CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

for the

TOMALES VILLAGE COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
at
10 IRVIN ROAD, TOMALES, MARIN COUNTY

for

ORDER No. R2-2015-0019

(Attachment E of Order No. R2-2015-0019)

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I. PURPOSE

1. This monitoring program is for waste discharge requirements assigned to the Tomales Village Community Services District (Discharger), adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board).

2. The principal purposes of a monitoring program by a waste discharger, also referred to as a self-monitoring program (SMP), are:

   a. To document compliance with waste discharge requirements and prohibitions established by the Water Board and
   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution or potential threats to water quality arising from waste discharges.

3. Reporting responsibilities of waste dischargers are specified in sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code, and Water Board Resolution No. 73-16.

II. SAMPLING and ANALYTICAL METHODS

1. **Approved methods**. Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR 136) or other methods approved and specified by the Executive Officer of the Water Board (Executive Officer).

2. **Approved laboratory**. Water and waste analyses shall be performed by a laboratory approved for these analyses by the California Department of Public Health (CDPH), or by a laboratory waived by the Executive Officer from obtaining a CDPH certification for these analyses, or as otherwise specified in this SMP.

3. **Accountability for analytical work**. The director of the laboratory whose name appears on the certification, or his laboratory supervisor who is directly responsible for the analytical work performed, shall supervise all analytical work including appropriate quality assurance/quality control procedures in his laboratory and shall sign all reports of such work submitted to the Water Board.

4. **Appropriate usage and calibration of equipment**. Measurements by use of portable analytical equipment or other monitoring instruments and equipment shall abide by the following conditions:

   a. The analytical equipment is appropriate for the given analysis of/for water or waste;
   b. The analytical equipment is properly maintained and calibrated to ensure accuracy;
   c. The equipment user is knowledgeable of proper sampling and equipment use practices; and
   d. Written notification of the intended use has been provided in advance to the Water Board, and the Water Board has not stated any objections.

III. DEFINITION of TERMS

The following are definitions and explanations of terms used in this monitoring program; see Appendix A for abbreviation expansions. Additional descriptions are given in the findings of this Order.

A. FACILITY AND WASTEWATER SYSTEM

1. **Facility Site.** The Facility site is the land on which the Facility identified as the Tomales Wastewater Facility is located. This land consists of Marin County Assessor's Parcel Number 102-130-10 and 104-050-18.

2. **Wastewater System.** The wastewater system is comprised of all equipment at the Facility site used for collection, conveyance, treatment, storage, discharge, and management of wastewater and wastewater solids from the community of Tomales, including the Shoreline Unified School District.

3. **Discharge Area.** The discharge area, also called the irrigation field, is a 21-acre vegetated gently sloping hillside field, fenced and gated, with above-grade sprinklers, located downhill of the storage ponds, and about 3,600 feet south of the wastewater treatment ponds.

4. **Discharge System.** The discharge system is the portion of the wastewater system used for conveyance and discharge of treated wastewater to land in the identified discharge area. This includes, but is not limited to, pumps, pipes, sprinklers, and all equipment used to control and monitor the discharge operations.

B. TYPES OF SAMPLES

1. **Flow Measurement.** Flow measurement is the accurate measurement of the flow volume over a given period of time using a properly calibrated and maintained flow measuring device. Use of a properly calibrated and maintained automated pump-use recording device, such as a pump dose event counter, is acceptable.

2. **Grab Sample.** A grab sample is defined as an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples are used primarily in determining compliance with daily or instantaneous maximum or minimum limits, and also for bacteriological limits. Grab samples represent only the condition that exists at the time and location the sample is collected.

3. **Observations.** Observations are primarily visual assessments and inspection of conditions. Observations may include recording measurements from monitoring devices such as freeboard determined from a water level staff gauge, or precipitation determined from a rain gauge.

4. **Pond Water Depth.** Pond water depth is the vertical distance between the free water surface of the water contained in the pond, and the bottom of the water volume contained in the pond.

5. **Pond Freeboard.** Pond freeboard is the vertical distance between the free water surface of the water contained in the pond and the elevation of the lowest point of the top of the water containment structure (i.e., the elevation at which water would overflow from the pond).

C. SAMPLING FREQUENCY

1. **Continuous.** Continuous monitoring.
2. **Daily.** One time each calendar day.
3. **Weekly.** One time per calendar week, with sampling interval of at least five days.
4. **Monthly.** One time per calendar month, with sampling intervals of at least three weeks.
5. **Quarterly** One time per calendar quarter, at intervals of about three months.
6. **Semiannual.** Two times per calendar year, with sampling intervals of about six months.
7. **Annual.** One time per calendar year.
8. **Event.** Each service or discharge event.
9. **Conditional.** Depending on conditions specified in this SMP.

D. MONITORING PERIODS

For purposes of monitoring, reporting and compliance determinations relevant to requirements specified in this Order and SMP, the following time periods apply:

1. **Daily.** 24-hour period associated with a calendar day; may overlap calendar days (e.g., 8 am of one day to 8 am of the next) but shall be consistent from one sampling event to the next.
2. **Weekly.** 7-day calendar week.

3. **Monthly.** Each respective calendar month.
4. **Annual.** Calendar year.

IV. DESCRIPTION of MONITORING STATIONS

A. GENERAL

1. **Monitoring Station Definitions**. Stations to be used for sampling and observations in this SMP are described in this section (IV). Each station is identified by a station code and station description. The Station Code is a reference code for station identification in this SMP and in recording and reporting of monitoring data. The Station Description is a description of the water, wastewater, point of the wastewater system, or land area where specified monitoring is to be conducted.

2. **Monitoring Station Changes.** Changes to the monitoring stations defined in this SMP may be authorized by the Executive Officer in order to accommodate changes in the wastewater system or wastewater system operations or to provide improved monitoring. Requests for changes to the monitoring stations shall be submitted to the Water Board in writing with a detailed explanation of the purpose of the proposed station changes. Proposed changes to monitoring stations shall be approved in writing from the Executive Officer prior to implementation.

3. **Site Plan Showing All Monitoring Stations.** The Discharger shall develop a scaled and legible plan view drawing of the Facility site that clearly shows the locations of all major components of the wastewater system, all monitoring stations identified in this SMP, and relevant land use features such as buildings, access roads, property boundaries, and surface water drainage systems. A copy of this drawing shall be included with each annual monitoring report and with any reports regarding station changes.

B. WASTEWATER SYSTEM MONITORING STATIONS

	Code	Station Name and Description	Station Purpose
1.	INF	Influent: Wastewater at a point in the Wastewater Treatment Facility (Facility) where all wastes upstream of the treatment process are present.	Measurement of the total volume of wastewater flow into the Facility to document compliance with the Authorized Wastewater Flow (annual total flow) limit given in Discharge Specification B.4 of this Order. Sampling and analytical characterization of influent into the Facility.
2.	FOG	Fats, Oils, and Grease Interceptor: Wastewater solids serviced by septic waste hauler.	Record of the service event and measured amount of wastewater solids collected.
3.	TR-1, TR-2, TR-3	Treatment Ponds 1, 2, and 3: Wastewater at a point in each of the three respective treatment ponds, representative of the water in the pond; a physical location suitable for general observations of pond conditions.	Sampling and analytical characterization of pond water for Dissolved Oxygen, pH, Temperature, and Dissolved Sulfides as needed; for standard observations of pond conditions, to document compliance with the requirements of Discharge Specification B.2 of this Order.
4.	EFF- TR	Treatment Pond Effluent: Wastewater at a point in the Facility where all treatment has been completed, except for disinfection by chlorination, prior to discharge to the irrigation field.	Sampling and analytical characterization of final treated effluent prior to discharge to land, to monitor and evaluate treatment system performance and to document compliance with requirements of Discharge Specification B.5.
5.	ST-East, ST-West	Storage Ponds, East and West: Wastewater at a point in each of the two respective storage ponds, representative of the water in the pond, and a physical location at each pond suitable for general observations of pond conditions.	Sampling and analytical characterization of pond water for Dissolved Oxygen, pH, and Dissolved Sulfides as needed; for standard observations of pond conditions, to document compliance with requirements of Discharge Specification B.2.
6.	EFF-D	Disinfected Effluent: Wastewater at a point in the Facility where all treatment has been completed, including disinfection by chlorination, suitable for bacteriological quality analyses.	Sampling and analytical characterization of the bacteriological quality of the final treated effluent, to document compliance with Total Coliform limits given in Discharge Specification B.5.iv.
7.	EFF-Flow	Effluent Flow: Wastewater at a point in the Facility where all treatment has been completed, including disinfection by chlorination, suitable for final effluent flow measurement.	Measurement of the total flow of final treated disinfected wastewater effluent discharged to land at the irrigation field.
8.	FIELD	Irrigation Field: The irrigation field land area used for discharges of treated wastewater to land.	Standard observations of discharge area conditions and to document compliance with requirements of Discharge Specification B.3.

V. MONITORING SCHEDULE and SPECIFICATIONS

A. MONITORING SCHEDULE

1. **Table 1.** The Discharger is required to perform sampling, analyses, and observations according to the schedule tabulated in **Table 1 - Schedule for Monitoring**, which is the last item in this SMP.

2. **Table 1 "SMP References".** Table 1 includes references given in brackets to the right of the Parameter name. These references correspond to Definitions in Section III or Monitoring Specifications in Section V.B. of this SMP.

B. MONITORING SPECIFICATIONS

1. **Flow Monitoring and Reporting.** All flows shall be monitored continuously in a manner sufficient to measure, record, and report the daily flow volume for each day of operation and the monthly flow volume for each calendar month. Flows shall be reported as Daily Flow, in gallons, for each day when flow occurs, and Monthly Flow, in gallons, for each calendar month.

2. **Additional Monitoring May be Necessary.** The monitoring requirements established in this SMP are minimum requirements. Additional monitoring for any parameter may be necessary and prudent to ensure proper wastewater system performance and compliance with WDRs.

3. **Nitrogens**
   a. The parameter 'Nitrogens' in this SMP means all of the following parameters:
   (1) Ammonia Nitrogen,
   (2) Nitrate Nitrogen,
   (3) Total Kjeldahl Nitrogen (TKN), and
   (4) Total Nitrogen.

   b. Analytical results for the above nitrogen parameters shall be reported as: mg/L as Nitrogen.

4. **Precipitation.** Precipitation (rainfall) visual monitoring shall be daily. It shall be recorded and reported as total rainfall for each calendar day and as the total for each calendar month. Precipitation monitoring shall be representative of precipitation falling on the discharge areas.

5. **Standard Observations**
   a. Check (smell) area for odors.
   b. Check area for evidence of any standing water (ponded water).
   c. Check for evidence of mosquitoes breeding within the area due to standing water.
   d. Check all visible distribution system components for proper condition and hydraulic integrity.
   e. Check discharge area runoff containment systems (berms and/or subsurface drains) for proper condition and integrity. Note and record any evidence of wastewater escaping the discharge area.
   f. Check perimeter fences and gates for properly posted warning signs to inform public that discharge area water is wastewater that is not safe for drinking.
   g. Measure and record pond water depth and pond freeboard, in feet and tenths of feet.

C. INCREASED MONITORING FREQUENCY

If any monitoring indicates unstable wastewater system operation or performance, or a violation of waste discharge or monitoring requirements including incomplete sampling or analyses, then monitoring for the parameter(s) and station(s) in concern shall henceforth be conducted at twice the ordinary frequency identified in Table 1 of this SMP. This increased monitoring frequency shall be maintained for at least two sampling events and until such time as the results of monitoring indicate violations are no longer occurring

or the problem has been corrected and the wastewater system has returned to stable operation and performance.

D. MONITORING BY USE OF AUTOMATED INSTRUMENTS

Selected parameters may be monitored by the use of automated analytical instruments, provided such instruments are properly maintained and calibrated to ensure accurate measurements, that these instruments and their use is documented in the Operation and Maintenance Program Manual, and written notification to the Water Board has been provided.

E. MODIFICATION OF MONITORING PRACTICES

Modifications of the monitoring practices specified in this SMP may be authorized by the Executive Officer, in consideration of acceptable accumulated data and acceptable alternate means of monitoring. Factors to be considered include: data quality, adequate characterization of the identified water or wastewater system process, consistency of system performance, compliance with waste discharge requirements, and acceptable means for providing equivalent and adequate monitoring of the identified water or wastewater system process. Requests for modification of monitoring practices must be submitted to the Water Board in writing, with a technical report that includes evaluation of accumulated data, and a complete description of proposed alternate means of monitoring. Proposed modifications of monitoring practices must be accepted in writing by the Executive Officer prior to implementation.

VI. REPORTS to be SUBMITTED to the WATER BOARD

A. MONITORING REPORTS

The Discharger shall submit to the Water Board monitoring reports documenting the wastewater system operation and performance, and compliance with waste discharge requirements, in accordance with the following:

1. Report Schedule

a. Monthly Reports. Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Reports shall be prepared for each calendar month and shall be submitted to the Water Board by the **last day of the month following the monitoring period** (e.g. the February report is due by March 31).

b. Annual Reports. Written reports shall be prepared for each year and shall be submitted to the Water Board by the last day of the second month following the monitoring period (i.e., February 28 or 29).

2. Transmittal Letter

A letter of transmittal shall accompany each monitoring report submitted to the Water Board. The transmittal letter shall include the following:

a. Identification. Identification of the following:

(1) The discharge Facility by name and address;
(2) The monitoring period being reported;
(3) The name and telephone number of a person familiar with the report and the current status of the wastewater system, for follow-up discussions as may be needed; and
(4) The name of the Water Board staff case handler.

b. Operation and Maintenance Activities. Discussion of all significant wastewater system operation and maintenance activities that occurred during the reporting period (e.g., repair or replacement of system equipment), including dates and reasons for such activities.

c. Violations or Problems. Discussion of any violations of waste discharge requirements and any problems or unusual conditions that occurred during the reporting period. This shall include reporting of the following information:

(1) Date and time of occurrence;
(2) Location of occurrence, shown on a scaled or dimensioned plan drawing of the Facility site;
(3) Description of the violation, problem, or unusual condition;
(4) Corrective actions taken or planned to correct the violation, problem, or unusual condition and a time schedule for implementation of these actions. Actions may include increased monitoring and any changes to wastewater system equipment or operations.

If a report describing corrective actions and/or a time schedule for implementation of those actions was previously submitted to the Water Board, then reference to that report is satisfactory. References to other reports shall include the Date, Title or subject, and Author of the referenced report.

d. Transmittal Letter Signature(s). The transmittal letter shall be signed by: (1) the Discharger's principal executive officer, ranking elected official, or duly authorized representative, and (2) the wastewater system chief plant operator, with the following certification statement:

"I certify under penalty of law that this document and all attachments have been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

3. Results of Analyses and Observations.
Each report shall include results of analyses and observations in accordance with the following:

a. Monitoring Results. Each monitoring report shall include tabulations of results from all required analyses, measurements, and observations specified in this SMP for the reporting period, including:

(1) Date of sampling or observation;
(2) Location of sampling or observation (sample station);
(3) Parameter of analysis (e.g., pH, Dissolved Oxygen, etc.); and
(4) The result of the analysis, measurement or observation.

b. Data Presentation. In reporting monitoring data, the data shall be arranged in tabular form so that the data are clearly discernible. The data shall be summarized in a manner to illustrate clearly whether the discharge is in compliance with waste discharge requirements and this SMP. Reporting shall include maximum, minimum, and monthly average values for each parameter for which more than one sample result is obtained during the monitoring period.

c. Sample Analysis Data. For all sample analyses, include the following:

(1) Date of analysis;
(2) Individual or contract laboratory conducting the analysis;
(3) Analytical procedure or method used, and test method detection level; and
(4) Copies of laboratory analysis result reports for all analyses conducted by a contract laboratory.

d. Reporting Results Below Detection Limits. For all analytical characterizations (laboratory tests) for which results are identified as below limits of detection of the test procedure, data reporting shall include the limit of detection. In other words, reporting a sample test result as only "ND" or "not detected" or similar is not acceptable; the actual numeric value of the detection limit must also be reported. It is acceptable to use notations of non-detection - "ND" or similar - in data tables, provided that the corresponding limit of detection is clearly identified elsewhere in the table or as a footnote of the table.

e. Additional Monitoring Results. If any parameter is monitored more frequently than is required by this SMP, then the results of such monitoring shall be included in the monitoring reports and in any calculations of statistical values.

4. **Monitoring During Wastewater System Modifications.** Whenever any modifications to the wastewater system occur, the monitoring report shall include a description of work that has occurred during the monitoring period, any impacts to wastewater system operations, and, if work is incomplete, the anticipated completion schedule.

5. **Annual Monitoring Reports**
   The annual monitoring report shall include the following:

   a. Data. Tabular and graphical summaries of monitoring data obtained during the period being reported.
   b. Monthly flows. A tabulation of monthly wastewater flows into and out of the Facility, including monthly total flows for monitoring stations within the Facility where flows are recorded.
   c. Performance record. A discussion of wastewater system performance and compliance with requirements specified by this Order.
   d. Monitoring record. A discussion of any data gaps or deficiencies in the monitoring record.
   e. Non-compliance events. For any event of non-compliance with requirements specified by this Order, including monitoring and reporting requirements, the report shall include description of corrective actions taken or planned to achieve full compliance and a time schedule of when those actions were or will be taken.
   f. Monitoring Station Map. A scaled and legible plan view drawing of the Facility site that shows the locations of all monitoring stations specified by this SMP.

B. REPORTS of VIOLATIONS

If the Discharger violates or threatens to violate waste discharge requirements or this SMP due to:

1. Maintenance work, power failure, or breakdown of wastewater system equipment;
2. Accidents caused by human error or negligence; or
3. Other causes such as acts of nature, then:

The Discharger or Discharger's agent(s) shall notify the Water Board office by telephone as soon as the Discharger or Discharger's agent(s) have knowledge of the incident. Written notification shall be submitted within two weeks of the date of the incident, unless directed otherwise by Water Board staff. The written notification shall include pertinent information explaining reasons for the non-compliance and what steps were taken to correct the problem and the dates thereof and what steps are being taken to prevent the problem from recurring.

C. REGIONAL WATER BOARD ADDRESS and PHONE NUMBER

The Water Board's office mailing address, email, fax, and telephone number information are given below. This is the address to be used for submittal of reports and correspondence to the Water Board.

1. **Mail Address:** California Regional Water Quality Control Board, San Francisco Bay Region
   1515 Clay Street, Suite 1400
   Oakland, CA 94612
2. **Email:**

   a. Monitoring Reports.
   Monitoring reports and other related technical reports that are of moderate file size (no more than 10 MB) can be submitted electronically to the Water Board as an attachment to an email submitted to the following email address: **wdr.monitoring@waterboards.ca.gov**.

   b. Email Notification.
   Whenever a report is submitted to the above address, it is advisable to also send a short email notice about that submittal (without the attached report) to Water Board case staff.
   Water Board staff email addresses use this format: <first name>.<last name>@waterboards.ca.gov.

3. **Water Board Telephone and Fax:** Telephone: (510) 622 - 2300; Fax: (510) 622 - 2460.

VII. REPORTS to be SUBMITTED to OTHER ENTITIES

A. California Department of Public Health

For each monitoring report required to be submitted to the Board, a complete copy of the report shall be submitted at the same time that the report is submitted to the Board to the California Department of Public Health, Preharvest Shellfish Unit, at its current mailing address or email address, at the time of this Order:

California Department of Public Health
Preharvest Shellfish Unit
ATTN: Vanessa Zubkousky-White
850 Marina Bay Parkway, G165
Richmond, CA 94804

E-mail address: Vanessa.Zubkousky@cdph.ca.gov

VIII. MONITORING PROGRAM CERTIFICATION

I, Bruce H. Wolfe, Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Water Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements for the subject wastewater systems.
2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be ordered by the Executive Officer.
3. Is effective on the following date: May 13, 2015.

Digitally signed by Bruce H. Wolfe
DN: cn=Bruce H. Wolfe, o=SWRCB, ou=Region 2, email=bwolfe@waterboards.ca.gov, c=US
Date: 2015.05.18 16:27:03 -07'00'

BRUCE H. WOLFE
Executive Officer

TABLE 1 - SCHEDULE for MONITORING (*)

Monitoring Stations:			INF	FOG	TR-1, 2, 3, ST-East, ST-West	EFF-TR	EFF-D	EFF-Flow	FIELD	
			Influent	FOG Unit Influent	All Treatment and Storage Ponds	Treatment Pond Effluent	Disinfected Effluent	Effluent Flow to Land	Discharge Area	
Sample Parameters		**Type of Sample:**	F	O	G, O	G, O	G	F	O	
Parameter	**(units)**	**[SMP Reference]**								
Flow Volume	(gallons)	[V.B.1]	D&M					D&M		
$BOD_5$20°C	(mg/L)		M			W				
Temperature	(degrees F or C)		M		W	W				
pH	(pH units)		M		W	W				
Dissolved Oxygen	(mg/L)				W	W				
Dissolved Sulfides	(mg/L)	(whenever D.O. < 2 mg/L)			C	C				
Nitrogens	(mg/L as N)	[V.B.3]				M				
Total Dissolved Solids	(mg/L)		M			W				
Total Coliform	(MPN/100 mL)						W | E			
Precipitation	(inches)	[V.B.4]							D	
Standard Observations		[V.B.5]	W		W	W			W	
Water Depth and Freeboard (feet)		[III.B.4 and III.B.5]			W					
Chlorine Tank Level	(inches)						W			
Fats, Oils, and Grease Interceptor Service				Q						

* For explanation of abbreviations used in this table, see **Table 1 Abbreviation Expansions**, on the next page below.

Appendix A
TABLE 1 ABBREVIATION EXPANSIONS

1. Type of Sample Abbreviations

F	=	Flow measurement
G	=	Grab Sample
GL	=	Ground water level measurement
O	=	Observation

2. Parameter Abbreviations

COD	=	Chemical Oxygen Demand
BOD_5 20°C	=	Biochemical Oxygen Demand, 5-day, at 20°C
Chlorine Level	=	Chlorine tank level

3. Unit Abbreviations

F or C	=	Fahrenheit or Celsius
mg/L	=	milligrams per liter
MPN/100 ml	=	Most Probable Number, per 100 milliliters of water
N	=	Nitrogen

4. Sampling Frequency Abbreviations (see III.C for definitions)

D	=	Daily	A	=	Annual
W	=	Weekly	M	=	Monthly
C	=	Conditional:	Q	=	Quarterly
		For Dissolved Sulfides, sample for Dissolved Sulfides if Dissolved Oxygen < 2.0 mg/L			
D&M	=	Continuous monitoring; record and report Daily & Monthly values			
W | E	=	Weekly monitoring, during each week when discharges to land occur			