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August 19, 2022

TO: Coastal Commissioners and Interested Parties

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SUBJECT: Review and consideration of the National Park Service's First Year Version of the Water Quality submitted pursuant to the Commission's conditional concurrence on Consistency Determination No. CD-0006-20 for the 2020 General Management Plan Amendment for Point Reyes National Seashore and the North District of Golden Gate National Recreation Area

Summary of Staff Recommendation

This report and recommendation provides background information and an evaluation of the water quality strategy submitted to the Commission from the National Park Service (NPS) as required by Conditions I and II of Consistency Determination No. CD-0006-20. A motion and resolution for Commission action is provided on page 4.

The Water Quality Strategy and Climate Action Plan described in Conditions I, II and IV of the Commission's conditional concurrence with the NPS's consistency determination were required to be submitted within 12 months of the April 22, 2021, hearing in which the Commission provided that concurrence. On March 4, 2022, NPS requested the Commission extend this deadline. During a public hearing on March 11, 2022, the Commission opposed the extension request and directed staff to bring NPS' Water Quality Strategy and Climate Action Plan to the Commission for consideration at the Commission's April 2022 hearing. On March 24, 2022, NPS submitted two documents to Commission staff, a "Climate Action Strategy for the General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area" (Climate Action Plan) and a "Water Quality Strategy for the General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, First Year Version" (Water Quality Strategy). These documents were timely submitted prior to the April 22, 2022, deadline established in Conditions II and IV.

Consistent with Condition II, the Water Quality Strategy was provided for public review as well as Commission review and approval. Consistent with Condition IV, the Climate Action Plan was provided for public review as well as Commission review and comment. At a public hearing on April 8, 2022, interested members of the public provided comments on these documents and the Commission considered and rejected the Water Quality Strategy. The Commission also established a deadline of the September 2022 meeting for NPS to revise its Water Quality Strategy and return it to the Commission for consideration. No further action on the Climate Action Plan was identified and Condition IV is therefore considered satisfied.

On August 15, 2022, NPS submitted a revised Water Quality Strategy to Commission staff for review, titled "Water Quality Strategy for Management of Ranching Operations for General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, Version 2.0" (**Exhibit 1**). Prior to this submittal, NPS and Commission staff met several times, including one meeting that included staff of the San Francisco Bay Regional Water Quality Control Board (Regional Board), to discuss the content of the Water Quality Strategy, the provisions and intent of Conditions I and II of the Commission's conditional concurrence and ongoing water quality related efforts within Point Reyes National Seashore (PRNS). Commission staff also independently coordinated with staff of the Regional Board and Marin County's Community Development Agency, Environmental Health Services program during the course of its review of the Water Quality Strategy.

This review is structured around the specific required elements of the Water Quality Strategy described in Condition I of the Commission's April 2021 conditional concurrence as well as the guidance and direction provided by the Commission during the April 2022 hearing when it rejected NPS' initial Water Quality Strategy. The key elements for the Water Quality Strategy identified in Condition I include (1) an overall strategy for assessing and improving water quality through installation of ranching-related infrastructure and management practices in areas of the General Management Plan Amendment (GMPA) outside of the Tomales Bay watershed; (2) a timeline for the Water Quality Strategy that reflects short- and long-term ranch management priorities related to water quality; (3) use of existing water quality data as well as water quality enhancement efforts that have proven successful elsewhere in PRNS; (4) prioritizing resolution of the most significant water quality-related issues first; (5) a commitment to updating the strategy and timeline on an annual basis based on data and analysis from the previous year; (6) a sampling methodology for collecting quantitative water quality data in areas of the GMPA outside of the Tomales Bay watershed; (7) a provision for annual NPS reporting to the Commission's Executive Director on water quality monitoring results, best management practices (BMPs) implemented and ranching measures taken and planned to address identified water quality issues.

As further detailed below, NPS' Water Quality Strategy (Strategy) represents a thorough effort to meet the requirements of Condition I. The Strategy addresses, partially or fully, all but one of the eight key elements summarized above and is a significant improvement over the version that was prepared by NPS in advance of the April 7, 2022, Commission hearing. The one element that is missing from the plan, Element 6

(a commitment to updating the strategy and timeline on an annual basis based on data and analysis from the previous year), appears to be one that could be addressed fairly easily by NPS and may simply have been an oversight. Of the other seven elements of Condition I, most are fully satisfied by the Strategy. The exception is that one of the items the Commission called for to be included in the annual report - water quality monitoring results from all previous years – is not specifically addressed in the Strategy and some aspects of the guidance and requests made by the Commission during its April 7, 2022, hearing appear not to have been integrated into the Strategy. Commission staff encourages NPS to resolve these omissions through the annual reports it will be developing and providing the Executive Director and through future versions of the Strategy.

Despite these modest issues, however, the Strategy is largely in compliance with the various specific requirements of Condition I. Moreover, the Strategy and the approach it proposes to implement water quality improvement actions and measures, carry out regular inspections of ranch sites, continue a six-part water quality monitoring program, and develop and submit annual reports, appears capable of meeting the overall purpose identified by the Commission for Condition I, “assessing the effect of installed ranching best management practices and management measures on water quality throughout the GMPA planning area and prioritizing further measures to be implemented to reduce ranching impacts on water quality.”

As such, Commission staff recommends the Commission **approve** NPS’ Water Quality Strategy.

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Exhibits

Exhibit 1 - Water Quality Strategy for Management of Ranching Operations for General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, Version 2.0

Exhibit 2 – May 10, 2021, Letter from Commission Staff to Superintendent Craig Kenkel, Point Reyes National Seashore

I. Motion and Resolution

Motion:

I move that the Commission approve the National Park Service's August 15, 2022, "Water Quality Strategy for the General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, Version 2.0" on the grounds that it is consistent with Conditions I and II of the Commission's conditional concurrence with Consistency Determination No. CD-0006-20.

Staff recommends a **YES** vote on the motion. Passage of this motion will result in an approval of the August 15, 2022, "Water Quality Strategy for the General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, First Year Version" (Water Quality Strategy) and adoption of the following resolution. An affirmative vote of a majority of Commissioners present is required to pass the motion. Failure of the motion will result in disapproval of the Water Quality Strategy. If the Commission does not approve the Water Quality Strategy, it may identify revised or additional information necessary to help achieve approval as well as a timeline for resubmittal and reconsideration.

Resolution:

The Commission hereby approves the National Park Service's August 15, 2022, "Water Quality Strategy for the General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area, Version 2.0," finding that it is consistent with Conditions I and II of the Commission's conditional concurrence with Consistency Determination No. CD-0006-20.

II. Findings and Declarations

A. BACKGROUND

On April 22, 2021, by a vote of five in favor, four opposed, the California Coastal Commission conditionally concurred with the above-referenced consistency determination submitted by the National Park Service (NPS) for the 2020 General Management Plan Amendment (GMPA) for Point Reyes National Seashore and the north district of Golden Gate National Recreation Area. As specifically described in the NPS consistency determination and Coastal Commission staff report, the NPS requested Commission review of the "detailed elements" of the GMPA: the proposed zoning framework, management of ranch operations, and wildlife management. Within the GMPA area there are five dairy and eight cattle grazing operations, with some cattle grazing operations encompassing more than one individual grazing allotment. As noted in NPS' Water Quality Strategy (**Exhibit 1**),

The distribution of these operations is such that in most cases, only one to two operations may impact conditions in an individual watershed. The small coastal

dairy waterways drain primarily to the Pacific Ocean and Drakes Bay; grazed portions of two dairies outside the confined facilities within the developed ranch core drain to Tomales Bay. There are no dairy operations within the Drakes Estero watershed. In the remainder of ranch lands managed by NPS in the Tomales Bay Watershed, there are currently seven active cattle grazing operations, including one seasonal grazing allotment. It is expected that two additional allotments may be seasonally grazed or managed at some level with targeted grazing based on resource objectives.

The Commission adopted four conditions for Consistency Determination No. CD-0006-20. These conditions, as well as clarifying descriptions of intent based on Commission deliberations, were included in a May 10, 2021, letter from the Commission to the NPS (provided as **Exhibit 2**). Two of the conditions (Conditions I and II, included below) focus on the development and submittal of a water quality strategy for review and approval by the Executive Director and Commission.¹ For the purpose of the review provided in this report, the first of these conditions, Condition I, has been divided into individual elements – identified as Elements 1 through 7 in bold insertions below – and used to assess the adequacy and completeness of the Strategy. An additional eighth element focused on the guidance and requests made by the Commission during its April 7, 2022 hearing on the Strategy is also evaluated in this report.

- I. The NPS will provide a water quality strategy for review and approval by the Executive Director before new leases with ranchers are finalized. This strategy shall have an overall purpose of assessing the effect of installed ranching best management practices and management measures on water quality throughout the GMPA planning area and prioritizing further measures to be implemented to reduce ranching impacts on water quality. The water quality strategy shall include the following elements:

1. Proposed overall strategy and timeline for assessing and improving water quality through installation of ranching-related infrastructure and management practices in areas of the GMPA outside of the Tomales Bay watershed, including Abbott’s Lagoon and Drake’s Estero and the creeks that drain to these features, but also including watersheds that drain directly to the Pacific Ocean. **[Element 1]** The strategy should be informed by existing water quality data, and water quality enhancement efforts that have proven successful elsewhere (e.g., the Olema and Lagunitas Creek watersheds) **[Element 2]** and should prioritize resolution of the most significant water quality-related issues first, where practicable and as indicated by existing information. **[Element 3]** The timeline should reflect short- and long-term ranch management priorities related to water quality as expressed by the NPS and identified in ranch-specific ROAs. **[Element 4]** Both the strategy and timeline should be updated on an annual basis to reflect information and analysis provided under items 2 and 3 below. **[Element 5]**

¹ Condition III has a deadline of April 2026 and Condition IV was satisfied in April of 2022.

2. Proposed sampling methodology for collecting quantitative water quality data in areas of the GMPA outside of the Tomales Bay watershed, consistent with the strategy provided in item 1 above. Data collection should be sufficient to enable comparison to existing water quality standards (e.g., concentrations of indicators of bacterial contamination as described in existing policies and programs of the State Water Control Board and RWQCB) and to inform identification of water quality-related issues and prioritization of management strategies to address those issues, as described in Item 3 below. The sampling methodology should incorporate guidelines and requirements from state and federal agencies (i.e., RWQCB, State Water Control Board, and/or U.S. Environmental Protection Agency) related to sampling coverage and frequency, sample testing procedures, and reporting of results. **[Element 6]**
 3. A provision for annual NPS reporting of water quality monitoring results and measures taken and planned to address identified water quality issues to the Executive Director. These annual reports should include monitoring results from all previous years, comparison of water quality data with relevant state and federal water quality standards, proposed measures to address identified issues including identification of priority areas for additional ranching or grazing related best practices, and plans (including responsible entities, funding, timing and schedule) for incorporating such practices into ROAs or implementation through other measures, as appropriate. **[Element 7]**
 4. The annual report to the Executive Director shall also describe the best management practices and ranching measures implemented in the previous year. **[Element 7]** For example, this reporting should include miles of fencing installed or repaired, number of stream crossings constructed or improved, installation of dairy-related infrastructure or practices to address manure management, and other ranching-related measures installed, and their locations and efficacy. This information will help provide details regarding actual implementation of the GMPA.
 5. Annual reports shall also include results of continuing or proposed implementation of best management practices and water quality monitoring of ranch lands in the PRNS and GGNRA portions of the Tomales Bay watershed, including Olema and Lagunitas Creeks. **[Element 7]**
- II. The National Park Service will bring its water quality strategy to the Commission within a period of twelve months for public review, as well as Commission review and approval.

These conditions were included by the Commission and accepted by NPS to ensure that the GMPA is consistent with the enforceable policies of California's Coastal Management Program (the Chapter 3 policies of the Coastal Act). In its review of NPS' consistency determination for its GMPA, the Commission found that areas of the GMPA outside the Tomales Bay watershed (i.e., most lands within PRNS) raised a number of water quality concerns. Available water quality data in the area was limited and had not

been collected since 2013. The data that was available indicated that water quality standards were not typically being met in creeks in PRNS that drain into Drake's Estero and the Pacific Ocean. While NPS proposes in the GMPA to implement the same suite of best management practices and water quality protection measures in PRNS that were successful in addressing significant water quality problems in areas upstream of Tomales Bay, the GMPA reviewed by the Commission and NPS' consistency determination did not describe where and on what timeline these measures would be implemented, or how their efficacy would be evaluated.

Therefore, to address this concern, the Commission included with its concurrence on NPS' consistency determination conditions that the NPS provide a water quality strategy for public review and for review and approval by the Executive Director and Commission. These are the conditions included above.

On March 4, 2022, the National Park Service (NPS) submitted a letter to the Commission requesting an extension of the 12-month deadline established in Condition II for submittal of its Water Quality Strategy. This letter was reported to the Commission at its hearing on March 11, 2022. At that time, the Commission rejected the extension request and directed NPS and Commission staff to bring forward the Water Quality Strategy for public review and Commission consideration at its April 2022 hearing. Consistent with Condition II, on March 24, 2022, NPS prepared and provided to the Commission its Water Quality Strategy (Strategy) for consideration at the Commission's April 7, 2022 hearing. Given the limited opportunity for staff review of the Strategy between its submittal date and the Commission hearing, a staff evaluation and recommendation for Commission action was not completed. At its April 7, 2022, hearing on the Strategy, the Commission rejected it for failing to fulfil the requirements of Condition I and directed Commission staff and NPS to bring forward a revised version of the Strategy at the Commission's September 2022 meeting.

B. AGENCY COORDINATION

As part of its review of NPS' Water Quality Strategy, Commission staff held coordination meetings with staff from the San Francisco Bay Regional Water Quality Control Board (Regional Board) and Marin County Environmental Health Services (Marin County EHS) during the course of its review of the Water Quality Strategy. These coordination meetings helped inform Commission staff on the role of each agency and the status of efforts carried out in recent months to evaluate and address water quality concerns associated with ranching activity within PRNS.

San Francisco Bay Regional Water Quality Control Board

The Regional Board's Nonpoint Source Agricultural Programs administer water quality protection permits for vineyards in the northern San Francisco Bay Area cattle grazing operations and confined animal facilities in select watersheds², and cannabis operations

² The Regional Board's grazing program is currently only active in Napa River, Sonoma Creek and Tomales Bay watersheds. New watersheds are added when total maximum daily loads (TMDLs) identify grazing as a source of impairment. The Regional Board will be renewing its permit program to include one Conditional Waiver for the region, but it will only be implemented within TMDL watersheds (grazing not currently captured by the Tomales Bay watershed will also be added, at the request of NPS). Dairies are only located within Sonoma and Marin Counties.

throughout the San Francisco Bay region. In February of 2022, Regional Board staff carried out a series of site inspections at six ranches with confined animal facilities within the area of the GMPA. These inspections were carried out in coordination with NPS staff and in response to concerns raised by members of the public about the compliance of ranching operations with applicable Regional Board standards and requirements. As a result of these inspections, a variety of issues and corrective actions were identified and deadlines established for their resolution. The most significant issues identified concerned the condition and use of a few animal waste holding ponds and the potential for stormwater runoff from confined or heavy use areas. Regional Board staff inspected six dairies and issues with holding ponds were identified at two of them. Of the other four, one was closed and issues identified at the other three were limited to minor corrective actions. In its Water Quality Strategy, NPS has reflected its commitment to continued coordination with Regional Board staff and reflected the November 1, 2022, deadline, called for by Regional Board staff, for the resolution of issues with a high risk to water quality.

Marin County Environmental Health Services

The Environmental Health Services (EHS) section of Marin County's Community Development Agency was established to protect public health and the well-being of all Marin County residents, workers, and visitors by preventing injury and the spread of disease. EHS staff identify potentially dangerous and unhealthy situations and promote sound environmental health practices through education and the enforcement of public health statutes and regulations. In response to concerns raised by members of the public, EHS staff began to carry out a series of inspections of ranch facilities in coordination with NPS staff within the GMPA area in February of 2022. These inspections were completed in August of 2022. The inspections identified a variety of minor to significant issues regarding the condition and use of septic system and leach field infrastructure at several ranch sites. These issues and resulting corrective actions were identified by EHS staff and transmitted to NPS for follow-up and resolution. Many of these items remain outstanding but have been prioritized for resolution in NPS' proposed Strategy. EHS staff have encouraged NPS to continue to coordinate with them regarding implementation of the corrective actions in order to help ensure appropriate and timely completion.

C. WATER QUALITY STRATEGY

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will

Other types of confined animal facilities (CAF) are required to enroll in the CAF program if located within TMDL watersheds.

maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging

As described in the “Background” section above, the Commission conditionally concurred with NPS’ consistency determination for its GMPA on April 22, 2021, and included several conditions. NPS agreed with these conditions. The most substantial of them, Condition I, focused on water quality concerns within portions of the GMPA planning area and the GMPA’s consistency with Sections 30230 and 30231 of the Coastal Act. As noted in the Commission’s adopted findings for Consistency Determination No. CD-0006-20:

With the incorporation of this condition, the Commission found that appropriate measures would be in place to ensure that marine resources in the coastal zone would be protected, that biological productivity of coastal waters would be sustained, and adverse effects of water pollution would be minimized, consistent with Sections 30230 and 30231 of the Coastal Act.

Condition I requires NPS to develop and submit for Executive Director review and approval a Water Quality Strategy with an “overall purpose of assessing the effect of installed ranching best management practices and management measures on water quality throughout the GMPA planning area and prioritizing further measures to be implemented to reduce ranching impacts on water quality.” Condition II requires this Water Quality Strategy (Strategy) to also be submitted to the Commission for review and approval. Commission staff received NPS’ proposed Strategy, titled “Water Quality Strategy for Management of Ranching Operations for General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area Version 2.0” on August 15, 2022. The Strategy includes background information on ranching operations in PRNS as well as the GMPA process and status. The Strategy is organized into three elements: Element 1 – Inspection, Implementation and Adaptive Management; Element 2 – Water Quality Monitoring and Assessment; and Element 3 – Annual Reporting.

The Strategy also identifies two primary goals, one for infrastructure and operations and one for water quality. As NPS notes in the Strategy,

The goal for infrastructure and operations is to ensure water quality Best Management Practices (also referred to as Management Activities) are identified,

incorporated and maintained for all ranches. The water quality goals are to protect public health in high recreation areas, meet regulatory requirements, and limit exceedances of established water quality benchmarks in waterways.

Six individual objectives were developed and included in the Strategy to help achieve these goals. These objectives and the associated actions proposed to achieve them are included on pages five through eight of the Strategy.

This review of NPS' Water Quality Strategy is focused on the key elements identified in Condition I for inclusion in the Strategy as well as the additional guidance provided by the Commission at its April 2022 hearing. Each of these elements is discussed separately below and each associated section notes if the element is included in the Strategy and, if so, how thoroughly or effectively it is anticipated to be in meeting the overall purpose identified by the Commission for the plan, "assessing the effect of installed ranching best management practices and management measures on water quality throughout the GMPA planning area and prioritizing further measures to be implemented to reduce ranching impacts on water quality."

Element 1:

An overall strategy for assessing and improving water quality through installation of ranching-related infrastructure and management practices in areas of the General Management Plan Amendment (GMPA) outside of the Tomales Bay watershed.

The Strategy relies on a variety of proposed methods and actions to lay out how it would assess and improve water quality through installation of infrastructure and management practices, both inside and outside the Tomales Bay watershed. The Strategy is structured around an approach of using the results of recently completed inspections by the Regional Board and Marin County EHS staff to identify and prioritize infrastructure improvements and management actions to be taken in the immediate term (over the remainder of 2022) to improve water quality within the GMPA area and its surrounds. These include installation of stormwater management measures around confined livestock holding areas (such as gutters, roofs, and rainwater diversion systems), repairs and upgrades to holding ponds as well as corrective actions for residential waste systems - piping repairs, septic system maintenance or replacement work, and leachfield installations and upgrades. In addition, the Strategy also calls for integration into Ranch Operating Agreements and short-term leases of actions and management measures developed through the GMPA process (and its associated Record of Decision and NEPA document). These include installation of exclusionary fencing around riparian areas and drainages, dispersed livestock watering sites (to help prevent livestock from entering riparian areas in search of water), reductions in livestock stocking levels, strategic movement of cattle, and seasonal grazing.

As proposed in the Strategy, the effectiveness of these actions and measures would be assessed through the collection and evaluation of water quality monitoring data throughout the GMPA area. This data would be used to document water quality improvements, identify areas that warrant further investigation or application of management measures, and to help determine if implemented water quality

improvement strategies are effectively bringing water quality parameters within targeted ranges (below the action thresholds identified through applicable Regional Board standards and requirements).

Further, the Strategy also proposes to implement more frequent and regular ongoing inspections of ranch sites to help ensure that recently required and possible future corrective actions are implemented in an appropriate and timely manner and to flag new potential issues for resolution before they negatively affect water quality.

Finally, the proposed Strategy also includes a robust program of annual reporting to document and convey water quality monitoring data, implementation of corrective actions, pending measures and the results of effectiveness evaluations.

With the inclusion of clear actions and commitments for installation of ranching-related infrastructure and implementation of management practices – including those that have already begun following the GMPA Record of Decision and as part of the Regional Board and Marin County EHS inspections – as well as a robust six-part monitoring program, the Strategy includes a comprehensive and well-reasoned approach for assessing and improving water quality in PRNS and surrounding water bodies.

Conclusion

Requirement met.

Element 2:

A timeline for the Water Quality Strategy that reflects short- and long-term ranch management priorities related to water quality.

While it does not include a graphical timeline, the Strategy does include short- and long-term actions and priorities. As discussed on page four of the Strategy, NPS' first-year version of its Water Quality Strategy is structured around a two-prong approach, an immediate-term inspection and assessment effort and a longer-term effort that includes incorporation of updated mandatory requirements for the continued operation of ranches into ongoing adaptive management as well as implementation of practices to protect and improve water quality. This two-prong approach and the associated objectives included in the Strategy allow for both short- and long-term ranch management priorities related to water quality to be considered and addressed. Many of these priorities are reflected in the objectives included in the Strategy. These objectives can be divided into short- and long-term efforts and ranch management priorities as well. For the purposes of this discussion, "short-term" would include actions proposed to occur within the next twelve months and "long-term" would focus on twelve months and longer. Objectives that include actions that would begin within twelve months and continue on an ongoing basis would fall into both categories. Pages five through eight of the Strategy provide additional information on each of these objectives, including the ongoing and pending actions that would help achieve them.

Objective Description	Short-term	Long-term
Objective 1 - Complete initial inspections of all ranch operations to identify required immediate actions for improvement by November 1, 2022.	X	
Objective 2 - Implement a recurring ranch inspection process to track compliance, maintenance, as well as document conditions, including infrastructure and riparian exclusion fencing by April 2023.	X	X
Objective 3 – Conduct initial water quality assessment monitoring of major waterways flowing from ranches to coastal waters in winter and summer of 2022-2023 to document conditions, with additional monitoring and adaptive management actions triggered by results consistently above monitoring benchmarks.	X	X
Objective 4 - Continue long-term, regulatory, and beach recreational water quality monitoring, with additional monitoring and adaptive management actions triggered by results consistently above monitoring benchmarks.	X	X
Objective 5 - Integrate specific GMPA ROD changes and updates to mandatory requirements for continuing ranch operations into current NPS management to ensure expeditious implementation of priority actions to protect water quality and sensitive resources. Primary elements include allotment-specific changes identified in the GMPA ROD, updated requirements for all ranches continuing operations under 2-year Interim Leases, active implementation of improvement projects, and adaptive management on an ongoing basis.	X	X
Objective 6 - Complete Ranch Operating Agreements (ROAs) tied to longer-term leases for each ranch operation that incorporate progress and information obtained during implementation of Objectives 1-5 in an iterative process for continued management to improve water quality. Executed leases/ROAs will allow for full implementation of Strategy components through the GMPA. ROAs will identify and track ranch-specific mandatory requirements related to water quality protection.		X

Conclusion

Requirement met.

Element 3:

Use in the Strategy of existing water quality data as well as water quality enhancement efforts that have proven successful elsewhere in PRNS.

This element of Condition I has two parts, use in the Strategy of (1) existing water quality data and (2) water quality enhancement efforts that have proven successful elsewhere in PRNS.

The discussion in the Strategy on pages 21 and 22 describes how both existing data and successful enhancement efforts were used to help develop the Strategy. Specifically, this discussion cites two recently completed studies focused on the Olema Creek watershed (Lewis et. al. 2019) and Point Reyes Peninsula coastal watersheds (Voeller et. al. 2021 and GMPA Appendix L) that made use of water quality monitoring data from 1999 to 2017 and 2000 to 2013, respectively, to evaluate the efficacy of several dozen individual Management Activities intended to improve water quality (such as fencing, off-stream livestock water supply sources, hardened stream crossings and infrastructure improvements including roofs, gutters and manure management). The water quality data collected in these studies was used to document a 95% reduction in average fecal coliform bacteria concentrations in the Olema Creek watershed and declines in fecal indicator bacteria concentrations at all 13 water quality stations in the coastal watersheds concurrent with implementation of the water quality enhancement Management Activities. Based on these results, the Strategy integrates and builds off of the monitoring methods and management activities used in the studies and uses them to help justify the expected effectiveness of the Strategy.

Conclusion

Requirement met.

Element 4:

Prioritizing resolution of the most significant water quality-related issues first.

The proposed Strategy identifies that regular ongoing inspections will be a key part of its management strategy and uses the results of inspections carried out within the past six months by Marin EHS and the Regional Board as a primary means of identifying and seeking resolution of the most significant ranching-related water quality degradation within the GMPA area. These inspections by state and local agency staff with extensive experience in identifying and addressing water quality issues in rural and ranch settings resulted in lists of corrective actions needing to occur to improve and protect water quality and meet applicable standards and regulations.

The corrective actions identified by Marin EHS and Regional Board staff have been ranked by significance or level of risk to water quality to aid NPS in developing priorities for resolution. Marin EHS inspections focused primarily on the residential areas of the ranch sites and the condition and operation of septic systems and leach fields. These inspections identified widespread issues at many of the ranches and resulted in corrective action lists similar to that included below:

1. Tank serving main house and trailer residence 1 and 2: Reseal/replace riser to lid adaptor. Tank was recently pumped due to back up at filter. Filter cannot be readily removed. Filter must be replaced.

2. Sump tank serving main house and trailer residences: repair electrical junction box, affix new lid, connect to conduit pipe.
3. Cabin: unable to locate tank for this house. Recommend sending a camera down the sewer line to locate discharge point.
4. Residence: tank should be pumped. Install sanitary tee. Unable to access liquid side, likely second lid is buried.
5. Residence: tank is leaking evidenced by low operating level. Pump tank and inspect to see if repair is possible. Repair will require county permit.

Because Marin County EHS has limited resources and staffing, it uses issues of concern identified by members of the public as a method to help direct its work. Given the remote location of the ranches within the GMPA area, their inaccessibility to the public, and the unclear status of County jurisdiction on the federal property of PRNS, it's likely that the recently completed inspections by Marin County EHS were the first it has carried out on these sites in at least a decade and possibly much longer.

In response to these inspections, a variety of corrective actions have already been taken. As noted on page 9 of the Strategy, "the NPS completed review and the County has issued permits for 5 new systems on 2 ranches. The NPS is reviewing additional applications for system repair or replacement on additional ranches, which will also require County permitting prior to installation."

NPS also establishes in the Strategy that it is prioritizing the resolution of all the issues identified by EHS staff. It proposes a timeline for completion of this effort on page 9:

By September 2022, all ranches will have been notified of required actions stemming from the [EHS] inspections. It is the expectation that lessees will complete initial actions within 30 days of notice. Some larger items identified require multiple reviews and permits leading to implementation. NPS anticipates that it will continue working with ranchers to ensure all identified issues are addressed and remediated through the remainder of 2022.

Through the annual report requirement of Condition I and resulting element of the Strategy, the progress made by the ranchers in addressing the full suite of corrective actions identified by EHS staff would be documented by NPS and provided to the Executive Director by the end of the year. Continued coordination between EHS, Commission staff and NPS will also be occurring and would be expected to further help ensure the timely implementation of the corrective actions.

Inspections carried out by Regional Board staff also identified a number of issues or concerns, although fewer and less severe. Regional Board inspections focused on livestock operations, including holding facilities, waste management, transit routes, and stormwater management. Through the work of its Agricultural Program, the Regional Board already regulates many of the ranching operations within the GMPA area and pending changes to its program would expand the Regional Board's involvement to include some of those ranches not currently regulated, those non-dairy operations outside of the Tomales Bay watershed. The Regional Board's involvement means that

periodic inspections have been occurring over time and that conditions of operation and requirements are described in Regional Board authorization documents, such as the General Waste Discharge Requirements for Confined Animal Facilities.

Nevertheless, the inspections by Regional Board staff from February of 2022 identified several significant issues at a subset of the ranches they visited, including issues with the pond systems used to hold animal waste. Regional Board staff are pursuing resolution of these issues both independently and in coordination with NPS. The Strategy includes continuation of this coordination. It also establishes through its “Objective 1” that immediate correction of the issues identified by Regional Board is a priority. The Strategy proposes November 1, 2022, as a deadline for all identified issues to be resolved. As noted in the Strategy, the date was selected to be prior to the likely onset of winter rains that can trigger flows of contaminants or other materials into drainages and water bodies from improperly constructed or operated livestock areas.

Overall, through the commitments and timelines it includes for completion of the corrective actions that resulted from Regional Board and Marin County EHS inspections, the Strategy includes a clear and robustly developed priority list of potentially significant water quality-related issues as well as corrective actions for them. The list was independently developed by state and local agency experts and through its Strategy, NPS has committed to working through it over the coming months and ensuring that each of the items on it are addressed at the respective ranches. This effort and prioritization meets the goal and intent outlined by the Commission for both Condition I and the Strategy itself.

Conclusion:
Requirement met.

Element 5:

A commitment to updating the strategy and timeline on an annual basis based on data and analysis from the previous year.

The Strategy does not include a commitment to an annual update cycle of the Strategy and timeline. However, it does acknowledge that NPS will be engaged in an ongoing effort of evaluating the Strategy and updating it if water quality improvements are not occurring. Specifically, page 12 of the Strategy notes that:

The effectiveness of the Elements of the Strategy will be assessed through data collected and presented in annual reports. If the suite of actions described by the Strategy does not appear to be improving water quality, the NPS will reevaluate whether additional Management Actions, an updated Strategy, or further planning is necessary to achieve desired conditions.

While this approach reasonably assumes that updates to the Strategy may not be necessary if it proves to be effective at enhancing water quality (as determined through monitoring efforts and documented in annual reports), it nevertheless falls short of the requirement in Condition I that the Strategy and timeline be updated on an annual basis.

However, in discussions between NPS and Commission staff during NPS' development of the Strategy, it was clear that both agencies expected the Strategy to be a "living document" that would be periodically updated over time. The process of reviewing the annual reports provided to the Executive Director and ongoing coordination efforts with NPS staff would likely provide Commission staff the ability to request updates to the Strategy and timeline if data indicates that its effectiveness is falling short of expectations. That said, Condition I is quite specific in the frequency and method to be used for these updates - annually and based on data and analysis from the previous year - and the Strategy does not include a commitment to do either.

Commission staff expects that NPS would be willing and able to address this deficiency in the Strategy but in the version submitted for review, it remains unresolved.

Conclusion

Requirement not met.

Element 6:

A sampling methodology for collecting quantitative water quality data in areas of the GMPA outside of the Tomales Bay watershed.

Data collection should be sufficient to: (1) enable comparison to existing water quality standards (e.g., concentrations of indicators of bacterial contamination as described in existing policies and programs of the State Water Control Board and RWQCB) and (2) to inform identification of water quality-related issues and prioritization of management strategies to address those issues; and (3) should incorporate guidelines and requirements from state and federal agencies (i.e., RWQCB, State Water Control Board, and/or U.S. Environmental Protection Agency) related to sampling coverage and frequency, sample testing procedures, and reporting of results.

The second of the Strategy's three primary elements focuses entirely on water quality sampling and monitoring. The effort is broken into six separate water quality monitoring programs, one each for short-term assessment monitoring, coastal watershed monitoring, regulatory dairy monitoring, recreational beach sampling, long-term monthly monitoring of the Tomales Bay watershed, and regulatory bacterial water quality monitoring of the Olema Creek watershed. The Strategy includes proposed locations, frequencies, parameters, action triggers, corrective actions, and reporting methods for each of these six programs. Action triggers are based on applicable water quality parameters and standards. Monitoring parameters, frequencies and methodologies are similarly based on existing guidance and techniques in use for similar monitoring efforts carried out within the region currently or in recent years.

During development of the Strategy, NPS staff coordinated with Regional Board staff with relevant expertise in water quality sampling and monitoring programs and revised the proposed action triggers and parameters to reflect the most recent standards. The Strategy also describes how the proposed water quality sampling protocols were designed to follow applicable established, peer reviewed NPS San Francisco Bay Area Network Freshwater Quality Monitoring Protocol Standard Operating Procedures,

including sampling device quality assurance/quality control and operating requirements, and EPA-approved laboratory analysis methods. The Strategy further describes how certain components of the water quality monitoring program were also designed to be consistent with Regional Board standards:

Protocols and quality assurance procedures specific to Regional Water Board regulatory monitoring will be followed for Monitoring Program 3 - the General WDR for Confined Animal Facilities (Confined Animal Facilities General WDR Order No. R2-2016-0031), and Monitoring Program 6 - the Tomales Bay Pathogen TMDL.

The proposed sampling methodologies, protocols, parameters and action triggers therefore appear to be based on and consistent with the latest available regulatory approaches and standards. Initial review of the Strategy by Regional Board staff supports this conclusion.

Several other aspects of the proposed monitoring program are also notable. The first is that although this element of Condition I allows the monitoring aspect of the Strategy to be limited to only those portions of the GMPA area outside of the Tomales Bay watershed, the Strategy nevertheless includes the Tomales Bay watershed as well. The Strategy proposes to apply a consistent approach to water quality monitoring both within and outside of the Tomales Bay watershed by expanding and re-initiating a program of coastal watershed monitoring that mirrors that of the successful longer-term programs that have been ongoing in both the Tomales Bay and Olema Creek watersheds. The proposed use of the same standard operating procedures, protocols, and monitoring frequency across the new and existing programs would allow for consistency in interpretation and direct comparison of data and trends. This allows for a more sophisticated assessment and evaluation of management measures implemented to address water quality issues.

The second notable aspect of the proposed monitoring program is that its recreational beach monitoring component (monitoring program four of six) relies heavily on a partnership with a local environmental organization, the Environmental Action Committee of West Marin (EAC). While this partnership has been successful and has facilitated the expansion of NPS' water quality monitoring efforts in a manner that is considerate of NPS' resource limitations and competing priorities, it does raise questions about the long-term sustainability of the program and NPS' ability to continue it if the partnership and cost-sharing were to cease. While not directly called out as a required component of the "sampling methodology for collecting quantitative water quality data" identified in Condition I, recreational beach water quality monitoring is still a critical piece of the Strategy, particularly as it advances NPS' stated goal for the Strategy to "protect public health in high recreation areas." As such, Commission staff would recommend that simultaneous to NPS' efforts to cultivate and continue its partnership with EAC, it also pursue alternative funding sources or other contingency measures that could be quickly enacted to ensure that recreational beach sampling continues uninterrupted if the partnership is discontinued. This may also further the first part of objective four within the Strategy, to "continue long-term, regulatory, and beach recreational water quality monitoring..."

Despite this potential shortcoming, however, the proposed sampling program meets the requirement of this provision of Condition I for the Strategy to include “a sampling methodology for collecting quantitative water quality data in areas of the GMPA outside of the Tomales Bay watershed.” The program is robust and was designed to exceed the minimum standard established through Condition I. The Regional Board have provided support for the technical aspects of the proposed sampling program. Implementation of this program, as described in the Strategy, would help further one aspect of the overall goal identified by the Commission for the Strategy, the goal of “assessing the effect of installed ranching best management practices and management measures on water quality throughout the GMPA planning area...” Systematically collected quantitative data on water quality within the GMPA area and surrounds will serve a wide variety of uses, including both detection of water quality issues to be corrected and assessment of the effectiveness of corrective techniques applied.

Conclusion

Requirement met.

Element 7:

A provision for annual NPS reporting to the Commission’s Executive Director that includes:

- *water quality monitoring results from all previous years;*
- *ranching measures taken and planned to address identified water quality issues;*
- *a comparison of water quality data with relevant state and federal water quality standards;*
- *proposed measures to address identified issues including identification of priority areas for additional ranching or grazing related best practices;*
- *plans (including responsible entities, funding, timing and schedule) for incorporating such practices into ROAs or implementation through other measures;*
- *a description of the best management practices and ranching measures implemented in the previous year; and*
- *results of continuing or proposed implementation of best management practices and water quality monitoring of ranch lands in the PRNS and GGNRA portions of the Tomales Bay watershed.*

The requirement for NPS’ development and submittal to the Executive Director of an annual report – and the various items it should include – is established through subparts three, four and five of Condition I, as excerpted above.

NPS’ commitment to providing an annual report to the Executive Director is strongly established in the Strategy. Of the Strategy’s three primary elements, the third is focused on annual reporting (see discussion on pages 39 to 41 of the Strategy). The Strategy proposes a reporting deadline of December 31 of each year and notes that the annual report would be comprised of both an implementation report and water quality monitoring and assessment report.

As described on page 39 of the Strategy, the implementation report would contain

a summary of annual progress related to the Strategy Objectives 1, 2, 5, and 6, outside of direct water quality monitoring actions and results tied to Objectives 3 and 4. Documented corrections of immediate improvement actions, implementation, monitoring and maintenance of Management Activities, and compliance with lease/permits and regulatory requirements to protect water quality will be utilized to track progress toward goals.

The Strategy further establishes that six categories of information would also be included in the implementation report. These are (1) progress on specific short-term immediate corrective actions identified during Regional Board and Marin County EHS inspections; (2) a list of Management Activities implemented in the previous year; (3) information from enforcement of lease/permits to protect water quality; (4) annual certification of completion of regulatory reporting requirements; (5) additional proposed actions, including mandatory improvements identified on ranches and timelines for implementation for dairies and grazing operations; and (6) significant changes to lease/permits, stocking or grazing regimes.

As described in the Strategy, this implementation report component of the annual report would fully address the requirement in Condition I for the annual report to include “ranching measures taken and planned to address identified water quality issues,” “proposed measures to address identified issues including identification of priority areas for additional ranching or grazing related best practices,” “plans (including responsible entities, funding, timing and schedule) for incorporating such practices into ROAs or implementation through other measures,” and “a description of the best management practices and ranching measures implemented in the previous year.”

The Strategy also states that a water quality monitoring and assessment report would be provided as part of each year’s annual report. This would include “a brief background, objectives, identification of monitoring areas, sample regime, sample parameters, results and discussion, notable events, conclusions, and appendices with detailed description of methods and previous Coastal Watershed monitoring results collected under this Strategy.” The report would also use “the number of incidences of recreational water illnesses, the number and type of exceedances of water quality benchmarks, and the number of occurrences of triggered synoptic monitoring” to track progress towards goals. The report would also be structured to include monitoring results from each of the six proposed monitoring programs proposed to be carried out as part of element two of the Strategy, the “Water Quality Monitoring and Assessment” element. With inclusion of the separate water quality monitoring and assessment report with the annual report, the Strategy would satisfy the requirement in Condition I for it to include “a comparison of water quality data with relevant state and federal water quality standards” and “results of continuing or proposed implementation of best management practices and water quality monitoring of ranch lands in the PRNS and GGNRA portions of the Tomales Bay watershed.”

However, as described in the Strategy, each annual report would focus primarily on the year ending on December 31 and may not include “water quality monitoring results from all previous years,” as specified in Condition I. Because the results of monitoring carried out in previous years can allow for comparisons to be made to more recent results and thus allow for a deeper evaluation of the effectiveness of corrective actions and management measures, it would be important for the water quality and assessment report portion of the annual report to include these comprehensive monitoring results (at least in the first submitted annual report since subsequent reports could simply expand on that data set). Commission staff recommends that NPS include all prior year monitoring results in the annual report to be submitted by December 31, 2022.

As structured and described in the Strategy, the proposed annual report from NPS to the Executive Director would facilitate ongoing coordination between NPS and Commission staff and allow for progress, issues and successes to be documented and discussed.

Conclusion

Requirement met.

Element 8:

Incorporation of guidance and items noted by the Commission at its April 2022 hearing.

During its hearing on April 7, 2022, the Commission requested that NPS consider or include a variety specific features and measures in the Strategy. These included a summary and analysis of past monitoring programs, pollution site characterization, best management practices, adaptive management, compliance assurance, a revenue generation plan, and a monitoring focus to identify public health risks and eutrophication problems.

NPS addresses many of the requested measures in the proposed Strategy. Attachment 1 on Page 46 in the Strategy includes preliminary water quality data and analysis for the Coastal Water Quality Monitoring Program (Monitoring Program 2) and Recreational Beach Sampling Monitoring Program (Monitoring Program 4) but does not include data from the Tomales Bay Watershed Monitoring Program (Monitoring Program 5) or Olema Creek Regulatory Monitoring Program (Monitoring Program 6). Although not included in the proposed Strategy, data from Monitoring Program 5 and 6 are available and a summary and analysis could be included in an updated version of this Strategy. The NPS San Francisco Bay Area Network Inventory and Monitoring Program has typically published formal reports biannually for the Olema and Lagunitas Creek watersheds which correspond with Monitoring Program 5. In addition, the Regional Board maintains bacterial water quality data as part of the Tomales Bay Pathogen Total Maximum Daily Load (TMDL), in coordination with the Tomales Bay Watershed Council and NPS, which corresponds with Monitoring Program 6.

Although the proposed Strategy does not include a comprehensive evaluation of past monitoring programs, it does provide an initial comparison to preliminary data from recent sampling efforts (2021 to present). In addition, the Strategy does include a

commitment to prepare and provide as part of its annual report a water quality monitoring and assessment report which would summarize past and recent results from all six monitoring programs every year going forward.

With respect to pollution site characterization, the Strategy includes Short-term Assessment Monitoring (Monitoring Program 1), as described on page 23, which would identify persistent pollution sources for corrective action. As part of this requirement, assessment monitoring stations would be placed in key waterways below ranch operations to identify and isolate potential pollution sites. In addition, Recreational Beach Sampling (Monitoring Program 4), as described on page 27, is conducted at high recreational use areas that were identified to overlap with water flows from ranch lands. As described on page 9, the Strategy also includes annual inspections of critical infrastructure for ranches, dairies, and residences to identify potential pollution sources on these properties. As described earlier in this report, NPS also partnered with Marin County EHS to conduct inspections of septic systems on all 17 ranches currently in service to identify potential compliance issues. From those inspections, EHS staff identified corrective actions for each ranch operator to complete and provided them to NPS for follow-up, with the expectation that lessees will complete short-term actions within 30 days of notice and long-term items needing additional permitting, throughout the remainder of 2022. Dairy inspections were conducted by Regional Board and NPS staff in February 2022 to determine compliance with the Board's General Waste Discharge Requirements for Confined Animal Facilities (General WDR). To address infrastructure deficiencies, dairy operators out of compliance with the General WDR were also required to implement mandatory short-term improvements by November 1, 2022, and long-term actions within their two-year interim lease timeframe.

Best management practices are included in the Strategy as Management Activities and are further described in Appendix F of the General Management Plan Amendment and on page 17 of the Strategy. Management Activities will be based on site-specific evaluation and include protective fencing around waterways and riparian areas, managed stream crossings, off-stream livestock water supplies, dairy infrastructure improvements, erosion preventative measures, vegetation management, and targeted cattle grazing. To further address this item, NPS is now requiring all Management Activities to be mandatory elements of leases and operations which would include both operational changes as well as infrastructure maintenance. This shift from voluntary guidelines to mandatory requirements, along with regular inspections and assessments, will allow NPS to ensure that lessees are actively implementing best management practices and addressing critical deficiencies immediately.

NPS has also included adaptive management actions throughout the Strategy. Objectives Three and Four, beginning on page six of the Strategy, describe conducting water quality monitoring with additional monitoring and adaptive management actions triggered by exceedances of water quality thresholds. As described in Objective Five and on page 16, past and ongoing drought conditions have prompted NPS to develop and implement drought plans to reduce impacts to water quality and maintain adequate residual dry matter on grazed lands. By implementing mandatory drought adjustments, including reduced stocking rates, early sale of animals, increased supplemental feeding,

and adjustments to grazing regimes, NPS can continue to adaptively manage range conditions throughout periods of varying drought conditions. Additionally, through the annual site-specific inspections and water quality monitoring, NPS will tailor mandatory Management Activities to immediately address current water quality issues stemming from ranch and dairy activities.

To address concerns with assuring compliance with water quality standards, NPS will implement an annual inspection process to track compliance and maintenance of ranch and dairy operations. In coordination with Regional Board staff, short- and long-term action items will be identified following inspections and included in Corrective Action Plans with set timelines and reporting procedures. In addition, field staff from NPS and the Regional Board will continue to conduct observations during regular ranch visits to help ensure compliance with current Corrective Action Plans. Instances of noncompliance would be included in the General WDR annual report from the Regional Board and shared in the NPS annual report. Past NPS inspections were sporadic and did not maintain regular compliance documentation, so this Strategy puts into place increased routine inspections as a required condition of lease permits. As described in Objective Two on page 11, Regional Board dairy General WDR and Grazing Waiver compliance is also required as part of lease permits.

NPS staff has not yet developed a revenue generation plan as part of this proposed Strategy. Objective Five on page seven briefly states that NPS and ranch operators continue active engagement in securing funding for additional Management Activities but does not describe a plan in detail. Similarly, Objective One on page 10 states that dairy operators would be expected to pursue funding in coordination with NPS and the Natural Resources Conservation Service within their two-year interim lease timeframe but does not provide further detail. Proposed funding sources, responsible parties, and timing for implementation of site-specific Management Activities are expected to be identified following routine inspections and water quality monitoring and described in annual reporting to the Commission. Commission staff recommends that NPS staff develop a revenue generation plan prior to the 2022 annual report, detailing potential funding sources and responsible parties.

As recommended by the Commission, the Strategy's implementation of water quality sampling methodologies include a focus on identifying public health risks and eutrophication issues. As detailed in Element 2, in the Rationale for Primary Monitoring Parameters section on page 19, fecal indicator bacteria (FIB) was selected as the primary monitoring constituent in part due to its effectiveness in addressing public health concerns in recreational areas. The US Environmental Protection Agency recommends *E. coli* as the best indicator of health risk from water contact in recreational waters. Visual algal cover assessment will be conducted at each sample location, which along with dissolved oxygen sampling, can identify areas with eutrophication issues. Visual and photo monitoring of algal cover is consistent with the Regional Basin Plan, as described on page 21. Persistent algal blooms and dissolved oxygen measurements outside of the benchmarks for minimum concentrations will trigger additional monitoring and investigation of potential pollution sources in the watershed.

Overall, the Strategy addresses the majority of specific features and measures that the Commission requested NPS to consider or include in this update. However, the Strategy does not include a detailed revenue generation plan and generally states that lessees would find funding sources. Although NPS has committed to including those details in their required annual report, which would be submitted to the Commission in December 2022, this current proposed Strategy does not adequately address the Commission's request for a revenue generation plan. Commission staff encourages NPS to more directly address these outstanding aspects of the guidance and requests provided by the Commission at its April 7, 2022 hearing. Despite this shortcoming, however, the Strategy overall addresses each of the major considerations brought forward by the Commission at its April 7, 2022 hearing.

Conclusion

Requirement met.

D. CONCLUSION

As noted above, the Strategy adequately addresses seven out of the eight key elements identified for the Strategy by the Commission through Condition I and the comments provided at its April 2022 hearing. Commission staff encourages NPS to commit to updating the Strategy based on each year's efforts and the information it collects regarding successes, failures, and emerging issues in order to meet the requirements of Element Five of Condition I. In addition, Commission staff also encourages NPS to address the more minor omissions identified above regarding Elements Seven and Eight.

Overall, however, NPS' Water Quality Strategy effectively meets most of the primary requirements established by the Commission through Condition I. The approach NPS proposes in the Strategy for improving water quality within and surrounding the GMPA area and evaluating the effectiveness of implemented corrective actions and management measures is expected to be capable of successfully meeting the underlying intent and purpose of Condition I. In so doing, the Strategy would help ensure the GMPA and associated NPS management operations are implemented consistent with the water quality protection and enhancement policies of the Coastal Act, Sections 30230 and 30231. Therefore, Commission staff recommends the Commission approve the Water Quality Strategy. Through its implementation and annual reports, continued ongoing coordination between Commission staff, NPS, the Regional Board and Marin County EHS would be facilitated and the shared goals of these agencies to enhance and protect water quality in and around PRNS could be advanced.