RMP Sediment Workgroup Meeting

May 16, 2024
10:00 AM – 5:00 PM

MEETING SUMMARY

Agenda

1. **Information: Overview of Workgroup Planning Efforts**
2. **Information: Presentation on Sediment Dynamics at Bay Marshes**
3. **Information: Presentation on Suspended Sediment and Wave Monitoring in South and Lower South Bay**
4. **Information: Presentation on Hydrodynamic Modeling using the DFM**
5. **Information: Presentations of Tier 1 Proposals**
6. **Information: Presentations of Tier 2 Proposals**
7. **CLOSED SESSION Decision: Ranking of Tier 1 and Tier 2 Proposals**
8. **Report Out of Proposal Idea Ranking and Recommendations to Principal Investigators**

Attendees (Name, *Affiliation*)

Alex Braud, *SFEI*

Amy Kleckner, *SFEI*

Brenda Goeden, *BCDC*

Carole Foster, SCVWD

Christina Toms, *SFBRWQCB*

Craig Jones, *Integral*

Dan Nowacki, *USGS*

David Hart, *USGS*

David Peterson, *SFEI*

David Schoellhamer, *USGS ret, Technical Advisor*

Don Yee, *SFEI*

Donna Ball, *SFEI*

Gerardo Martinez, *SFBRWQCB*

Jamie Rose Sibley Yin, *USACE*

Jay Davis, *SFEI*

Jazzy Graham-Davis, *SFBRWQCB*

Jeremey Lowe, *SFEI*

Jessica Vargas, *USACE*

Jessie Lacy, *USGS*

Josh Gravenmier, *ERM*

Judy Nam, SCVWD

Julie Beagle, *USACE*

Karen Thorne, *USGS*

Katie McKnight, *SFEI*

Kyle Stark, *SFEI*

Lester McKee, *SFEI*

Lilia Mourier, *SFEI*

Luisa Valiela, *EPA R9*

Martin Trinh, *SFEI*

Maureen Dunn, *Chevron*

Oliver Fringer, *Stanford University*

Pat Wiberg, *UVA, Technical Advisor*

Rachel Allen, *USGS*

Renee Spenst, *DU*

Scott Bodensteiner, *BPC and Haley & Aldrich*

Scott Dusterhoff, *SFEI*

Setenay Bozkurt-Frucht, *SFBRWQCB*

Syeda Mariya Qadri

Tom Mumley, *SFBRWQCB*

Xavier Fernandez, *SFBRWQCB*

Scott Dusterhoff welcomed attendees to the 2024 San Francisco Bay Regional Monitoring Program (RMP) Sediment Workgroup (SedWG or WG) annual May meeting. He provided an indigenous land acknowledgement and introduced the goals for meeting, which were to:
- Review findings from SedWG studies
- Get updates from RMP studies from outside the SedWG
- Discuss and rank 2025 Special Study proposals

Prompted by Dave Schoellhamer's suggestion in a previous meeting, Scott created a summary table of all special studies funded by this workgroup since 2018, totaling $2.3M, included in the agenda package. Members of the WG and Steering Committee expressed the need for access for a historical list of projects, accomplishments, and reports for each Workgroup easily accessible on the SFEI website. Scott and Jay noted progress is being made for that.

1. Information: Overview of Workgroup Planning Efforts

Scott Dusterhoff gave an overview of upcoming efforts to support WG planning. Management Questions (MQs) guide special study proposals put forward each year, which build our strategic plan. MQs 3-5 were reviewed in 2023 as part of the Monitoring & Modeling Workplan, and subsequently the SedWG Multi-Year Plan was updated.

This year, the WG will review MQs 1-2, and update the Multi-Year Plan in 2025. MQs 1-2 had not been a priority over the past few years, and only 10% of funding has gone to addressing them since 2019. This is partly because other funders address them (e.g. USACE strategic placement pilot). It was noted that the RMP cannot fund everything, so we need to prioritize where we put our efforts.

In early fall 2024, Scott will assemble a subgroup of the SedWG. In late fall 2024, a meeting will be held to develop ideas for updates to MQ 1 & 2 and potential Workplan elements. In Winter 2025, draft updates to MQ 1 & 2 and a draft Workplan will go out to the WG for review. In Spring 2025, these will be finalized. In Fall 2025, the SedWG Multi-Year Plan will be updated.

This year, $40,000 is proposed as strategy funds to support WG planning efforts. It was noted that although these funds come from the same planned budget for SedWG Special Studies ($280k), the RMP tries not to make strategy funds competitive with Special Studies. Generally, the RMP will fund these outright from the RMP pot, then choose Special Studies from all the WGs.

Jay Davis added that the budget is going up 50% this year for each WG, and by 2026, there will be a doubling of the RMP budget, expected to be sustained for the foreseeable future. All WGs have risen to the challenge of coming up with good uses of the funding.

2. Information: Presentation on Sediment Dynamics at Bay Marshes

Jessie Lacy presented updates to efforts that encompass 3 Special Studies funded by this WG at Whale's Tail marsh, Corte Mader marsh, and San Pablo Bay NWR study areas. All studies have common goals to understand sediment deposition and erosion in salt marshes and what information is needed to model and predict behavior.

Data collection at Whale's Tail marsh targeted high frequency measurements over large spatial coverage, but a short duration with eight weeks in summer and eight weeks in winter. Data releases are complete and a paper is close to publication. The next two studies added two sites in Central and North Bay, focused on how marsh location relates to sediment dynamics. Data were collected for 16 months. Two papers based on findings from these sites are in prep. Karen Thorne's group is working on a paper on blue carbon implications. Data releases are starting to go into review. Jessie may present a year from now to discuss final conclusions.

A primary takeaway from the studies is that a lot more sediment is deposited in summer than winter. Big spring tides deposit more sediment than other tides. This is expected, as deposition is related to inundation time, but the effect is quite dramatic. Deposition falls off very rapidly with distance from the water source. This drop off is sharper at channels, while the drop off isn't as quick on the bay edge. Edge retreat was significantly greater in spring and summer than fall and winter.

They came up with an estimate of total deposition over a year at Whale's Tail and Cargill marshes. Edge erosion is losing 4,600 kg/day, and Whale's Tail surface deposition is 3,500 kg/day, and Cargill surface deposition is 1,200 kg/day. Imports and exports are basically balanced, but the marsh is not stable. The marsh edge is shrinking, and deposition is raising the bed.

In San Pablo Bay, wave height is greater and suspended sediment concentration (SSC) is greater than Corte Madera marsh. However, deposition is not very different between the two sites. This suggests SSC does not predict deposition very well. The curves at the two sites are very different. At a given level of SSC, there is more deposition at Corte Madera than San Pablo Bay. The difference in marsh edge type strongly influences spatial pattern.

Brenda Goeden asked if edge erosion is supplying deposition, especially during storms. Jessie said that the Petaluma River supplies sediment during storms. At Whale's Tail, yes, the eroded sediment becomes a pool to be deposited. The extent to which it is directly eroded and deposited is hard to tell. At Whale's Tail, they saw big humps of sediment on the marsh top, so some clasts were eroded and deposited.

Pat Wiberg mentioned that the Whale's Tail results are similar to results in Virginia marshes. She asked if there is interannual variability in suspended sediment, and to what degree. Jessie said that summers are regular, winters are highly variable. LiDAR data from 10 and 20 years ago shows annual erosion from decadal results is very close. Soon they will be analyzing twice-a-year LiDAR flights, and are excited to see if there is variability between winters. Eel grass is also a factor to look at.

Pat asked if when making deposition estimates for the sediment budget they were assuming SSC in creeks was the same as the Bay. Jessie answered that no, they measured suspended sediment flux across the reach only in Cargill marsh. The other SSC assumptions were purely based on a spatial tile-based model of sediment accretion based on curves related to position near a water source–developed from one interior creek far from the Bay, one at the Bay edge, and one on the main tidal creek 500 m from Bay. They assumed homogeneity along the interior creek and did not distinguish distance from Bay.

Oliver Fringer asked for the fraction of inorganic vs organic material. Jessie said deposition on pads is the sediment that's in the Bay, and percent carbon in Bay sediment is less than 2%, with lots of oyster shell action. Marsh sediment in the San Francisco Bay is overall not high in carbon. Karen added that they have observed less than 20% carbon in wetlands. Some isotope analysis shows the origin is mostly pickleweed and marsh plants. They will have good numbers after analysis this summer.

Tom Mumley brought up the need to think ahead and consider overlap with WRMP interests. This is a solid foundation, can we monitor trends? Scott highlighted a need for meeting with WRMP folks. Jessie added they are thinking about how to generalize these findings, with a need to know how this informs management actions. The USGS is increasingly interested in marsh resilience.

3. Information: Presentation on Suspended Sediment and Wave Monitoring in South and Lower South Bay

Lilia Mourier presented an update on progress in the second year of suspended sediment and wave monitoring in the South and Lower South Bay. The project is a collaboration between the Nutrient Management Strategy (NMS) and South Bay Salt Pond Restoration Project, with field support from USGS, and the California Conservation Corps (CCC) watershed stewards program.

Data collection spans channel, shoal, and slough habitat types, collecting 15-minute turbidity data, monthly discrete SSC, and 5-minute continuous wave height. There are limitations for site access, preventing discrete SSC samples during the highest turbidity periods. However, the team developed a Linear Mixed Model (LMM) with a good relationship between turbidity and SSC (r^2 = 0.62). Data showed distinct trends between habitat types (channel, shoal, slough). They generated a preliminary SSC time series, but the range is limited by the calibration threshold. Data are available for download now, prior to report completion at this link: https://drive.google.com/drive/folders/184ipBErM9R564VNpq5FYdjs-wjFZx3rV?usp=drive_link

Looking ahead, they will concentrate on strengthening site-specific calibrations, resolve outliers, and assess validity periods. They will write a more comprehensive report and publish data to the NMS data dashboard.

Pat Wiberg asked if there are ideas to push calibration to higher values of turbidity. Lilia said that hasn't been worked out yet, but may involve remote samplers in the future.

Dave Schoellhamer noted that flocculation studies could look into the differences between habitat types and build on this robust dataset. Jessie Lacy added that differences in habitat types suggests a difference in particle size, and that may be due to flocculation or sediment source.

4. Information: Presentation on Hydrodynamic Modeling using the DFM

Craig Jones presented an update on hydrodynamic modeling in the region. Work started in San Leandro Bay to see what is necessary for good model calibration and to develop workflows for setting boundary conditions. There are two models being linked. The first is the In-Bay Model led by the Nutrient Modeling Strategy program (Delft-3D FM). The model was calibrated for hydrodynamics across the Bay, it's open source and a flexible mesh structure, making it a good baseline to use. Having the hydrodynamics sorted, we can pull that directly into case studies for SSC. The second model is the Watershed Dynamic Model (WDM), where rainfall is routed across the landscape and parameters tuned for land use, storage, and flow types. The WDM is a very powerful tool for sediment boundary conditions for flux into the Bay. The WDM provides sand, silt, and clay fractions at hourly timesteps. We are exploring the need and potential for getting more high-fidelity information regarding particle sizes.

To model Bay-wide sediment flux, boundary conditions from the WDM can be used for tributary inputs. Empirical data collected at the Golden Gate can support model refinement, and that is yet to be evaluated closely in the modeling work. Flux between subembayments is the main question being addressed, currently by testing processes in San Leandro Bay. To expand to a Bay-wide study, they are using USGS data to populate sediment bed grain sizes, vertical structure, and erosion rates. Marsh edge erosion will be incorporated with a combination of data and results from Jessie Lacy's work as well as remote sensing that Don Yee and Alex Braud have been working on. Sediment budget modeling is primarily constrained by boundary conditions, but we're concerned with how things move internally. Modeling is a great tool to integrate boundary conditions and evaluate their influences to internal processes.

Regarding sediment transport to beaches, in the Central Bay there is significant coastal exchange, and In the North Bay there is a lot of interaction with local inputs. Modeling those factors might be site-specific, coupled to SWAN models. Craig said they have sorted out some past problems with linkages between SWAN and Delft-3D FM.

Craig noted the challenges that exist. No one model will answer all our questions. Each question requires specific metrics to address, which in turn requires specific data for calibration and validation. Various Workgroup needs will have convergence and divergence points within the same modeling framework.

Dave Schoellhamer mentioned that modeling to date seems to have looked at contemporary sources of contamination, then he asked about modeling the fate of legacy contaminants in the bed of the Bay. Craig said they are tracking layering and mixing in bed, and even bioturbation to look at PCBs, for example. They will be doing hind casting to see how the profile developed and how it will change in the future.

5. Information: Presentations of Tier 1 Proposals

Tier 1 proposals were given more development time than Tier 2 proposals, as they followed the SedWG strategic plan and were anticipated to be ranked highly and funded by the WG. However, the WG was asked to rank all proposals based on priority and need, regardless of tier status. Each of the three Tier 1 proposals got 30 minutes to present and discuss.

Kyle Stark presented the proposal titled: Refining the Conceptual Understanding of Sediment Transport in San Pablo Bay. This is a refinement to the existing Sediment Conceptual Model at a finer spatial resolution. This effort would help identify data gaps, support modeling, inform management efforts (e.g. creek or tidal marsh restoration), and help identify funding targets for other research. There are three proposed areas of focus:
- Compile a comprehensive set of available literature related to San Pablo Bay
- Augment understanding of tributary deliveries within San Pablo Bay, Petaluma, Sonoma, Napa Rivers by gathering existing data and utilizing existing RMP products (e.g. WDM)
- Refine the existing conceptual model tributary-marsh connection using updated literature

Dave Schoellhamer noted that loading to San Pablo Bay would be improved by incorporating new information from the sand mining budget, and asked what another incremental improvement might be. Kyle said that they would look into the near future, and incorporate restoration projects, Jessie's work, and climate change effects, but the focus would be on incorporating sand budget information. Work has been done Bay-wide, but things have not been interrogated at the subembayment scale. Ultimately, Kyle said the scale and resolution will improve, and it is an opportunity to gather information in one place and present it in a visually appealing and useful way. Tom Mumely added that this would address substantial comments on the recently released baywide sediment conceptual model report, primarily improving the scale. He said we don't have a compilation of what we do and don't know within each subembayment. One issue he'd like addressed is what is the erodible sediment pool, how is it formed, and how does it feed into the story? This would make that available to managers and scientists. Tom emphasized the Water Board's support of this work.

When asked about unknowns, Kyle said the biggest unknowns are inter-subemebayment exchanges and the pathway between the marshes and deeper bay. He said they will explore this. In the proposal, they focused on places with a wealth of data. Pat Wiberg suggested coupling work with the In-Bay Model.

Brenda Goeden added that they're investigating what happens between mudflats and marshes, but a bigger knowledge gap is movement between the deep water and shoals. It is important to clearly lay out how that works. She said it is time to expand beyond marshes and mudflats to deeper water actions. It is important to define where our uncertainty lies.

Luisa Valiela noted the importance of reviewing whose needs are being met. These are the least urbanized subembayments, and contaminated sediments are in the other subembayments. There is pressure in the federal government to focus on contaminated areas.

Next, Jessie Lacy presented the proposal to develop a study plan to improve characterization of bed sediments and settling velocity to advance sediment transport for San Francisco Bay.

There are various methods to understand bed erodibility in situ or in the lab. Proxies like bulk density or particle size can be used for erodibility, and there are a series of related parameters to evaluate. Settling velocity factors include particle size, floc density, and the many factors involved in flocculation itself, which are difficult to measure in the field. The goal is to improve parameterization for these processes to support sediment transport modeling by developing an integrated observational and modeling workplan. The budget was adjusted to $99,550, a slight reduction from the budget put out in the original proposal.

Pat asked about what data exist as a starting point. Jessie said there are good maps of sediment types in the Bay, but it's hard to get the models to stabilize. Oliver added that all studies have initialized the bed with as much data as they can. All models do the same thing: underprediction of suspension during large events due to flocculation. He doesn't expect improvements by adding more bed properties because you can tune those. The important question to answer is: Is it even possible to tune a model using known bed properties, or can you just adjust your model internally? Jessie said they might propose a field component, but they don't know what's most important yet. Oliver said this is an opportunity to get technical experts into one room and decide what studies might be best to answer these questions.

Dave suggested that there are different algorithms and conceptual models for how erosion works, and that should be part of the process to determine which are appropriate and when and where for this estuary.

When asked about the timeline, Jessie said they don't know how long the workplan will require, but three years follows the Strategic Monitoring and Modeling Workplan. When asked about modeling expertise, Jessie and Lester pointed out that modelers, including Craig Jones, will be included in the technical workshop.

Jessie noted that the next proposal addresses similar things in a different way, and it would be good to develop those projects in tandem.

Oliver Fringer then presented the proposal for the analysis of satellite-based surface suspended sediment concentrations for improved sediment transport modeling.

Oliver gave an overview of the large amount of satellite data that is available and showed results of a study of SSC by his former PhD student, Joe Adelson, as an example of how data could be analyzed. They found that SSC trends between 1999 and 2017 had differing results between channels and shoals. One limitation with satellite imagery is capturing data close to land features due to reflection interference. A main limitation is the lack of overlap of imagery and in situ data. This project would create a database of imagery and in situ data overlap. He said they can quantify uncertainty with this work, which can't be done with current approaches. Oliver has two PhD students incoming that could work on this study.

Pat asked about cloud cover and other limitations. Oliver said they will try to identify bias through this process. Dave noted that an appeal is tying this in with modeling in the long term. He asked if they had discussed this with modelers yet. Oliver said this first part is to explore if the satellite data is even usable. Then, they will begin discussions with modelers to determine how to use it, focused on what technical questions should be answered.

Tom Mumely asked about the products of the study, and asked that they be publicly available. Oliver said that one product would be a database of imagery that everyone has access to. A paper would focus on which data are being used to identify trends and the practical issues with usefulness of data.

Oliver noted that NSF and other agencies are interested in science questions, but not model development, so research funding from those sources is not likely. He envisioned a PhD student working on this, but more funding would allow a postdoctoral researcher to do this.

6. Information: Presentations of Tier 2 Proposals

To save time, proposals were not presented, and discussion was opened directly for each. Proposals were reviewed in advance by WG members. Scott informed the WG that Tier 2 proposals could be ranked above Tier 1 proposals if desired.

The first proposal discussed was capturing Napa-Sonoma Sediment Loads.

Dave Schoellhamer mentioned this is the kind of long term monitoring that shouldn't be coming to the WG every couple of years. If the EPA funds could fund long term monitoring or gages, that would be useful. He then asked the status of the flow gages. Lester McKee said they are operational flow gages, but no SSC has been collected since water year 2017 or 2018, a dry year. There is a need to capture large events, and the odds of an above average wet year are a challenge. Lester noted the start up cost is $20k per station, so supporting long term monitoring is more cost effective than periodic reinstallations.

Brenda Goeden asked if the study would capture sediment removed by dredging. Lester said no, but the data would support a budget analysis.

The second proposal was the Bay Sediment Budget Update.

Pat Wiberg asked Lester to clarify how this related to other proposals and work being done in the system. Lester said it relates to the conceptual model to help make further conceptual or maybe numeric estimates on how to estimate the erodible sediment pool. The conceptual model work could come up with a methodology, and this project would apply it. He said it relates to Jessie's work in the erodible sediment pool, and that is a new "box" in the sediment budget. Estimates would be supported by further development of the conceptual model. There is now more information on San Francisco Bay-specific bulk densities. Finally, this will update the full bay budget, and with a finer spatial resolution focused on the Central Bay.

Next, the proposal to map Shoreline Change in San Francisco Bay was discussed.

The WG technical advisors, Pat and Dave, noted it is surprising this has not already been done. Alex Braud said that some work had been done in San Pablo Bay using heads up digitizing, but not much has been done via automated methods. There are a lot of historic shoreline data, and this project would compile those data and make them readily available. Julie Beagle mentioned they had applied to do this many times, without success. She added that the whole Bay needs it, especially the Central Bay. She is very supportive of this, and Christina Toms agreed.

Karen Thorne noted that shoreline change is small compared to Louisiana and Chesapeake Bay. The WRMP has a spatial working group that should be connected. The USGS also has access to other imagery at higher spatial resolution. If this gets funded, she suggested exploring those opportunities. The group discussed the WRMP's habitat basemap, and Christina pointed out that shoreline change was not a high priority when developing that map, and it has not yet been quantified.

The WG then discussed the proposal for Suspended Sediment Flux Measurements at Richmond-San Rafael Bridge.

When asked for clarity about deciding which sensor to install, David Hart said that they would conduct pilot transects to figure out what to install and where. They went out last week. Winds were high, so they captured flood tide, but not ebb tide. There are two channels (main and eastern). For ~$14k they could install a temporary turbidity station, functional during the winter season, 6 months, supplemented by transects. Or for $40k, they could install an ADCP in the main channel. When asked for a sensor preference, David said an ADCP is best, but an extra sensor at the lower budget option is very useful as well. In the short term, instruments are available from storage, but for long term monitoring, they would have to purchase instruments at varying costs. Redeployment is fairly easy.

Next the group discussed the expanded coverage of studying Spatial Variability of Accretion in San Francisco Bay Restorations.

Karen Thorne informed the group that they had chosen five sites based on feedback in the last WG meeting: Cargill marsh, Pond 6A, Bahia marsh, Grays marsh, Tubbs Island. This proposal would add three more to capture better spatial variability. Other sites could be in the Napa River area, but it is a unique area. They don't have anything selected in the Central Bay, and the South Bay has a lot of potential. Karen mentioned that overlap is not critical, and funding could come next year, but clustering sites helps keep costs down.

Xavier Fernandez asked if there are current field efforts that could be coupled, such as strategic placement. Karen said there is an Army Corp project looking at dredge fill in restorations at three sites. That info will be included in reports. In the South Bay, Karen and her team are funded to do surface elevation readings, so they could core there too. But the RMP will benefit from studying other types of restorations. They could core strategic placement areas but that's through 2024 only. Karen will think more about coring at strategic placement locations. Julie Beagle added that there are some options to continue strategic placement monitoring.

The last proposal discussed was titled Sediment Dynamics in a Fluvially Influenced Salt Marsh.

Pat asked about broader findings we might get out of this site-specific proposal. Dan Nowacki answered that a lot of work has been done with hydrodynamic models using sediment accretion observations in marshes fronting the Bay. This marsh is on a river channel. There have been few studies of marshes of this type. This study will help understand how marshes are recovering or responding to restoration efforts. This is a recent and active restoration, which differs from studies of older restorations. Findings could be transferable to some marshes along Napa and Petaluma rivers, as well as planned reconnection of Novato Creek to the Baylands. Jessie added that this effort looks at watersheds previously cut off from marshes, something they haven't studied in depth yet.

7. CLOSED SESSION Decision: Ranking of Tier 1 and Tier 2 Proposals

Those involved with the proposed Special Studies left the room while the rest of the WG prioritized projects.

8. Report Out of Proposal Idea Ranking and Recommendations to Principal Investigators

Xavier Fernandez summarized the discussion and reported out the results of the closed door session to the larger group. Five studies meet the expected budget for next year, and will go forward to the TRC.

- The proposal to develop a study plan to improve characterization of bed sediments and settling velocity was deemed to have the highest value, and the group discussed accelerating it to get the project going quickly. Its value is in helping modeling and other projects.

- Then the shoreline change proposal was ranked second because it will help inform a lot of projects and with climate change, it is important to get that information now. The group suggests spreading the work over 2 years, funding $50k the first year, and $30k next.

- Ranked 3rd was adding a station at Richmond Bridge, because of its low cost ($15k) and high value. David Hart clarified that $40k would fund a long term ADCP. Xavier mentioned that the WG will revisit this next year to discuss sustaining the station.

- Ranked 4th was refinements to the conceptual model because there is a need to gather all the info and data for the San Pablo Bay subembayment into one place. It will help inform management decisions there and identify data gaps.

- Ranked 5th was the study of sediment dynamics in a fluvially influenced salt marsh (Gray's Marsh). The group noted this hasn't been studied and it is important to start studying it. There was some debate about whether it could be transferable to similar creeks. It is important to at least figure out how to do the study, and transfer methods to other areas (e.g. Wildcat, Novato).

The following proposals fall outside the expected budget allocation for SedWG 2025 Special Studies. Xavier emphasized that we're funding limited, and would fund all these if possible. All of these have been kept on the list for potential Supplemental Environmental Project (SEP) funds or funded by other entities. Further, unfunded projects can be incorporated into the WG's strategy for future years.

- The group thought the study of Napa-Sonoma sediment loads is valuable, but it's a gamble to capture a storm in one year. It would be helpful to plan out this project over a longer period of time to increase the odds of collecting useful data.

- For the expanded coverage of studying spatial variability of sediment accretion in restorations, the group felt there is potential funding from USACE and WRMP, so ranked it lower, hoping one of those entities would fund it. If they don't, we could consider it next year.

- Ranked next was the analysis of satellite imagery for suspended sediment. It was agreed that the team is the right group to do it, and the study has relevance to help refine models. This has high value for the Nutrient Management Strategy, but is not a high priority for the SedWG at the moment.

- The Bay sediment budget update was hard to make a decision on without seeing the BCDC report that will come out this summer. Once WG members are able to read that report, this proposal can be considered next year.