

**CALIFORNIA COASTAL COMMISSION**

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Th10b

November 2, 2023

TO: Coastal Commissioners and Interested Parties

FROM: Cassidy Teufel, Deputy Director
Alexis Barrera, Environmental Scientist

SUBJECT: Annual informational briefing on the National Park Service's implementation of the 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

EXHIBITS: [Exhibit 1 - CD-0006-20 Post-hearing Letter](#)

APPENDICES: [Appendix A - 2023 Annual Water Quality Strategy Report and Water Quality Monitoring and Assessment Report](#)

I. Introduction

This report provides background information and a summary of the annual report prepared by the National Park Service (NPS) on implementation of its 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. That annual report was provided to Commission staff on October 26, 2023, and is included as [Appendix A](#). In addition, this report identifies the information required to be included in the annual report, whether and where it has been provided as well as key findings and next steps.

II. Background

On April 22, 2021, by a vote of five in favor, four opposed, the California Coastal Commission (Commission) conditionally concurred with the NPS' 2020 General Management Plan Amendment for Point Reyes National Seashore and the North District of Golden Gate National Recreation Area (Consistency Determination No. CD-0006-20). Conditions I and IV of the Commission's conditional concurrence required NPS to develop and implement a Water Quality Strategy and a Climate Action Plan. 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 Management of Ranching Operations for General Management Plan Amendment for Point Reyes National Seashore and North District Golden Gate National Recreation Area” (Water Quality Strategy or Strategy).

Consistent with Condition II of the Commission’s conditional concurrence, 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 to the Commission at the same time. At the Commission’s public meeting 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 its September 2022 meeting for NPS to revise the Water Quality Strategy and return it to the Commission for consideration. No further action on the Climate Action Plan was identified.

On August 17, 2022, NPS submitted a revised Water Quality Strategy¹ to Commission staff and on September 8, 2022, the Commission held a public meeting to consider it. By a vote of six in favor, five opposed, the Commission approved the revised Water Quality Strategy, as modified to include additional commitments made by NPS staff. Those commitments included the following, several of which are also reflected in Condition I of the Commission’s conditional concurrence (included below):

Items agreed to by NPS prior to the September 8, 2022, hearing:

1. Annual Strategy and timeline update: NPS will update the Water Quality Strategy and timeline on an annual basis.
2. Data availability: NPS will include all previous year monitoring results in its annual reports.
3. Recreational beach monitoring: NPS will maintain the Recreational Beach Monitoring Program in partnership with the Environmental Action Committee of West Marin (EAC). Should EAC discontinue this partnership, NPS will maintain the program independently.

The additional commitments made by NPS staff during the September 8, 2022, Commission meeting included the following, as identified in the summary letter provided to NPS by Commission staff on November 3, 2022 ([Exhibit 1](#)), following the Commission’s approval of the Water Quality Strategy:

That NPS coordinate with Commission staff to bring to the Commission on an annual basis, during a Commission meeting, an informational briefing on the progress that has been made on implementation of the Strategy and improvement

¹ [Th10b-9-2022-exhibits.pdf \(ca.gov\)](#)

of water quality within Point Reyes National Seashore and the North District of Golden Gate National Recreation Area.

At this annual public hearing, the following will be provided to the Commission:

1. Progress on implementation of the Strategy and specific actions taken and planned to address water quality issues. [Objectives 3 and 4]
2. A discussion of the funding approach being used by NPS and update on how effectively NPS is funding implementation of the Strategy.
3. Summary of enforcement efforts/investigations by the NPS enumerating alleged violations, actions taken by the agencies, and the responses and current statuses of those violations. In addition, NPS will report on the status of its leases and any violations, actions taken by NPS, any response, as well as the result (withdrawal, non-renewal, or revocation of leases) and current status of each lease. [Objectives 1 and 6]
4. Description of the best management practices and ranching measures implemented in the previous year. 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, reduction in herd sizes and other ranching-related measures installed, and their locations and efficacy. [Objective 5]
5. Updated report on progress of the Climate Action Plan prepared by NPS to address ranching activities.

In addition to these commitments for information and elements to be included in the annual report and briefing, Condition I of the Commission's conditional concurrence also established several requirements for the annual report.

Condition I of CD-0006-20 states (emphasis/underline added):

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. 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) and should prioritize resolution of the most significant water quality-related issues first, where practicable and as indicated by existing information. 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. Both the strategy and timeline should be updated on an annual basis to reflect information and analysis provided under items 2 and 3 below.

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.

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.

4. The annual report to the Executive Director shall also describe the best management practices and ranching measures implemented in the previous year. 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.

III. Required Information for Annual Report

As noted above, Condition I of the Commission's conditional concurrence with NPS' consistency determination requires NPS to provide a variety of information in its annual report. NPS also committed to include several additional items in the annual report prior

to and during the Commission's approval of its Water Quality Strategy. To meet those requirements, NPS submitted the 2023 Annual Water Quality Strategy Report (Annual Report) and Water Quality Monitoring and Assessment Report (Water Quality Report) on October 26, 2023. Both documents are provided in [Appendix A](#) to this report.

The requirements listed below can be linked to specific objectives within the Water Quality Strategy. The following section of this report will identify those objectives and summarize NPS' progress in achieving those objectives and the below requirements. Where relevant, each of these items is identified below along with a description of where it can be found in the annual report provided as [Appendix A](#).

Annual Strategy and Timeline Update

Requirement: The first provision of Condition I related to NPS' annual report establishes that "both the [Water Quality] strategy and [its] timeline should be updated on an annual basis to reflect information and analysis provided [through implementation of the sampling and associated response efforts]."

Status: On October 26, 2023, NPS provided to Commission staff an Annual Report and Water Quality Monitoring Report. On page 3 of the Water Quality Report, NPS summarizes its implementation of the Water Quality Strategy as follows:

During the first year of the Strategy, the NPS prioritized expansion of existing water quality monitoring programs to include the Point Reyes Peninsula. This included updating and adapting protocols, standing up an extensive assessment monitoring regime, staffing coordination and training, development of laboratory contracts for analysis, ensuring prompt attention to data for triggered monitoring responses and timely annual reporting, and devoting management effort to tracking the complexities of six individual monitoring programs. Following the triggered monitoring approach identified under the Strategy to ensure actions are responsive to results, the first-year monitoring efforts focused primarily on active dairy operations.

In the Annual Report, NPS also proposes three updates to the Strategy. Based on a preliminary analysis of the first year of monitoring results, NPS proposes to prioritize water quality monitoring of active dairy sites and add synoptic monitoring at dairies. In addition, NPS proposes to add further elements to their water quality analysis, such as groundwater monitoring or additional investigations of dairy waste management infrastructure, based on consultations with the RWQCB. NPS also proposes to shift the timeline of the Water Quality Strategy's annual review (Water Quality Report, p. 6):

NPS proposes that the timeline for annual review allow for summary and analysis of data by water year in order to facilitate adaptive management. The NPS suggests that the timing of an Annual Report to the Commission be considered for the period of February or March. This would allow for consolidation of all WY data, as well as timely reporting of the annual information due to the NMFS and USFWS on December 31 of each year.

Staff Conclusion: NPS has fulfilled this requirement.

Monitoring Results

Requirement: The second provision of Condition I related to the annual report establishes that it include “annual NPS reporting of water quality monitoring results.” This was further emphasized by the commitment NPS made as part of its Water Quality Strategy to “include all previous year monitoring results in its annual reports.”

Status: Data collected through implementation of the Water Quality Strategy over the course of 2023 is available in [Appendix A](#) to this report – the Annual Report and Water Quality Report provided by NPS. As noted on p. 5 of that Water Quality Report, data from previous years can be accessed in several locations:

Previous monitoring data is available through the National Water Quality Monitoring Council Water Quality Portal (available at: <https://www.waterqualitydata.us/>).² Analysis of previous data is presented in the park’s General Management Plan Amendment Final Environmental Impact Statement under Appendix L (available at: <https://parkplanning.nps.gov/document.cfm?documentID=106632>), in Voeller et al. 2021 (available at: <https://doi.org/10.1016/j.rama.2021.02.011>), and in Lewis et al. 2019 (available at: <https://doi.org/10.3390/su11195516>).

Staff Conclusion: NPS has fulfilled this requirement to provide the water quality data from 2022/23 monitoring efforts along with those from previous years. Although this data indicates a variety of water quality issues (as discussed further below), it should be noted that NPS’ full implementation of its Water Quality Strategy began in this water year (which includes the winter of 2022) and is limited to a single year. The typical practice with environmental data like this that can be subject to significant annual variability is to establish a multi-year dataset to evaluate trends and signals before using it to implement significant management decisions. As such, the monitoring data from the 2023 water year (a year characterized by extensive rainfall) may not be representative of more consistent, longer-term trends.

Comparison of Data with Relevant Standards

Requirement: The third provision of Condition I establishes that NPS provide a “comparison of water quality data with relevant state and federal water quality standards.”

² Under the advanced tab, use location parameters for *Marin County, CA*, both *Ocean* and *Stream* as the Site Type, and *NPS Biological Resources Division (11NPSWRD_WQX)* as the Organization ID. Also, use Filter Results to select Sample Media as *Water* and select *Sample Results (physical/chemical metadata)* and chose *MS Excel 2007+* as file format under Data Profiles. The following link has those search settings pre-filled:
https://www.waterqualitydata.us/#countrycode=US&statecode=US%3A06&countycode=US%3A06%3A041&siteType=Ocean&siteType=Stream&organization=11NPSWRD_WQX&sampleMedia=Water&mimeType=xlsx&dataProfile=resultPhysChem&providers=NWIS&providers=STEWARDS&providers=STORET

Status: NPS uses water quality benchmarks and exceedances based on the standards set by the RWQCB in its Water Quality Control Plan for the San Francisco Bay Region (Basin Plan), the RWQCB's General Waste Discharge Requirements for Confined Animal Facilities, and the California Department of Public Health. Specific benchmarks used for comparison are shown in Table 1 on page 24 of the Water Quality Report ([Appendix A](#)). The comparison of water quality data to these standards can be found in the Results and Discussion section starting on page 30 of the Water Quality Report ([Appendix A](#)).

Staff Conclusion: NPS has fulfilled this requirement.

Measures Taken and Planned in Response to Monitoring Results

Requirement: The fourth provision of Condition I establishes that NPS provide annual reporting of "measures taken and planned to address identified water quality issues." This was further emphasized by the commitment NPS made as part of its Water Quality Strategy to report on its "Progress on implementation of the Strategy and specific actions taken and planned to address water quality issues."

Status: This requirement is linked to Objectives 3 and 4 in the Strategy. To meet this requirement and those objectives, NPS implemented Monitoring Programs 1, 2, 3, 4, and 6 as well as additional actions following water quality exceedances:

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.

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.

Monitoring Program 1 (short-term assessment): As discussed on pages 12-13 of the Annual Report and pages 63-73 of the Water Quality Report, throughout the last year, NPS completed 6-week winter and summer assessment monitoring at 16 sites in the watersheds of the Point Reyes Peninsula. NPS is continuing implementation of the program for Water Year 2024. As described on page 75 of the Water Quality Report, triggering actions are implemented when certain benchmarks for water quality are exceeded during sampling. Triggering actions are implemented soon after monitoring results show water quality exceedances, which includes taking additional grab samples upstream of the monitoring station to find the source of the pollution entering the waterway. In addition to that sampling, ranch operations are also investigated to search for the source of pollution, such as the presence of animals, ground disturbance, and runoff from high use areas entering the waterway. During and after large rain events this past winter, several sites exceeded the E. coli recreational water quality benchmark and un-ionized ammonia triggers. As described in the Annual Report (starting on p. 63), in response to these winter measurements, NPS followed up with additional synoptic

monitoring at four active dairies in order to assist with bracketing and isolating potential pollution source areas. From the results of the synoptic monitoring, NPS developed several short-term actions, including additional monitoring and site-specific adjustments. Triggered sample events were also conducted following persistent elevated E. coli observations at four sites and observed algae cover over 30% and low dissolved oxygen at two sites. NPS concluded that further monitoring is needed to understand each site's dynamics and accurately develop additional efficient management actions.

Following the summer sampling, NPS found several sites that indicated high levels of E. coli including at sites without current grazing and the reference site. In response to these measurements, NPS conducted site visits to investigate the source of pollution. Triggered sampling was conducted at one site that had persistently high levels of E. coli. NPS plans to conduct further investigations to understand the behavior of E. coli in the environment before determining specific actions to address water quality issues, however. Initial hypotheses are that these sample results are driven by very localized influences, accentuated by low flow conditions.

Monitoring Program 2 (long-term trends): As discussed on pages 14-15 of the Annual Report and pages 35-59 of the Water Quality Report, NPS continued monthly sampling at eight sites, measuring core parameters such as water temperature, dissolved oxygen, pH, salinity, conductivity, and specific conductance. Turbidity and fecal indicator bacteria sampling were also conducted at these sites. Based on these sampling results, NPS followed up on water quality exceedances with additional triggered sample events.

Monitoring Program 3 (dairy regulatory monitoring): As discussed on pages 15-16 of the Annual Report and pages 74-75 of the Water Quality Report, five dairy operations conducted water quality monitoring downstream of their facilities following three storm events in water year 2023. This monitoring was conducted in accordance with the Regional Water Quality Control Board (RWQCB) General Waste Discharge Requirements for Confined Animal Facilities. Parameters collected included pH, specific conductance and temperature, and total ammonia nitrogen.

Monitoring Program 4 (recreational beach monitoring): As discussed on page 16 of the Annual Report and pages 60-62 of the Water Quality Report, NPS and EAC conducted fecal indicator bacteria sampling from April-October (weekly) and November-March (monthly) at Drakes Beach and Drakes Estero. In response to public concern that agricultural runoff was affecting elephant seals at Drakes Beach, NPS collaborated with researchers at the Marine Mammal Center to investigate the potential exposure of pathogens from the runoff to these marine mammals. The results from the study showed that elephant seals' body condition and behavior were not being affected by the runoff.

Monitoring Program 6 (Tomales Bay watershed TMDL): As discussed on pages 16-17 of the Annual Report and pages 88-89 of the Water Quality Report, in coordination with the RWQCB watershed-wide TMDL monitoring program, NPS conducted weekly

sampling at six sites in the Olema Creek watershed for a five-week period during the winter and summer months.

Staff Conclusion: NPS has fulfilled this requirement.

Plans for Incorporating Response Measures into Ranch Operating Agreements or Other Implementation

Requirement: The fifth provision of Condition I establishes that NPS provide annual reporting of “plans (including responsible entities, funding, timing and schedule) for incorporating such practices into ROAs or implementation through other measures.”

Status: This requirement is linked to Objective 2 in the Strategy (copied below) and has not yet been completed. NPS has not provided specific plans for implementing proposed measures to address identified issues resulting from water quality results.

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.

As discussed starting on p. 11 of the Water Quality Report,

Actions under this objective are ongoing. NPS continues development of a system for tracking and reporting, as well as an annual inspection checklist and process that will be incorporated into Ranch Operating Agreements issued under long-term leases.

...

NPS completed issuance of two-year Interim Leases in mid-September 2022. As noted, Interim Leases are publicly available and posted to the park website. Interim Leases require lessees to report monitoring and maintenance of riparian fencing and other actions by November 1 annually. These metrics are tied to the Biological Opinion reporting requirements of the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). While Interim Leases with associated reporting metrics were only in place for a short period, NPS worked with lessees to meet the November 1 reporting goals for 2022. NPS submitted reports the USFWS and NMFS for the 2022 reporting period. NMFS acknowledged review and receipt of the report noting that it “thoroughly and adequately covers all reporting items.” USFWS did not provide feedback on the report.

Issuance of long-term leases is being affected by the ongoing litigation. As NPS notes in the Water Quality Report (p.21),

...there is currently active litigation related to the implementation of the GMPA. The Center for Biological Diversity, Western Watersheds Project, Resource Renewal Institute, the National Park Service, and the rancher intervenor groups are continuing with the confidential mediation process initiated in the summer of 2022. The parties held productive in-person mediation discussions in July and September of 2023. In addition to the ongoing biweekly discussions, additional in-person

meetings are scheduled for November 2023. In their October 16, 2023, filing to the Court, parties acknowledged that the mediation process has also included certain other consultants who have agreed to the strict mediation confidentiality agreement that all other parties have entered, and that the mediation discussions continue to be productive. The Court approved continuance of the matter and set the date for the next Case Management Conference for March 15, 2024.

Staff Conclusion: Not yet completed.

Best Management Practices Implemented

Requirement: The sixth provision of Condition I establishes that NPS provide annual reporting of “the best management practices and ranching measures implemented in the previous year”. This was further emphasized by the commitment NPS made as part of its Water Quality Strategy to report on any “miles of fencing installed or repaired, number of stream crossings constructed or improved, installation of dairy related infrastructure or practices to address manure management, reduction in herd sizes and other ranching-related measures installed, and their locations and efficacy.” This requirement is linked to Objective 5 in the Strategy.

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.

Status: As of September 2023, most ranch operations are operating under two-year interim leases that are set to expire next year in September 2024. New requirements have been added to the interim leases such as expanded reporting requirements to meet Regional Water Board and NMFS and USFWS Biological Opinion requirements and development of standard operational requirements across permits. In addition, G, H, and I Ranch interim leases include a requirement for operators to phase out of silage production by September 2026 which would reduce the likelihood of silage effluent potentially polluting waterways. For dairy operations, interim leases have a requirement establishing locations where land application of manure is allowed to ensure that this material is not being directly introduced into the watershed.

Ranchers are also required to submit reports in accordance with the Biological Opinions from NMFS and USFWS, which NPS also receives as a requirement of the interim leases. The reports for 2023 are due November 1, 2023, but a summary of the 2022 reports describing improvement and adaptive management projects is included below from pages 18-19 in the Annual Report:

- Livestock Water Supply extension and drought resilience projects were completed on four ranch allotments including approximately 130 feet of pipeline, 2 troughs and 4 storage tanks.

- Pond restoration projects were completed on two ranch allotments (one pond on each) with removal of an estimated 2,936 cubic yards of accumulated sediment and total temporary disturbance of approximately 0.83 acres. Accumulated material was placed to reinforce the levy of each pond.
- Fencing was installed on three ranch allotments, including approximately 5,217 feet of exclusion fencing (along Drakes Estero, north Home Ranch Creek, and a tributary to Abbotts Lagoon) and 3,090 feet of pasture fencing.
- Upland and Riparian Vegetation Management and Planting occurred on two GGNRA ranch allotments.
 - Along approximately 465 linear feet of a tributary to Lagunitas Creek, 123 total native plants including willow (*Salix* sp.), commonrush (*Juncus* sp.), coffeeberry (*Frangula californica*) and California live oak (*Quercus agrifolia*) were planted, and three patches of invasive blackberry (*Rubus armeniacus*) were removed with hand tools.
- Along approximately 190 linear feet of Lagunitas Creek, 80 total native plants including coast live oak, common rush, white alder (*Alnus rhombifolia*), and big leaf maple (*Acer macrophyllum*) were planted.
- Additionally in late winter 2022-23 NPS completed three additional planting events, on GGNRA ranches planting 43 willows, 11 oaks, 10 buckeyes, and 8 coffeeberry, 4 Coyote brush, 6 twinberry and 20 juncus sprigs. 34 cages were placed to protect plants and removed Himalayan blackberry on a GGNRA ranch riparian area. Approximately 1.3 acres addressed.

Although the Annual Report was prepared by NPS before the 2023 reports had been submitted, NPS notes that exclusion fencing to reduce pressure on sensitive riparian habitat will continue to be installed throughout the project area. Additionally in 2023, a park rancher completed a livestock water system update to better distribute cattle away from surface water resources in the Tomales Bay watershed. Future plans include road decommissioning and improvement projects in spring 2024.

Staff Conclusion: NPS has fulfilled this commitment.

Best Management Practices for Lands in Tomales Bay Watershed

Requirement: The seventh provision of Condition I establishes that NPS provide annual reporting of “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.”

Status: As noted above, a variety of BMPs have been implemented across PRNS and GGNRA. NPS’ annual report does not specifically differentiate which of these BMPs were carried out within the Tomales Bay watershed but the discussion of Objective 5 starting on p. 19 of the Water Quality Report describes BMPs implemented throughout PRNS and GGNRA.

Regarding “water quality monitoring of ranch lands in the PRNS and GGNRA portions of the Tomales Bay watershed, including Olema and Lagunitas Creeks,” Monitoring Program 5 and Monitoring Program 6 of the Strategy are focused on the Tomales Bay

and Olema Creek watersheds, respectively. Results from Monitoring Program 6 are discussed in the Annual Report starting on p.71 and include sites within Olema Creek.

Staff Conclusion: NPS has fulfilled this commitment.

Recreational Beach Monitoring:

Requirement: Prior to the September 8, 2022, hearing, NPS committed to maintaining the Recreational Beach Monitoring Program in partnership with the Environmental Action Committee of West Marin (EAC). Should EAC discontinue this partnership, NPS committed to maintaining the program independently.

Status: NPS has coordinated with EAC over the last several water years and continues to fund the sampling analysis and share with EAC field sampling costs. NPS and EAC have indicated to Commission staff that they will meet this fall to coordinate monitoring for the upcoming year. Implementation and results from the Recreational Beach Monitoring (Monitoring Program 4 in the Strategy) are detailed starting on p. 61 of the Annual Report.

Staff Conclusion: NPS has fulfilled this commitment.

Funding Approach

Requirement: During the September 8, 2022 hearing, NPS committed to providing “a discussion of the funding approach being used by NPS and update on how effectively NPS is funding implementation of the Strategy”.

Status: NPS is funding the implementation of the Strategy by using existing staff to conduct field collections and expending \$50,000 from its budget towards water quality monitoring. NPS also was awarded a contract in March 2023 to continue laboratory analyses required under the Strategy.

Staff Conclusion: NPS has fulfilled this commitment.

Enforcement Efforts

Requirement: During the September 8, 2022, hearing in which it approved NPS’ Water Quality Strategy, the Commission directed its staff to develop for its annual review of the Water Quality Strategy “a report that includes information on enforcement efforts by the Commission, NPS, San Francisco Bay Regional Water Quality Control Board, and Marin County Environmental Health Services, and that, for each, enumerates all alleged violations, actions taken by the agencies, and the responses and current statuses of those violations.” Staff from the Commission’s Enforcement Division compiled the update provided below of its efforts over the past year. Commission staff also coordinated directly with the agencies listed above, identified for them the information requested by the Commission and has included below the information provided in response.

In addition, NPS committed to the Commission in September 2022 to “report on the status of its leases and any violations, actions taken by NPS, any response, as well as

the result (withdrawal, non-renewal, or revocation of leases) and current status of each lease.” NPS’ response to this commitment is provided below. NPS’ commitment to report on the status of its leases is also linked to Objectives 1 and 6 in the Strategy:

Objective 1: Complete initial inspections of all ranch operations to identify required immediate actions for improvement by November 1, 2022.

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.

Status:

National Parks Service

Table 1 on page 6 of NPS’ Annual Report provides information on the status of its leases and notes that

...excepting the two life estates are operating under two-year interim leases issued in September 2022. The Interim Leases are in effect until September 2024 and publicly available on the NPS website (available at: <https://www.nps.gov/pore/getinvolved/planning-gmp-amendment-leases-permits.htm>). Among other things, the Interim Leases incorporate and update monitoring and reporting requirements identified through Biological Opinions issued by US Fish and Wildlife Service and National Marine Fisheries Service, as well as the Regional Water Quality Control Board.

There is active litigation related to the GMPA and a confidential mediation process has been ongoing since the summer of 2022. The next meeting with the Center for Biological Diversity, Western Watersheds Project, Resource Renewal Institute, NPS, and the rancher intervenor groups is scheduled for this November. Therefore, NPS has not completed ROAs tied to longer term leases, as discussed in Objective 6 of the Strategy.

California Coastal Commission

Starting In 2021, based on reports from concerned parties, the Commission’s District Enforcement staff became aware of a number of alleged Coastal Act violations on various ranches on National Park Service (NPS) lands located within the Point Reyes National Seashore (PRNS) and/or the Golden Gate National Recreation Area (GGNRA), and soon thereafter began investigating the reports. Enforcement staff discovered that some of the reported activities were not Coastal Act violations, and that some were located on properties outside of the Coastal Zone, whose boundary meanders throughout the Parks and sometimes bisects ranches.

In its investigation, Enforcement staff coordinated with the National Park Service (NPS); Marin County Environmental Health Department (EHS); and the Regional Water Quality

Control Board (RWQCB) regarding the status of the various violations and what steps these other agencies and the Commission's Enforcement staff had taken, or would be taking, in their respective efforts to address the violations.

Enforcement staff sent five Notice of Violation ("NOV") letters to operators of ranches located on federal lands notifying them that the Coastal Act applies to matters on these properties and identifying the alleged unpermitted development located on the federally owned ranch lands. The alleged unpermitted development includes such things as: grading and vegetation removal in a riparian corridor; discharge of raw sewage from broken pipes and/or septic tanks; repairs and/or replacement of failing septic systems; and dumping and stockpiling into a former sileage pit of various materials including derelict vehicles, some of which may contain toxic and/or hazardous substances or materials. These letters informed the ranch operators of the Commission's authority over unpermitted development activities conducted by private entities on NPS land, advised the operators of their responsibilities and obligations under the Coastal Act, and requested resolution of any outstanding Coastal Act violations on site. Staff received responses from most of the ranch operators we contacted. Staff is working with the operators to achieve resolution of all outstanding Coastal Act violations, including their seeking and obtaining coastal development permits, when necessary, and continuing to coordinate with NPS, EHS, and RWQCB.

Specifically, one ranch operator performed remediation and restoration of the disturbed riparian area on the ranch, and also installed a permanent riparian exclusion fence to keep cattle from the riparian area. Another ranch operator is seeking a CDP for a new septic system to replace a failing system. The ranch operator with stockpiled materials in a former sileage pit has removed all materials from the pit, under NPS guidance, and is awaiting necessary soil testing to determine if the soil or water have been contaminated and need clean-up and remediation, which would require a CDP. Enforcement staff is also having discussions with several ranch operators about what type of mitigation is appropriate for any resource damage that may have occurred.

Commission Enforcement staff will continue to coordinate with the other agencies and Commission Federal Consistency staff and to monitor the progress by the ranch operators to fully address these matters.

San Francisco Bay Regional Water Quality Control Board

On October 26, RWQCB submitted a summary of enforcement-related work via email to Commission staff, which is provided below:

Water quality impacts from dairies and grazing operations continue to be a Water Board staff priority. As a reminder, each dairy in the region, including the five operating within the Point Reyes National Seashore (PRNS), must comply with the General Waste Discharge Requirements for Confined Animal Facilities (CAF General Permit). The CAF General Permit regulates all discharges to land and prohibits any waste discharges to surface or groundwaters. It contains specific terms and conditions that must be met, including structural and non-structural

management measures for minimizing impacts to water quality from confined animal areas, land application areas, and grazing lands.

Additionally, 10 of 18 PRNS grazing operations are located within the Tomales Bay watershed and must comply with a Conditional Waiver of Waste Discharge Requirements for Grazing Operations in the Tomales Bay Watershed (Grazing Permit). The Grazing Permit includes the development of Ranch Water Quality Plans, implementation of conservation practices to minimize delivery of pathogens, nutrients, and sediments to surface waters, annual monitoring, and annual adaptive management adjustments to the plans. The Water Board is currently reissuing and expanding the current Grazing permitting program which will apply to all PRNS grazing operations by next year.

Over the past year, Water Board staff have been actively engaged with PRNS staff while they implement the first year of the Water Quality Strategy for Management of Ranching Operations. Parallel to this effort, Water Board staff continues to implement the dairy and grazing regulatory programs by conducting inspections, evaluating reports, promoting outreach and education, coordinating with local agencies and other agricultural partners, and facilitating grants to help expedite the larger and more expensive ranch improvements. Included below is a summary of recent Water Board actions and outcomes within PRNS.

This summer, Water Board staff conducted joint inspections with PRNS staff of two grazing ranches. Both ranches were found to be complying with the Grazing Permit, and recent new management measures were observed including new fencing and gates near stream crossings and reduced herd numbers due to past drought years. It was observed that additional fencing could help to optimize pasture rotations, therefore PRNS staff will be exploring new fencing options.

In February 2022, Water Board staff conducted inspections of each PRNS dairy to evaluate compliance with the CAF General Permit. Inspection reports were sent to ranchers and PRNS staff detailing the inspection findings and specific action items needed for each facility including timelines for compliance. Specific short-term corrective measures were required to be implemented prior to the 2022 2023 wet season and some larger corrective measures were identified as needing long-term planning, design, and financing. Corrective action plans for these larger projects were required and interim mitigating measures were put in place to control pollutants until permanent improvements can be completed. In addition, PRNS staff included these requirements within each interim ranch lease agreement.

In November and December 2022, the Water Board revisited each dairy to ensure that short-term management measures and winterization practices were in place and assessed compliance with required reports and plans. While all required short-term actions were completed, incomplete long-term planning action items were identified. Staff communicated the insufficiencies to the operators, their Western United Dairy representatives, and the Park Service, emphasizing the Park's shared responsibility for developing the plans. Water Board staff have also instituted

quarterly meetings with Park staff and ranchers to discuss corrective action progress.

Additionally, Water Board staff directed two operators to conduct and submit post-storm photo-monitoring of erosion controls at their most sensitive sites through the 2022-2023 winter season. The photo-monitoring allowed Water Board staff to evaluate the control measure's stability and effectiveness and to provide feedback on the operator's wet season adaptive management.

The winter of 2022-2023 included a series of heavy atmospheric river events, during which Water Board staff regularly communicated with PRNS staff and operators. Water Board staff followed up on the maintenance of retention ponds and erosion controls, responded to a citizen complaint, and consulted PRNS staff about their monitoring and oversight of the dairies.

Following the first atmospheric rivers in early January, the Water Board received a citizen complaint about evidence of soil and manure runoff from a pasture zone cattle feeding area. The Water Board and PRNS staff immediately coordinated efforts to respond and investigate the situation. The area had been used to feed grazing cattle for many years and was initially chosen due to its underlying rock layer which was thought to be more resistant to erosion. However, it was determined this area cannot be adequately controlled during intense atmospheric river events. Upon notice from PRNS staff, the operators installed temporary sediment controls and worked to identify two alternative winter-feeding locations. Following the early-season atmospheric river events, PRNS staff visited each dairy and coordinated their efforts with the Water Board. It was reported that the newly implemented management practices held up well, and no discharge violations were observed. However, two dairies requested PRNS authorization to increase retention pond storage capacity by conducting mid-winter irrigation. Water Board staff advised PRNS staff that the CAF General Permit allows this practice under strict conditions. PRNS staff evaluated each situation, authorized the irrigation when allowed, and required operators to haul out wastewater when conditions did not allow irrigation.

During the past year, Water Board staff have facilitated communication between ranch operators, agricultural compliance assistance organizations, and PRNS staff to ensure that the dairies complete their long-term corrective actions and proactively protect water quality. As of October 2023, all dairies are implementing corrective actions to address the water quality threats identified by Water Board staff. One operator has applied for and received funding through the Natural Resource Conservation Service (NRCS) for a Comprehensive Nutrient Management Plan and analysis for long-term corrective action.

Water Board staff helped to facilitate recent grant funding to the Marin Resource Conservation District (RCD) for their Conserving Our Watersheds program. The grant, funded through the U.S. EPA's Clean Water Act Section 319(h) Grant Program, has been awarded for implementing high-priority water quality

improvement projects on ranch lands within the Drakes Bay and Estero San Antonio watersheds. Ranch operators will be eligible to submit a project proposal to the RCD as early as next Fall. Water Board staff also are encouraging PRNS and dairy operators to apply for alternative funding sources for infrastructure improvement projects, including grants from the California Department of Agriculture and NRCS.

Marin County Environmental Health Services (EHS)

Marin County EHS staff are in the process of developing a summary of relevant enforcement efforts to provide Commission staff for inclusion in this report. That summary will be added here when available.

Staff Conclusion: In progress.

Climate Action Plan

Requirement: During the September 8, 2022 hearing, NPS committed to providing an update on the “progress of the Climate Action Plan prepared by NPS to address ranching activities”.

Status: On September 28, 2023, NPS released an updated Climate Change Response Strategy 2023 Update (Response Strategy). The stated goals of the Response Strategy are stated below:

Goals include implementation of adaptation actions to manage cultural and natural resources under conditions of continuous change and reducing carbon emissions to net zero by 2045 through commitment to environmentally sustainable operations and practices. The park will support planning and implementation of climate smart agricultural practices and infrastructure, which aligns with updated California Climate Adaptation Strategy priorities, actions, and goals for agriculture. It is anticipated that the greatest potential to address greenhouse gas emissions is through technological means on the concentrated dairy operations. Methods are articulated in the state’s climate-smart agricultural approaches and incentives for dairy methane reduction and nutrient management.

In addition to the incorporation of the Response Strategy, NPS states that it intends to focus on structural improvements to ranch and dairy waste management with the goal of reducing runoff and emissions, as well as work with Commission staff to efficiently process habitat restoration projects to help address climate change effects by lowering environmental temperatures and sequestering carbon.

Staff Conclusion: In progress.

IV. Notable Findings

- NPS staff devoted significant effort to developing and implementing six individual monitoring programs to evaluate and respond to water quality issues. Not

including staff time, NPS expended approximately \$50,000 for implementation of the Strategy's water quality monitoring elements from October 2022 to October 2023;

- NPS completed initial inspections of all ranch operations to identify immediate actions needed for water quality improvement;
- “During the sampling period, core parameters (pH, dissolved oxygen, and specific conductance) were generally under or within benchmark ranges of values for most sites [sampled as part of the coastal watershed monitoring program (Program 2)]”;
- “Given the observed variability in fecal indicator bacteria concentration results, additional monitoring data will be necessary to determine where management actions may be required for a number of locations”;
- Data from 16 sites primarily downstream of leased ranching operations were visited once a week for six weeks in winter and summer and used to “further target monitoring efforts and corrective actions at certain locations where results exceeded benchmarks. Collection of additional assessment monitoring data next water year will provide necessary information to allow for more informed management actions where results are determined to regularly exceed benchmarks”;
- “Monitoring downstream of five dairies following three rainfall events was also conducted consistent with regulatory requirements to allow for responsive corrective actions if benchmark exceedances were detected in runoff... With the exception of one site during the first winter sample event, samples met benchmarks established under the San Francisco Bay Regional Water Quality Control Board's General Waste Discharge Requirements for Confined Animal Facilities”;
- NPS and Ranchers coordinated with other entities, including SPAWN and Marin RCD, on projects within the NPS ranch allotments such as relocation, decommissioning and improvement of multiple ranch roads identified as sediment sources to Lagunitas Creek, installation of riparian exclusion fencing to reduce pressure on sensitive riparian habitat, and completion of a livestock water system update to better distribute cattle away from surface water resources in the Tomales Bay watershed.
- NPS discussed requirements with dairy operations that were required in November 2022 to submit Corrective Action Plans (CAPs) by the Regional Water Board. The three dairy operations subsequently submitted their CAPs to the Regional Water Board, as required. In December 2022, NPS issued letters to three dairies identified with CAPs requiring that they work with the NPS to develop a mutually agreeable plan for implementation of the needed corrective actions. NPS met with the three dairy operators in January 2023 to further discuss updates to CAPs. Only one of three dairy operators has pursued planning and funding opportunities for long-term corrective actions.
- NPS coordination with Regional Water Board staff included eight meetings throughout the year to track and discuss progress on water quality components. NPS states it will be requiring the dairies to continue existing short-term corrective actions and expects to require at least three additional short-term corrective actions on three dairies for winter of 2023. NPS states it will inspect

dairies in fall of 2023 to ensure identified short-term corrective actions and winter preparations are in place.

Water Quality Monitoring Results Summary:

- Monitoring Program 1: During the six-week winter and summer period, in general the majority of samples taken were within the benchmark range for each parameter, with the exception of *E. coli*.

Winter:

- All dissolved oxygen results collected over the six weeks were within the benchmark range for this parameter.
- 98% of pH samples during this assessment were within the benchmark range for this parameter.
- All specific conductance results were within the benchmark range for this parameter.
- 81% of turbidity samples during this assessment were within the benchmark range for this parameter.
- For *E. coli*, all sites in the Drakes Bay Watershed below dairy operations exceeded the six-week geomean contact recreation water quality benchmark.
- All ammonia results were within the benchmark range for this parameter.

Summer:

- 93% of dissolved oxygen results were within the benchmark range for this parameter.
- 98% of pH results were within the benchmark range for this parameter.
- All specific conductance results were within the benchmark range for this parameter.
- 98% of turbidity results were within the benchmark range for this parameter.
- For *E. coli*, all sites with flowing water, with the exception of one site, exceeded the six-week geomean contact recreation water quality benchmark.
- For ammonia, only one site was sampled due to low flow of water at other sites. This site was within the benchmark range for this parameter.
- Monitoring Program 2: The majority of results from monthly sampling were within the benchmark range for each parameter.
 - 79% of dissolved oxygen results were within the benchmark range for this parameter.
 - 91% of pH results were within the benchmark range for this parameter.
 - 99% of specific conductance values were within the benchmark range for this parameter.
 - 88% of turbidity measurements from coastal sites were within the benchmark range for this parameter.
 - 71% of *E. coli* results were within the benchmark range for this parameter.
 - 88% of enterococci results were within the benchmark for this parameter.
- Monitoring Program 3: Samples met benchmarks established under the San Francisco Bay Regional Water Quality Control Board's General Waste Discharge

Requirements for Confined Animal Facilities with the exception of one site for pH and specific conductance.

- Monitoring Program 4: 98% of samples were within the benchmark range for enterococci.
- Monitoring Program 6: Over half of the results from monthly sampling were within the benchmark range for the TMDL five-week geometric mean benchmark for fecal coliform.
 - Winter: 67% of sites sampled were within the benchmark range for this parameter.
 - Summer: All sites sampled were within the benchmark range for this parameter.

V. Next Steps

- NPS will continue implementation of its Strategy over the coming year and prepare to bring forward a 2024 annual report;
- The Court approved continuance of its hearing on the General Management Plan Amendment litigation and set the date for the next Case Management Conference for March 15, 2024.
- NPS is developing a Tomales Point Area Plan for the area of PRNS that includes the 2,900-acre Tomales Point Tule Elk Reserve. Public scoping and initiation of an Environmental Assessment occurred in the summer of 2023 and the final decision is anticipated in the summer of 2024. Additional information is available at the NPS website here: <https://www.nps.gov/pore/getinvolved/planning-tomales-point-area-plan.htm>