CALIFORNIA Water Boards

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GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

Sent via email – no hard copy to follow

January 24, 2024
CIWQS Place No. 209987

Bolinas Community Public Utility District
Attention: Jennifer Blackman, General Manager
Box 390 270 Elm Road
Bolinas, CA 94924
Sent electronically to jblackman@bcpud.org

Subject: Water Code Section 13267 Order – Technical Reports for Bolinas Community Public Utility District's Wastewater Treatment Facility

Dear Ms. Blackman:

This letter requires the Bolinas Community Public Utility District (District) to submit technical reports related to the District's wastewater collection, treatment, and disposal facility (Facility) pursuant to California Water Code section 13267. On June 27, 2023, the San Francisco Bay Regional Water Quality Control Board (Water Board) issued a letter of support of the proposed expansion of District's sewer collection system, under the conditions that District continues to adhere to the existing waste discharge permit, enhances groundwater monitoring at the disposal fields, and evaluates potential future upgrades to the Facility. The enhanced monitoring and associated technical report requirements are detailed in this letter.

Background & Facility Description

The District owns and operates a municipal wastewater system in Bolinas which is regulated by the Water Board under Waste Discharge Requirements Order No. 88-100 (WDR), adopted on June 15, 1988.

The Facility currently collects, treats, and disposes of approximately 32,000 gallons per day (gpd) of wastewater (average dry weather flow). The wastewater from the sewered area of the community of Bolinas is collected and pumped to a series of ponds including two treatment ponds and two storage ponds; treated wastewater is ultimately disposed through pond evaporation and spray disposal on 45 acres of land (see Attachment 1: Site Map). Disposal through spray irrigation is permitted between April 15 and November 15 each year. The WDR prohibits both wet and dry weather wastewater flows to the wastewater treatment plant exceeding 65,000 gpd.

The collection system includes 163 connections (serving 141 residential, 20 commercial, and two institutional properties) from the historic downtown village of Bolinas. In June 2023, the Water Board supported District's proposal to expand the sewer collection system to serve an additional six homes. The remainder of Bolinas is served by private onsite wastewater treatment systems (septic systems).

Monitoring and Technical Report Requirements

The following technical reports are required pursuant to Water Code section 13267. All technical documents shall be signed by and stamped with the seal of a California registered civil engineer, a California registered geologist, or a California certified engineering geologist. The technical reports shall be acceptable to the Water Board's Executive Officer and shall be submitted as described below.

A. Groundwater Monitoring Well Installation Workplan and Report

By December 1, 2024, District shall submit a *Groundwater Monitoring Well Installation Workplan* that proposes an adequate number of groundwater monitoring wells to ensure sufficient monitoring of groundwater quality beneath the wastewater disposal fields, including but not limited to groundwater characterization upgradient and downgradient of the fields. Groundwater monitoring wells shall be designed to yield samples representative of the uppermost portion of the first encountered groundwater underlying the sites. The plan shall include a schedule to complete installation no later than **October 31, 2025**.

Within 120 days of installation, District shall submit a *Groundwater Monitoring Well Installation Report* that describes the installation and development of all new monitoring wells and explains any deviations from the approved installation workplan.

Consistent with the Business and Professions Code, groundwater monitoring reports, well construction workplans, etc. shall be prepared under the supervision of a California licensed civil engineer or geologist. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Water Board's staff for review and approval. Once installed, all monitoring wells designated as part of the monitoring network shall be sampled and analyzed according to the schedule below.

B. Enhanced Groundwater Monitoring and Reporting

The WDR requires monthly groundwater monitoring and reporting to be analyzed for total and fecal coliforms and nitrates. Following installation of the additional groundwater monitoring wells, District shall implement an expanded groundwater monitoring and reporting program as outlined in Table 1, below.

The data from routine groundwater monitoring events shall be submitted monthly, as outlined in WDR section III.B. Analysis of the data and groundwater flow directions shall be performed at least annually and shall be performed under the supervision of a California licensed professional (as described above). The Discharger may request a reduced monitoring and reporting schedule once adequate data has been collected to

characterize the site (Typically two years of quarterly sampling is required for adequate characterization.).

Prior to sampling, groundwater elevations shall be measured and the wells shall be purged of at least three well volumes and until pH and electrical conductivity have stabilized. No-purge, low-flow, or other sampling techniques are acceptable if they are described in an approved Sampling and Analysis Plan. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater elevations shall be calculated. Samples shall be collected using approved U.S. EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Table 1: Groundwater Monitoring Parameters and Frequencies

Constituent	Units	Sample Type	Sampling/Reporting Frequency[1]
Groundwater Elevation[3]	0.01 Feet	Calculated	Monthly
Depth to Groundwater	0.01 Feet	Measurement	Monthly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
pH	Std. Units	Grab	Monthly
Total Dissolved Solids	mg/L[2]	Grab	Monthly
Nitrate as Nitrogen	mg/L	Grab	Monthly
Sodium	mg/L	Grab	Monthly
Chloride	mg/L	Grab	Monthly
Total Coliform Organisms[4]	MPN/100 mL[2]	Grab	Monthly

[1] Analysis of data by a California licensed professional is required at least annually.
[2] mg/L = milligrams per liter MPN/100 mL denotes most probable number per 100 mL sample
[3] Groundwater elevation shall be based on depth to water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
[4] Using a minimum of 15 tubes or three dilutions.

C. Facility Upgrade Plan

By December 1, 2028, District shall submit a *Facility Upgrade Plan*. This plan shall evaluate how to operate the Facility in compliance during 25- to 50-year return annual precipitation and evaluate options to reasonably expand the wastewater system to accommodate additional homes within the District's water service area that currently rely on septic systems for wastewater disposal. The Facility's current storage capacity is designed for approximately a 10-year rainfall year. The plan shall identify preferred alternatives for facility upgrades to address vulnerabilities and include estimated costs and efforts to finance the improvements (such as rate increases, grants, and loans).

The *Facility Upgrade Plan* technical report will support a future permit renewal application for potential updates to the WDR. Implementation of the wastewater treatment facility upgrades would be anticipated to occur within approximately a five-

year period following the technical report; this timeline allows for adequate time to obtain funding for and to design, permit, and construct the identified upgrades.

District shall provide two interim progress updates on the plan by December 1, 2026, and by December 1, 2027. The first milestone is to complete a "Need for Project Analysis" to define flows and loads for the current service area and potential expansion service areas, and to identify drivers for facility improvements including an assessment of the vulnerability of the Facility to climate change, further described below. An update on the first milestone is due by **December 1, 2026**.

The next milestone of the plan is to complete an "Analysis of Alternatives" to define the alternatives that will be considered for addressing the deficiencies identified. An update on the second milestone is due by **December 1, 2027**.

Climate Change Vulnerability Assessment

Climate change is shifting precipitation and temperature patterns, exacerbating extreme weather events, and causing sea level rise and groundwater rise. These conditions have significant implications for wastewater collection, treatment, and discharge operations.

We recognize that planning for climate change is complex. For example, in addition to anticipating sea level rise, agencies must consider site-specific information about groundwater elevations, extreme storm events, tides, wave setup and runup, and watershed flows. We consider the Ocean Protection Council's *Sea-Level Rise Guidance*[1] to be an authoritative source supporting planning for sea level rise in California. In May 2020, the California Coastal Commission adopted *Making California's Coast Resilient to Sea Level Rise: Principles for Aligned State Action*,[2] indicating there is a significant risk of up to 0.8 feet of sea level rise by 2030 and 6.9 feet by 2100 in the San Francisco Bay region. Pending site-specific analyses, we advise starting with a sea level rise target of 3.5 feet by 2050. The California Environmental Protection Agency, including the State Water Resources Control Board, has endorsed such planning principles. This target applies a safety factor to the California Ocean Protection Council's sea level rise estimates, which do not account for extreme storm surges, tides, or other weather events on top of sea level rise.

The assessment of the Facility's vulnerability to climate change, including the collection system, treatment facility, and disposal areas, shall include:

- ***Sea Level Rise***. Explain how the District manages existing flooding risks for the wastewater system (e.g., protective measures already in place, planned, or proposed). Evaluate future flooding risks over a 50-year time horizon, and identify how the District will manage those risks (e.g., planning efforts and protective measures in place, facility upgrades needed). Utilize the guidance

[1] https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf
[2] https://documents.coastal.ca.gov/reports/2020/5/w6g/w6g-5-2020-exhibits.pdf

listed above and document all guidelines and assumptions used to anticipate sea level rise.

- ***Groundwater Rise***. Explain how the District intends to manage future flooding related to groundwater rise over a 50-year time horizon (e.g., ongoing planning efforts and protective measures in place, planned, or proposed). If the District believes it will not be susceptible to flooding related to groundwater rise within 50 years, explain the basis for the conclusion. For more information, see publications from the San Francisco Estuary Institute (*Shallow Groundwater Response to Sea Level Rise*), Hummel et al. (*Sea Level Rise Impacts on Wastewater Treatment Systems Along the US Coasts*), and Plane et al. (A Rapid Assessment Method to Identify Potential Groundwater Flooding Hotspots as Sea Levels Rise in Coastal Cities).[3]
- ***Changing Climate and Weather***. Assess how increased temperatures, greater rainfall intensity, and longer and drier summers may affect the collection, treatment, and disposal systems.

Based on these and any other vulnerability of the District's collection, treatment, and discharge systems, mitigation and control measures needed to maintain, protect, and improve wastewater infrastructure under existing and possible future conditions should be identified and analyzed in the plan. Climate adaptation strategies may include regional collaboration, near-term measures, long-term design modifications and improvements, new monitoring, and updated emergency response planning.

GeoTracker Electronic Reporting Requirements

The Discharger shall submit all technical reports and analytical monitoring results to GeoTracker, a Water Boards internet-accessible database, according to the schedule outlined in WDR section III.B. Additional information and resources on GeoTracker are listed below.

The Discharger-specific GeoTracker Global ID is WDR100027397. In order to submit reports electronically, create a secure GeoTracker Electronic Submittal of Information (ESI) account and log in. The account will be connected to the Global ID. The Discharger can request a username and password online, which is accessible from the 'Getting Started' section on the GeoTracker ESI webpage.

Additional GeoTracker support information can be found at the following:

a. 'Guides/Resources' document link in the "Tools" on the GeoTracker ESI account
b. Resources on the GeoTracker ESI website, such as the Beginner's Guide

[3] https://www.sfei.org/projects/shallow-groundwater-response-sea-level-rise; https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017EF000805 (Hummel, M., M. Berry, and M. Stacey. 2018. Sea Level Rise Impacts on Wastewater Treatment Systems Along the US Coasts. Earth's Future 6 (4): 622–633); https://www.mdpi.com/2073-4441/11/11/2228/htm (Plane, E., K. Hill, and C. May. 2019. A Rapid Assessment Method to Identify Potential Groundwater Flooding Hotspots as Sea Levels Rise in Coastal Cities. Water 11, 2228).

c. General GeoTracker Help Desk contact information:

Phone: 1-866-480-1028
Email: geotracker@waterboards.ca.gov

Statuatory Authority

The requirement for technical reports is made pursuant to Water Code section 13267, which allows the Water Board to require technical and monitoring program reports from any person who has discharged, discharges, proposes to discharge, or is suspected of discharging waste that could affect water quality. The burden, including costs, of the reports bears a reasonable relationship to the need for the reports and the benefits to be obtained. Specifically, the requested reports are necessary to ensure the protection of human health and waters of the State. Enhanced groundwater monitoring around the disposal area is necessary to evaluate potential impacts to groundwater. The *Groundwater Monitoring Well Installation Workplan* is estimated to be about $30,000. Installation of additional groundwater monitoring wells is anticipated to be between $25,000 and $30,000. The *Facility Upgrade Plan* technical report is critical to support a future permit renewal application for potential updates to the WDR. Evaluating climate change vulnerabilities and identifying measures needed to maintain, protect, and improve wastewater infrastructure under existing and possible future conditions are necessary to ensure sustained longterm operations and protection of water quality. The Facility's current storage capacity is designed for approximately a 10-year return annual precipitation based on historical datasets, while current standards utilize a 100-year return annual precipitation design standard and climate change could result in more extreme events and greater rainfall intensity in the future. The *Facility Upgrade Plan* is estimated to cost between $200,000 and $250,000. Additional information on Water Code section 13267 requirements is attached.

Pursuant to Water Code section 13268, the Water Board may impose civil liability of up to $1,000 per day for failure to submit timely and acceptable technical reports. Any extension to the deadlines specified must be confirmed in writing by Water Board staff.

Closing

District is required to submit technical reports related to the District's wastewater collection, treatment, and disposal facility as summarized in the table below.

Table 2: Summary of requirements

Deadline	Task
December 1, 2024	Technical report: *Groundwater Monitoring Well Installation Workplan*
October 31, 2025	Action: Install new groundwater monitoring wells in accordance with the approved workplan
Within 90 days of installation	Technical report: *Groundwater Monitoring Well Installation Completion Report*
December 1, 2026	Progress update: Need for Project Analysis
December 1, 2027	Progress update: Analysis of Alternatives

Deadline	Task
December 1, 2028	Technical report requirement: *Facility Upgrade Report*

Following installation of the new groundwater monitoring wells, the District shall commence groundwater monitoring and reporting as specified above. Implementation of the wastewater treatment facility upgrades would be anticipated to occur within approximately a five-year period following the technical report.

If you have any questions or would like to discuss further, contact Sarah Acker of my staff via email to Sarah.Acker@waterboards.ca.gov or at (510) 622-2494.

Sincerely,

Digitally signed by Keith H. Lichten, Division Manager
Date: 2024.01.24 17:42:20 -08'00'

for Eileen White
Executive Officer

Attachments: 1. Site Map
2. Water Code section 13267 Fact Sheet

cc (by email): Water Board
Margaret Monahan, Margaret.Monahan@waterboards.ca.gov

Marin County Environmental Health Services
Gwen Baert, GBaert@marincounty.org
Becky Gondola, RGondola@marincounty.org

ATTACHMENT 1: Site Map

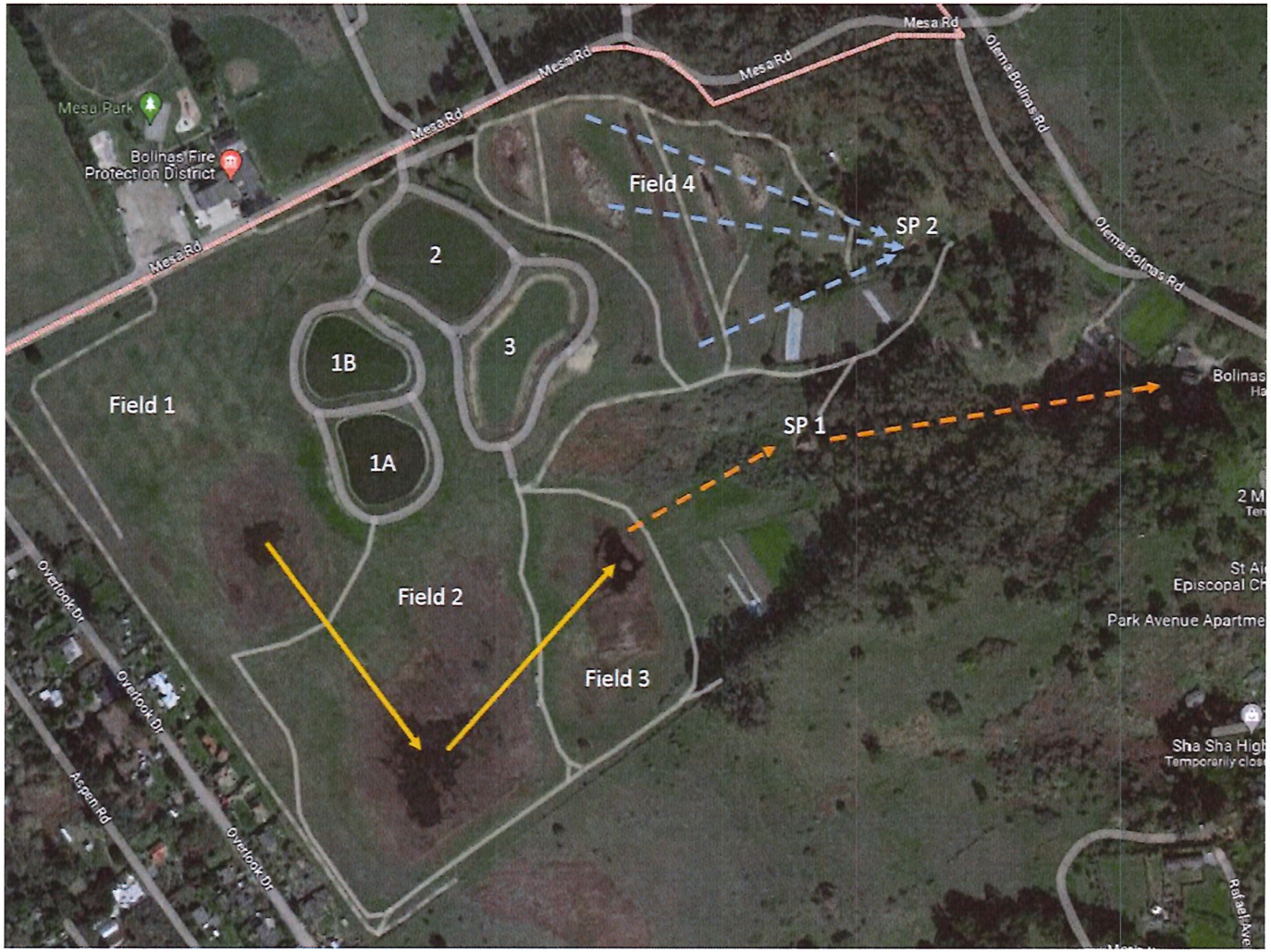

Figure 1. Bolinas Community Public Utility District Treatment Facility: Treatment ponds are labeled 1A and 1B, storage ponds are labeled 2 and 3, seepage ponds are labeled SP1 and SP2, and disposal spray fields are labeled Fields 1-3 (Field 4 is unused). Solid yellow arrows show wastewater flow between fields, dashed orange arrows represent overland flow to SP1 and off-site, and dashed blue arrows represent stormwater overland flow to SP2.

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San Francisco Bay Regional Water Quality Control Board

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

What does it mean when the Regional Water Board requires a technical report?
Section 13267[1] of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged or discharging, or who proposes to discharge waste...that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires."

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?
The requirement for a technical report is a tool the Regional Water Board uses to investigate water quality issues or problems. The information provided can be used by the Regional Water Board to clarify whether a given party has responsibility.

Are there limits to what the Regional Water Board can ask for?
Yes. The information required must relate to an actual or suspected or proposed discharge of waste (including discharges of waste where the initial discharge occurred many years ago), and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The Regional Water Board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?
A time extension may be given for good cause. Your request should be promptly submitted in writing, giving reasons.

Are there penalties if I don't comply?
Depending on the situation, the Regional Water Board can impose a fine of up to $5,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information or fails to comply with a requirement to submit a technical report may be found guilty of a misdemeanor. For some reports, submission of false information may be a felony.

Do I have to use a consultant or attorney to comply?
There is no legal requirement for this, but as a practical matter, in most cases the specialized nature of the information required makes use of a consultant and/or attorney advisable.

What if I disagree with the 13267 requirements and the Regional Water Board staff will not change the requirement and/or date to comply?
You may ask that the Regional Water Board reconsider the requirement, and/or submit a petition to the State Water Resources Control Board. See California Water Code sections 13320 and 13321 for details. A request for reconsideration to the Regional Water Board does not affect the 30-day deadline within which to file a petition to the State Water Resources Control Board.

If I have more questions, whom do I ask?
Requirements for technical reports include the name, telephone number, and email address of the Regional Water Board staff contact.

Revised January 2014

[1] All code sections referenced herein can be found by going to www.leginfo.ca.gov.