Toxicology – Charette #1
July 7, 2020

Meeting Participants:
Brandon Beach – Public Affairs Chief, USACE
Tessa Beach – USACE Chief, Environmental
Scott Bodensteiner – Project Manager, Haley & Aldrich, Inc.
Todd Bridges – Senior Research Scientist, USACE Engineer Research and Development Center (ERDC)
Hal Cardwell – USACE CPCX
Seth Cohen – USACE Collaboration & Public Participation Center of Expertise (CPCX)
Ashley Demcsak – Environmental Specialist, Chevron Richmond
Edwin Draper – Associate Engineer, Port of Oakland
Sarabeth George – Dredging and Disposal Program Manager, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)
Erin Hanford – Program Manager, City of Vallejo
James M. Haussener – Executive Director, California Marine Affairs & Navigation Conference
Ryan Hernandez – Contra Costa County
Cassie Pinnell – Montezuma Wetlands
Brian Ross – Environmental Protection Agency (EPA)
Will Wallgren – The Dutra Group
Roselyn Wang – Assistant District Counsel, USACE

Meeting Organizers/Helpers:
Stu Townsley – USACE (Deputy District Engineer for Project Management)
Brian Gerrity – USACE SPN (Meeting Host)
Tawny Tran – USACE Project Manager
Priscilla Ouchida – Nikkei Environmental LLC (Facilitator)
John Guenza – Adanta, Inc. (Facilitator)
Libby Claggett – Adanta, Inc. (Note Taker)
Joe Schwennesen – Adanta, Inc. (Timekeeper/Note Taker)

After some audio difficulties, the charette began at 8:40 AM PT. Priscilla Ouchida welcomed attendees to the meeting and began the presentation. Stu Townsley spoke about the purpose of the charette and gave background information. Jim Haussener stated (via the chat box) that he was glad to see Suisun Slough Channel included but asked about Islais Creek and Richardson Bay, which have had some historical dredging. Priscilla Ouchida then provided with an overview of the meeting protocols.

Comments Discussed During the Meeting

Comment 1 Relating to Sediment Quality Testing:

> The EIS should describe the multi-year sediment testing plan that has been developed in coordination with the interagency Dredged Material Management Office. A summary of past sediment quality testing results for each federal channel should be presented in the DEIS. In addition, the DEIS should address how the Corps will manage any maintenance dredged material that may be found to be unsuitable for unconfined aquatic disposal, or beneficial re-use at particular sites (for example, due to chemical contamination or toxicity to aquatic organisms).

Brian Ross commented the USACE should provide/post all comments received in advance (not just summary), as well as via the charrettes.

Brian Ross stated that Comment 1 was from 2005 and was part of the scoping discussion for the RDMMP from the last time the Corp worked on a RDMMP. The EPA does not feel there is a problem with sediment

testing, but rather the area of the Dredge Material Management Plan (DMMP) and the sediment testing program. The LTMS program coordinated a way for the Corp to test the federal channels. This involves full testing and a number of years of natural testing. The permitting process is, thus, sped up. The DMMP needs to describe the importance of testing and how it fits into the program.

Jim Haussener asked what is status of Sampling and Analysis Plan (SAP) and possibly Site Assessment Report (SAR) that went through the Dredged Material Management Office (DMMO) for Santa Fe Channel? Jim Haussener said years ago Brian Ross provided the background data for the Sante Fe Channel, and a SAP was submitted through the DMMO. Jim asked what happened with this in terms of identifying were the channel was in the cleanup process. Tawny Tran stated the Corps will get back with him on an answer.

Jim Haussener asked how the EIS will address material found as unsuitable. Since it is a 20-year document, would it be better off to say something along the lines of in the EA for a particular dredging episode, the Corps will address that situation. It may be found that there are different ways of dealing with dredge material or it be may determined that what was polluted today may not be considered polluted in the future. Places may need to be addressed on a time-by-time basis; this may be too broad for the current EIS. Brian Ross stated that when sediment is considered unsuitable, it is definitely a case-by-case basis as to why it is unsuitable and where it might be available to ramp. When the Corps finds unsuitable material, it is often left in place. One of the issues is that often a local sponsor must handle the material and the extra cost associated with that.

Jim Haussener asked of the Corps when passing over to non-federal sponsor, is it a funding issue or a do not want to deal with issue? Jim Haussener asked if the Corps' not doing something with the unsuitable material is contractual issue, a funding issue, or if it is just too complicated to deal with. Tessa Beach said it would depend on the channel.

Ten stakeholders were on the line to participate in the polling process to see if this comment would be carried forward as a stakeholder recommendation. Comment 1 did not obtain a majority vote.

<u>Comment 2 Relating to Toxicology Associated with Dredging Practices</u>:

> The projects that are associated with the Regional DMMP will involve the use of dredging equipment, use of heavy equipment for off-loading, and truck transport of dredged material. These activities could have short and long-term impacts on air quality - particularly emissions of nitrogen oxides (NOx - an ozone precursor), particulate matter less than 10 microns in size (PM10), and carbon monoxide. The EIS should discuss the general air quality impacts of the projects associated with the Regional DMMP and discuss options for mitigating these impacts.

Brian Ross said he was not sure from where the comment came, but said he is frustrated with the approach taken with this type of comment. Air quality could be considered a part of toxicology, but to the extent you are doing National Environmental Policy Act (NEPA) compliance, air quality and water quality must be discussed in the document. Brian Ross added that he is not sure why the question of including air quality in the DMMP is even up for a poll as to if it should be included in the DMMP. Priscilla Ouchida stated the purpose of the poll is more about obtaining consensus from the stakeholders and their view on the comment and not if the comment will be addressed or not.

Scott Bodensteiner asked (in the chat box) will Corps engage the Water Board to find a way to beneficially reuse slightly contaminated material where WDRs now do not permit contaminants over ambient concentrations. Brian Ross responded yes, they will (in the chat box).

Jim Haussener stated that in-bay placement really helps avoid or minimize these potential impacts. Jim Haussener added that he considers in-bay placement beneficial because by putting material back in the bay, there is less distance to travel, no truck issues, less air emissions, etc. Jim Haussener added that in-bay placement may be the right method for the large amount of material and may minimize impacts people are identifying.

Comment 2 did not obtain a majority vote.

Stu Townsley made the decision to stop the formal meeting process and open the telephone lines up for open communication (without having to use the chat box) since there were so few meeting participants on the line.

Comment 3 Relating to Toxicology Transport Modeling:

> Known sources of contamination such as sewage treatment plants and permitted industrial discharges as well as non-point sources of contamination such as Superfund and RCRA sites, urban runoff, and landfill leachate. The contaminant classes considered must include PCBs, dioxin/furans with 2,3,7,8 substitutions, organochlorine pesticides related to DDT and chlordane, PAHs, and the metals cadmium, mercury, and methyl mercury.

Jim Haussener said that regarding sediment transport modeling, he is not sure what the question is. Is it taking about what happens when you place the material somewhere, what happens when you pull the dredge material out of the water, or what? Why are dioxins being included since there is not a sure problem with dioxins? How does this relate to the process and is it specifically talking about dredging or the process? Brian Gerrity said the comment was from someone who was invited to this meeting but did not attend. Jim Haussener said the DMMO, SAP, and the testing manual should be tied into the DMMP since there is a knee-jerk reaction to dredge material in general by other agencies. Tessa Beach stated it is part of the process, and she agrees with Jim Haussener's comments.

Brian Ross said he thinks it is confusing and wished the commenter was in attendance to clarify. Sediment transport modeling is an important issue and separate from toxicology. All sediment dredged has been tested as appropriate, but there is some streamlining that can be done. Brian Gerrity added another charette is planned to discuss physical processes and transport modeling will be discussed in greater depth then.

Stu Townsley stated that he agrees that testing protocols should be included as part of the RDMMP, and regarding air quality versus water quality balancing between agencies makes things difficult for the Corps with competing requirements and processes. Stu Townsley does not thing the dredging program is the place to answer questions about RCRA and Superfund sites but believes there is some obligation and the Corps does currently test and finds that most of the material dredged is clean. One of the challenges of toxicology for the Corps is Tier I testing, and the timeline for that is longer than the dredge cycle itself. Thus, dredging must be delayed to wait on the testing results. Sometimes the requirements get in the way of smooth execution; thus, it should be discussed how the requirements affect the ability to dredge.

Brian Ross said the EPA has heard the Corps concerns about testing costs and believes the DMMP should discuss this. The DMMP should focus on adequate placement sites for the material over the next 20 years.

Jim Haussener stated that the overall program needs to be discussed but testing limits should be considered as well and asked is there really a reason to do Tier I testing. Brian Ross clarified that Tier I testing could be done year or biyearly. There can be a Tier I that has nothing to do with whether in-bay disposal is better or not than some other type of disposal. The testing issue is a primarily a cost issue. Getting a permit is a cost issue as well. Most projects have Tier I testing. Todd Bridges added this is an important discussion. In the future looking forward 20 years, there needs to be more focus on how to manage the sediment in the water. There is a need for information on sediment quality but need to look at the decades of data already available on San Francisco Bay.

Stu Townsley stated that the DMMP needs to be as descriptive of the program and the challenges that support the ability to dredge as possible to get to long-term sustainability.

Comment 3 did not obtain a majority vote.

New Comments

Scott Bodensteiner stated there is known contamination in the upper portion of the channel. In the past when the channel has been dredged, the contaminated material has been reused since there was minor contamination. These days, the Water Board has requirements for reusing the material. Now, if a contaminant exceeds the ambient water concentration in the Bay, you can no longer take the upload. The DMMP should consider engaging the Water Board to find out if there is a way to take out the requirement of the ambient water concentration for material reuse. Stu Townsley paraphrased saying that slightly contaminated material protocols could be improved for the beneficial reuse of the material.

Jim Haussener asked if any polycyclic aromatic hydrocarbon (PAH) issues are impacting the federal channel like they are at some piers in San Francisco. PAHs are hydrating into the Bay and having impacts. May need to consider the potential impact of the leaking of contaminants into the ground into navigation channels. The ratcheting down of the contaminant level may also have an impact on future projects. Ambient concentrations have been decreasing for certain materials; thus, materials that were not contaminated previously are not contaminated. Stu Townsley paraphrased saying that future protocols should be focused around material that is contaminated from previous land use issues that is now migrating into dredged channels. Secondly, the DMMP process should incorporate future potential changes to DNDLs for example.

Brian Ross said in terms of framing the question, are trying to reflex some limitations on what is suitable for what is being placed in the bay (ambient conditions slowly getting better and contaminants can slowly go down in the future). The general context of the DMMP should recognize that some standards are getting tighter over time. Stu Townsley said the DMMP process should anticipate future changes and how to accommodate the changes in respect to the dredging program. Brian Ross added that the DMMP should address material that may not pass.

Scott Bodensteiner stated that acknowledging work done by the FFPI and regional dredging monitoring for future suitable for dredging, the DMMP should be used to update that effort and where it is going and what is intended to be accomplished with it. This will affect how much material can be for beneficial reuse. Stu Townsley stated the Corps could potentially benefit from a mechanism from FFPI to utilize activities to bring science online.

Jim Haussener added there should be a placeholder for emerging contaminants of concern like tire pollution from storm drains and per- and polyfluoroalkyl substances (PFAS) should have a placeholder regarding protocol for emerging contaminants.

The meeting was closed at 11:54 AM PT.

After Meeting Feedback

After the meeting, Todd Bridges provided the following comments via an email to Stu Townsley, Tawny Tran, Tessa Beach, and Brian Gerrity:

> The virtual format creates some challenges, clearly, for sparking dialogue. An alternative approach that could also be considered for next time would be to introduce some thoughts/ideas on future targets or directions we are thinking about, based on the comments USACE has received, and then let discussion move around those ideas.
>
> Some of the opportunities that I think exist in regards to the Regional Dredge Material Management Plan (RDMMP) based on today's topic of "toxicology":
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> 1. Orient toward sustainable sediment management. Stu's opening thoughts align strongly with this theme. I think this is a "winner" argument for us and our partners and stakeholders.

2. Transition from the environmental "testing" focus of the last 40 years, to how we manage dredged material effectively and efficiently. Here we would move away from thinking and using testing to make a pass/fail determination, but to inform how to manage sediment. We have A LOT of engineering knowledge, techniques, technologies that have been developed and used over the last 40 years that can be applied to ensure that dredged sediments with a range of contamination levels can be acceptably managed in the water. Transitioning from a testing-pass/fail model to a testing-manage model could (I would say should) be a goal of the RDMMP. The rule here is right-size the management/engineering to match the level of contamination/risk.

3. Legacy sources of contamination. Navigation channels don't create contamination, obviously. We are "gifted" the problems that others have created or poorly managed (including EPA). There is an opportunity here to focus our agency partners on their responsibilities that are negatively affecting our program. Land-based sources is one example. There are also opportunities where we could leverage the dredging program to reduce the potential for contaminated sediments to get into our channels. One of these is to use clean dredged material to "cap" contaminated areas that may be contaminant sources to our channels. This would be an example of a win-win: using dredged material beneficially (to cap) while reducing the potential for contaminated sediments to get into our channels from these sources in the future.

There are certainly obstacles in the form of existing procedures, rules etc. to all the above. But if we take the long view, I think there is an opportunity to use science and stakeholder engagement to not just change the rules of the game, but even the game itself.