Key Workshop Themes

- The WRMP has utility to agencies, in different ways. Standard monitoring protocols for the region would be useful for permitting restoration and compensatory mitigation projects. Reference sites can be useful for developing performance objectives for restoration projects. Reaffirmation that coordinating between science and our management decisions is very important.
- Overall, agencies aren't sure how the WRMP will fit in with permitting. The mechanisms would likely be different for various agencies, particularly as participation in the WRMP can't be required but can potentially be incentivized. WRMP will work with agencies on how to consider/employ the WRMP.
- Further careful consideration is needed on discussions with project proponents around WRMP – setting expectations, scope of program, and potential implementation in permitting.

Meeting Summary:

Session 1 January 22, 2021

Welcome

When polled, the overall participant goals for the meeting included learning more about the WRMP and the applications to their work.

WRMP Value and Updates

Information about the WRMP can be found at wrmp.org, in the 2 page [WRMP handout](), and in the [WRMP Program Plan]()

Agency Small Group Discussions

Discussion included the following questions:
1) What are your agency's goals for wetlands restoration?
2) How could your agency use the monitoring information to guide decisions on wetland restoration goals? (i.e. what technical information do you need to do your job?)
3) How might your agency incorporate the regional monitoring program into permit conditions?

Large Group In-Depth Discussion

Values and Opportunities

- Opportunities articulated: regional science is of interest & can inform our regulatory work, data could be helpful for a watershed approach, multiple types of beneficial data could deepen understanding of wetlands and supplement thinking and approach for restoration. Inform species' Recovery Plans.
- Standardizing monitoring in a regional context could help inform both restoration and compensatory mitigation.
- Exploring synergies and using the WRMP to make things easier across agencies. Want to give our collective selves time, space, and data to develop synergies.

Challenges and Considerations
- Range of regulatory mandates (both broad and narrow) to navigate. Can we standardize restoration monitoring in consideration of the level of complexity with the various agency goals?
- We should explore the use of the Corps' Universal Performance Standards, which are primarily used for compensatory mitigation. These standards may conflict with the WRMP's evolving science. We could ID a subset of the variables covered under UPM that are critical variables for the SF Bay and that should be in alignment with regional science - will need adaptive learning
- Distinguish voluntary restoration from compensatory mitigation

Session 2 January 26, 2021

Questions about the WRMP program - summary of responses

- The WRMP is not an academic research program, but rather a management-driven focused program for the collective restoration community
- Our goal is to make monitoring effective and make the data useful to all regional users. Will have a centralized data management system for data collection, upload, and visualization to enable data sharing, digestion, and adaptive lessons learned.
- Regarding concerns about pushback from applicants, development of the WRMP includes proactive engagement with restoration project proponents. The SC and TAC framework allows for coordinated discussions and development of any monitoring standards. Through this integrated coordination, the hope is the WRMP can achieve science-based monitoring requirements that result in both cost effectiveness to project proponents by reducing unnecessary data collection, and data that are useful at appropriate spatial scales for better management decisions.

What data do you rely on now for project analysis and subsequent monitoring requirements?

Overall: CNDDB and project-specific field surveys were the most common answers. See attached Mentimeter poll.

Breakout 1: What data would you find useful to inform your agency's restoration work?

- Uniform performance monitoring standards would be great BUT will be a challenge to develop as restoration project sizes and goals vary quite a bit.
- Reference sites can inform temporal and spatial targets for Project Specific Site (PSS) performance.
  - Discussed the concept of when to compare & what level of monitoring is required to determine performance of PSS as compared to reference range. If a project is on a positive trajectory, the analyst can adjust monitoring (e.g., frequency, parameters, etc.).
  - Some agencies already try to adjust required monitoring timelines dependent on the resource, especially for tidal marsh and streams.
- Ideal if the WRMP TAC is in alignment with regulatory data needs
- Monitoring is dynamic and changes as the restoration project develops
- Include dialogue with experienced project proponents concerning their willingness to participate in WRMP
- Don't want to verge into prescribing restoration goals through monitoring; monitoring important to see if those goals are being met
- Agencies all work with different sets of data
- Is the restoration project working? Are projects supporting intended species?
- High and low marsh components, rate of establishment, vegetation monitoring, establishment of vegetation as habitat indicator, occupancy by species, hydrology, physical data, monitoring at appropriate reference sites
- Need synthesis of existing data: what works, what design changes should we consider
- Innovative restoration methods & monitoring data… type, how much, etc.

Breakout 2: What are the next steps? Each agency discussed the following:

Where do we go from here with your agency?
What other branches of your agency should be involved in understanding the WRMP with an eye toward potential implementation?
How can the team best assist your agency?

Large Group Synthesis and Problem Solving

- Discussed: the funding strategy for the WRMP, the priorities of the WRMP TAC, WRMP monitoring site network, quality/integrity of data & data management plans, what data formats are of most use to our end users.
- There are many ways for agencies to engage on WRMP and discuss potential implementation in permitting. Existing initiatives such as BRRIT are great forum for these discussions as we seek alignment with existing processes and consideration of effective performance standards.
- The WRMP will not be static and will be revised periodically as it is built to adapt to changing ecological needs. As with the Bay RMP, management questions are reviewed periodically, answered, then move on to the next question. This is a model that WRMP can replicate to adapt management questions, protocols, monitoring standards over time.

Summary and Next Steps

- Contemplating a future workshop with the practitioners and agencies, and welcome feedback from agencies on this.
- Potentially convene small groups of 2-3 agencies to grapple with similar implementation issues, i.e. resource agencies vs. permitting agencies
- If you have any questions about specific technical information, please convey that to us to make sure that your concerns are being considered.
- *We heard post-workshop that some participants experienced technical issues with the polling regarding what data you typically use for project analysis, so feel free to expound upon your answers by emailing Jen Siu.*

Provide 2-3 primary sources of data you rely on for analysis of regulatory and resource requirements?

CNDDB/BIOS

CNDDB

south bay salt ponds fish surveys, RMP for Water Quality

Field survey data collection – data sheets provided per the 1987 Manual, AW supplement, and OHWM manual for the west

CNDDB, Marine BIOS

IEP fish studies - currently I mostly use Bay Study, USFWS beach seine studies, available on the EDI portal UCD Fish monitoring - Suisun Marsh (South Bay and Napa are not publically available like Suisun)Green sturgeon radio acoustic data

hydrology reportswetland delineations

hydrology analysis, landuse & connectivity, DMMO database

1. EcoAtlas mapping2. Native vegetation cover3. Cover of invasive plants

Provide 2-3 primary sources of data you rely on for analysis of regulatory and resource requirements?

Data provided from applicants through onsite testing or surveys

CNDDB, project/consultant surveys, prior BiOps

regional research papers, databases where they exist, other restoration project's monitoring reports or progress at similar sites

Dredge sediment testing reportsRecovery plans

fish monitoring reports

Marine BIOS, CDFW Fisheries Data, U.S.G.S Habitat Maps

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What information about the WRMP might you need that you don't yet have?

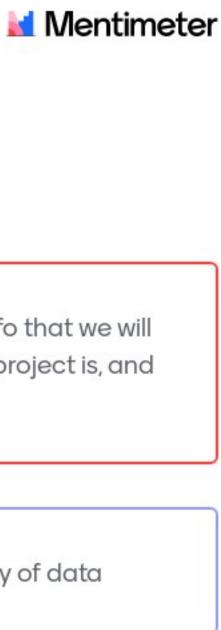Does any agency want to contribute a lead scientist to the effort?

It would be great to hear the current status of the tac efforts

I think that the WRMP is still working on the info that we will need. I have a much better idea of where the project is, and what the project may help us accomplish.

the types of information and metrics that can be monitored through remote sensing

How might it be funded? Can it be revised periodically?

Need more information about Quality/integrity of data

For coordination, it may be useful to provide a draft of what it is you intend to monitor, the frequency, the spatial extent, to potential users/regulators, to comment for sufficiency.

I'd like to know how the WRMP considers that the benchmark sites can be used. It sounds like the thought is that these ancient marshes reflect what could be around the bay present/future, and are"canaries in the coal mine" for SLR

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