monitoring of mitigation wetlands created at the site.

Brian Pittman, CWB (Continued)

Wildlife Program Manager/Sr. Wildlife Biologist

Contra Costa County Flood Control & Water Conservation District, Lower Walnut Creek Channel Restoration

Project, Martinez, CA. *Senior Biologist.* Brian is the Project Director and an agency-designated lead biologist for the Lower Walnut Creek Channel Restoration Project. Construction activities, including vegetation removal and channel excavation will be largely completed in late 2021. Focused monitoring activities, which have been ongoing since April 2021, include daily compliance monitoring for California black rail and salt marsh harvest mouse during the manual removal of coastal salt marsh habitat.

Mill Site Remediation at Site OU-E Permitting and Construction Monitoring Support: Georgia Pacific, Ft. Bragg, CA.

Senior Biologist. Brian was the senior biologist for a project involving soil remediation work at a former timber mill site. He provided oversight for biological monitoring during project construction. ESA is currently supporting long-term monitoring of mitigation wetlands created at the site.

Pudding Creek Dam Emergency Repair Permitting: Georgia Pacific, Ft. Bragg, CA. *Lead biologist.* Brian provided senior biological input on permitting documents for the repair of a small dam on Pudding Creek.

North Bay Water Reuse Authority, North Bay Water Reuse Program Phase 2 EIR/EIS, Marin, Sonoma, and Napa

Counties, CA. *Biological Resource Task Manager.* Brian led ESA's team of biologists for this combined CEQA/NEPA document evaluating the impacts associated with the implementation of 14 individual water reuse projects seeking funding from the U.S. Bureau of Reclamation's Title XVI program. Brian led the EIS/EIR biological resources analyses and the program-wide Biological Assessment to secure funding under the Title XVI grant program.

Oakland Waterfront Ballpark District EIR, Oakland, CA. *Sr. Biologist.* Brian is the senior biologist assisting in the preparation of an EIR for the Oakland Athletics' new ballpark and mixed-used development at Howard Terminal. Brian has been working collaboratively with the City of Oakland and the development team to characterize potential project impacts to aquatic resources in the Oakland Estuary and develop a strategy to protect nesting peregrine falcon.

California Water Service Company ("Cal Water") Bay Area Stream Assessments, San Mateo County, CA. Brian is the lead biologist for this on-call for which ESA biologists respond to accidental water releases into regional streams. In support of RWQCB reporting requirements, Brian has performed and managed aquatic site reviews in numerous streams on the San Francisco Peninsula to review water quality and the health of aquatic invertebrates and native fish species including steelhead trout. ESA's biological resources on-call emergency response contract with Cal Water remains active in 2021.

B.F. Sisk Dam Safety of Dams EIS/EIR and San Luis Low Point Improvement EIS/EIR, San Benito and Santa Clara

Counties. *Senior Biologist.* Working directly with the U.S. Bureau of Reclamation, Brian was the senior biologist of the terrestrial biology chapters for the EIS/EIRs and the USFWS Biological Assessments. He led focused field survey efforts for San Joaquin kit fox and California red-legged frog, among other species. Brian also directed the biological field surveys at Pacheco Reservoir, an alternative to Low Point Improvement Project and was senior author of the associated biological survey report.

BART Laughlin Station Photovoltaic Facility, Biological Resources Assessment, Alameda County.

Sr. Biologist. Brian performed focused biological surveys of BART's Laughlin property in the City of Livermore and was lead biologist of a biological constraints review to support a proposed solar photovoltaic facility on an 11.5-acre portion of the site. The constraints assessment included a wetland assessment, rare plant survey, and vernal pool fairy shrimp habitat assessment, with a discussion of biotic habitats, special-status species, and sensitive habitats on the site. The report characterized the distribution and potential presence of California tiger salamander, California red-legged frog, burrowing owl, and San Joaquin kit fox on the site and provided recommendations to avoid and minimize impacts to these and other sensitive biological resources.

Liza Ryan

Senior Wildlife Biologist



EDUCATION

MS, Ecology, UC Davis

MPH, Environmental
Toxicology, UC Berkeley

BS, Biology, Yale
University

14 YEARS' EXPERIENCE

California Scientific
Collection Permit #10071

TRAININGS

Rare Pond Species
Training and Handling
(CTS, CRLF, WPT), 2022

Wetland Delineation
40-Hour Training Course
(2019)

Endangered Species Act
Section 7 Biological
Assessment Workshop,
2012

OSHA 10 Hour Training for
Respiratory Hazards, 2012

Qualified Stormwater
Practitioner (SWPPP)
Training, 2011

AEP Advanced CEQA
Workshop, 2011

California Tiger
Salamander Identification
and Management, 2010

California Red-legged
Frog Identification and
Management, 2008

NWETC CEQA
Workshop, 2007

Liza is a senior wildlife biologist and NEPA/CEQA specialist with expertise in ecology, wildlife biology and toxicology. She has 14 years' experience working with multidisciplinary teams on complex regulatory, mitigation, and planning issues. Her responsibilities have included conducting biological reconnaissance, nesting birds, and special status species surveys, habitat analyses, Section 7 biological assessments, mitigation and monitoring plans, and preparing state and federal permits. She has conducted protocol-level surveys for aquatic and terrestrial special-status species, including Ridgway's rail, Swainson's hawk, California red-legged frog, California tiger salamander, salmonids and vernal pool crustaceans. Liza has also worked as a risk assessor, environmental site inspector and in public outreach and scoping. She is experienced with biological resources analysis, permit compliance, surveying, and monitoring for threatened and endangered species throughout the western United States.

Relevant Experience

Antioch Costco Biological Reconnaissance, Antioch, CA. *Project Manager.* Liza surveyed for biological resources on an undeveloped parcel prior to development and authored the reconnaissance report. Burrowing owl and active dens were found onsite, and the project will proceed with measures to avoid impacts to this species.

Mosquito Source Reduction Biological Assessment, Bay Area, CA. *Project Manager.* Liza coordinated with mosquito abatement districts across the Bay Area to develop approaches for mosquito source reduction that minimized impacts to Ridgway's rail, western snowy plover, and other rare tidal marsh species for the Section 7 BA, that were suitable for future Corps permitting.

Lower Walnut Creek Tidal Marsh Restoration Project, Martinez, CA. *Biologist.* Liza monitored for rails, nesting birds, salt marsh harvest mouse and rare plants during vegetation removal, fence installation, and channel excavation for this large-scale tidal marsh restoration project on Suisun Bay. She also assisted with protocol-level salt marsh harvest mouse trapping in 2021.

Bi Du Haalle Housing, 235 Kelly Road, Cloverdale, CA. *Biologist.* Liza performed a biological resources survey and habitat assessment for a technical report for CEQA, on this tribal site planned for commercial and residential redevelopment. Ephemeral waters, rare plants, and oak woodland communities were among the potential impacts.

Ukiah Riverside Park Regeneration Project, Ukiah, CA. *Biologist.* Liza evaluated biological resource impacts for this multi-stage restoration project in Riverside Park in Ukiah. Aquatic, riparian, woodland and grassland habitats were present and potential effects of restoration were evaluated and mitigation developed for CEQA analysis.

San Rafael Rock Quarry Supplemental Environmental Review, Marin County, CA. *Biologist.* The Quarry required supplemental review of a plan to extend the end date of

Liza Ryan (Continued)

Senior Wildlife Biologist

mining and reclamation. Liza reviewed existing biological surveys, annual reports, and other information, including recent California red-legged frog sightings, and is preparing the biological resources analysis.

Heartland Hydrogen Project Biological Technical Report and EIR, Fresno County, CA. *Lead Biologist.* Liza surveyed the project site for Swainson's hawk, San Joaquin kit fox, and other sensitive species; wrote the biological technical report for the site; and will write the Biological Resources section for the Environmental Impact Report.

Santa Venetia Timber-Reinforced Berm IS, Marin County, CA. *Lead Biologist.* The project was to install a timber berm along a tidal channel to prevent encroachment of floodwater into homes, and to remove and repair pipes associated with existing pumping stations. Liza surveyed the tidal marsh and upland habitats and wrote the Biological Resources section of the Initial Study in 2019.

UCSF Comprehensive Parnassus Heights Plan EIR, San Francisco, CA. *Biologist.* The project is a 2020 programmatic EIR to expand and modernize the Parnassus campus of UCSF, with some project-level components for the initial phase. Liza reviewed prior EIRs for the campus and available environmental data, and conducted a reconnaissance survey of the campus and adjoining Open Space Reserve in order to write the Biological Resources section. The DEIR is presently undergoing revision.

City of Calistoga Riverside Ponds Relocation Project. Napa County, CA. *Biologist.* The project assessed impacts from construction and reconfiguration of four riverside wastewater treatment ponds and other facility structures in close proximity to the Napa River, the Napa Vine Trail, and the Dunaweal Wastewater Treatment Plant to improve water quality, reduce erosion and protect vital infrastructure. Liza authored the Biological Resources section of the initial study, and the Section 7 biological assessment, and responded to public and agency comments.

San Anselmo Flood Risk Reduction Project EIR, Marin County, CA. *Lead Biologist.* Liza performed reconnaissance surveys of the project sites, including Fairfax and San Anselmo Creeks, for the Marin County Flood Control and Water Conservation District and authored the biological resources section of the Project Environmental Impact Reports. The Project EIR for flood risk reduction was finalized and approved in Fall 2018. Liza also authored the Section 7 Biological Assessment, assisted with 401, 404 and LSA permitting for the sites, and monitored for sensitive species during construction in 2020. Species of interest included western pond turtle, northern spotted owl, nesting birds and roosting bats.

North Bay Water Reuse Authority, Phase II EIR/EIS, Marin, Sonoma, and Napa Counties, CA. *Lead Biologist.* Liza was responsible for the preparation of the Section 7 Biological Assessments to evaluate impacts to terrestrial and marine species. She surveyed all sites for the presence of California red-legged frog, and authored the Biological Resources section of the joint EIR/EIS for the North San Pablo Bay Restoration and Reuse Project Phase II. The project proposes to add pipelines and storage facilities for a regional recycling program to use treated wastewater from the wastewater treatment plants within the North San Pablo Bay area.

San Francisco Public Utilities Commission Ridge Trail Upgrades EIR, San Mateo County, CA. *Biologist.* Liza surveyed the 26-mile Fifi Field-Cahill Ridge Trail and Skyline Boulevard extension for sensitive biological resources, especially San Francisco garter snake, California red-legged frog, Mission blue butterfly and San Bruno elfin butterfly. She authored the Terrestrial Biological Resources Impacts and Mitigation section for the EIR to evaluate options for upgrading the trails and expanding public access to watershed resources. The process involved site visits and numerous discussions with the Public Utilities Commission and Planning Department.



Paul Miller

Managing Principal, Senior Noise Analyst

Paul is an environmental professional with more than 35 years of experience in providing services and products to government agencies and private sector corporations. His technical areas of expertise include CEQA project management and technical analyses in the areas of air quality, greenhouse gas emissions, noise, integrated waste management, energy, and hazardous materials. With a broad range of environmental skills, he has applied his background since 1986 to CEQA and NEPA and has been integral in the preparation of over 500 CEQA/NEPA environmental documents, including project manager for more than 18 major EIRs. He has been the project manager or a key team leader for five state agencies (California Public Utilities Commission (CPUC), California Energy Commission (CEC), CalRecycle, the former California Integrated Waste Management Board, and the State Water Resources Board, Central Valley Region) on projects of statewide importance.

Paul has been collecting and analyzing ambient noise measurements since 1987 for CEQA projects throughout California, including projects in more than 10 California Counties and projects for the California Public Utilities Commission and the California Energy Commission. Through these efforts he has designed efficient noise monitoring systems (hardware and software) to collect cost-effective, long-term noise measurements. He was the senior air quality and noise reviewer for CEQA documents at Environmental Science Associates for almost 20 years and has been the Senior Noise Analyst at RCH since 2012.

Projects in Marin County include the recently approved San Rafael Rock Quarry Amended Reclamation Plan EIR Addendum (2021); other include Alta Way Residential, the North Bay Wetland Mitigation Bank Project, Santa Venetia Timber-Reinforced Berm Improvements Project, composting at the Redwood Landfill, and Aramburu Island restoration.

Relevant Noise Analysis Experience

Noise Studies (2014 - 2021). Paul has been the lead noise analyst for several environmental documents. He has prepared noise analyses for open space projects in the bay area such as the Marin Municipal District Biodiversity, Fire and Fuels Integrated plan and the Alameda Creek North Levee Improvements Project, the North Bay Wetland Mitigation Bank Project and the Santa Venetia Timber-Reinforced Berm Improvements Project. These have also included several projects in the City of South San Francisco: EIR Addendums for the Centennial Towers projects, peer review of 150 Airport Blvd. multi-family development, and MNDs for projects in the East of 101 area including Blue Line Transfer Station Anaerobic Digester, 127 West Harris Hotel and 550 Gateway Hotel. He has prepared numerous analyses for residential projects in Sacramento and Placer Counties as well as the Cities of Rocklin, Roseville and Folsom. He is senior noise analyst for three transmission line projects throughout California for the California Public Utilities Commission.

Noise Studies (2010 - 2013). Paul was the lead noise analyst for several environmental documents. These included a Mitigated Negative Declaration for changes to the Alameda County Integrated Waste Management Plan (CoiWMP) including an increase of the diversion goal to 75%. He also prepared EIR analyses for the restoration of an area of the Salt River in Humboldt County, and a wetland restoration in southern Yolo County. He prepared analyses for Mitigation Negative Declarations for the restoration Aramburu Island in Marin County, a surface water treatment facility in Lodi, a mixed-use projects in San Jose, a housing development in Antioch, a low-income multi-family project in Solana Beach, and a water force main outfall in Vista. He also prepared a federal Environmental Assessment (EA) noise analysis for improvements on the Yuba River Levee.

Noise Studies (2000-2009). Paul was the lead noise analyst for several environmental documents. These included EIRs for the expansion of the Knife River Company Quarry near Lodi California, and the expansion of Forward Inc. Landfill near Stockton California and housing projects in Placerville and Union City California, EIS and EIR documents for the proposed 1,300 Megawatt Eagle Mountain Pumped Storage Hydroelectric project in Riverside County California near Desert Center, an EIR for a 10-mile transmission line and substation for Turlock Irrigation District, and an EIR for a 5,000 ton-per-day Materials Recovery Facility in Irwindale California. He also prepared Initial Study CEQA analyses for repairs at Parsons Slough near Monterey Bay California. He prepared a peer view of an EIR Noise study for proposed changes at the Delmar Race Track in San Diego County.

Education

1977 Master of Science (Zoology and Entomology)

Colorado State University – Fort Collins, Colorado

1974 BA Zoology, Miami University – Oxford, Ohio

Professional Affiliations

- Member, Association of Environmental Professionals (AEP)
- Board Member, Air and Waste Management Association, Mother Lode Chapter of Golden West Section
- Acoustical Society of America, Associate Member
- Institute of Noise Control Engineering (INCE), Associate Member

25+ Years Consulting Experience

- Environmental Science Associates (ESA)
- North State Resources
- Aspen Environmental Group
- EarthMetrics, Inc.
- Environmental Measurements, Inc.
- Ecology Consultants, Inc.
- Miller Environmental Consultants

Luis Rosas

Noise Technical Associate, Environmental Services

Luis Rosas is an environmental professional with 3 years of experience in providing environmental services and products to government agencies and private sector corporations. Luis works as an environmental associate at RCH and has knowledge of ecology, biology, renewable energy and noise. His work involves technical analysis of noise, preparation and review of CEQA/NEPA environmental documents, and noise monitoring. He has experience conducting short-term and long-term noise monitoring using Metrosonics dB 308 and Larson-Davis SoundTrack LxT-1 sound level meters. His technical experience with noise includes hands-on noise monitoring fieldwork and noise modeling. He has conducted noise measurements throughout California from Marin and Sonoma Counties to San Diego County. He recently conducted the noise analysis for the San Rafael Rock Quarry Amended Reclamation Plan EIR Addendum that was approved in 2021 by Marin County.

Luis was Deputy Project Manager for the City of Corning Heritage RV Park IS/MND and the City of Victorville Mojave Drive Self-Storage IS/MND.

CEQA/NEPA Project Experience:

- **Residential/Commercial/Educational/Industrial Development Projects:** San Rafael Rock Quarry Amended Reclamation Plan EIR Addendum, City of Corning Heritage RV Park Storage Project IS/MND, City of Victorville Mojave Drive Self-Storage IS/MND, City of Victorville Amethyst Road Project, Inglewood Transit Connector EIR, American Canyon SDG Commerce 217 Wine Storage IS/MND, Burlingame 1814/1820 Ogden Drive IS/MND, Marin County Distaff Thistle Eradication Project IS/MND, Lomas Santa Fe Drive Improvements Project, Union City Rental Housing IS/MND, Wildhawk Noise/EMF measurements Project and Yolo County Haykingdom Processing and Storage Improvements IS/MND.
- **Material Recovery Facility/Transfer Station/Landfill Projects:** Irwindale Athens Service Materials Recovery Facility/Transfer Stations EIR, Ukiah Landfill Closure EIR and Sonoma Compost SGO EIR
- **Restoration/Recreational Projects:** North Bay Wetlands Mitigation Project IS/MND
- **CEQA Review Projects:** Baden Station Environmental Consistency Analysis, City of La Canada Flintridge CEQA Analysis, East Bay Regional Park District Concord Hills Regional Park EIR Review,

Education

BS, Environmental Studies, California State University – Sacramento, CA

Professional Affiliations

Member, Association of Environmental Professionals

Dan Jones

Senior Associate /Air Quality Analyst

Dan Jones is an environmental professional with seven years of experience in providing environmental services and products to government agencies and private sector corporations. Dan's technical areas of expertise include CEQA project management and document preparation and technical analyses in the areas of air quality, greenhouse gases/climate change, health risk assessment, and noise. Dan has been integral in the preparation of over 150 CEQA documents and technical studies supporting such documents. Dan's technical noise experience includes short-term and long-term noise monitoring and noise modeling with the Federal Highway Administration's Roadway Construction Noise Model and Highway Traffic Noise Prediction Model. Dan is proficient in a variety of air emissions models including California Air Pollution Control Officers Association's CalEEMod, California Air Resource Board's EMFAC and OFFROAD, and Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model.

Dan has worked on dozens of projects in the Bay Area Air Quality Management District including several in Marin County.

CEQA/NEPA Project Experience:

- **Residential/Commercial/Industrial Development Projects:** Colfax Maidu Village Commercial Center IS/MND, City of Sacramento Fruitridge Shopping Center Redevelopment IS/MND, City of Sacramento River Oaks (The Cove) EIR Addendum, Colfax Corporation Yard and RV/Boat Storage IS/MND, Colfax Auburn Street Hotel IS/MND, Colfax Sierra Oaks Estates Residential Development IS/MND, Shasta 10 Noise/AQ/CAP Consistency Analysis, Morgan Knolls Subdivision IS/MND, Rocklin Meadows Subdivision AQ/GHG Analysis, Wildcat Subdivision AQ/GHG Analysis, Winding Creek Subdivision Noise Analysis, Rancho Vista Subdivision AQ Analysis, Riolo Vineyards Specific Plan IS/MND, Nevin Avenue Apartments IS/MND, Calistoga Subdivision Noise/AQ/CAP Consistency Analysis, Residences at Railway AQ/GHG Analysis, Centennial Towers North Tower AQ/GHG/HRA Analysis, 488 Linden Avenue AQ/HRA Analysis, 255 Cypress Avenue AQ/HRA Analysis, Centennial Towers R&D Project AQ/GHG/HRA Analysis, Whitehawk I & Whitehawk II AQ/GHG Analysis, Viri Estates Skilled Nursing Facility IS/MND, Alviso Village AQ/GHG/HRA Analysis, Lakeside Fire Protection District IS/MND, Green Island Road Wine Warehouse AQ/GHG/HRA Analysis, Pruneyard Shopping Center AQ/GHG/HRA Analysis, Richmond Terminal 3 Timber Export Facility IS/MND, 901 Larch Avenue IS/MND, 52 Franklin Avenue IS/MND, UCSF Research Building and Parking Garage Expansion EIR, 150 Airport Blvd IS/MND, Oak Knoll Mixed Use Community Plan EIR, Lincoln Northeast Quad Specific Plan HRA, Oakland T12 Office Tower, Sonora Food Service Building IS/MND, Osgood Heights IS/MND, 550 Gateway Blvd Hotel IS/MND, Justin Vineyards & Winery Permit Application, Sunnyvale Atria on El Camino Real AQ/GHG/HRA Analysis, Quarry Place Mixed Use Development AQ/GHG/Noise Analysis, First and Campbell AQ Analysis, Roseville Junction Crossing Noise Analysis, William Jenkins Health Center Noise Analysis, John Henry High School AQ/Noise Peer Review, Sierra Oaks Estates and Village Oaks IS/MND, The Parkway Apartments IS/MND, Cal Expo Rock & Brews CEQA Categorical Exemption, Solana Beach Skyline Elementary School Reconstruction Peer Review, Folsom Bidwell Pointe CEQA Infill Exemption, Marin County Alta Way IS/MND, Granite Bay Joe Rodgers Subdivision AQ/GHG/Noise Analysis, Monarch Vista Apartments IS/MND, Double S Ranch Subdivision AQ/GHG Analysis, Vista Self Storage IS/ND, San Marin High School Turf Field Categorical Exemption, Novato High School Turf Field Categorical Exemption, San Marin High School Expansion IS/MND, Novato High School Expansion IS/MND, Colfax Sierra Oaks Estates and Village Oaks CEQA Addendum, Bayview Health Risk Assessment, The Oaks Assisted Living CEQA Addendum, Dutton Meadows CEQA Addendum, and Rocklin Tractor Supply Company AQ/GHG Analysis.
- **Energy Projects:** Castor Solar Noise Study, California Public Utilities Commission Fulton-Fitch

Mountain Reconductoring Project, California Public Utilities Commission Central Valley Power Connect 230 kV Project, California Public Utilities Commission Riverside Transmission Reliability Project, San Diego Gas & Electric TL 695, TL 6971 Reconductoring Project and Santa Paula Battery Energy Storage System IS/MND, PG&E Wheeler Ridge Junction Project, Gemini Solar EIS.

- **Waste Management Projects:** Glenn County Solid Waste Conversion Facility EIR, Blue Line Biogenic CNG Facility CEQA Addendum, Recology Vallejo Permit Revisions IS/MND, Valley Springs Recycling Center IS/MND, Irwindale Materials Recovery Facility/Transfer Station EIR, Sierra Waste Transfer Station Permitting, Forward Landfill SEIR, North Richmond Chip & Grind GHG Analysis, San Luis Obispo Anaerobic Digester IS/MND, Fair Deal Recycling Facility IS/MND & Transfer Processing Report, Ukiah Landfill Closure EIR, San Luis Obispo Anaerobic Digester Odor Impact Minimization Plan, Irwindale Materials Recovery Facility/Transfer Station EIR Addendum, and San Luis Obispo Anaerobic Digester Authority to Construct Permit.
- **Water Conveyance Projects:** Buena Outfall Force Main Phase III IS/MND, Oasis Irrigation System Expansion Project EIR, The People's Moss Landing Water Desalination Project EIR, Central Amador Water Project Pioneer Water Rehabilitation Project IS/MND, Cuesta Heights Water Storage and Distribution Improvements Project IS/MND and Christian Valley Park Community Service District Water Storage Tank Project IS/MND.
- **Restoration/Recreational Projects:** Rockville Trails IS/MND, High Plains Shooting Sports Center Noise Analysis, Alameda Creek Levee Improvement IS/MND, Putah Creek Restoration Projects Program EIR, Lower Putah Creek Restoration Project IS/MND, Lake Chabot Campus Modernization IS/MND, Phillips 66 Company Line 200 Release Remediation Project IS/MND, Bay Point Restoration and Public Access IS/MND, University of California Santa Barbara Sea Wall IS/MND and Black Diamond Mines Preserve EIR.
- **Mining Projects:** Olive Pit Mine and Reclamation Project EIR, R&J Aggregate Mines EIR, Olive Pit Mine and Reclamation Project EIR Addendum, and Irwindale Kincaid Pit Remediation and Reclamation Project.

Education

BS, Environmental Policy Analysis and Planning, University of California, Davis, CA

Professional Affiliations

Member, Association of Environmental Professionals

PETER HUDSON PG, CEG

Principal/Senior Geologist



Pete Hudson has more than 30 years of broad-based experience in engineering geology, hydrogeology, environmental, geotechnical and surface water. He is a professional geologist and certified engineering geologist in the state of California and a registered geologist/engineering geologist in the state of Washington. His general responsibilities include providing geological, geotechnical, geophysical and hydrogeological technical support in water quality assessments, water resource and geological studies for planning, permit assistance, environmental impact assessments with emphasis on hydrological and geologic issues, soils investigations and erosion/geomorphic investigations, planning/policy assessments, and mitigation planning and monitoring. Pete has authored numerous geoscience and hydrology-related technical sections under CEQA and NEPA and provides technical input and senior review for completion of work products including EIRs and EISs, and EAs. Pete contributes his technical expertise to resource management plans, reclamation/restoration plans, erosion control plans, draft permits (e.g., NPDES), land development environmental feasibility analyses, and site selection/constraints studies. Pete is a Qualified SWPPP Practitioner (QSP) as required under California's Construction General Permit.

Education and Certifications

BA, Geology, San Francisco State University 1987

Pre-Engineering Coursework. University of San Francisco 1985

Professional Geologist, California (Registration No. 6730)

Certified Engineering Geologist, California (Registration No. 2368)

Qualified SWPPP Practitioner QSP (Certificate No. 21673)

RELEVANT PROJECT EXPERIENCE

Marin County Emergency Operation Facility Program EIR, San Rafael, CA, *Geologic/Geotechnical*.

Pete was the senior technical advisor for geology and soil issues. Key concerns on the project were ensuring compliance with SB 1953 and associate seismic design requirements, fairly deep subgrade facilities and potential for structural dewatering, and contamination issues. An additional issue of concern was construction in an historic district, and related aesthetic and cultural resources impacts, particularly with regard to the Frank Lloyd Wright Civic Center buildings. The EIR included an extensive examination and comparison of alternative sites for the facility, both on and off the Civic Center campus.

San Rafael Rock Quarry Supplemental EIR, Marin County Public Works Department, Marin, CA. *Geology/Geotechnical*.

Marin County conducted supplemental environmental review for the San Rafael Rock Quarry's (SRRQ) proposal to amend its approved Conforming Amended Reclamation Plan; the subject of a 2009 Final Environmental Impact Report (FEIR). The amendment allows SRRQ to extend the date to complete mine reclamation activities by 20 years to 2044. Pete was responsible for analysis of geology, soils, and geotechnical issues, (e.g., slope stability) for the proposed amendment. The analysis considered changes to baseline conditions, new applicable laws and regulations, and Quarry operations that affect reclamation that may have changed since publication of the 2009 FEIR.

San Rafael Rock Quarry Amended Reclamation Plan and Amended Quarry Permit EIR. (2009). *Geologic and Hydrogeologic*.

Pete provided senior technical input and oversight for the preparation of the geology/seismicity and hydrology chapters of the EIR. He coordinated and led the technical aspects of the

PETER HUDSON PG, CEG

Principal/Senior Geologist



sampling program developed for fugitive dust emissions and crystalline silica. Main technical issues involved erosion and storm water and post-reclamation conversion to a marina. Pete provided senior review of the DEIR sections and assisted with the response to public and agency comments.

Redwood Landfill Solid Waste Facilities Permit Revision EIR. *Geology/Geotechnical, Hydrogeology Technical Analyst.* Pete was involved in this project for 8 years as an analysts and geoscience technical advisor for issues with landfill cover, slope analysis, the Leachate Collection and Recovery System (LCRS) operations analysis and levee stability. This project is located on the Bay mud along the banks of the Petaluma River and thus presents challenging issues for geotechnical stability, groundwater/leachate management, and groundwater quality. As Technical Services Group manager, Pete supported staff hydrologists and geologists during the impact analysis, attended County/Applicant CEQA meetings, and provided senior technical review of EIR technical sections.

Dipsea Ranch Land Division Initial Study. *Geology/Geotechnical.* Sutro assisted Siclar Environmental Consultants with a CEQA Initial Study for a proposed land division to subdivide an existing 8.3-acre lot in unincorporated Mill Valley to create 3 single-family residential lots. Pete conducted a peer review of applicant geotechnical studies, verified slope instability assessment, and prepared the geology/seismicity section for the initial study. Analysis also involved review of the onsite sewage disposal analysis prepared for the applicant by an outside consultant. Impact analysis included past action involving the unpermitted grading of a fire road, placement of fill, and installation of a culvert.

Alta Way Extension Initial Study. *Geology/Geotechnical.* Sutro assisted Siclar Environmental Consultants with the CEQA Initial Study for this subdivision project off the Panoramic Highway in Mill Valley. Pete conducted a peer review of applicant-provided geotechnical investigation report and prepared a draft of the geology/seismicity chapter of the IS/MND. The primary geologic and geotechnical issues involved foundation placement and grading on slopes composed of sheared and fractured mélange of the Franciscan Complex containing sandstone and siltstone. The project is located in a seismically active area on unstable slopes.

San Geronimo Golf Course Constraints Analysis, Marin County Fire Department, Marin, CA. *Geology/Geotechnical and Hazardous Materials.* Marin County is considering locating a new fire station at the southwest corner of the site that was previously the San Geronimo Golf Course. Sutro teamed with Siclar Environmental Consulting to conduct a constraints analysis of the site, analyzing constraints in the areas of geology, surface water hydrology, groundwater hydrology, water quality, and hazardous materials. Pete was responsible for assessing constraints associated with geology, seismicity, soils, geotechnical, paleontology, and special geologic features and hazardous materials. Pete authored the geology and hazardous materials constraints chapters.

Eden/Whistlestop NEPA Review – Parcel 4 Remediation, 999 Third Street, San Rafael, CA. *Hazardous Materials Analyst* Pete reviewed relevant documentation and prepared a letter of professional opinion regarding the current onsite subsurface contamination and whether it would preclude Eden/Whistlestop from proceeding with its planned residential use at 999 Third Street (also known as Parcel 4), in San Rafael California. Sutro reviewed several site investigation reports and letters of correspondence from the Department of Toxic Substance Control (DTSC), available through the DTSC Envirostor website.

JUSTIN TAPLIN, MS

Principal/Senior Environmental Scientist

A skilled and effective scientist, technical manager, and strategic thinker, Justin brings more than 15 years of California based consulting experience to the environmental review and compliance process. He applies expertise in the arenas hydrology, water quality, and water resource regulation with a discerning eye to produce comprehensive and defensible environmental assessments and mitigation strategies. He acts as technical manager, senior reviewer, and lead author for large-scale, often contentious, complex program- and project-level Environmental Impact Reports, Environmental Impact Statements, and other documents pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). As technical manager, he routinely coordinates with engineering and technical sub-consultants with expertise in a variety of fields such as stormwater retention and conveyance, stormwater treatment, hydromodification, coastal hydrology and sea level rise dynamics, and water quality. Prior to co-founding Sutro Science LLC, Justin worked at Environmental Science Associates from 2007 to 2015 as a technical manager contributing to a wide range of development, water supply, energy and infrastructure projects.

Education and Certifications

M.S. Environmental Management. University of San Francisco, California.

B.S. (Hons) Biological Sciences. University of Westminster, UK.

Certified Fisheries Professional (#3146), American Fisheries Society

Advanced CEQA Workshop. AEP, 2015.

CEQA Case Law Updates, Issues, Trends. Sohagi Law Group, 2010.

Stormwater Regulations in CA. NWET, September 2009.

Management of Water in CA. UC Berkeley Extension, 2008.

Relevant Project Experience

34th America's Cup and Cruise Terminal EIR, San Francisco, CA. *Hydrology and Water Quality.*

Environmental review for two projects was completed through a single EIR: 1) the 34th America's Cup sailing events; and 2) a new Cruise Terminal located along the San Francisco Bay shoreline. The America's Cup Event Authority proposed a variety of temporary coastal and offshore facilities. The Cruise Terminal involved in-water work along the Bay shoreline. Justin managed all tasks related to the hydrologic and water quality impacts analysis for the EIR and was the section lead author. Technical management required coordination of engineering and technical sub-consultants as well as a team of hydrologists and coastal process engineers. Justin evaluated the project components, which posed several unique hydrologic and water quality impacts along the Bay margin. Key issues included use of temporary project facilities, such as wave attenuators, in-water construction impacts, and temporary land use changes.

Dipsea Ranch Land Division IS/MND, Marin County Community Development Agency, Marin, CA. *Hydrologist.*

Environmental review was conducted for a proposed land division to subdivide an existing 8.3-acre lot in unincorporated Mill Valley to create 3 single-family residential lots with two new on-site sewage disposal systems and a storm water management system that would treat and control runoff and mimic pre-project site hydrology. Justin was responsible for all aspects of hydrology and water quality analysis, including consideration of potential hydromodification impacts within the Redwood Creek watershed and impacts resulting from a past action involving the unpermitted grading of a fire road, placement of fill, and installation of a culvert. Justin supported County staff by providing technical input, including peer review of independent studies submitted by Petitioners, throughout the public comment period, public hearing phase, and following an appeal of the Planning Commission vote to adopt the MND and approve the Project.

JUSTIN TAPLIN, MS

Principal/Senior Environmental Scientist

Alta Way Extension IS/MND, Marin County Public Works Department, Marin, CA. *Hydrologist.* Marin County is conducting environmental review for a grading permit application to allow the extension of Alta Way, an existing residential street in unincorporated Mill Valley. The extension of Alta Way would provide access and utility extensions for six to ten undeveloped legal lots of record. Because approval of the grading permit would allow access to undeveloped lots, the analysis of impacts included the proposed extension of Alta Way and the future development of up to ten lots. Justin was responsible for all aspects of hydrology and water quality analysis for the future development of the ten new residential lots, located on steep slopes within the Coyote Creek watershed. Justin's analysis of impacts considered public scoping comments related to concerns that existing stormwater infrastructure is insufficient to accommodate stormwater from the project and that increased runoff from the site could increase flooding downgradient for roads, creeks, and residential properties.

San Rafael Rock Quarry Supplemental EIR, Marin County Public Works Department, Marin, CA. *Hydrology and Water Quality.* Marin County conducted supplemental environmental review for a proposal by San Rafael Rock Quarry (SRRQ) to amend its approved Conforming Amended Reclamation Plan, which was the subject of a 2009 Final Environmental Impact Report (FEIR). The amendment would allow SRRQ to extend the date to complete mine reclamation activities by 20 years to 2044. Justin was responsible for all aspects of hydrology and water quality analysis for the proposed amendment, including consideration of changes to baseline conditions, new applicable laws and regulations, and Quarry operations that affect reclamation that may have changed since publication of the 2009 FEIR.

San Geronimo Golf Course Constraints Analysis, Marin County Fire Department, Marin, CA. *Hydrology and Water Quality.* Marin County is considering locating a new fire station at the southwest corner of the site that was previously the San Geronimo Golf Course. Sutro teamed with Sicular Environmental Consulting to conduct a constraints analysis of the site, analyzing constraints in the areas of geology, surface water hydrology, groundwater hydrology, water quality, and hazardous materials. Justin was responsible for analyzing all surface water hydrologic and water quality constraints, including potential flooding, changes to stormwater runoff and retention, effects from construction and development on surface water quality, consistency with local and State storm water regulations and requirements, and whether site development could affect San Geronimo Creek.

Vista Grande Drainage Basin Improvement Project EIR/EIS, Daly City, CA. *Technical Manager: Hydrology and Water Quality.* Justin worked with Daly City and San Francisco Public Utilities to provide CEQA/NEPA documentation, and hydrologic and water quality technical support for a project that proposes to address storm-related residential flooding in the basin while beneficially re-using storm water for management of Lake Merced. Justin designed and implemented water quality investigations (including a water quality sampling program) related to Basin Plan, 303d, and NPDES issues and was lead author and analyst for the hydrology and water quality section of the EIR/EIS. Key issues include stormwater re-use impacts to lake water quality and stratification dynamics, fisheries habitat, coastal erosion impacts from and sea level rise resilience of outfall structures, Operation and management of stormwater treatment wetlands.

Relevant Publications

Roberts, J. W., J. Taplin, E. Zigas. 2017. Disposal of Seawater Desalination Brines and the CEQA/NEPA Process. American Society of Civil Engineers (ASCE): World Environmental and Water Resources Congress, May 1, 2017. Available at: <https://ascelibrary.org/doi/abs/10.1061/9780784480632.021>

SUSAN MORLEY, M.A., RPA

Principal Investigator

EDUCATION

M.A., Social Science, San Jose State University
1997
B.A. Anthropology, San Jose State University
1994

YEARS OF PROFESSIONAL EXPERIENCE

30

REGISTRATIONS/ CERTIFICATIONS

Register of Professional Archaeologists (2001)
Wetlands Training Institute, Glenwood, N.M., 2001
Sonoma State University Foundation:
Internship in Native American Graves Protection and Repatriation Regulations
1999

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists
Society for American Archaeology
Society for California Archaeology
Santa Cruz Archaeology Society

VOLUNTEER WORK

Cultural Committee Member, Esselen Tribe of Monterey County

Mrs. Morley is principal archaeologist for Achasta Archaeological Services in Marina, California, and has 30 years of professional experience and advocacy work with California tribes. She is qualified under the Secretary of Interior's Standards for Archaeology and is certified by the Register of Professional Archaeologists. She has conducted CEQA compliant archaeological studies in Monterey, Santa Cruz, Santa Clara, San Mateo, and San Benito Counties since 1993. She is professionally trained as a physical anthropologist and is an expert in the identification and analysis of human remains. She received her master's degree from San Jose State University in 1997. Ms. Morley was an adjunct professor in anthropology at California State University, Monterey Bay's (CSUMB) Social and Behavioral Sciences Department from 2002 to 2016. She was designated the university's Native American Graves Protection and Repatriation Act (NAGPRA) coordinator from 2006 to 2016. While at CSUMB she organized workshops for Monterey County culturally affiliated Tribes designed towards the protection of their ancestral heritage sites. Ms. Morley invited Tribal representatives to university laboratory courses to monitor and teach students working with tribal culturally affiliate materials. She has also designed and coordinated multiple cultural monitor training programs for Tribal involvement on construction projects. Prior to founding her own firm, Ms. Morley was an archaeologist and osteologist for Ohlone Families Consulting, a CRM firm. From 2003-2009 she volunteered as Tribal Administrator and Tribal Archaeologist for Ohlone/Costanoan-Esselen Nation (OCEN). She presently volunteers with the Esselen Tribe of Monterey County.

SELECT PROJECT EXPERIENCE

Moss Landing Native American Burial Recovery, Moss Landing, Monterey County, CA. (2021-Present).

Principal Investigator. Burial recovery project for individual impacted during mechanical trenching for utility upgrades for a single-family dwelling located within the boundaries of a known resource, and within Monterey County's high archaeological sensitivity zone. Project responsibilities will include direct coordination with Most Likely Descendent and tribal representatives, developing and implementing a burial recovery program for the project, osteological analysis of the individual and CEQA compliant technical reporting. Client: Esselen Tribe of Monterey County.

Springfield Water System Improvements, Moss Landing, Monterey County, CA. Principal Investigator (2020). Conducted Phase II subsurface testing for domestic water infrastructure project in the vicinity of a known archaeological resource. Project tasks included literature and records search, implementation of a subsurface testing plan, evaluation of bore samples and CEQA compliant technical reporting. Client: Denise Duffy and Associates.

Scenic Drive Burial Identification, Carmel Point, Monterey County, CA. (2019). Retained by developer to identify human remains inadvertently encountered during a small construction project for a single-family dwelling located in Monterey County's high archaeological sensitivity coastal zone. Responsibilities included identifying individual as Native American in origin for the Monterey County Coroner and instructing homeowner and developer on procedural regulations, and consultation with the Resource Management Agency of Monterey County.

Kuchun Archaeological Reconnaissance, Arroyo Seco, Monterey County, CA. (2018) Principal Archaeologist Volunteer. Conducted CEQA compliant Phase I emergency archaeological reconnaissance survey of a 40-acre site impacted by illegal grading within Monterey County's high archaeological sensitivity inland zone. Study conducted in collaboration with Esselen Tribal elders during pedestrian survey of parcels, documented previously unrecorded resources within the graded area and surrounding acreage. Resource locations provided by Tribal elder with ancestral knowledge of the area. Responsibilities included literature and records search, field reconnaissance, and CEQA compliant technical reporting. Client: Tom Little Bear Nason.

Harvest Moon Agricultural Employee Housing Project, Salinas, Monterey County, CA. (2020). Principal Archaeologist. Conducted Phase II subsurface auger testing within a modeled archaeological sensitive zone. Project tasks included literature and records search, development and implementation of an archaeological testing plan, core sample analysis, and CEQA compliant technical reporting.

Smith Ranch Rocky Creek Survey, Big Sur, Monterey County, CA. (2016). Principal Archaeologist. Conducted an emergency archaeological reconnaissance survey after unpermitted trenching activities within Monterey County's high archaeological sensitivity coastal zone. Responsibilities included conducting a literature and records search, conducting field reconnaissance survey to reevaluate two known archaeological resources in the vicinity of the trenching, and CEQA compliant technical reporting.

Carmel Valley Ranch Burial Recovery and Monitoring Program, Carmel Valley, Monterey County, CA. (2010). Principal Investigator, Field Director. Conducted burial recovery program for an individual inadvertently impacted during utility trenching. Responsibilities included the respectful excavation of the individual in direct coordination with the MLD and tribal elders, direct collaboration with project MLD, coordination and scheduling field staff, evaluation and analysis of archaeological features and artifacts, literature and records search, and CEQA compliant technical reporting.

Yuki Kutsuimi Šaatoš Inūxw (Sand Hill Road), Stanford University, Palo Alto, Santa Clara and San Mateo Counties, CA. (1998-2002). Principal Osteologist. Directed osteological data recovery of individuals inadvertently impacted by construction related activities within the boundaries of known archaeological resources. Responsibilities included respectful excavation of Muwekma Ohlone ancestral remains in direct coordination with the MLD and tribal elders, osteological analysis of the recovered individuals, archaeological monitoring of ground disturbing activities, and CEQA compliant technical reporting. Work conducted under Ohlone Families Consulting Services.

BRENNA WHEELIS, B.A.

Associate Archaeologist-Project Manager

EDUCATION

B.A., California State University,
Monterey Bay, 2009

San Jose State University, Applied
Anthropology Graduate Program
2021-Present

YEARS OF PROFESSIONAL EXPERIENCE

15

PROFESSIONAL AFFILIATIONS

American Anthropological Association
Society for California Archaeology
California Historical Society
California Mission Foundation

VOLUNTEER EXPERIENCE

Cultural Committee Member, Esselen
Tribe of Monterey County

Brenna Wheelis has thirteen years of experience with CRM firms and universities on the Monterey Peninsula, Santa Clara and San Francisco Bay Area. As an Associate Archaeologist and Project Manager she works directly with clients to identify project needs and outcomes with an emphasis on the timely completion of project deliverables. Ms. Wheelis is versed in archival research for historic and prehistoric properties and routinely conducts collaborative outreach with Native American tribal representatives. She conducts cultural resource evaluations for environmental review documentation and compliance, directs archaeological surveys, manages phase II testing and phase III data recovery programs, manages the analysis and curation of collections, and authors technical reports. Human and faunal osteology are among her specialties. Ms. Wheelis is versed in CEQA, NEPA, and NHPA Section 106 regulations and meets the Secretary of Interior's Professional Qualification Standard for history.

SELECT PROJECT EXPERIENCE

San Rafael Rock Quarry Supplemental Environmental Impact Report, Marin County, California. (2020-2021). Project Manager. Ms. Wheelis led the archaeological resources assessment for the supplemental environmental impact report of Dutra Minerals permit application for extended mining activities at the San Rafael Rock Quarry in Marin County, California. Responsibilities included budget and staffing management, client coordination, pedestrian survey to re-evaluate previously documented archaeological and built environment resources in the project area, literature and records search, final reporting of the results. Client: Sicular Environmental and Natural Lands Management.

Gallinas Levee Upgrade Project, Marin County Flood Control and Water Conservation District Zone 7, Marin County, California. (2019) Project Manager. Ms. Wheelis led the cultural resources assessment for the initial study of the Gallinas Levee Upgrade Project. The Project aimed to increase the level of flood protection to the community of Santa Venetia by raising the existing timber reinforced berm to meet the elevation of 12.5 feet NAVD88. Responsibilities included budget oversight, conducting a 1.5-mile survey of the existing levee and timber berm, determine potential adverse effects of the project, literature and records search and technical reporting. Additional peer review of the Cultural Resources and AB52 Tribal Consultation chapters were also conducted. Client: Sicular Environmental and Natural Lands Management

Kuchun Archaeological Reconnaissance, Arroyo Seco, Monterey County, CA. (2018) Assistant Archaeologist, Volunteer (2018). Conducted CEQA compliant Phase I emergency archaeological reconnaissance survey of a 40-acre site impacted by illegal grading within Monterey County's high archaeological sensitivity inland zone. Assisted Principal Investigator and Esselen Tribal elders during pedestrian survey of parcels, documented previously unrecorded resources within the graded area and surrounding acreage. Resource locations provided by Tribal elder with ancestral knowledge of the area. Client: Tom Little Bear Nason.

2961 Corvin Drive, Santa Clara, Santa Clara County, CA. (2019-2021) Project Manager, Field Director). Residential development conducted within a known archaeological resource. Ms. Wheelis manages the Project's cultural mitigation monitoring and reporting program to ensure CEQA and Lead Agency compliance with the Lawrence Station Area Plan. Project responsibilities include direct coordination with the Project's client, the MLD, and the Native American tribal monitors, and worked with the MLD to develop excavation strategies to reduce impacts to potential buried individuals, and archaeological and tribal resources. Ms. Wheelis assisted the MLD and client in developing a reburial plan for the individual on City of Santa Clara public land. Client: Toll Brothers.

3347 17 Mile Drive, Pebble Beach, Monterey County, California. (2019). Project Manager. Conducted the cultural resources assessment in support of the 3347 17 Mile Drive project. The project involves a creating a separate parcel (Parcel II) and the construction of a single-family dwelling with an attached garage in the vicinity of a known archaeological resource. Responsibilities include a literature and records search, Sacred Lands File inquiry and Native American outreach, pedestrian survey, and technical reporting. The project was completed in Spring 2020. Client: Michael Spanos c/o Anthony Lombardo and Associates, Inc.

Department of Veterans Affairs Palo Alto Health Care System, Palo Alto, California (2018) Project Manager. Ms. Wheelis managed the reporting and artifact curation phase of a two-phase project. Responsibilities included budget oversight, preparing on behalf of the client the final project National Register of Historic Places evaluation and nomination documents for archaeological investigations of CA-SCL-585, stabilizing two artifact collections for curation from two separate data recovery programs for curation, and responding to State Historic Preservation Officer comments. Client: Department of Veterans Affairs Palo Alto.

Alta Way Extension Project, Marin County, California. (2017-2018). Project Manager. Responsibilities included drafting a Cultural Resources Assessment for an Initial Study of a proposed ten parcel land development in Marin County, CA. Project tasks included budget oversight, directing field survey, literature and records search, and Native American Sacred Lands consultation with the Federated Indians of Graton Rancheria. Client: Client: Sicular Environmental and Natural Lands Management.

Transbay Redevelopment Block 8, San Francisco, California. (2016). Project Manager. Responsibilities included the preparation of an Archaeological Resources Report (ARR) on behalf of the Transbay Joint Powers Authority (TJPA), outlining the results of an implemented Archaeological Research Design and Testing Plan (ARDTP) for a mixed-use tower development located in an area with moderate historic and prehistoric sensitivity. Project management components included evaluating the significance of archaeological features, coordinating field staff, laboratory analysis management, budget oversight, and coordination with the client and lead agency. Client: Related California.

Quinley Avenue over Black Rascal Creek Project, Merced County Irrigation District, Atwater, California. (2017) Staff Archaeologist. Responsibilities included pedestrian survey of Quinley Avenue Bridge over Black Rascal Creek, irrigation channels and adjacent roadway shoulders and easements in the Merced County Irrigation District, Atwater, CA. Client: GPA Consulting.

Appendix B: Distribution List for the SER/Draft SMND

Appendix B: Distribution List

The SER/SMND was sent to the agencies, organizations, and tribes listed below. Notice of availability of the SER/SMND was also sent to all property owners within 625 feet of the project area, and to those subscribed to Project updates through the County's website.

Category	Recipient	FirstName	LastName	Address	City	State	Zip
A Proj Sponsor	Marin County Flood District	Robin	Bartlett	3501 Civic Center Drive, Rm. 304	San Rafael	CA	94903
B Fed	Department of the Army- San Francisco District, Corps of Engineers	Attn: Branch Chief		450 Golden Gate Avenue, 4th Floor, Suite E1613	San Francisco	CA	94102-3404
B Fed	U.S. Fish & Wildlife Service	Attn: Supervisor		2800 Cottage Way #W-2606	Sacramento	CA	95825
B Fed	U.S. Fish & Wildlife Service San Francisco Bay National Wildlife Refuge Complex	Winnie	Chan	1 Marshlands Road	Fremont	CA	94555
B Fed	National Oceanic Atmospheric Administration	Joe	Pecharich	777 Sonoma Ave Suite 325	Santa Rosa	CA	95404
B Fed	National Oceanic Atmospheric Administration	Dan	Logan	1401 Constitution Ave NW Rm 5128	Washington	DC	20230
B State Agencies	CA Dept. Fish & Wildlife Reg 3	Regional Manager		2825 Cordelia Road, Ste. 100	Fairfield	CA	94534
B State Agencies	CA Dept. of Fish & Wildlife	Regional Manager		P.O. Box 944209	Sacramento	CA	95814
B State Agencies	CA Regional Water Quality Control Board	SF Bay Region #2	Ferguson, Leslie	1515 Clay Street, #1400	Oakland	CA	94612
C Local Gov	City of San Rafael		City Manager	1400 Fifth Avenue	San Rafael	CA	94901
C Local Gov	City of San Rafael Public Works Dept.	April	Miller, Director	111 Morpew Street	San Rafael	CA	94901
C Local Gov	Marin Resource Conservation District	Nancy	Scolari, Executive Director	P.O. Box 1146	Point Reyes Station	CA	94956
C School Districts	San Rafael School District		Superintendent	310 Nova Albion Way	San Rafael	CA	94903
C Serv District	Las Gallinas Sanitary Dist.		District Manager	101 Lucas Valley Road, Ste. 300	San Rafael	CA	94903
C Water Dist.	Marin Municipal Water District		Environmental Services	220 Nellen Avenue	Corte Madera	CA	94925
D CDA Staff	Community Development Agency	Robin	Fies	3501 Civic Center Drive, #308	San Rafael	CA	94903
D Marin County Dept	Marin Co. DPW	Christopher	Blunk, Director	3501 Civic Center Drive, Rm. 304	San Rafael	CA	94903
D Marin County Dept	Marin Co. Fire Department	Jason	Weber, Chief	P.O. Box 518	Woodacre	CA	94973
D Marin County Library	City of San Rafael Public Library			1100 E Street	San Rafael	CA	94901
D Marin County Library	Marin Co. Library, Civic Center			3501 Civic Center Dr., Rm. 427	San Rafael	CA	94903
E Local Grp	Federated Indians of Graton Rancheria	Sacred Sites Protection Committee		6400 Redwood Drive, Ste. 300	Rohnert Park	CA	94928
F Media	Marin Independent Journal			103 Shoreline Parkway, #201	San Rafael	CA	94901

Appendix C: Report Preparers

The Supplemental Environmental Review/Subsequent Mitigated Negative Declaration, as well as this response to comments document, were prepared by Sicular Environmental Consulting LLC, under contract to CSW|ST2, which in turn is under contract with the Marin County Flood Control and Water Conservation District for planning and design of the Santa Venetia Floodwall Project. Report preparers included the following:

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Resumes of technical analysts follow.

Appendix D: Mitigation Monitoring and Reporting Program

APPENDIX D

Mitigation Monitoring and Reporting Program

The purpose of this Mitigation Monitoring and Reporting Program (MMRP) is to ensure that mitigation measures necessary to reduce the Project's significant impacts to less than significant are implemented in a timely and effective manner. In addition to the text of each mitigation measure, the MMRP table includes a description of the associated monitoring measure, when the measure will be implemented, and by whom it will be monitored.

Some mitigation and monitoring measures that were carried over from the 2019 IS/MND have been revised. Revisions are shown in Chapter 3 of the SER and in Chapter 2 of this Response to Comments document as “redline” (underline and strike-through) text. For readability, revisions are not shown in redline in the MMRP table.

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Air Quality				
Project construction would result in an increase in diesel exhaust emissions.	Mitigation Measure AQ-1: Diesel Exhaust Emissions Reduction Measures. The District will include in all Project construction contracts requirements for the following measure: All off-road diesel-powered equipment with engines greater than 25 horsepower used in Project construction shall meet the California Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines.	Monitoring Measure AQ-1: The District's Project Manager shall be responsible for ensuring that this requirement is stated in bid documents and is being implemented by contractors.	During construction	Flood Control District Project Manager
Biological Resources				
Project could impact sensitive species	Mitigation Measure BIO-1: Avoidance of Sensitive Species a. Plants: Each year that construction is planned, a qualified biologist shall conduct a focused survey for all rare plant species with potential to be present during their suitable blooming period, prior to ground disturbance. The survey will cover the area where construction activities are planned that year. If no special-status plants are observed, no further action is required. If special-status plant species, including Point Reyes bird's beak, are observed, the plants shall be avoided with a suitable buffer, determined in coordination with CDFW. The buffer zone shall be clearly demarcated using exclusion fencing. If establishing an avoidance buffer is not feasible, individual plants shall be transplanted to an area with suitable physical and biological conditions outside of the work area, according to a Rare Plant Relocation Plan to be prepared by the District or its contractor and reviewed and approved by CDFW. The Relocation Plan shall include regular monitoring and weed control for a period of five years, with success criteria including 75% cover of target species and less than 20% cover of weeds. Adaptive management criteria shall apply, including additional 3 years' monitoring, weeding, supplemental watering, or	Monitoring Measure BIO-1: - The District shall ensure that all construction contracts include the stated provisions for use of hand tools only, fencing, etc. in sensitive habitats. - Prior to start of construction each year that construction is planned, the District shall employ the services of a qualified botanist and a biological monitor to carry out the site inspection and monitoring provisions of Mitigation Measure BIO-1. The Biological Monitor shall report to the District's Project Manager monitoring activities and any encounter with sensitive species. - The District shall report all observations of sensitive species made during construction to the California Natural Diversity Database (CNDDDB).	During Construction	Flood Control District Project Manager

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	additional replanting, if success criteria are not met after the five-year management period. b. Wildlife: For work within and directly adjacent to potential habitat for salt marsh harvest mouse, California black rail, and Ridgway's rail (i.e., within tidal marsh habitat), the following protection measures shall apply: • For work within and directly adjacent to marsh habitat a qualified biologist shall survey the area where ground disturbance or vegetation removal will take place each morning prior to the start of work. • Protocol-level surveys will be conducted annually in Las Gallinas marsh and Santa Venetia marsh in all suitable habitat for Ridgway's (California clapper) rail (CCR) or California black rail (CBR). Protocol-level surveys for rails shall follow the methods detailed in the USFWS <i>Site-Specific Protocol for Monitoring Marsh Birds</i> (2017). No work activities, visual disturbance (direct line of sight) and/or increase in the ambient noise level shall occur within 700 feet of areas where CCR and/or CBR have been detected and are likely to be nesting during the breeding season (January 15 - August 31 for CCR, February 1 - August 31 for CBR), though this buffer distance may be reduced depending on site conditions and the nature of the proposed work, in coordination with CDFW and USFWS. Any areas where construction activities will take place shall have all vegetation removed using hand tools or hand-held motorized equipment only (e.g., string trimmers). • Prior to all vegetation removal in the above-defined habitats, a qualified biologist shall survey the vegetated areas to identify any common or special-status wildlife. Such removal shall only occur in the presence of the qualified biologist. A qualified biologist/biological monitor is defined as a person who has completed a four-year degree in biological			

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	sciences and has demonstrated field experience in identification and monitoring of salt marsh harvest mouse and rail species. All work in tidal marsh habitat shall be monitored full-time by a qualified biologist. • Following vegetation removal, exclusion fencing shall be installed around work areas within tidal marsh habitat where substrate would support fencing. The fence shall be made of a non-textured material that does not allow salt marsh harvest mice to pass through or climb (such as slick plastic sheeting) or silt fence with slick tape a minimum of 6 inches wide, and the bottom should be buried to a depth of at least 4 inches so that animals cannot crawl under the fence. Fence height shall be at least 12 inches higher than the highest adjacent vegetation with a maximum height of 4 feet. Fence posts shall be placed on the work area side (vegetation cleared side) of the fencing. The fencing shall be installed under the supervision of the qualified biologist. • For work within marsh habitat, the biological monitor shall survey the area where ground disturbance or vegetation removal shall take place each morning prior to the start of work. Barrier fencing shall be installed at land-based work sites to define the outer limits of each work area. • If a special-status species is identified within or near the work area during construction, the biologist shall be notified and work shall cease in the vicinity of the animal. The animal shall be allowed to relocate of its own volition. If the animal does not voluntarily relocate, the biologist shall contact U.S. Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Wildlife (CDFW), as appropriate, to determine an appropriate response prior to reinitiating work in the area. • All excavated or deep-walled holes or trenches greater than one-foot deep shall be covered at the			

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	end of each workday using plywood, steel plates, or similar materials, or escape ramps shall be constructed to allow animals to exit. Before such holes are filled, they shall be thoroughly inspected for trapped animals. • At the beginning of each workday within marsh habitat, a biological monitor shall visually inspect and sweep both sides of each exclusion fence to ensure that the fence is in good repair and that salt marsh harvest mice or other wildlife have not entered the work area or become trapped within folds in exclusion fencing fabric. • As the California black rail, Ridgway's rail and salt marsh harvest mouse are all California fully protected species, as well as a state and/or federal listed species, the District shall avoid all take of these species.			

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Project could impact sensitive species	Mitigation Measure BIO-2: Site Protection and Contractor Environmental Awareness Training All construction personnel shall attend an environmental education program presented by a qualified biologist. The training shall include an explanation of how to avoid the accidental take of Ridgway's rail, California black rail, salt marsh harvest mouse, other special-status species, and nesting birds. The field meeting shall include topics on species identification, descriptions, habitat requirements and required minimization and avoidance measures. Training shall be repeated at least annually for the duration of the construction period. Throughout the construction period, foot traffic in the marsh shall be avoided and minimized to avoid impacting vegetation. All earthwork shall occur during daylight hours. No artificial lighting will be introduced to the work area. Because salt marsh harvest mice move to high ground during extreme high tides and may be near work areas during that time, no work will occur during high tide events or when the adjacent marsh plain is flooded, i.e., two hours before and after a high tide event of 6.5 feet or greater as measured at the Golden Gate Bridge, and adjusted to the timing of local high tides. The contractor shall provide closed garbage containers for the disposal of all trash items. Work sites shall be cleaned of litter daily. No pets, excluding service animals, shall be allowed in construction areas.	Monitoring Measure BIO-2: The District shall include in all construction contracts the provisions for worker training and work restrictions contained in Mitigation Measure BIO-2. The District's Project Manager shall be responsible for implementation of this measure.	During construction	Flood Control District Project Manager

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Project would impact sensitive natural communities	Mitigation Measure BIO-3: Protection for Sensitive Natural Communities The area of impact in sensitive natural communities shall be minimized by siting construction staging and access areas outside sensitive natural communities and by utilizing previously-disturbed areas in upland habitat for staging. All wetland areas shall be avoided as discussed in Mitigation Measure BIO-2. During construction, removal of understory vegetation trees will be minimized and avoided. All trees to remain during construction will be flagged for avoidance, and trimmed as necessary to ensure their trunks and/or limbs are not disturbed during construction. Certified weed-free permanent and temporary erosion control measures (e.g., fabric wattles) shall be used to minimize erosion and sedimentation during and after construction. Temporary impacts on sensitive natural communities shall be restored by revegetation with native species. No permanent loss of salt marsh habitat or associated vegetation is anticipated.	Monitoring Measure BIO-3: • The District shall include the provisions of Mitigation Measure BIO-3 in all construction contracts. The District's Project Manager shall be responsible for verifying compliance with these conditions. • Revegetated sensitive natural areas shall be monitored for a five-year period to ensure success, according to the monitoring requirements described in Mitigation Measure BIO 4.	During construction and five years following revegetation	Flood Control District's Project Manager
Project would impact sensitive natural communities	Mitigation Measure BIO-4: Habitat Restoration and Monitoring During or following each year of Project construction, the District shall restore sensitive vegetation disturbed during construction, and monitor conditions to ensure that restoration has been successful. Restoration and monitoring shall be guided by a qualified biologist experienced in wetland habitat restoration. Restoration shall include protocols for replanting of native vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success. The following measures shall apply to site restoration: • If needed, as determined by a qualified restoration biologist, areas impacted from construction-related activity shall be replanted or reseeded with locally-collected and grown native trees, shrubs, wetland	Monitoring Measure BIO-4: If the qualified restoration biologist employed by the District determines replanting is necessary, the District shall contract with a landscaping or restoration firm to complete revegetation and restoration requirements. Revegetation of disturbed areas shall occur during the same year in which the disturbance occurred. The District's Project Manager will be responsible for oversight of the contractor and for the post-revegetation monitoring of restored areas.	During or following Project construction	District's Qualified Restoration Biologist and Project Manager

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	vegetation, and herbaceous species under guidance from a qualified restoration biologist • If needed, as determined by a qualified restoration biologist, temporary impacts to vegetated salt marsh habitat shall be restored onsite with native wetland species under guidance from a qualified biologist. • Monitoring shall commence following the completion of restoration activities, and shall continue annually for five years or until performance criteria are satisfied. Success criteria for monitoring shall include: – 70 percent survival of planted wetland vegetation (only applicable to replanted areas); or – native wetland herbaceous species in restored areas exceeding 60 percent relative vegetative cover; and, – less than 20 percent cover of invasive non-native plants identified on the California Invasive Plant Council (Cal-IPC) High or Moderate lists. • If during annual monitoring, the project biologist determines that a particular species is underperforming or suffers high rates of mortality, remedial action may be warranted to address the issue. Such actions may include the replacement of mitigation plantings, raking, or weed removal. In some cases, plant replacement may be needed with a higher-performing species.			
The Project would impact State or federally protected wetlands	Mitigation Measure BIO-5: Wetland Delineation, Mitigation, and Monitoring a. The District shall conduct a wetland delineation according to the USACE protocol and regional supplement to delineate all potentially jurisdictional wetlands and other waters within and adjoining the Project site. The wetland delineation will delineate wetlands, waters of the U.S., and/or waters of the	Monitoring Measure BIO-5 The District shall conduct the required wetland delineation and obtain the necessary permits prior to commencement of any Project construction activities. The District's Project Manager shall be responsible for ensuring that	Prior to commencement of any Project construction activities	Flood Control District's Project Manager

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	State within the Project footprint. The District shall then obtain and comply with necessary conditions for permits for wetland impacts from the USACE, CDFW and the Regional Water Quality Control Board. The permits will specify the amount of wetland to be impacted and include conditions for construction and restoration. The District will comply with all permit conditions for temporary and permanent wetland impacts, including mitigation at 1:1 or other approved ratio. b. Final Project design shall avoid and minimize the fill of wetlands, waters of the U.S., and/or waters of the State based on the delineation. To offset unavoidable temporary impacts to wetlands, waters of the U.S., and/or waters of the State, restoration shall be provided through the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-4.	mitigation requirements are implemented. Successful implementation of mitigation requirements will be verified by the relevant permitting agency or agencies.		

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Cultural Resources				
Project could impact archaeological resources	Mitigation Measure CUL-1: Archaeological Monitoring. The District will retain the services of a qualified archaeologist who has expertise in California precontact settings, and a Federated Indians of Graton Rancheria (FIGR) Tribal cultural monitor to monitor all Project-related ground-disturbing activities into native soils in the southwestern Project area from the southern terminus of the Project area west of Meadow Drive downstream to the portion of the levee at 115 Vendola Drive. Upon completion of ground disturbance in the southwestern Project area, the District shall retain the archaeological consultant and FIGR Tribal cultural monitor on an on-call basis in the event of inadvertent discoveries throughout the remainder of the construction period. If any previously undiscovered archaeological materials are discovered during construction all work shall stop until the qualified archaeologist and the FIGR Tribal cultural monitor and Tribal Heritage Preservation Officer (THPO) have the opportunity to evaluate the find and provide additional treatment recommendations. If the resource is considered significant by the archaeologist and FIGR , all ground disturbance shall be halted until appropriate additional mitigation measures are implemented, as determined necessary by the qualified archaeologist, the lead agency, and the FIGR THPO . Mitigation measures may include, but are not limited to: planning construction to avoid the resource; deeding the resource into a permanent conservation easement; capping or covering the resource with soil prior to construction; planning parks, greenspaces, or other open space to incorporate the resource; excavation of the resource, if it would otherwise be damaged or destroyed by the Project.	Monitoring Measure CUL-1: Prior to commencement of any construction activities in the southern portion of the levee, the District shall employ the services of a qualified archaeologist and FIGR Tribal cultural monitor to perform the construction monitoring. The archaeologist and the FIGR Tribal cultural monitor shall both be contractually empowered to stop work, if archaeological materials are discovered. The archaeologist will report to the District's Project Manager.	Prior to and during any ground-disturbing construction activities in the southern portion of the levee	Flood Control District's Project Manager

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Project could impact archaeological resources	Mitigation Measure CUL-2: Construction Personnel Training. A qualified archaeologist and a FIGR Tribal cultural monitor shall be retained to conduct a cultural resources training session with construction personnel prior to the commencement of any ground disturbing activities. Training will include (1) the reasons for archaeological and Tribal resource monitoring; (2) regulatory policies protecting archaeological and Tribal resources and human remains; (3) basic identification of archaeological and Tribal resources; and (4) the protocol to follow in case of a discovery of such resources. Construction contractors shall maintain records of employees who have completed the training. Training shall be repeated at least annually. At least one trained crew member (trained within the previous year) must be present during all Project construction activities that involve ground disturbance.	Monitoring Measure CUL-2 Prior to the commencement of construction activities, the District shall employ a qualified archaeologist and a FIGR Tribal cultural monitor to conduct the cultural resources training. Construction contracts shall include the training and record keeping requirements. The District's Project Manager shall be responsible for ensuring all contractors' compliance with training requirements.	Prior to commencement of any ground-disturbing activities	Flood Control District's Project Manager
Project could disturb human remains	Mitigation Measure CUL-3: Training for Accidental Discovery of Human Remains. The archaeological training specified in Mitigation Measure CUL-2 shall include training on identification of human remains or potential human remains, and in the procedures to follow in the event of such discovery.	Monitoring Measure CUL-3: See Monitoring Measure CUL-2.	Prior to commencement of any ground-disturbing activities	Flood Control District's Project Manager

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Noise				
Vibration from sheet pile installation could damage nearby structures.	Mitigation Measure NOI-1: Crack Monitoring For installation of sheet piles west of Meadow Drive Bridge and adjacent to #55, #57 and #61 Meadow Drive, the construction contractor shall notify these residents of the potential for structural damage from this construction activity. The construction contractor shall conduct pre- and post-construction crack monitoring surveys at these residences. The crack monitoring surveys shall include photographs, video tape, or visual inventory, and shall include inside as well as outside locations. All existing cracks in walls, floors, etc. shall be documented with sufficient detail for comparison after construction to determine whether vibration damage occurred during construction. If any vibration damage is documented, the District shall: 1. Repair vibration-related damages to residential structures caused during construction, or: 2. Provide proportionate compensation to the homeowner(s) for repair of any vibration-related damages to a residential structure caused during construction.	Monitoring Measure NOI-1: 1. The District shall ensure that any construction contract for sheet pile installation includes requirements for notifying residents along Meadow Drive of potential damage, as well as requirements for crack monitoring of any residence less than 30 feet distance from the alignment of the sheet pile wall. This will include requirements for repair or compensation for verified crack damage due to sheet pile installation. 2. Prior to finalizing any construction contract for sheet pile installation, the District's project manager will verify that these provisions have been included in the contract. 3. Prior to commencing construction of the sheet pile wall west of Meadow Drive, the District's project manager will confirm with the contractor that the notification and monitoring provisions are being implemented.		