

CALIFORNIA COASTAL COMMISSION

455 MARKET STREET, SUITE 228
SAN FRANCISCO, CA 94105-2219
FAX (415) 904-5400
TDD (415) 597-5885



Th10b

**CD-0006-200
(National Park Service)**

September 8, 2022

CORRESPONDENCE

**Received between
4:30pm and 5:00pm, September 2, 2022**



September 2, 2022

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

**RE: September 2022 Agenda Item Thursday 10b - CD-0006-20 (National Park Service, Marin Co.)
Request for Commission to NOT APPROVE Unless Amended**

Chair Brownsey, Vice Chair Hart and Members of the Commission:

The Environmental Action Committee of West Marin (EAC), local environmental nonprofit based in Point Reyes Station, CA submits these preliminary comments for consideration and will be supplementing these comments with our long-term partner, the National Parks Conservation Association (NPCA), in the coming days.

EAC requests the Commission not approve the submitted Water Quality Strategy unless amended.

We want to note that the General Management Plan Amendment (GMPA) was finalized on September 13, 2021 and the public is still waiting for completion of leases with the operators and the implementation framework to fully understand the National Park Service (NPS) plans.

This may be one of the final opportunities the Commission will have to weigh in on the format and information included in the annual water quality report that will provide critical information and transparency to the public on the success of the GMPA implementation.

Therefore, we ask the Commissioners to consider the below items to satisfy Sections 30230 and 30231 of the Coastal Act and increase public transparency in the implementation of the GMPA:

- 1) Require all Conditions to be satisfied that were agreed to in the 2021 Consistency Determination and in 2022 Coastal Commission Meetings and, to improve public transparency, require that NPS update its website to include: the annual report submitted to the Commission, links for water quality results, copies of leases, and Ranch Operating Agreements.
- 2) Include copies of the Ranch Operating Agreements; maps of pending and completed projects; and regulatory limits for water quality results in all tables, graphics, and charts in the annual report to improve public transparency in the implementation of the GMPA.
- 3) Expand the Strategy to define, *improved water quality*, and the milestones the Strategy seeks to achieve in 5 years, 10 years, and 20 year timelines. *Essentially, what is the baseline (current conditions) and*

what water quality targets is the NPS trying to achieve with the GMPA, lease requirements, and Ranch Operating Agreements?

- 4) Commit to retaining long-term sampling metrics in the Strategy. Retaining metrics over time ensures comprehensive long-term monitoring and flag issues with any changed conditions (environmental and operational).
- 5) Require reductions in animals if existing operational infrastructure fails to meet regulatory water quality standards. For example, if a dairy is unable to support the current number of animals due to failing manure management systems, the number of animals should be reduced to the current system capacity until after remedial measures have been implemented and reviewed to protect coastal resources and water quality.
- 6) Request the NPS outline the process for the annual operational ranch inspections, who is present, which partner regulatory agencies will be participating, and when those inspections will occur each year.
- 7) Finally, clarify what happens if an operator consistently fails to meet regulatory and GMPA standards as outlined in their lease agreement. As the Strategy notes, updated leases that are being signed include regulatory requirements for water quality, but it is unclear what actions the NPS will take if those standards are not met as those leases are not finalized and not available for public or commission review.

Thank you for the consideration of our comments.



Morgan Patton
Executive Director
Environmental Action Committee of West Marin



Bridger Mitchell
Board President
Environmental Action Committee of West Marin



9/2/2022

California Coastal Commission
455 Market St, Suite 223
San Francisco, CA 94105- 2219

RE: Coastal Commission consideration of Water Quality Strategy developed by National Park Service (NPS) as specified in Conditions I and IV of the Coastal Commission's conditional concurrence on Consistency Determination No. CD-0006-20 for the 2020 General Management Plan Amendment (GMPA) for Point Reyes National Seashore and the north district of Golden Gate National Recreation Area (GGNRA), Marin County.

Chair Brownsey, Vice Chair Hart, and members of the Coastal Commissioners,

The Resource Renewal Institute (RRI) has reviewed the Coastal Commission (CCC) staff report dated August 19, 2022 and the exhibit, the National Park Service (NPS) revised Water Quality Strategy for Point Reyes National Seashore and the northern district of the Golden Gate National Recreation Area in an attempt to fulfill Conditions I and IV of the CCC's conditional concurrence on Consistency Determination No. CD-0006-20.

While RRI finds the Water Quality Strategy to have improved dramatically, we maintain several concerns related to accountability, timelines, feasibility of implementation, action triggers, and cures. Further, the Resource Renewal Institute notes that the CCC staff have conducted no analysis and have provided no staff recommendation for the Climate Action Strategy.

At this time RRI requests the Commission not approve the Water Quality Strategy unless amended.

We delineate our positions on the NPS strategies below:

Water Quality Strategy

RRI understands that CCC staff are aligning their findings and recommendations with specific sections of the Coastal Act, namely Section 30230¹ and 30231².

¹ *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 maintain healthy populations of all species of marine organisms adequate for long- term commercial, recreational, scientific, and educational purposes.*

² *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*

While RRI understands the proposed strategy to largely address Section 30231 by controlling runoff and minimizing adverse effects of waste water discharge and entrainment, the proposed Water Quality Strategy largely fails to address Section 30230—especially for beef and dairy ranch lands that drain into Areas of Special Biological Significance (ASBS), which are known to have routine exceedances of various water quality benchmarks/thresholds (fecal indicator bacteria, conductivity, etc.)

RRI implores the CCC to use its authority to not only mitigate the worst impacts on coastal resources, but the actively *enhance and restore* our coastal watershed, in the spirit and the letter of Section 30230 of the Coastal Act.

Below RRI provides our position on the 8 “key” elements identified in Condition I of the NPS’ Water Quality Strategy:

Element 1

RRI supports more frequent and regular inspection of ranch sites is proposed in the Strategy.

It is important to see a commitment to ongoing engagement from partner agencies that have conducted recent inspections. Internal documents RRI has obtained via Freedom of Information Act requests regarding ranch worker housing inspections indicate that NPS has had capacity issues that impact the consistency and frequency of inspections, resulting in confirmation of prior year conditions via e-mail with lessees.

RRI would like to see letters of support from Marin County Environmental Health Services (EHS) and the San Francisco Regional Water Quality Control Board (Regional Water Board) indicating their ability and willingness to accommodate this renewed oversight role.

RRI maintains concerns about the feasibility of implementation, milestones, metrics for success, any enforcement activities to ensure corrective action. These concerns are addressed in the responses to later Elements.

Element 2

RRI finds that is acceptable to delineate corrective management actions between short term and long term actions, with short term actions defined as activities planned in the next 12 months.

Further, RRI finds that the activities in Element 2 are properly categorized between short-term, long-term, or both short- and long-term activities.

and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging...

RRI maintains concerns about the feasibility of implementation, milestones, metrics for success, any enforcement activities to ensure corrective action. These concerns are addressed in the responses to later Elements.

Element 3

RRI notes that NPS has seen reduction in average fecal coliform bacteria concentrations in the Olema Creek Watershed. While there have been reductions in concentrations, RRI are also interested in understanding the frequency of exceedances of benchmarks.

RRI finds that despite the “[m]ore than 170 Management Activities intended to improve water quality [that] have been implemented in the GMPA planning area in the last 20 years”, a [recent third-party analysis](#) produced by Geoenvironmental Engineer Douglas Lovell, documents consistent and significant water quality pollution in the GMPA planning area. This raises concerns about the efficacy of NPS Management Activities.

As part of “Monitoring Program 1: Short-term Assessment Monitoring” in the Strategy, the NPS states that monitoring stations may be added or retired over time and that selection of assessment monitoring stations will rotate on a priority basis. RRI wants the Strategy to ensure this does not conflict with long term assessment priorities identified in Element 7 and Element 8 of the CCC staff report along with amendments found below. Long term data will help build trust with the public and provide NPS and other regulatory agencies with data to understand trends and properly forecast climate futures and water futures to adjust Management Activities as appropriate to protect coastal resources.

Element 4

Inspections by EHS and the Regional Water Board identified widespread issues at many of the ranches and resulted in corrective action lists.

RRI understands that all the ranches will have been notified of the need for corrective action by September 2022, and that NPS will work “with ranchers to ensure all identified issues are addressed and remediated through the remainder of 2022” (CCC Staff Report, 8/19/2022).

RRI concurs with NPS’ prioritization of the resolution of issues identified by EHS that are a threat to public health—and especially the health and general welfare of ranch workers.

RRI understand that the progress made by the ranchers in addressing the full suite of corrective actions identified by EHS and Regional Water Board staff would be documented by NPS and provided to the Executive Director by the end of the year.

The list of corrective actions identified by EHS the Regional Water Board are extensive, and the NPS and its lessees have previously made numerous public statements indicating they could not make improvements until they enter into long term leases and leverage these leases to acquire capital for improvements.

As a result of previously statements indicating the need for long term leases to make capital improvements, and the NPS' decision to pursue interim leases, RRI remain skeptical of the feasibility for the NPS and its lessees to follow through on these commitments to remedy the growing corrective action lists provided by EHS and the Regional Water Board.

Element 5:

RRI agrees with CCC staff that the requirement for Element 5 has not been met and requires further amendment.

The public and the CCC need an assurance that the NPS will update the Strategy and the timeline if data indicates that its effectiveness is falling short of expectations.

Further, RRI seeks clarity from the CCC on what it defines as "expectations." At what point do expected water quality parameters/metrics trigger corrective action? What "goals" are agencies progressing towards?

Element 6:

RRI finds the requirement for Element 6 has not been met and requires further amendment.

RRI approves of the proposed application of 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 alongside it's recreation beach monitoring program conducted in partnership with the Environmental Action Committee of West Marin (EAC).

RRI shares the concerns raised by CCC staff regarding long-term sustainability of the program and NPS' ability to continue the program given NPS' resource limitations and competing priorities.

While RRI appreciates staff recommendations that the NPS pursue alternative funding sources of other contingency measures, this remains to be seen. RRI does not believe this element can be satisfied until the NPS demonstrates it can adequately fund and sustain a long-term sampling program. *(See RRI's response to Element 8 for a more expansive explanation.)*

Element 7:

RRI finds the requirement for Element 7 has not been met and requires further amendment.

RRI is supportive of the inclusion of the six categories of information in the implementation report to the Executive Director as proposed in the Strategy.

RRI is supportive of the inclusion of Tier 2 plans and results of required monitoring programs under the General WDR to NPS and to be included in annual reports.

RRI agrees with CCC staff and NPS that the NPS include all prior year monitoring results in the annual report to be submitted by year end (e.g., Dec. 31) of each year.

RRI believes these annual reports should not only be provided to the Executive Director, but should be made available upon request and publicly released as an item in Deputy Director's report for Northern California or Federal Consistency for the first meeting of each year (i.e., January).

The environmental community needs to see progress on specific short-term corrective actions identified during routine inspections by EHS and the Regional Board; the list of Management Activities implemented in the previous year, information from information of lease/permits to protect water quality; additional proposed actions, including mandatory improvements identified on ranches and the timelines for implementation for dairies and grazing operations; and significant changes to lease/permits, stock or grazing regimes.

Since the public hearing on April 7th, RRI has received hundreds of pages of internal documents from the NPS acquired via a Freedom of Information Act request that showed the NPS had proposed management actions (e.g., seeking a CEQA exemption for redevelopment/desiltation of dozens of springs) that were denied by the Regional Board. Further, RRI received proposed Drought Mitigation Plans from each, as well as the correspondence indicating which ranchers failed to respond to the NPS. We believe documents such as these prove valuable to resource managers and the environmental community at large, and must be included and publicized in annual reports moving forward.

Further, RRI is supportive of the inclusion of the water quality monitoring and assessment report as part of each year's annual report as proposed in the Strategy.

Again, RRI believes these annual reports should be made available upon request and publicly released as an item in Deputy Director's report for Northern California or Federal Consistency for the first meeting of each year (i.e., January).

The environmental community and the general public have a material interest in water quality monitoring background information, objectives, identification of monitoring areas, results and discussions, notable events, conclusions, 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—as well as the sample regime and sample parameters.

Again, RRI seeks to clarify what "goals" the NPS, the CCC, and other agencies are "progressing towards" as stated in the CCC staff report, page 20. Are those goals the numeric benchmarks for bacteria (2019 ISWEBE Bacteria Provisions), dissolved oxygen and pH (Regional Board Basin Plan and technical report guidance), specific conductance (Regional Board CAF benchmark), and keeping algal blooms with visual benthic and surface algal cover >30% from persisting for longer than a month?

Further, RRI is unclear on timelines between sampling, actions being triggered, length of additional synoptic monitoring, and corrective action. RRI requests further clarification around expectations for resolution of exceedances of benchmarks.

Similarly, RRI is unclear on the timeline for short term and long-term corrective actions required under the General WDR for dairy ranch operators (“Monitoring Program 3: Regulatory Dairy Monitoring. Part e”, page 25). While NPS states this strategy has been successfully used in watersheds in GGNRA, the CCC staff report from April 22, 2021 identified that strategies the NPS has found successful in the GGNRA do not necessarily translate to the dairy operations at Point Reyes. If a dairy initiates a process to procure funding, or develop designs, or seek approvals for a project, is there a deadline for timely completion to ensure corrective actions are taken and the observed conditions have been promptly addressed? If it will take several years to come into compliance, is that acceptable to NPS and the CCC per the Strategy? If not, then what? How many follow ups or what duration of time does the NPS expect of follow up with lessees to determine status before issuance of fines or citations. RRI seeks clarification on this timeline.

In the proposed Strategy, NPS states that it will reevaluate whether additional Management Actions, an undated Strategy, or further planning is necessary to achieve desired conditions if the Strategy does not appear to be improving water quality. At what point in time does the reevaluation get triggered? After a number of attempted cures? How many? How does the NPS evaluate whether it is cost effective or appropriate to pursue further cures versus termination of lease permits?

This information is critical for RRI and other organizations and members of the public to independently assess the efficacy of Management Activities in the Management Area, and it is also critical to have a clear definition of “progress” with a clear “goal,” clear milestones, and a clear timeline for the CCC staff and Commissioners to rely on if and when the CCC works with the NPS to update the “living” Strategy document.

To that end, RRI believes the Strategy *must* include water quality monitoring results from all previous years, as specified in Condition I, to allow for comparisons to be made to more recent results and allow for the evaluation of effectiveness of mandatory Management Actions and corrective actions. Clarification of timelines should also be provided to set expectations for lessees, NPS, and the public.

Element 8:

RRI agrees with CCC staff that the NPS should include water quality monitoring background information, objectives, identification of monitoring areas, sampling parameters, sampling regimes, results and discussions, notable events, conclusions, 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 from the Tomales Bay Watershed Monitoring Program and the Olema Creek Regulatory Monitoring Program in this Strategy. In their GMPA, the NPS admitted their preferred alternative and its associated

activities (e.g., ranching) would continue to contribute to the impairment of these water bodies. As such, it is imperative that the regulatory agencies, environmental organizations, and the public understand the magnitude, duration, and frequency of these contributions to impairment of these waterbodies, as with the proposed water quality monitoring in the Pacific drainage.

The public has been unable to access data from the NPS San Francisco Bay Area Network [Inventory](#) and [Monitoring](#) Program and/or the [Tomales Bay Watershed Council](#) since their respective websites have not published data since at least 2016—the majority of the data is from 2008 to 2014.

In addition, RRI notes that the incorporation of other critical guidance from the April 7, 2022, public hearing is lacking. As the CCC mentioned (and as RRI mentions above), there is an outstanding need to understand how to finance the Strategy, including the extensive, expensive capital improvement projects that have been identified by EHS and the Regional Board.

Commission staff recommends that the NPS staff develop a revenue generation plan prior to the 2022 annual report, detailing potential funding sources and responsible parties. Given the extent of the proposed Strategy and the corrective actions already identified by EHS and the Regional Board, RRI believes funding sources and the responsible parties should be provided *prior* to the approval of the Water Quality Strategy.

In discussion of primary monitoring parameters, the CCC staff report notes fecal indicator bacteria (*E. Coli*), dissolved oxygen (DO), visual algal assessments, and turbidity as the primary indicators. (In the Strategy, the NPS also notes total ammonia nitrogen and unionized ammonia are monitored for dairy operations (Exhibit A, Page 21). RRI believes these indicators are follow guidance from the U.S. Environmental Protection Agency (USEPA) standards for constituents in water that have been shown to pose a risk to human health.

RRI notes various other parameters were located in “Monitoring Program 1: Short-term Assessment Monitoring” in the Strategy(Exhibit A, Page 37 aka “Table 3”)., but did not see those parameters listed in staff report as primary parameters. Those include temperature and pH data, and conductivity and salinity data. All have proven valuable in prior [Coastal Watershed Assessments for Point Reyes National Seashore and the Golden Gate National Recreation Area](#).

Climate Action Strategy

As mentioned in the staff report dated August 19th, 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) on March 24, 2022.

While the CCC staff indicate that “these documents were timely submitted prior to the April 22, 2022, deadline” established in Conditions II and IV, the documents were not provided with sufficient time for the CCC staff to provide a staff report and recommendation for the public hearing on April 7, 2022 (inaccurately dated April 8th on page 2 of the staff report). As a result, Coastal Commissioners had no framework to assess or work through the Climate Action Strategy and Water Quality Strategy proposed by the NPS. Leading up to the hearing on April 7th, 2022, the Marin Independent Journal published an article, [Point Reyes Inspections Find Sewage Dumping, Leaks](#). Given this new information published on the eve of the Commission meeting, the public and the Commissioners were rightly focused on the deficiencies of the Water Quality Strategy, which took up the vast majority of the Commissioners deliberations.

On page 2 of the CCC staff report dated August 19, 2022, the staff indicated that no further action on the Climate Action Plan was identified and Condition IV is therefore considered satisfied. We believe Commissioners requested an extension to September 2022 on the understanding that there would be an revised submission by the NPS and a staff report to help the Commissioners assess the NPS Climate Action Strategy and Water Quality Strategy. To this day, the CCC staff have failed to provide any analysis of the NPS’s proposed Climate Action Plan.

As mentioned in prior correspondence provided to the CCC, the Resource Renewal Institute maintains that the NPS Climate Action Plan dated March 24, 2022 is deficient and does not adequately satisfy the Commissioners concerns discussed at the original public hearing for Consistency Determination No. CD-0006-20 on April 22, 2021.

1. The CCC and the NPS agreed that the Climate Action Strategy would “identify actions that could be conducted in response to local (Marin County) and/or state (CA Air Resources Board) climate-related requirements, delineate current conditions, and put forth a strategy about how to move forward toward reducing greenhouse gas emissions from ranching operations in the GMPA area”

Instead of developing a climate strategy for the CCC, the NPS has stated that they have achieved a reduction of 690 dairy animals, which will result in 4-27% reduction in NH₃, a 15-17% reduction in VOC, a 16% reduction in CO₂e, and a 17% reduction in PM_{2.5}. These reductions were achieved due drought conditions that resulted in the failure of aquifer recharge at the I Ranch dairy, [as described by dairy rancher Bob McClure in a Point Reyes Light article](#) published shortly after the CCC narrowly approved their conditional consistency determination. These reductions were **not** achieved due to any NPS strategy.

Similarly, under the NPS’s proposed “strategy” they will achieve reductions in CO₂e when operations close. If the result of a closure is similar to that of I Ranch, we can assume that this CO₂e reduction strategy will only occur after a lessee causes long-term adverse alterations of natural hydrological functioning and alterations of natural water quality into receiving waters, including the adjacent marine managed areas (MMAs) and ASBS.

No carbon reduction/carbon neutrality milestones were identified in the draft Strategy provided by the NPS in March. No on farm investments or adjustments were scoped out. They simply state that mandatory conditions will be developed and administered in future ranch plans. Clearly, these are not specific, measurable, actionable, realistic, or timebound goals. This amorphous Strategy does not adequately respond to Commissioner Wilson's original concerns expressed at the public hearing on April 22, 2021.

2. The CCC and the NPS agreed that this strategy would "consider how climate change initiatives from the Administration and Department of the Interior, to the extent that such initiatives are developed and pertinent, distill down to the level of Point Reyes National Seashore and the north district of Golden Gate National Recreation Area."

A glaring omission from the NPS's proposed Climate Action Strategy is the exclusion of the Department of Interior's 2021 Climate Action Plan, which required some of the following commitments:

- *Use Best-Available Science and Traditional Knowledge.* Planning and decision-making will use the best-available information that considers existing and projected climate change vulnerabilities, risks, and impacts. Decision-making will also consider traditional knowledge, and the Department will meaningfully consult with Tribes and other indigenous communities throughout decision-making processes that affect their interests.
- *Mainstream Adaptation.* Climate change adaptation will be mainstreamed and integrated into Departmental policies, planning, practices, and programs. This will ensure that the Department's decisions are not solely based on historic conditions but consider future scenarios and future-oriented management.
- *Tackle Inequity and Environmental Justice.* Issues of environmental justice and inequity will be integrated into decision-making to ensure adaptation efforts are sustainable and account for the impacts on all populations, including low-income communities, communities of color, Insular areas, and Tribes.
- *Maximize Co-Benefits.* Adaptation strategies will complement or directly support other climate-related initiatives, including respecting Tribal sovereignty and self-determination, improving disaster preparedness, promoting sustainable resource management, promoting environmental justice, restoring contaminated lands and waters, managing facilities sustainably to reduce energy and water consumption, and reducing greenhouse gas emissions
- *Apply Risk Management Methods.* Adaptation planning will incorporate risk management methods and tools that consider potential future climate conditions to identify, assess, and prioritize options to reduce vulnerability to the environmental, social, and economic impacts of climate change.

This is just one example of policy documents introduced and approved by the new administration, which affect the proposed action in the planning area. The Resources Renewal Institute believes that the intent of the Commission was to ensure that policies of the new

administration were captured and explained in the NPS's climate action strategy. Instead the NPS has excluded any mention of federal, state, or regional climate plans/goals that will guide their management actions.

Conclusion

Since the public hearing on April 7th, the public and the CCC have received:

- Extensive [health and sanitation violations](#) at beef and dairy ranches across the Seashore, including Marin EHS inspection results finding septic systems were out of compliance—or nonexistent—at 7 of the 16 ranches.
- [Rancher worker housing conditions](#) documentation.
- [2022 Confined Animal Inspection Reports](#) from the San Francisco Regional Water Quality Control Board which found the need for immediate corrective actions in 4 of the 6 dairies operating in the Seashore.
- [Drought Mitigation plans and other NPS/Rancher correspondence](#) detailing the severity of groundwater depletion and the extent of trucking of water into the Seashore to sustain beef and dairy operations
- A report [Heal the Bay](#) published in June 2022, in which it gave an “F” grade to numerous waterbodies associated with numerous beaches at the Seashore due to poor water quality for contact recreation.
- A [2021-22 Water Quality Report](#) independently commissioned by the Turtle Island Restoration Network, which [reveals](#) ongoing and pervasive water pollution at Point Reyes National Seashore.

The implementation of the General Management Plan Amendment for Point Reyes National Seashore, which the CCC narrowly conditionally concurred to on April 22, 2021, has revealed itself to be a Gordian knot so tightly entangled that it grows more and more gnarled and complex the more the public and regulators investigate.

The issues now being discussed and prioritized in the Water Quality Strategy were not initiated by the National Park Service. Rather, community-based organizations and a dedicated citizenry sounded alarms that initiated intervention from a collection of additional regulators. Similarly, the solutions laid out in the Climate Action Strategy were not initiated by the National Park Service, but by a lessee who close his dairy due to a concern they were running out of water and their aquifer was not recharging. For the foreseeable future the NPS will not be implementing the plan the CCC conditional concurred on, but will be picking and choosing which components of that plan they will be incorporating into interim leases.

How much further must the baseline of Consistency Determination No. CD-0006-20 shift before we are discussing a different project altogether?

There are numerous amendments that need to be made to various elements in order to ensure adequate oversight and an opportunity for course correction as the CCC and the NPS proceed.

What's more, there are a series of imminent deadlines the NPS and its lessees must achieve, and there is much ambiguity with regard to how to fund the growing list of corrective actions and the timeline for remedying these issues.

Unless and until the NPS amends their plan to incorporate amendments to further accountability and transparency and provide clarity around funding mechanisms and sources, RRI requests the CCC reject the Water Quality Strategy.

Thank you for protecting California's coastal resources for current and future generations,

A handwritten signature in black ink, appearing to read "Chance Cutrano". The signature is fluid and cursive, with the first name "Chance" being more prominent than the last name "Cutrano".

Chance Cutrano
Director of Programs
Resource Renewal Institute
ccutrano@rri.org

James Coda
2009 Falcon Ridge Drive
Petaluma, CA 94954

September 2, 2022

VIA EMAIL

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

Re: NPS's Water Quality Strategy; Agenda Item CD-0006-20 (NPS, Point Reyes
GMPA); Hearing on September 8, 2022

Dear California Coastal Commission:

I have some comments regarding a portion of the Coastal Commission's May 10, 2021, letter to NPS concurring conditionally with its CD, NPS's response to the CCC in the form of an overall strategy and timeline and, finally, the CCC staff's report "robustly" approving NPS's strategy and timeline.

More specifically, I'm going to address parts of Conditions 1 and 3 of the May 10 letter which require NPS to propose an overall strategy and timeline for assessing and improving water quality through the installation of best management practices ("BMPs") and which also require NPS to (a) report to the Executive Director annually on its water quality monitoring results and to (b) compare its annually acquired water quality data with relevant state and federal water quality standards.

By requiring NPS to compare its annual water quality data with relevant state and federal water quality standards, it would seem the CCC expects the data to eventually match or exceed water quality standards, although it doesn't literally state that.

NPS outlines its overall strategy on page 5 as follows:

Element 1 – Inspection, Implementation and Adaptive Management

Element 2 – Water Quality monitoring and Assessment

Element 3 – Annual Reporting

There is no "Element 4" which one would logically expect to be a timeline for "Compliance" with a date certain. There is some language in NPS's strategy that seems to indicate it intends for ranching to come into compliance under its strategy. For example: "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.” NPS Strategy at 23. (Emphasis added.) There is also this somewhat contradictory statement: “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.” Strategy at 5. (Emphasis added.)

If the CCC intends that the strategy is to at least meet minimally acceptable environmental conditions, including applicable water quality standards with a timeline, and NPS is agreeable to that, then the two agencies should revise the conditional concurrence and Strategy to state that.

That would be appropriate for both agencies because the Seashore Act¹ and the Coastal Act² require each agency to not only preserve environmental conditions but to restore the environment to presumably original conditions, to the extent possible. If NPS chooses to avoid any compliance language, I believe it is because it knows that with the current extensive ranching at PRNS, no amount of BMPs will ever get ranching into compliance.

There are far too many cattle on these park lands for BMPs to make a difference. I have discussed this in earlier comments. Douglas Lovell, Geoenvironmental Engineer, said the same thing in his water quality report submitted to the CCC a year ago (cow numbers must be reduced).

NPS states that it has installed 170 BMPs over the past 20 years in the ranching area of PRNS and GGNRA. Strategy at 16. NPS doesn’t give a breakdown on how many were installed in each drainage. Because of their anadromous nature, Lagunitas and Olema Creeks, may have received above-average numbers of BMPs.

Yet, Tomales Bay, and Lagunitas Creek and Olema Creek still fail to meet water quality requirements for pathogens, nutrients and sediments. The drainages in PRNS are even worse. Douglas Lovell’s August 28, 2022, report on water quality for Kehoe, Abbott’s, Drakes Estero and Drakes Bay Watersheds filed with the CCC on August 31, 2022, by Turtle Island Restoration Network, especially Table 6 which shows complete failure with respect to those watersheds meeting fecal indicator

¹ “[T]he property . . . shall be administered by the Secretary without impairment of its natural values, in a manner . . . consistent with . . . the maximum protection, **restoration**, and preservation of the natural environment . . .” (Emphasis and bolding added.)

² “§ 30230 Marine resources shall be maintained, enhanced, and, where feasible, **restored**.” (Emphasis and bolding added.)

“30231. 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** . . .” (Emphasis and bolding added.)

bacteria (“FIB”) standards by factors as high as 174 times the objective. This is after 20 years of installing BMPs.

Why can’t they meet the objective of the applicable water quality standard, aside from the fact that there are too many cows?

There are at least two reasons, runoff and unfenced ponds.

RUNOFF

There are 2400 beef cows and 2425 dairy cows in the ranching area. Beef cows deposit all their urine and feces directly on the ground. The same is true of dairy cows, except to the extent most (not all) of them are housed part of the year in free-stall barns, but even that manure is scraped or hosed from the barn floors into adjacent manure ponds where it is stored until it is later loaded into tanker trucks and spread onto the ranch fields. So, sooner or later, all of the manure from 4825 cows is deposited on park lands. Keep in mind that a Holstein dairy cow weighs on average 1500 pounds.

https://www.holsteinusa.com/holstein_breed/holstein101.html?tab=2#TabbedPanels
1 It produces 120 pounds of manure (urine and feces) a day.

<http://livestocktrail.illinois.edu/dairynet/paperDisplay.cfm?ContentID=274> That’s 43,800 pounds (21.9 tons) per year.

When it rains enough to saturate the ground, all the rain runs downhill and carries some manure constituents with it. Barbed wire fences and hardened stream crossings have no effect on polluted water running across the ground and into the nearest creek and that is how the creeks and streams become very polluted.

In summary, BMPs in general don’t work when it rains and the soil gets saturated because you then have runoff across the fields and into the watercourses. The only thing that will work is a significant reduction in cattle numbers. NPS has very recently added reductions in cattle numbers as a BMP, but the ranchers would not be easily convinced and would probably contact Senator Feinstein and/or Representative Huffman to complain. Both of them are very strong supporters of ranching in these parks. In view of Douglas Lovell’s very recent study, some drainages would require a 100% reduction in cattle numbers.

THE 120 UNFENCED PONDS

There are 120 stock ponds in the two parks. GMPA FEIS at 168. They cover 82 acres. *Ibid* at 74. The second reason why an important BMP like exclusion fencing along creeks doesn’t have much effect in PRNS and GGNRA is because the ranchers don’t want to follow good husbandry rules and fence the ponds. They prefer to just have their cows walk into the stock ponds and drink. If NPS ever tried to require

the ranchers to follow good husbandry and fence the ponds, the ranchers would contact Senator Feinstein and/or Representative Huffman and complain.

It is not a good idea to let the cows walk into the stock ponds and drink because when they do so they invariably urinate and defecate in the pond. That is a big reason why pollutants get into the creeks. Stock ponds are usually located where there is a spring or seep to fill the pond and they normally have a discharge pipe at the lower (dam) end of the pond which lets water escape when the pond gets to a certain level. Plus, the earthen dams are permeable and the pond water percolates through them and carries some components of the manure with it. Hence, the polluted pond water enters creeks below the dam and all that exclusion fencing along the creek below the pond is rendered essentially useless.

There is a simple solution, good husbandry as explained below.

A farm pond is a pool of water formed by a dam or pit. You can use it to supply drinking water for your cattle . . .

On hot summer days, cattle like to stand around in ponds trying to cool off. Doing so is unhealthy for your cattle and for your pond. The cattle will urinate and defecate in the same pond water that often serves as their drinking water . . .

For the foregoing reasons, most farm ponds should be completely fenced so cattle can't go around or in them. You can take advantage of gravity by using a drain pipe to bring water from the pond to a water tank at a lower elevation outside the fenced area.

“Raising Beef Cattle for Dummies,” Nikki and Scott Royer, at 125-26. (Emphasis added.) In addition to gravity, pond water can be moved to tanks using electric and solar power.

Fencing streams without fencing the pond portions of the streams is not going to keep manure out of the streams unless all ponds are fenced. If the CCC doesn't require it, it will never happen.

Furthermore, according to NPS's GMPA EIS: fencing construction is going to occur at a snail's pace:

Fencing—Approximately 20% of the 340 miles of existing fencing would be replaced, 24 miles of fence would be installed for the Resource Protection subzone, and an additional 35 miles of new fence would be constructed to improve livestock management over the 20-

year lease/permit term. NPS anticipates up to 5 Fencing projects annually.

GMPA FEIS at 110. (Emphasis added.)

Taking 20 years to exclude cattle from all the streams is absurd. And that prediction doesn't even contemplate fencing 120 ponds.

Keeping the cows out of the streams by fencing them can be beneficial, but not if you let the cows urinate and defecate in the ponds and that polluted pond water winds up flowing down that fenced stream.

Below is a photo I took of a Holstein cow defecating in a large pond on the L Ranch. I believe this pond is the headwaters of the South Fork of Kehoe Creek.



Below is a photo I took that is a short distance down grade from the pond in the first photo. It receives the upper pond's polluted water. Like the first pond, it is in the drainage for the South Fork of Kehoe Creek.



When the water (and manure) from this lower pond exits the pond it flows down grade to Pierce Point Road where it joins the main stem of the South Fork of Kehoe Creek. Note the vegetative growth in the pond due to a vast amount of nutrients from the cow manure going into these ponds. All ponds should be fenced with pipes to troughs located down grade from the ponds for stock watering.

In summary, as long as it rains enough to saturate the soil, the rain will run off and carry with it manure pollutants that will wind up in the drainages and their creeks and streams. Unfenced ponds provide a lower, but more constant, source of pollutants to drainages and their creeks and streams. Even if the ponds are fenced, runoff during rains will still greatly pollute the drainages. Another approach is needed. “Insanity is doing the same thing over and over again and expecting a different result.” The only BMP that will work, given that when it rains enough there will be runoff, is to reduce cattle numbers.

Douglas Lovell, in his August 28, 2022, Surface Water Monitoring Report, has already provided a method or framework for cattle reductions in the Kehoe, Abbott’s, Drakes Estero and Drakes Bay drainages in his Table. 4. If a drainage is four times the limit on fecal indicator bacteria, one method would be to reduce the total number of cattle in the drainage by a factor of 4.

In any event, ranchers should not be given 20-year leases until they meet the applicable water quality standard for that drainage.

ADDITIONAL COMMENTS

As CCC staff has pointed out, NPS's strategy does not meet all the requirements under Condition 1, namely Element 5. Staff Report at 24. Plus, it fails to address "the more minor omissions identified above regarding Elements Seven and Eight." *Ibid.* The Commissioners need to address that.

s/James Coda

Julia Stalker
520 Shrader St
San Francisco, CA 94117

California Coastal Commission
455 Market Street, Suite 223
San Francisco, CA 94105-2219

September 2, 2022

Re: September 8, 2022 Hearing. Agenda Item Th10b, CD-0006-20

Dear Commissioners:

I appreciate the amount of time and work that has been given to completing the Water Quality Monitoring Strategy for Point Reyes National Seashore and the North District of the Golden Gate National Recreation Area but think that it is still not adequate enough to be approved by the Commission at the September 2022 meeting.

Your staff call the Strategy a significant improvement over the version that was presented by NPS in April 2022 and recommend approving it despite the fact that it is incomplete.

The element that is missing from the Strategy (a commitment to updating the strategy and timeline on an annual basis based on data and analysis from the previous year) is suggested to possibly be an oversight. Perhaps this is true, but this commitment should be included before the Strategy is considered complete and/or approved.

The omission of including water quality monitoring results from all previous years and of a strategy for revenue generation to fund the Strategy are not simple shortcomings as your staff has labeled them. If not included in the Strategy, NPS staff and ranch operators could be allowed to further delay much needed repairs and maintenance and allow the harmful pollutants to continue to impact the waterways of the Seashore, threatening the health of the public and the natural resources of the Park and of the Coastal Zone.

The past has shown that NPS has not been transparent with data regarding the water quality in the Park, has not been able (or willing) to correct violations quickly when discovered and has claimed to be hindered in monitoring and/or correcting the problems due to a lack of funds.

These are all important aspects of insuring that the water quality data is recorded and kept transparent and used to correct pollution-causing violations **in a timely manner** with appropriate funding sources that have been identified. The details of the funding sources and responsible parties **DO NEED** to be made clear and included in the Strategy.

Without a commitment to disclose and use the water quality data to update the strategy and timeline each year and without a plan or commitment of funding, this Strategy is incomplete and potentially ineffective.

Please do not approve of the Strategy without the addition of, and more clarity about these and any other omitted features, measures and details.

Sincerely,
Julia Stalker

From: Kenneth Bouley
34 Drakes Summit Road
Inverness California 94937
(415) 259-1332

kennethbouley@gmail.com

To: California Coastal Commission EORFC@coastal.ca.gov

Date: August 31, 2022

CC: U.S. Interior Secretary Deborah Haaland
Shannon A. Estenoz, Assistant Secretary for Fish and Wildlife and Parks
Cindy Orlando, Principal Deputy Regional Director - National Park Service
Point Reyes Superintendent Craig Kenkel

Re: [Agenda Item Thursday, September 8, 2022: CD-0006-20 \(National Park Service, Marin Co.\)](#)

Thank you for accepting my comments regarding this matter. As a concerned, local citizen, I have closely read the various relevant publications and correspondence from the Park Service.

My initial comments pertain to this condition from the Commission to the Park Service: "The strategy should be informed by existing water quality data, and water quality enhancement efforts that have proven successful elsewhere." Your staff states that the Park Service complies with this condition.

The relevant section of the staff report is this: "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..." (p14)

The relevant section of the cited NPS Strategy paper says, "Analysis of water quality data collected from 2000 to 2013 in the Abbotts, Kehoe, and Drakes Estero watersheds found that fecal indicator bacteria concentrations (after accounting for variation in rainfall) declined at all 13 water quality stations that were downstream of approximately 30 Management Activities... There was a 54 –99% reduction in fecal indicator bacteria concentrations with a sixfold increase in the frequency of samples meeting regulatory criteria over the 13-year study period ([Voeller et al. 2021](#); [GMPA Appendix L](#))." NPS Strategy, page 23.

But there are significant flaws in the named paper and your staff errs by referencing it approvingly. Furthermore, the Park service has shown willingness to misrepresent the paper's findings. The Best Management Practices described in this paper have certainly not been "proven successful," unless successful means only moving water quality from abysmal to very bad.

Following is a list of problems with the cited paper or its use in the Strategy, summarized here and detailed in

the post-script.

Inappropriate before/after approach: the paper uses a time point to determine the “before” and “after” cutoff for its analysis which is based on an irrelevant circumstance of the study and is more likely to introduce error into the findings than an arbitrary cutoff. The dividing line was set to when the researchers changed the type of indicator bacteria they were actually measuring, rather than basing the cutoff on an analysis of when the BMPs were likely to take effect, for which the authors lacked the necessary data.

Poorly defined and quantified explanatory variables: the paper evaluates the effectiveness of Best Management Practices (BMPs) but arbitrarily counts them up at the project level. Fences of different lengths, roofs of different sizes, and troughs of different capacities are lumped together (e.g. putting up 100 yards of fencing is counted as one BMP, and putting up 1,000 yards of fencing are counted as just one more BMP. Etc.) In many cases, the paper’s authors do not know when the BMP projects they are analyzing started or ended.

-
Paucity of data and omitted explanatory variables: there were only 30 BMPs in the entire study, across 4 watersheds. Concurrent with the BMPs, dairies affecting two of three relevant watersheds converted their operations to organic. How much this affected the results was not analyzed. Uncontrolled variables are problems for causal studies. Converting to organic is something that can only be done once, and so whatever aspects of these conversions contributed to improved water quality cannot necessarily be expected to contribute anything further in the future. The only watershed not affected by these dairies’ conversions had exactly two BMPs implemented over the study period and showed the least improvement. This suggests that to some unknown degree, it was the one-time (unrepeatable) conversion to organic that improved the water quality, not the BMPs, as the paper states.

Misrepresented results: Where the authors claim (and CCC staff repeat without comment) that “there was a 54 –99% reduction in fecal indicator bacteria concentrations with a sixfold increase in the frequency of samples meeting regulatory criteria over the 13-year study period,” it should be noted that even after numerous, costly projects, water quality still exceeded regulatory thresholds between about half and three-quarters of the time. In other words, water quality got a lot better because it was so dire to begin with and even after the BMPs were done, it was still illegally bad most of the time. This might be OK if the observed trends were expected to continue, but they are not. See next point.

-
Unacknowledged Diminishing Returns: the paper’s authors admit that although BMPs are *initially* helpful, further BMPs help less and less over time. It is therefore ill-advised to observe an improvement trend from preliminary BMPs and assume that trend will continue. In fact, the opposite is known to be true: additional BMPs will have increasing less beneficial impact (the trend will peter out.) The Park Service should not claim, and the Coastal Commission should not accept, that the trends seen early on will continue as such – it is known that they will not.

So overall, whereas the paper is used to imply that things are already getting better, and future improvements are assured, a closer read actually reveals that things are still really bad and there’s no reason to be confident that they’ll get much better.

In summary, I argue that element 2 of condition 1 (“The strategy should be informed by existing water quality data, and water quality enhancement efforts that have proven successful elsewhere”) is in fact not met, contrary to your Staff report. Furthermore, element 5 (“A commitment to updating the strategy and timeline on an annual basis based on data and analysis from the previous year”) is uncontroversially not met, per your staff report. It’s unclear what “partially compliant” might mean. If even one element of the Commission’s requirements is not met, then presumably you should find the Strategy non-compliant. The Strategy should not be deemed “close enough for government work.”

And whereas the Park Service did not comply with the Commission’s condition to commit to regular analysis and Strategy updates, it of course did not comply with a more stringent condition that the Commission

unfortunately did not make: *that the Strategy work*. There are no conditions on *outcomes*. What recourse will the Commission have if the Park Service and ranchers actually implement the Strategy, partially or in full, and yet water quality remains inadequate?

Another problem with the Strategy is the lack of a sure source of funding for implementation. This is especially concerning considering the Point Reyes national park staff has a historically poor record of enforcing existing rules and lease conditions. I believe the Commission is aware of recent occurrences in the park concerning illegal bulldozing of sensitive riparian habitat, longstanding and yet undetected toxic dumps, and nonfunctional septic systems at ranch residences, so I won't recount them here. All of these blatant transgressions of law and public trust were found and reported by the citizenry, not the National Park Service. But the park service, like Lucy holding the football for Charlie Brown, is saying this time it will be different. It's unclear why the taxpayer should bear *any financial burden whatsoever* regarding private businesses polluting public land, but in my opinion, the odds of implementation and monitoring aspects of this Strategy failing for budgetary reasons lean steeply toward the inevitable.

Finally, I have a comment about **restoration**.

The Point Reyes National Seashore enabling legislation states that the land must be administered "...without impairment of its natural values, in a manner which provides for such recreational, educational, historic preservation, interpretation, and scientific research opportunities as are consistent with, based upon, and supportive of the maximum protection, **restoration**, and preservation of the natural environment within the area..."

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..."

So, both agencies, the National Park Service and the California Coastal Commission, are formally charged with **restoration**, not mere mitigation. And yet, neither seems to be pursuing it genuinely. Instead, the staff of each are exploring the arcane edges of minimally legally justifications. The true restoration of the waters and general environment of Point Reyes National Seashore is in fact trivially "feasible." After all, the ranch leases in the Seashore are at the **discretion** of the Interior Secretary. The painfully obvious first step in restoration is simply to remove these polluting, private-profit, taxpayer-subsidized businesses from the public's land. Meanwhile, band-aids, politics, and shifting technicalities thwart progress and plague efforts at what everyone knows is the right thing to do.

I sincerely hope the Commissioners do not rubber stamp the Park Service's overly optimistic and otherwise dubious strategy.

Thank you.

Sincerely,

Kenneth Bouley

PS: Below is a more detailed analysis of the Park Service's unsupported claims regarding expectations of future improvements in water quality in the Seashore. I would be happy to discuss any aspect of my review with any Commissioner.

In its March 4, 2022, letter to the California Coastal Commission,¹ the Park Service wrote to the Commission, “Changes related to more robust requirements for ranch operations and additional restrictions on diversification activities will increase the certainty of water quality protections and reduce environmental impacts from dairy operations and forage production.” [emphasis added]

But *there is no such certainty*, and in fact the opposite is apparent. The Final Environmental Impact Statement (FEIS) prepared for the General Management Plan Amendment² (GMPA) specifies, “Under alternative F [removing ranching], impacts on water quality would be noticeable, long term, and beneficial because ranching activities would be phased out across the entire planning area.” (GMPA, page vii), whereas “Alternative B [the selected plan] would continue to contribute adverse impacts on water resources in the planning area from beef and dairy cattle ranching, Manure and Nutrient Management, and water consumption related to ranching activities.” (GMPA, page 135). This much is as per the Park Service.

Yet by the time the Record of Decision³ (ROD) was issued, the story had changed: “Implementation of the selected action and the measures discussed above will result in continued improvements in water quality in the planning area, consistent with trends that have been documented through long-term monitoring (Lewis et. al. 2019⁴ and Voeller et. al. 2021⁹).” (ROD, p D-9) [emphasis added]

Unacknowledged Diminishing Returns: The Park Service omits the fact that the cited papers explicitly characterize the impacts of the evaluated BMPs as exhibiting a steep decline of effectiveness over time. For example, the discussion in the Lewis paper states:

An interesting aspect of our findings is that, while the downward trend observed across grazed sites was significant across the entire period (Figure 4), there was a notable reduction in fecal coliform concentrations with the completion of the 1999-2006 BMP phase ... Comparing the 1999–2006 mean (1906) to the 2007–2017 mean (291), it appears that the initial prioritization and implementation of BMPs was associated with a mean reduction of fecal coliform by 1615 cfu/100ml—an 85% mean reduction that persisted throughout the remainder of the study period... (pp 7-8).

Here is Figure 2 from the Lewis paper:

So, 85% of the benefit was achieved in the first 42% of the effort measured by time, the first 15% of the effort measured by number of BMPs, and in the first 14% of the effort measured by length of fence influenced.

When the Park Service claims additional BMPs will cause a similar trend in water quality impacts, what trend do they mean? They presumably mean to imply water will continue to improve to a point where it meets standards (a speculation), rather than to imply that BMPs get progressively more expensive and less effective (the actual trend).

The Lewis paper states, “Fencing to limit or exclude cattle access to stream corridors has been shown to be highly effective in improving water quality and riparian habitat” (p. 7) and “All six BMPs implemented between 1999 and 2006 were stream corridor fencing (3. 8 km), with five of the six projects directly eliminating cattle access to approximately 90% of the mainstem of Olema Creek.” (p. 8) In the Voeller paper, more than half the BMPs (16/30) were fencing, and another 20% (6/30) involved water lines and/or troughs designed to keep the cattle out of creeks.

Although the Lewis paper discussion concludes their findings emphasize the need to prioritize BMP implementation, another clear conclusion is that fencing or coaxing cattle out of creeks (with artificial water sources) is by far the most cost-effective BMP, *and then further improvements become increasingly more difficult to achieve.*

In their comments to the draft GMPA/DEIS, the San Francisco Regional Water Board put it this way:

Technical or financial infeasibility of implementing appropriate BMPs, management or mitigation measures to eliminate or reduce impacts: In some Ranch Core locations, the suggested mitigation measures, such as "comply with requirements in the General CAF permit" may not be adequate. For example, the requirement to eliminate stormwater run-on into areas containing waste products, *may be technically or financially infeasible.* In the locations where the measures cannot successfully be implemented, there will be significantly greater impacts than identified in the EIS.⁶ [emphasis added]

The Voeller paper has several other significant problems:

Inappropriate before/after approach: The paper implements a before and after comparison in its discussion (for example, "Overall, for the analysis by station, FIB below the water contact recreation numeric objective increased sixfold, from 0.06 to 0.38 of all samples after 2006..." (p 147). However, "before" and "after" were not determined relative to an effort to identify the expected effective dates of any of the Best Management Practices (BMPs), but rather were determined by the date at which the sampling switched from measuring fecal coliform (FC) to measuring Escherichia coli (EC), as part of a discipline-wide trend.⁷ In other words, "before" and "after" are not defined as before and after anything that matters. A FOIA request asked for "The records containing information about why the water quality samples referenced in Voeller et al. (2021a) were split up and evaluated as years 2000- 2006 and then 2007- 2013," but this request was unaddressed in the FOIA response.⁸ In fact, an arbitrary dividing line would have likely been better because it would not have introduced or amplified any inaccuracy or variability in the conversion of FC to EC as a potential source of error in the results. In other words, if the method of converting the FC measures to EC includes any error, using that as the dividing line makes the most of the error and convolutes results.

Poorly defined and quantified explanatory variables: The explanatory variables in the Voeller paper (the putative causes of the measured improvements) are BMPs implemented over the study period (2000-2013). But there are only 30 BMPs in scope, across three watersheds, and they are arbitrarily defined and quantified. For example, 16 of the 30 BMPs involve fencing, but there is no effort to consider length or placement of the fence, number of animals excluded, etc. Neither do the authors know with any degree of certainty when the projects began and ended relative to dates of the water quality samples which they allegedly improved. The same FOIA request asked for BMP project start dates and completion dates. The National Park Service's response included only estimated completion year for the projects. Responses for 12 of 30 (40%) BMPs say things like "Completed by 3/2010 based on imagery," meaning the project was done just *some time before* a certain year estimate. In other words, there is no knowledge of whether this BMP affected just the after results, or the before and after results. If it affected both, it is obviously not the cause of the measured improvements. For three of the 30 BMPs, the completion estimation dates are a three-year spread. The same FOIA request asked for "The expected timeframe for effectiveness of BMPs to be measurable," but this item was unaddressed in the FOIA response.

The arbitrariness of the before and after dividing line and the paucity of the BMP data

point to a longitudinal study (with realistically represented trend lines) rather than a before/after study.

Paucity of data and omitted explanatory variables: As mentioned, there were only 30 (arbitrarily defined) BMPs implemented over the study period, with unknown effective dates. These BMPs were implemented in three watersheds. For two of the three, there was a significant uncontrolled variable as admitted by the authors:

“Changes in management not documented in this study could have also contributed to reductions in FIB concentrations. This included conversion of the dairies to organic operations (two in 2006 and one in 2011). General changes associated with this conversion included overall reduction of herd sizes and adherence to a number of regulatory requirements under the National Organic Program...” (p 147)

Conversion of some operations to the organic standard is an uncontrolled variable affecting two of the three watersheds with BMPs over the study period. Elsewhere in the results we learn that “at the watershed scale, the FIB reduction was more pronounced for those containing dairies (98%) when compared with the watershed with a single beef cattle operation (71%).”(P. 147) Not only was no effort made to control for differences between dairies and beef ranches with respect to BMP effectiveness, and not only was there no effort to control for the change to organic operations, but these uncontrolled variables affected the same subset of watersheds (two watersheds with dairies and which experienced a shift to organic versus one watershed without dairies that did not experience that shift), further obscuring any inferences about true causality.

The same FOIA request to the NPS regarding this study requested “The records containing information about the confounders (changes in conditions over the study area and timeframe that was considered as possibly affecting the Voeller et al. 2021a paper’s findings) cited in Voeller et al. 2021a, specifically those records associated with the transition to organic certification for any dairy in the tested watersheds.” But this aspect of the FOIA request was unanswered.

And although switching to organic can be viewed as simply the implementation of yet further BMPs, these are not the BMPs credited with the water improvements in the study. (One of the main changes involved in going organic is a reduction in herd size, and presumably further reductions would result in further improvements, since the cattle are the source of the bacteria.) Furthermore, going organic is something *that can only be done once*, implying that whatever improvements were attributable to the switch (which we don’t know, since that is not established in the study), there is no reason to believe additional improvements are achievable.

Additionally, and probably most significant, the only watershed that *did not have* a major uncontrolled variable (Home Ranch Creek watershed) had *just two BMPs over the study period.*

In summary, the study only scoped in three watersheds and 30 BMPs; the two watersheds with the biggest improvement had a significant uncontrolled variable over the study period; and the third one had only two BMPs, with uncertain start and completion dates.

Misrepresented results: The study claims, “Overall, for the analysis by station, FIB below the water contact recreation numeric objective increased sixfold, from 0.06 to 0.38 of all samples after 2006 while the values > 4,000 MPN/100 mL declined by > 75%, from 0.59 to 0.13 (see Table 3, Fig. S5).” (p 147)

Of course, all stations are in one watershed or another and so station level data rolls up to watershed level data. Table 3 from the report (which has no station level data) is given below:

Note that the maximum ratio increase in Category 1 measures (below the recreational contact threshold) for any watershed in the table is 400% (.06 vs .24 for Kehoe). And yet the authors claim, “for the analysis by station, FIB below the water contact recreation numeric objective increased **sixfold**.” It is quite unclear where sixfold comes from, since the best performing watershed increased only four-fold. Although you can’t average averages, even if you do, you can’t get results outside the range of all the averages. In other words, the only way “the analysis by station” can give a six-fold increase in Category 1 measures is if it reports a selected slice of the data, for example, the one station with the most dramatic improvement. (It could be something else, but what it actually means is not explained in the paper.) This is commonly called “cherry-picking” and is not generally expected in unbiased, scientific papers.

Furthermore, the authors admit that their category model can be misleading. Specifically, the results show that there was a two-and-a-half-fold increase in the number of measurements below the regulatory threshold in the sole watershed in the study with no BMPs enacted over the study period (namely East Schooner Creek, which was included in the study as a control watershed, even though it had no BMPs.) See highlighted values in the same table:

The number of measurements also went down starkly in categories 3, 4, and 5 in East Schooner Creek (despite no BMPs.) Considering increases in Category 1 measures, the one watershed with no BMPs (East Schooner Creek, 250% increase) performed nearly the same as the one watershed that did not have an organic conversion over the study period (Home Ranch Creek, 279% increase.) This is curious, and could cast doubt on the overall conclusions (for example, was this caused by the inappropriate selection for before/after cutoff described above?), but the paper dismisses the anomaly as “likely due to artifacts from categorical versus continuous models.” (P. 147)

So, under the binned or category model approach, one or a subset of categories can go up or down independently of, or disproportionately to, the overall trend for the station, watershed, or the study overall. The shuffling between categories is not necessarily indicative of the overall change in average values or water quality. For example, if you compare student grades year over year for some year-class, the number of A’s can go up even if the overall class numerical average drops, the number of F’s can increase even if the overall class numerical average increases, or vice-versa.

But the categorical model did not apply only to East Schooner Creek and although the authors are willing to cite this aspect of that model type to explain away the apparently anomalous trend, they do not point out the obscuring effect of the categories on the watersheds they wish to stress. The categorical model misleads in the same way for all watersheds (a four-fold increase in Category 1 measures is *nothing like* a 400% improvement in water quality), and selectively citing it for only those watersheds including BMPs while explaining it away for the uncooperative watershed is misleading. In other words, the reader is asked to take seriously the (outlying and possibly cherry-picked) six-fold increase in Category 1 measures for some unspecified station, but invited to ignore the two-and-a-half-fold increase in the watershed which lacked BMPs.

Note the artificial and misleading measures-related categories are superimposed on the already dubious before / after category, further casting doubt on the conclusions.

Point Reyes National Seashore added news of this study to their website, “Best Management Practices Improve Water Quality on the Point Reyes Peninsula,”⁹ shortly after the study was published. That page includes the claim, “The scientists also found that water samples met regulatory criteria six times more often.” As discussed above, that claim, if true in any sense, is certainly not representative of the actual data scoped in the study. But here it is repeated without qualification.

The discussion section of the Voeller paper reads, “Despite dramatic reductions, FIB concentrations still *periodically* exceed regulatory objectives and microbial pollutants remain that may introduce human, ecosystem, and other risks in our study watersheds.” (p 147) The same PRNS webpage borrows wording from here: “Bacteria concentrations *may* still *periodically* exceed regulatory objectives.” Leaving aside the inserted and indeterminate “may” (there is no doubt, they certainly will *frequently* exceed objectives) from that statement, “periodically” means “from time to time.” (Another meaning is *at regular intervals*, but this meaning cannot be operative here.) Actual exceedances in the after period are between 47% and 76% across watersheds. In summary, instead of glibly reporting regulatory compliant measures increased six-fold, the authors and the NPS could have more honestly relayed, “measures are still outside of regulatory compliance *most of the time* despite the presence of numerous BMPs.”

Note on precipitation: the Voeller paper adjusts bacteria measures for rainfall in its analysis, something the authors say is necessary for a meaningful trend evaluation. Voeller is also an author on the Lewis paper, which says for its study area and period, adjusting for precipitation is unnecessary. Responding to last spring’s (2021) citizen-sponsored water quality tests (“Point Reyes seashore water tests find high bacteria levels,” Marin IJ¹⁰), the Park Service minimized the findings, citing the effect of precipitation (“Seashore spokeswoman Melanie Gunn told the Light the test results were “in line with what we might expect after a rain event at this time of year.”¹¹). However, *it does rain*, after all, more or less, on and off, and the dismissal of rain-influenced measures as anecdotal or aberrant seems to ignore the fact that contaminants and run-off from ranches in the park eventually reach the ocean and may affect plant and animal life there.

Note that the 2019 State protocols for bacterial WQ sampling require that it be done during the wet season, specifically right after rainfall events. In addition, the CAF Order affecting the dairies requires that the ranch operator do their field sampling within 24 hours of a rainfall of 1” or more, if possible.

Common BMPs such as creek exclusion fencing and pasture water troughs are designed to cause cattle to defecate more centrally in pastures instead of in or near streams. This would seem to change the outflow *profile* of bacteria to the ocean and not necessarily the overall amount, depending on soil type, topology, etc., or perhaps not to the same degree that controlling for (controlling away) post-storm measures may imply. In other words, if BMPs cause a re-profiling of bacteria outflow to downstream waterways, controlling for precipitation actually obscures the fact that all that has changed is when, not how much, bacteria enter the waterways. In fact, salmonid species whose potential habitat includes some streams in Point Reyes, such as steelhead trout and coho salmon, are actually spurred upstream by freshwater outflows, so concentrating outflows after rains may be in that sense more concerning.

Conclusion re: water quality: Both the Voeller and Lewis papers include disavowals of conflict of interest, but all three authors of the Voeller paper and second author on the Lewis paper (again, Point Reyes National Seashore Range Program Manager, Dylan Voeller) are NPS personnel whose employer issued the claim of non-impairment under severe political pressure from prominent politicians and ranching interests. It does not avoid the appearance of conflict of interest that the park service ceased water quality testing in

the Pacific-draining watersheds in the year following then Interior Secretary Salazar's direction to the Park Service to pursue 20-year leases for the Point Reyes ranches. Neither does it avoid the appearance of bias that the authors decided to write a paper, using 8-year-old data, and publish *just in time* to be referenced by their employer's controversial Record of Decision. The paper was published after the public comment period on the draft General Management Plan Amendment but before the final decision and so was not available for public comment during that phase of the formal process. Add to this the apparently selective reporting of cherry-picked data described above and appearances of bias are magnified.

¹ CD-0006-20 – National Park Service, Point Reyes National Seashore - Update and Request for Extension of Time for Presentation of Water Quality Strategy for Commission Review. Superintendent Craig Kenkel to Executive Director John Ainsworth

² https://www.nps.gov/pore/getinvolved/planning_gmp_amendment.htm

³ <https://www.nps.gov/pore/learn/news/newsreleases-20210913-gmp-amendment-rod.htm>

⁴ <https://www.mdpi.com/2071-1050/11/19/5516>

⁵ <https://bioone.org/journals/rangeland-ecology-and-management/volume-76/issue-1/j.rama.2021.02.011/Improved-Microbial-Water-Quality-Associated-with-Best-Management-Practices- on/10.1016/j.rama.2021.02.011.short>

⁶ General Management Plan Amendment: Draft Environmental Impact Statement: Public Comments, comment #7018. https://www.nps.gov/pore/getinvolved/planning_gmp_amendment_deis_public_comments.htm

⁷ "However, *Escherichia coli* (EC) is a better measure of coliform bacteria risks to human health than total or fecal coliform (FC) (Edberg et al. 2000), and as demonstrated by Derose et al. (2020), regulatory numeric targets for FC can overestimate fecal contamination as compared with EC. Consequently, many microbial water quality monitoring programs have shifted their FIB measurements from FC to EC over the past few decades (Cude 2005; Garcia-Armisen et al. 2007; Rasmussen and Ziegler 2003)." P 140.

⁸ FOIA DOI-NPS-2021-00S31S. Center for Biological Diversity to: National Park Service.

⁹ <https://www.nps.gov/articles/000/best-management-practices-improve-water-quality-on-the-point-reyes-peninsula.htm>. Last updated: April 30, 2021.

¹⁰ <https://www.marini.com/2021/03/20/point-reyes-seashore-water-tests-find-high-bacteria-levels/>

¹¹ <https://www.ptreyeslight.com/news/private-tests-show-bad-water-quality-near-park-ranches/>

This email and any files transmitted with it are confidential, proprietary and intended solely for the individual or entity to whom they are addressed. If you have received this email in error please delete it immediately.

Dear Commissioners,

Thank you for this opportunity to provide a written comment on the National Park Service (NPS) Water Quality Strategy. I am a Marin County resident, and I frequent the National Seashore. My time and experiences in this National Park is already impacted by the number barbed-wire fences, electric fences, poor access to trails and coastline due to cattle, cattle manure, and now based on the data from the Lovell Water Quality report, it appears I should not enjoy the waters in Drakes Estero, nor Drakes Bay, Abbotts, and Kehoe due to the significant levels of E.Coli, Enterococci, and Fecal Coliform caused from cattle manure.

I am aware the NPS stopped water quality monitoring in 2013, even though water quality data up to 2013 did not meet safe regulatory criteria, therefore I welcomed the Commissioner's requirement of the NPS to develop a water quality strategy. However, the NPS 2nd version of the proposed strategy does not meet a level of responsibility, transparency and accountability for me and the public to feel safe when enjoying the recreational waters in Point Reyes.

In 2021-2022, the NPS did not perform weekly sampling requirements which are cited by SFRWQB and the EPA – that is irresponsible. With the NPS' proposed monthly sampling, they missed capturing significantly high results of fecal bacteria indicators (FIB), and once again, put the public health at risk. These FIBs were captured by the work performed by Douglas Lovell since weekly sampling occurred.

Please require the NPS to perform weekly sampling to ensure there is accurate and a trustworthy dataset. There is absolutely no excuse for lack of money or lack of individuals to perform basic water sampling and the analysis. There is money, definitely in the pockets of the tenant ranchers, and since the tenant beef and dairy operations are causing this water pollution, the tenants must pay the cost of the lab analysis, not the public.

In terms of lack of transparency, the NPS did not provide the raw data from their 2021-2022 sampling, and now they proposed a yearly update of the results to the CCC, and not to the public. Weekly sampling paid for by the ranchers, with weekly updates shared with the public is a must. The public should feel safe in our own National Park.

Politics are in the way for the right step to take here for the environment, for wildlife and the public. We know the NPS and politicians have been protecting and coddling the tenant ranchers in PRNS for decades, and to the detriment of our public lands. Therefore it is time for the NPS to be accountable and prioritize the public land, for the sake of the public and future generations.

If the NPS cannot be responsible, accountable and transparent, urge the Commissioners to put politics aside, stand with the science and the need for us all to take a much needed step to protect our public land and coastline in PRNS. I believe clean water will never be possible with 5000 cattle in Point Reyes – it is time to open up the conditional concurrence, and reject it, as cattle ranching in this coastal zone does not align with the Coastal Act.

Kelli Petersen
Mill Valley California – submitted September 2, 2002