Attachment A~~E~~. Monitoring and Reporting Program (MRP) (CI-XXXX)

This Monitoring and Reporting Program is issued by the Los Angeles Water Quality Control Board (Los Angeles Water Board) pursuant to California Water Code (CWC) section 13267(b)(1), which authorizes the Los Angeles Water Board to require the submittal of technical and monitoring reports. The reports required by this MRP are necessary to ensure compliance with Water Reclamation Requirements (WRRs). The Permittee shall implement this MRP on the effective date of this Order. Failure to comply with this MRP could result in the imposition of monetary civil liability pursuant to Division 7 of the California Water Code and other applicable laws.

1. General Monitoring and Reporting Requirements

1.1. The Permittee shall monitor disinfected tertiary recycled water produced at the treatment facility in accordance with the methods and frequency outlined in this MRP.

1.2. Monitoring reports shall include, but are not limited to, the following:

- Analytical results.
- Location of each sampling station where representative samples are obtained.
- Analytical test methods used and the corresponding minimum reporting levels (MRLs).
- Name(s) of the laboratory that conducted the analyses.
- ~~Copy of laboratory certifications by the California State Water Resources Control Board (State Water Board), Division of Drinking Water's (DDW) Environmental Laboratory Accreditation Program (ELAP).~~
- A summary of quality assurance and control (QA/QC) measures, including documentation of chain of custody.
- Applicable recycled water limitation or water quality objective.
- A summary of noncompliance during the monitoring period.

1.3. The Permittee shall have written sampling protocols in place. The sampling protocols shall also include the procedures for handling, storing, testing, and disposing of purge and decontamination waters generated from the sampling events when applicable.

1.4. The Permittee shall notify the Los Angeles Water Board and DDW by electronic means (losangeles@waterboards.ca.gov, DDWRegion4@waterboards.ca.gov, and DDWrecycledwater@Waterboards.ca.gov) within 24 hours of knowledge of any violations of this Order that may endanger human health or the environment. Written confirmation shall be submitted within 5 working days from the date of notification. The report shall include, but shall not be limited to the following information:

- The nature and extent of the violation;

- The date and time when the violation started; when compliance was achieved; and, when distribution of recycled water was suspended and restored, as applicable;
- The duration of the violation;
- The cause(s) of the violation;
- Any corrective and/or remedial actions that have been taken and/or will be taken with a time schedule for implementation to prevent future violations; and
- Any impact of the violation

1.5. Samples shall be analyzed using analytical methods described in section 136~~141~~ of title 40 of the Code of Federal Regulations (40 CFR § 136~~141~~); or where no methods are specified for a given pollutant, by methods approved by DDW, the Los Angeles Water Board and/or the State Water Board, the Permittee shall select the analytical methods that provide MRLs lower than the limits prescribed in this Order or as low as possible that will provide reliable data.

1.6. The Permittee shall instruct its laboratories to establish calibration standards so that the MRLs (or equivalent if there is a different treatment of samples relative to calibration standards) are the lowest calibration standard. At no time shall the analytical data be derived from extrapolation beyond the lowest point of the calibration curve.

1.7. For regulated constituents, the laboratory conducting the analyses shall be certified by the ELAP or approved by DDW or the Los Angeles Water Board.

1.8. Samples shall be analyzed within allowable holding time limits as specified in 40 CFR § 136~~141~~. All QA/QC analyses shall be conducted on the same dates the samples are analyzed. The Permittee shall retain the QA/QC documentation in its files for three years and make available for inspection and/or submit them when requested by the Los Angeles Water Board or DDW. Proper chain of custody procedures shall be followed, and a copy of this documentation shall be submitted with the quarterly report.

1.9. Upon request by the Permittee, the Los Angeles Water Board, in consultation with DDW and the State Water Board Quality Assurance Program, may establish MRLs, in any of the following situations:

1.9.1. When the pollutant has no established method under 40 CFR § 136~~141~~;

1.9.2. When the method under 40 CFR § 136~~141~~ for the pollutant has an MRL higher than the limit specified in this Order; or

1.9.3. When the Permittee agrees to use a test method that is more sensitive than those specified in 40 CFR § 136~~141~~.

1.10. Each monitoring report shall include a separate section titled “Summary of Noncompliance” which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance

with ~~waste~~ water ~~discharge~~ reclamation requirements. This section shall clearly list all noncompliance with ~~discharge~~ water reclamation requirements as well as all excursions of the recycled water limitations.

1.11. For bacterial analyses, sample dilutions shall be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 mL for total~~, fecal~~ coliform~~, and *Escherichia coli* (*E. coli*), at a minimum, and 1 to 1000 per 100 mL for *Enterococcus*~~). The detection methods used for each analysis shall be reported with the results of the analyses.

2. Monitoring Requirements

Recycled water monitoring is required to determine compliance with the permit conditions: (1) identify operational problems and aid in improving facility performance, and (2) provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.

2.1. Recycled Water Monitoring Location

The Permittee shall establish a monitoring location to demonstrate compliance with the recycled water discharge limitations and other requirements in this Order. The recycled water monitoring location shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained. Should the need for a change in the sampling station(s) arise in the future, the Permittee shall seek approval of the proposed station by the Executive Officer prior to use.

2.2. Recycled Water Monitoring

2.2.1 The Permittee shall monitor the disinfected tertiary recycled water used for non-potable use at the recycled water monitoring location. The parameters to be monitored and monitoring frequencies are listed in Table A~~E~~-1.

2.2.2 The following shall constitute the recycled water monitoring program:

Table A~~E~~-1. Recycled Water Monitoring

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Notes
Total recycled water flow	MGD	Recorder	Continuous	a
Total recycled water volume	Million gallons	Calculated	Monthly	--
~~Recycled water flow to each end user~~	~~MGD~~	~~Recorder~~	~~Continuous~~	~~a~~
Recycled water volume to each end user	~~Million~~ gallons	Calculated	Monthly	--
pH	Standard units	Grab	Daily	c~~--~~

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Notes
Turbidity	NTU	Recorder	Continuous	a
Total coliform	MPN/100 mL or CFU/100 mL	Grab	Daily	b
Total chlorine residual	mg/L	Recorder	Continuous	a
Total chlorine residual	mg/L	Grab	Daily	c~~–~~
Total Dissolved Solids	mg/L	24-Hour Composite	Monthly	--
Sulfate	mg/L	24-Hour Composite	Monthly	--
Chloride	mg/L	24-Hour Composite	Monthly	--
Boron	mg/L	24-Hour Composite	Monthly	--
Nitrate + Nitrite (as N)	mg/L	24-Hour Composite	Monthly	--
Nitrate (as N)	mg/L	24-Hour Composite	Monthly	--
Nitrite (as N)	mg/L	24-Hour Composite	Monthly	--

Footnotes for Table A~~E~~-1

a. Where continuous monitoring of a constituent is required, the following shall be reported:

   i. Total recycled water flow and total chlorine residual – Monthly minimum and maximum, and daily average values.

   ii. Turbidity – Shall be monitored after filtration but prior to disinfection. Maximum daily value, total amount of time each day the turbidity exceeded 5 NTU, and a flow proportioned average daily value. A grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be used in place of the recorder to determine the flow-proportioned average daily value.

b. Samples shall be collected seven days a week unless otherwise specified. The results for total coliform in CFU/100mL (membrane filtration method) and MPN/100 mL (multiple tube fermentation method) shall be considered functionally equivalent in terms of compliance with 22 CCR 60301.230(b).

c. Total residual chlorine and pH shall be monitored Monday through Friday and excluding holidays.

End of Footnotes for Table A~~E~~-1

2.3. Groundwater Monitoring

This Order permits the use of recycled water for non-potable uses, which meet the site-specific conditions for exemption from groundwater monitoring in the Recycled Water Policy and there are no other unique site conditions that present an unacceptable risk to groundwater; ~~, and~~ therefore, this Order does not require groundwater monitoring. The Permittee plans to use recycled water for irrigation and is required to apply recycled water at reasonable agronomic rates and shall consider soil, climate, and nutrient demand.

2.4. Use Area Monitoring

The Permittee is responsible for ensuring use area data is collected and submitted in the annual report. The following shall be recorded for each use with additional reporting for use areas as appropriate. The frequency of use area inspections shall be based on the complexity and risk of each use area. Use areas may be aggregated to combine acreage for calculation or observation purposes. Use area monitoring shall include the following:

Table A~~E~~-2. Use Area Monitoring

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
Recycled Water User	--	--	--	Annually
Average Monthly Recycled Water Flow	gallons per day (gpd)	Meter	Monthly	Annually
Acreage Applied	Acres	Calculated	--	Annually
Application Rate	inches/acre /year	Calculated	--	Annually
Soil Saturation and Ponding	--	Observation	Quarterly	Annually
Nuisance Odors/Vectors	--	Observation	Quarterly	Annually
Discharge Off-Site	--	Observation	Quarterly	Annually
Notification Signs (note a)	--	Observation	Quarterly	Annually

Footnotes for Table A~~E~~-2

a. Notification signs shall be consistent with the requirements of 22 CCR § 60310(g).

End of Footnotes for table A~~E~~-2

2.5. Storage Pond System Monitoring

In some cases, recycled water storage ponds may be used to store recycled water when it is not needed. These monitoring requirements apply only to storage ponds permitted through this Order. Storage p~~P~~onds covered by ~~an~~ existing waste discharge requirements (WDRs) and/or an NPDES order shall continue to be

monitored in accordance with that order. Storage p~~P~~ond(s) containing recycled water shall be monitored for the following:

Table A~~E~~-3. Storage Pond System Monitoring

Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
Freeboard	0.1 feet	Measurement	Quarterly	Annually
Odors	--	Observation	Quarterly	Annually
Berm condition	--	Observation	Quarterly	Annually

2.6. Dual-Plumbed System Monitoring

For dual-plumbed systems, DDW and/or its delegated local agency shall be consulted for additional reporting, design, and operation requirements, in accordance with the requirements of 22 CCR §§ 60313 through 60316. The potential for cross-connections and backflow prevention devices shall be monitored as listed below, or more frequently if specified by DDW.

Table A~~E~~-4. Dual-Plumbed System Monitoring

Requirement	Frequency	Reporting Frequency	Notes
Cross connection testing	Every four years	Within 30 days/annually	a & b
Backflow incident	Continuous	Within 24 hours from discovery	--
Backflow prevention device testing and maintenance	Annually	Annually	c

Footnotes for Table A~~E~~-4

a. Testing shall be performed at least every 4 years, or more frequently at the discretion of DDW.

b. Cross connection testing shall be reported pursuant to 22 CCR § 60314. The report shall be submitted to DDW within 30 days and included in the annual report to the Los Angeles Water Board.

c. Backflow prevention device maintenance shall be tested by a qualified person as described in the *Cross-Connection Control Policy Handbook*.

End of Footnotes for table A~~E~~-4

3. Cooling/Industrial/Other Uses of Recycled Water

If recycled water is used for industrial, commercial cooling, or air conditioning in which a mist is generated, the cooling system shall comply with California Code of Regulations, Title 22, section 60306(c).

4. Reporting Requirements

The Permittee shall submit the required reports, outlined in this section, to the State Water Boards's GeoTracker database by the specified dates.

4.1. General Reporting Requirements

For reporting compliance with numerical limitations, analytical data shall be reported using the following reporting protocols:

4.1.1. Sample results greater than or equal to the MRL must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample).

4.1.2. Sample results less than the MRL, but greater than or equal to the laboratory's ~~Minimum~~ Method Detection Limit (MDL), shall be reported as "Detected, but Not Quantified", "DNQ." The laboratory shall write the estimated chemical concentration of the sample next to "DNQ."

4.1.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected", or ND.

4.1.4. If the Permittee samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any sample more frequently than required in this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with average recycled water, receiving water, etc., limitations.

4.1.5. The Los Angeles Water Board or DDW may request supporting documentation, such as daily logs of operations.

4.1.6. Monitoring requirements listed in this MRP may duplicate existing requirements under other orders including WDRs and NPDES permits. If the permittee monitors a parameter at the recycled water monitoring location under a separate permit, the results from those analyses may be reported for compliance with this Order if the appropriate analytical method is used.

4.1.7. The Permittee shall electronically submit all reports and monitoring data required under these WDRs to the State Water Resource Control Board's GeoTracker database. All reports shall reference Compliance File No. XXXX and shall be uploaded under Global ID WDRXXXXXXXXX.

Compliance monitoring shall be submitted separately from other technical reports. All submittals shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the Order in searchable Portable Document Format (PDF) and all water quality data in Electronic Deliverable Format (EDF). If any files exceed 10 megabytes, the report shall be uploaded in multiple parts and upon request, the data shall be provided in excel format. Information regarding the GeoTracker database

(http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml) is provided on the State Water Boards' website.

4.1.8. The Permittee shall submit to the Los Angeles Water Board, together with the first monitoring report required by this Order, a list of all chemicals and proprietary additives which could affect the quality of the recycled water, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly. An annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used in the treatment process shall be included in the annual report.

4.2. Quarterly Monitoring Reports

4.2.1. Quarterly monitoring reports shall include, at a minimum, the following information:

a. Summary of operational concerns that address changes in reporting conditions involving recycled water since the last report.

b. The volume of all recycled water and the volume of recycled water used for each use for the reporting period. If no recycled water is used during the quarter, the report shall so state.

c. The date and time of sampling and analyses.

d. All analytical results of recycled water samples collected during the monitoring period.

e. The USEPA analytical method used, the MDL, and the reporting detection limit (RDL) for each constituent analyzed.

f. The applicable DDW conditions or permit limitations.

g. QA/QC documents shall be submitted with each quarterly report. This documentation includes lab reports, results for duplicate samples, results for blank samples, and chain of custody forms.

h. The name(s) of the laboratory that conducted the analyses. ~~and a copy of laboratory certifications from DDW's ELAP.~~

i. Records of any operational problems, plant upset(s), equipment breakdowns or malfunctions, and any diversion(s) of off-specification recycled water and the location(s) of final disposal.

j. Discussion of compliance, noncompliance, or violation of requirements.

k. All corrective or preventive action(s) taken or planned with a schedule of implementation, if any.

4.3. Annual Reports

4.3.1. Annual monitoring reports shall include a minimum of the following:

a. Tabular and graphical summaries of the monitoring data obtained during the previous calendar year.

b. A table listing the users and use areas serviced during the year, the amount of recycled water delivered to and used by each user (reported in both gallons and in acre-feet), and the use of the recycled water. Newly permitted recycled water users shall be identified. When applicable, a supplement to the Title 22 Engineering Report and the State Water Board approval letter supporting those additions shall be included.

c. A summary of compliance status with the applicable monitoring requirements during the previous calendar year.

d. For any non-compliance during the previous calendar year, a description of:

- The date, duration, and nature of the violation.
- A summary of any corrective actions and/or suspensions of subsurface application of recycled municipal wastewater resulting from a violation.
- If uncorrected, a schedule for and summary of all remedial actions.

e. A description of any changes and anticipated changes, including any impacts to the operation of any unit processes or facilities shall be provided.

f. A list of the analytical methods used for each test and associated laboratory quality assurance/quality control (QA/QC) procedures shall be included in the annual report. The annual report shall identify the laboratories used by the Permittee to monitor compliance with this Order, and include a copy of laboratory certifications issued by the California State Water Resources Control Board, Division of Drinking Water's (DDW's) Environmental Laboratory Accreditation Program (ELAP).~~their status of certification, and provide a summary of their proficiency test.~~

g. A list of current operating personnel, their responsibilities, and their corresponding grade and date of certification.

h. The date of the Facility's Operation and Maintenance (O&M) Manual, the date the plan was last reviewed, and whether the plan is complete and valid for the current facilities.

i. A summary table of all inspections and enforcement activities initiated by the Permittee. Include a discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into compliance. Copies of documentation of any enforcement actions taken by the Permittee shall be provided.

j. An evaluation of the performance of the recycled water system for the treatment facility including a discussion of capacity issues, system problems, and a forecast of the flows anticipated for the following year.

4.3.2. Annual Volumetric Reporting

All volumetric data measured monthly shall be reported annually as acre-feet (af) to the GeoTracker database under "Other Tools: submit Annual Volumetric Water Data." Monthly volume of influent, recycled water produced and distributed for beneficial use in compliance with Title 22 in each of the use categories below:

a. Agricultural Irrigation: pasture and crop irrigation.

b. Landscape irrigation: irrigation of parks, greenbelts, playgrounds, school yards, athletic fields, cemeteries, residential landscaping, freeway landscaping, highway landscaping, and street landscaping.

c. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.

d. Commercial application: commercial facilities, business use (such as laundries or office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.

e. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.

f. Geothermal energy production: augmentation of geothermal fields.

g. Other non-potable uses, including but not limited to, dust control, flushing sewers, fire protection, fill stations, snow making, and dual-plumbed systems.

5. Report Submittal Dates

Monitoring periods and reporting for all required monitoring shall be completed according to Table A~~E~~-5:

Table AE-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Start Date	Monitoring Period	Self-Monitoring Report (SMR) Due Date
Continuous	Permit effective date	All	Submit with quarterly report
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with quarterly report
Weekly	Sunday following permit effective date or on permit effect date if on a Sunday	Sunday through Saturday	Submit with quarterly report
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	Submit with quarterly report
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15 August 15 November 15 February 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 30
Annual volumetric reporting	January 1 following (or on) permit effective date	January 1 through December 31	April 30

6. Signatory Requirements

All reports required by this General Order and other information requested by the Los Angeles Water Board shall be signed by the Administrator principal owner or operator, or by a duly authorized representative of that person. A duly authorized representative is one whose:

6.1. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general manager in a partnership, manager, operator, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may

thus be either a named individual or any individual occupying a named position), and

6.2. Written authorization is submitted to the Los Angeles Water Board. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Los Angeles Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

7. Certification

All reports signed by a duly authorized representative shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, 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 for knowing violations."

Should the responsible reporting party discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information.