Response to Comments – San Mateo County Bay Beaches Advance Restoration Plan

Comment No.	Comment	Response	Changes
CASQA-1	Support the ARP approach to focus on higher-risk sources and being adaptive.	Comment noted.	None
SMCWPPP-1	ARP does not clearly distinguish between dry weather and wet weather conditions in evaluating attainment of water quality objectives. We recommend that the ARP incorporate an evaluation framework that accounts for distinguishing between dry weather and wet weather implementation and assessment	We acknowledge the distinction between dry and wet weather conditions in influencing bacteria levels and potential impairment. However, the applicable water quality objectives for protection of the REC-1 beneficial use are not differentiated by weather condition. At the same time, the ARP is designed to support implementation actions that are responsive to hydrologic, and thus seasonal, conditions. The ARP's adaptive management framework allows for context-specific implementation and monitoring. As such, the implementing parties should design and implement control measures that take seasonal factors influencing bacteria discharges into consideration.	None
SMCWPPP-2	We recommend that the ARP incorporate an evaluation framework that accounts for consideration of background or non-controllable sources when interpreting monitoring results.	We acknowledge that bacteria levels at the Project Beaches may reflect contributions from both controllable and non-controllable sources. However, the applicable water quality objectives are not source-specific, and attainment evaluations are therefore based on ambient conditions rather than adjusted to exclude background contributions. The implementation provisions in the Water Quality Control Plan for the Inland Surface Waters, Enclosed Bays, and Estuaries of California state that "a natural source exclusion approach may be utilized after all anthropogenic sources of bacteria are identified, quantified, and controlled." At this stage, implementation efforts remain focused on identifying and addressing human-caused (i.e., anthropogenic) sources through tools such as MST and targeted investigations. Accordingly, it would be premature to try to apply a background or non-controllable source exclusion approach.	None

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		In addition, doing so would require identification of appropriate reference systems, with no or very minimal anthropogenic sources, to characterize background bacteria conditions for the Project Beaches. Water Board staff investigations have not found appropriate reference systems within the Bay Area region for determining background or natural bacteria contributions in the region's impaired watersheds. Further, staff's previous studies also indicate that the exceedance frequencies allowed under the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List ("Listing Policy"), effectively about a 16 percent exceedance frequency, are generally consistent with or exceed any observed exceedance rates at available reference systems. Therefore, the Listing Policy already provides a level of accommodation for natural contributions and background conditions in impairment assessments. Nonetheless, the ARP does not preclude implementing parties from collecting monitoring data at appropriate background or reference sites to assess the potential influence of natural or non-controllable sources on exceedances at the Project Beaches.	

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SMCWPPP-3	Important that the ARP include a clear adaptive management framework that allows sufficient time to evaluate the effectiveness of implemented actions. Recommend that the ARP clarify that decisions regarding progression to a TMDL will be based on a weight of evidence, including implementation progress and evaluation of water quality trends, rather than solely on attainment of WQOs within a fixed timeframe. Specifically, we recommend that: Interim evaluations prioritize assessment of implementation progress and supporting indicators; Evaluation of water quality trends be based on multi-year datasets sufficient to detect meaningful changes; and Where implementation is ongoing and data are insufficient to evaluate trends, time for implementation and monitoring be provided prior to initiating a TMDL.	The ARP's adaptive management framework allows for context-specific implementation, monitoring, and refinement of actions over time. We will be evaluating implementation progress on an annual basis, including assessment of completed actions, source investigations, and supporting water quality monitoring data. We recognize that evaluation of water quality trends requires longer-term data set, 5-10 years of monitoring data, to account for interannual variability and to normalize differences between wet and dry years.	Added to Staff Report Section 6.7. "Decisions regarding whether to proceed with development of a TMDL will be based on a weight-of-the-evidence approach that considers implementation progress, source identification efforts, supporting monitoring information, and evaluation of water quality trends. Where implementation is ongoing and data are insufficient to evaluate trends, additional time for implementation and monitoring may be provided prior to initiating a TMDL."
CASQA-2 SMCWPPP-4	ARP relies on compliance with existing WQOs for *enterococcus* to evaluate attainment of recreational beneficial uses. While these objectives are intended to protect human health, their application in highly urbanized systems influenced by mixed human and non-human sources can present limitations. Recommend that the ARP incorporate a multiple-lines-of-evidence approach for evaluating progress toward beneficial use protection, rather than relying solely on	The applicable bacteria water quality objectives do not distinguish between contributions from human and non-human sources. Further, non-human sources of bacteria also pose a threat to public health. While attainment of the applicable enterococcus water quality objectives remains the basis for determining compliance, evaluation of progress under the ARP is not limited to attainment of these objectives. Staff will consider all lines of evidence in evaluating progress toward beneficial use protection. See response to comment no. SMCWPPP-2 for further information on identifying acceptable approaches for	See Staff Report changes made in response to Comment # SMCWPPP-3.

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	attainment of *enterococcus* WQOs. Specifically, we recommend that: • Evaluation of progress include consideration of implementation status and effectiveness of source control measures; • Monitoring results be interpreted in the context of source information (e.g., MST) to distinguish between human and non-human contributions; • ARP identify acceptable approaches for demonstrating the influence of non-controllable or background sources, using multiple lines of evidence (e.g., MST, spatial/temporal patterns, hydrologic conditions, and supporting studies); and • ARP clarify how these lines of evidence will be used to assess progress and inform adaptive management decisions.	demonstrating the influence of non-controllable or background sources. While we will evaluate all lines of evidence available, water quality objectives are based on *enterococcus* data. A robust and consistent monitoring datasets are significant for evaluating trends and interpreting monitoring results. Continued collection of regular, weekly monitoring data, particularly during the dry season, along the Bay shoreline beaches will improve the ability to evaluate spatial and temporal patterns. We acknowledge the logistical challenges associated with sampling tidally influenced Bay shoreline beaches; however, permittees with Bay shoreline beaches should continue coordinating with San Mateo County Environmental Health to improve consistency of weekly beach monitoring efforts.	
SMCWPPP-5	Important that implementation efforts be prioritized in a manner that reflects both the likelihood that a given source is contributing to WQO exceedances and the potential risk to beneficial uses. Recommend the following: • Implementation efforts focus on sources with a demonstrated or reasonably inferred contribution to exceedances; • Source prioritization incorporate available data, including MST data, spatial and temporal patterns, and site-specific conditions; and • ARP provide flexibility to adjust priorities over time as additional information becomes available through monitoring and special studies.	Staff agrees. The ARP is a framework that encourages implementing parties to prioritize implementation tasks based on watershed sources and available information. The implementation plan is expected to be iterative, taking into account new information and new approaches.	Added to Staff Report Section 6.5: "However, it is important that implementation efforts be prioritized in a manner that reflects the likelihood that a given source is contributing to WQO exceedances. Implementation efforts should focus on sources with a demonstrated or reasonably inferred contribution to exceedances. Source prioritization should incorporate available data, including MST data, spatial and temporal patterns, and

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			site-specific conditions. Further, implementation should provide flexibility to adjust priorities over time as additional information becomes available through monitoring and special studies."
SMCWPPP-6	Some implementation measures identified in the ARP, particularly those related to complex social or infrastructure issues, will require coordination with agencies beyond stormwater programs and may be constrained by jurisdictional authority and available resources. Recommend the ARP acknowledge these constraints and emphasize coordinated, multi-agency implementation approaches, rather than implying that any single program is responsible for achieving all outcomes. Implementation responsibility should align with the best available evidence regarding source contributions, particularly where data are limited or sources are uncertain.	Staff agrees that implementation measures relating to complex social or infrastructure issues, including those associated with unhoused populations, require a multi-agency approach and may extend beyond the authority or capabilities of stormwater programs alone. The ARP is adaptive and not prescriptive. Staff anticipate implementation plans to incorporate new and best available evidence over time to best characterize and address bacteria sources. The ARP does not require any single program to achieve all outcomes. Rather, the ARP is a framework that encourages implementing parties to prioritize implementation tasks based on watershed sources. It is unlikely that all of the Project beaches' watersheds are impacted by bacteria from unhoused populations. For bacteria sources from unhoused populations, the Municipal Regional Stormwater Permit – Order No. R2-2022-0018, as amended by Order No. R2-2023-0019 (MRP), which nearly all of the ARP's implementing parties are under, already requires MRP Permittees to develop, implement, and improve over time best management practices to minimize bacteria sources in and transport from unhoused encampments. The approaches developed to address unhoused populations pursuant to the MRP should be prioritized for implementation, as appropriate, in the Project beaches' watersheds.	Added to Staff Report Section 6.4, after "The responsibility for attaining the *Enterococcus* water quality objectives shall be shared among all implementing parties, as appropriate…": "…based on the best available evidence regarding source contributions. Some implementation measures, particularly those related to complex social or infrastructure issues, will require coordination among multiple agencies. As such, coordinated, multi-agency implementation approaches might be needed to address them."

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		Advances in technology, science, and knowledge relating to bacteria reduction over the next 5-10 years may provide additional tools to better characterize sources, refine priorities, and improve effectiveness of management actions to address bacteria.	

In addition, we made minor non-substantive clarifications and copyedits to the Tentative Resolution.