



Central Valley Regional Water Quality Control Board

23 May 2018

James Ross
Public Works Manager
City of Visalia
7579 Avenue 288
Visalia, California 93277

CERTIFIED MAIL
7017 3040 0000 4342 4106

NOTICE OF APPLICABILITY

STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2016-0068-DDW WATER RECLAMATION REQUIREMENTS FOR RECYCLED WATER USE CITY OF VISALIA WATER RECYCLING PROJECT TULARE COUNTY

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff reviewed the City of Visalia's 14 February 2017 Notice of Intent (NOI) for regulatory coverage under Water Quality Order WQ 2016-0068-DDW, *Water Reclamation Requirements for Recycled Water Use* (hereafter, General Order) and the 14 February 2017 *Amendment to 2011 Title 22 Engineering Report: Visalia Water Conservation Plant Tertiary Facility* (2017 Title 22 Engineering Report). The NOI was also submitted to the State Water Resources Control Board, Division of Drinking Water (Division of Drinking Water or DDW). The City of Visalia submitted a revised 2017 Title 22 Engineering Report in February 2018, in response to comments from the Division of Drinking Water.

The City of Visalia (City or Discharger) owns and operates the City of Visalia Water Conservation Plant (WCP) at 579 Avenue 288 in Tulare County. The WCP is currently regulated under Waste Discharge Requirements (WDRs) Order R5-2014-0076 (NPDES No. CA0079189) for irrigation on 250 acres of City-owned fodder crops and land discharge (i.e., percolation ponds) and WQ 2016-0068-R5001. Notice of Applicability WQ 2016-0068-R5001 authorizes the City to be the Producer, Administrator, and Distributer of undisinfected secondary-treated recycled water on 168 acres of City-owned land in addition to the 250 acres allowed by WDRs Order R5-2014-0076 for a total of 418 acres, and to five dairy farmers adjacent to the City's wastewater discharge conveyance canal and Basin No. 4.

The City has upgraded the WCP to include tertiary treatment and disinfection and proposes to administer a recycled water use program primarily for agricultural irrigation for farms and dairies and landscape irrigation.

On 7 June 2016, the State Water Resources Control Board adopted the General Order to regulate the use of recycled water for all Title 22 uses except groundwater recharge. In addition, the General Order delegates the responsibility of administering water recycling

programs to a designated Administrator to the fullest extent possible. Based on the information provided in the NOI and in subsequent information submitted by the City, the proposed water recycling project satisfies the general and specific conditions of the General Order. Therefore, this serves as formal notice that Order WQ 2016-0068-DDW is applicable to the site and discharge described below. The City will act as the Administrator of the Recycled Water Program for this discharge. You are hereby assigned **WQ 2016-0068-R5006** for this discharge. Be advised that coverage under WQ 2016-0068-R5001 is terminated by this NOA and all future correspondence related to this discharge should use the new order number (**WQ 2016-0068-R5006**).

As previously mentioned, potential recycled water users may include dairies. **Prior to accepting recycled water**, dairies that wish to receive recycled water from the WCP shall provide the City and the Central Valley Water Board with a revised Nutrient Management Plan and/or Waste Management Plan for their respective dairy, subject to Executive Officer approval. The dairy shall ensure compliance with the Dairy General Order R5-2013-0122 (if applicable) and manage all applications of recycled water correctly. Acting as the Administrator, the City has an obligation to remind dairies and other recycled water users to apply recycled water agronomically in accordance with the certified Nutrient Management Plan (if applicable).

On 12 August 2016, the Central Valley Water Board received a Report of Waste Discharge for an upgrade of its WCP to include a tertiary and disinfection system. The City completed construction of the tertiary and disinfection treatment system in January 2017. Tentative Waste Discharge Requirements were circulated for comment on 6 April 2018 and are scheduled to be on the agenda for the 31 May – 1 June 2018 Board meeting.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter, which describe mandatory discharge and monitoring requirements. Sampling, monitoring, and reporting requirements applicable to your recycled water project must be completed in accordance with the attached Monitoring and Reporting Program (MRP) WQ 2016-0068-R5006. This MRP was developed after review of your NOI as described in the enclosed Technical Memorandum.

WASTEWATER TREATMENT FACILITY

The City completed construction of the upgraded WCP in January 2017. The upgraded WCP consists of two Parshall flumes, two bar screens, four grit tanks, five rectangular primary clarifiers, four fine screens, four rectangular aeration basins, ten membrane tanks (each housing eight membrane cassettes with expansion space), two recirculation lines, and two parallel channels housing six ultraviolet light (UV) disinfection banks with expansion space for a future flow increase.

RECYCLED WATER APPLICATION

The City proposes to administer a recycled water use program for disinfected tertiary-treated water, in which the City will serve as the sole Producer and Administrator. The City will also serve as a Distributor and a User of Recycled Water. The proposal also calls for Tulare Irrigation District (TID) to serve as a Distributor to users within the TID area.

On 11 April 2018 the Discharger's consultant submitted copies of the TID use area agreements on the Discharger's behalf. The use area agreements identify the land owner,

APN, crop, acreage, irrigation type, and the maximum monthly and annual recycled water allotment.

The City requested to retain the ability to discharge undisinfected secondary-treated water in the event of a malfunction or planned maintenance. The discharge of undisinfected secondary-treated water is limited to the following locations:

- City-owned pond 2,
- City-owned pond 3,
- City-owned Basin No. 4,
- 250 acres of City-owned land (fiber and fodder) previously authorized by WDRs Order R5-2014-0076,
- 168 acres of City-owned land (fiber and fodder) previously authorized by WQ 2016-0068-R5001, and
- Contracted dairy farmers (potentially 2,525 acres of fiber and fodder) previously authorized by WQ 2016-0068-R5001.

The proposed tentative WDRs include a provision that limits the duration of any discharge of undisinfected secondary-treated wastewater (referred to as Type 2 Discharge in the tentative WDRs) to the time required to respond to any malfunction or planned maintenance.

WATER RECYCLING PROGRAM ADMINISTRATION FOR AGRICULTURAL AND LANDSCAPE IRRIGATION AND OTHER USES

The City, as the Administrator, will be responsible for the administration of the Recycled Water Program authorized pursuant to this General Order, including the requirements of Title 22. The City is also the recycled water Producer and Distributor and is responsible for all permit requirements related to the production and distribution of recycled water.

The NOI provided a detailed description of the City's water recycling program and included the following topics:

- Authority, Rules and Regulation, and User Agreements;
- Design and Implementation Program;
- Cross-Connection Testing Responsibilities and Procedures;
- Monitoring and Reporting Program;
- Use Area Inspection Program;
- Operations and Maintenance Program;
- Compliance Program;
- Employee and User Training; and
- Emergency Procedures and Notification.

DIVISION OF DRINKING WATER (DDW) CONSIDERATIONS

As previously mentioned, the City submitted the 2017 Title 22 Engineering Report in February 2017 and a revised 2017 Title 22 Engineering Report in February 2018 in response to comments received by DDW. DDW issued an acceptance letter dated 22 March 2018 for use of disinfected tertiary recycled water for City-owned and contracted use areas identified in the City's NOI. The letter includes DDW's recommendations for inclusion in either the WDRs, NOA, or monitoring and reporting program. Prior to use of recycled water to future landscape irrigation areas, the City shall:

- Submit recycled water pipeline drawings for any future landscape irrigation use area.
- Conduct a cross connection control test prior to distributing tertiary recycled water to any future landscape irrigation use areas. The inspections shall be conducted by a certified cross connection control specialist. The test shall be observed by DDW, the Use Area Supervisor, potable water purveyor, and the recycled water distributor. A written report documenting the results of the test shall be submitted to DDW within two weeks of completion of the test.

WATER RECYCLING USE REQUIREMENTS

1. The production, distribution, and use of recycled water shall be managed in accordance with the NOI, the Title 22 Engineering Report approved by the Division of Drinking Water, and this NOA.
2. Application of recycled water shall be limited to the uses described in the NOI, the Title 22 Engineering Report approved by the Division of Drinking Water, and this NOA.
3. The use of recycled water shall not cause pollution or nuisance, as defined by Water Code section 13050.
4. Unless specifically authorized otherwise by WDRs, recycled water shall be disinfected tertiary recycled water as defined by Title 22, section 60301.230.
5. When specifically authorized by WDRs, recycled water shall be at least undisinfected secondary recycled water as defined by title 22, section 60301.900. The City of Visalia is only authorized to reuse undisinfected secondary recycled water at the locations specified on page 3 of this NOA.
6. The City of Visalia shall promptly notify the Central Valley Water Board of any recycled water spills or unauthorized uses.

GENERAL INFORMATION AND REQUIREMENTS

The City of Visalia shall comply with the Specifications, Water Recycling Administration Requirements, and General Provisions of the General Order.

Please review this NOA carefully to ensure that it completely and accurately reflects the proposed Recycled Water Program. If the discharge violates the terms or conditions, the Central Valley Water Board may take enforcement action, including the assessment of an administrative civil liability. Failure to abide by the conditions of the General Order, including MRP WQ 2016-0068-R5006 (MRP), and this letter authorizing applicability could result in enforcement actions, as authorized by provisions of the California Water Code.

The required annual fee specified in the annual billing from the State Water Resources Control Board shall be paid until this NOA is officially terminated. The City of Visalia must submit in writing a Notice of Termination once the water recycling program has ended.

DOCUMENT SUBMITTALS

The City of Visalia shall continue to submit electronic self-monitoring reports (eSMRs) using the State Water Resources Control Board's California Integrated Water Quality System (CIWQS)

Program Web site (<http://ciwqs.waterboards.ca.gov/>). The City of Visalia shall report in the eSMR the results for all monitoring specified the MRP.

The Central Valley Water Board have gone to a Paperless Office System. All regulatory documents, submissions, materials, and correspondences other than the self-monitoring reports required by the attached MRP shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MBs should be emailed to centralvalleyfresno@waterboards.ca.gov. Documents that are 50 MBs or greater should be transferred to a disc and mailed to the Central Valley Water Board at 1685 "E" Street, Fresno, CA 93706. Until directed otherwise, the City shall submit all documents using our Paperless Office System.

To ensure that your submittals are routed to the appropriate staff, the following information should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5D540113001, Facility Name: Visalia Water Recycling Project,
Order: WQ 2016-0068-R5006

If you have any questions regarding this matter, please contact Daniel Benas at (559) 445-5500 or at Daniel.Benas@waterboards.ca.gov.

for 
Pamela C. Creedon
Executive Officer

- Enclosures:
- (1) State Water Resources Control Board Order WQ 2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use (Discharger Only)
 - (2) Monitoring and Reporting Program WQ 2016-0068-R5006
 - (3) Technical Memorandum of the City of Visalia's Notice of Intent
 - (4) Division of Drinking Water Final Amendment to 2011 Title 22 Recycled Water Engineering Report letter

cc: Timothy O'Brien, State Water Resources Control Board, Sacramento (via email)
Tricia Wathen, State Water Resources Control Board, Division of Drinking Water, Fresno (via email)
Tulare County Environmental Health Services, Visalia

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. WQ 2016-0068-R5006

FOR

CITY OF VISALIA
TULARE COUNTY

This monitoring and reporting program (MRP) describes requirements for monitoring a recycled water system. This MRP is issued pursuant to Water Code section 13267. The City of Visalia (Administrator) shall not implement any changes to this MRP unless and until a revised MRP is issued by the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) Executive Officer.

The Administrator has applied for and received coverage for the recycled water system that is subject to the notice of applicability (NOA) of Water Quality Order 2016-0068-DDW (WQ 2016-0068-R5006). The reports are necessary to ensure that the Administrator complies with the NOA and General Order. Pursuant to California Water Code section 13267, the Administrator shall implement this MRP and shall submit the monitoring reports described herein.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The name of the sampler, sample type (grab or composite), time, date, location, bottle type, and any preservative used for each sample shall be recorded on the sample chain of custody form. The chain of custody form must also contain all custody information including date, time, and to whom samples were relinquished. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Regional Water Board staff.

Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that they are used by a California Environmental Laboratory Accreditation Program (ELAP) certified laboratory or:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced by the manufacturer or authorized representative at the recommended frequency; and
4. Field calibration reports are maintained and available for at least three years.

Monitoring requirements listed below may duplicate existing requirements under other orders including WDRs or waivers of WDRs that regulate agricultural discharges from irrigated lands. Duplication of sampling and monitoring activities are not required if the monitoring activity satisfies the requirements of this General Order. Collecting composite samples is acceptable in most cases. The facility may continue using existing sampling collection equipment that is consistent with the applicable facility order. However, due to short sample holding times, bacteriological samples collected to verify disinfection effectiveness must be grab samples. In addition to submitting the results under another order, the results shall be submitted in the reports required by this General Order.

All of the monitoring listed below may not be applicable to all recycled water projects. Consult the NOA or Central Valley Water Board staff to determine applicable requirements.

RECYCLED WATER MONITORING

If recycled water is used for irrigation of landscape areas¹, priority pollutant monitoring is required at the production facility. The frequency of monitoring corresponds to the flow rate of the recycled water use. Sampling shall be consistent with the following:

Constituent	Treatment System Flow Rate	Sample Frequency	Reporting Frequency
Priority Pollutants ¹	< 1 mgd ²	5 years	The next annual report.
	≥ 1 mgd	Annually	Annually

¹ Priority pollutants are listed in Appendix A of Code of Federal Regulations, Part 423.

² mgd denotes million gallons per day.

DISINFECTION SYSTEM MONITORING

Samples shall be collected downstream of the ultraviolet light disinfection system and analyzed by an approved laboratory per Title 22, section 60321(a). The Administrator shall conduct the following monitoring:

Constituent/Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Coliform Bacteria	MPN/100 mL ¹	Grab	1/Day	Monthly ²
Turbidity	NTU ¹	Meter	Continuously	Monthly ²

¹ MPN/100 mL denotes most probable number per 100 mL sample. NTU denotes nephelometric turbidity unit.

² Summarize monthly reports and include in the Annual Report due April 1st.

USE AREA MONITORING

The Administrator shall monitor use areas(s) at a frequency appropriate to determine compliance with this General Order and the Administrator's recycled water use program requirements. The Administrator may assign monitoring responsibilities to a User as part of the Water Recycling Use Permit program. The Administrator retains responsibility to ensure the data is collected, prepared, and submitted in the Annual Report.

The following shall be recorded for each User 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 parameters:

¹ Landscape areas are defined as parks; greenbelts, playgrounds; school yards; athletic fields; golf courses; cemeteries; residential landscaping; common areas; commercial landscaping (except eating areas); industrial landscaping (except eating areas); freeway, highway, and street landscaping.

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
Recycled Water User	--	--	--	Annually
Recycled Water Flow	gpd ¹	Meter ²	Monthly	Annually
Acreage Applied ³	Acres	Calculated	--	Annually
Application Rate	inches/acre/year	Calculated	--	Annually
Soil Saturation/Ponding	--	Observation	Quarterly	Annually
Nuisance Odors/Vectors	--	Observation	Quarterly	Annually
Discharge Off-Site	--	Observation	Quarterly	Annually
Notification Signs ⁴	--	Observation	Quarterly	Annually

¹ gpd denotes gallons per day.

² Meter requires meter reading, a pump run time meter, or other approved method.

³ Acreage applied denotes the acreage to which recycled water is applied.

⁴ Notification signs shall be consistent with the requirements of California Code of Regulations, title 22, section 60310 (g).

REPORTING

In reporting monitoring data, the Administrator shall arrange the data in tabular form so that the date, data type (e.g., flow rate, bacteriological, etc.), and reported analytical or visual inspection results are readily discernible. The data shall be summarized to illustrate compliance with this General Order and NOA as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported in the next regularly scheduled monitoring report and shall be included in calculations as appropriate.

The City of Visalia shall continue to submit electronic self-monitoring reports (eSMRs) using the State Water Resources Control Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://ciwqs.waterboards.ca.gov/>). The City of Visalia shall report in the eSMR the results for all monitoring specified in this MRP.

A. Annual Report

Annual reports shall be submitted to the Central Valley Water Board by **April 1st following the monitoring year**. The Annual report shall include the following:

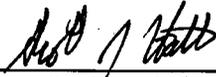
1. A summary table of all recycled water Users and use areas. Maps may be included to identify use areas. Newly permitted recycled water Users and use areas shall be identified. When applicable, identify any modifications to the approved Title 22 Engineering Report and include the State Water Board's letter approving such modifications.
2. A summary table of all inspections and enforcement activities initiated by the Administrator. Include a discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or General Order. Copies of documentation of any enforcement actions taken by the Administrator shall be provided.
3. An evaluation of the performance of the recycled water treatment facility, including discussion of capacity issues, system problems, and a forecast of the flows anticipated in the next year.
4. Tabular and graphical summaries of all monitoring data collected during the year, including priority pollutant monitoring, if required.
5. The name and contact information for the recycled water operator responsible for operation, maintenance, and system monitoring.

A letter transmitting the annual report shall accompany each report. The letter shall summarize the numbers and severity of violations found during the reporting period and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Administrator or the Administrator's authorized agent:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

The Administrator shall implement the above monitoring program as of the date of this MRP.

Ordered by:


for Pamela C. Creedon, Executive Officer
23 May 2018
DATE



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

TO: Clay L. Rodgers
Assistant Executive Officer

Scott J. Hatton 
Supervising Engineer

FROM: Alexander S. Mushegan 
Senior Engineer
RCE 84204

Daniel B. Benas 
Water Resource Control Engineer

DATE: 23 May 2018

SUBJECT: APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2016-0068-DDW, WATER RECLAMATION REQUIREMENTS FOR RECYCLED WATER USE, CITY OF VISALIA, TULARE COUNTY

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a 14 February 2017 Notice of Intent (NOI) with an amendment to the 2011 Title 22 Engineering Report for regulatory coverage under WQ 2016-0068-DDW, *State Water Resources Control Board Order, Water Reclamation Requirements for Recycled Water Use (General Order)* for the City of Visalia Water Pollution Control Plant (WCP). The NOI and amended Title 22 Engineering Report (Report) were signed by Courtney L. Eaton and Penny Carlo, both California registered professional civil engineers with Carollo Engineers, Inc. The NOI and the Report were also submitted to the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW). This memorandum provides a summary of staff's review of the NOI and evaluates if the City's proposed discharge of disinfected tertiary-treated wastewater for recycled water uses is eligible for enrollment under the General Order.

BACKGROUND

The City owns and operates a wastewater treatment facility at 7579 Avenue 288 in Tulare County, also known as the Water Conservation Plant (WCP). The WCP is regulated under Waste Discharge Requirements (WDRs) Order R5-2014-0076 (NPDES CA0079189) for irrigation on 250 acres of City-owned fodder crops and land discharge (i.e., percolation ponds) and for discharge to surface water (Mill Creek), although the surface water discharge ceased in August 2014. The City is currently enrolled under the General Order (WQ 2016-0068-R5001) and is authorized to be the Producer, Administrator, and Distributer of undisinfectated secondary treated effluent on 168 acres of City-owned land in addition to the 250 acres allowed by WDRs Order R5-2014-0076, for a total of 418 acres, and potentially up to five dairy farmers adjacent to the City's wastewater discharge conveyance canal and Basin No. 4.

DESCRIPTION OF DISCHARGE

The City submitted a Report of Waste Discharge on 12 August 2016 for a disinfected tertiary wastewater treatment facility and proposes to administer an expanded recycled water use program. Construction of the upgraded facilities was completed in January 2017. The upgraded WCP consists of two Parshall flumes, two bar screens, four grit tanks, five rectangular primary clarifiers, four fine screens, four rectangular aeration basins, ten membrane tanks (each housing eight membrane cassettes with expansion space), two recirculation lines, and two parallel channels housing six ultraviolet light (UV) disinfection banks with expansion space for a future flow increase. Tentative Waste Discharge Requirements were circulated for comment on 6 April 2018 and are scheduled to be on the agenda for the 31 May – 1 June 2018 Board meeting.

The February 2017 NOI proposes a recycled water use program for disinfected tertiary-treated water, in which the City will serve as the sole Producer and Administrator. The City will also serve as a Distributor and a User of Recycled Water. The proposal also calls for Tulare Irrigation District (TID) to serve as a Distributor to users within the TID area.

City-owned use areas listed in the February 2017 NOI include farmland adjacent to the WCP and City Airport as well as Plaza Park, and Valley Oaks Golf course. The City has requested the permission to retain the ability to discharge undisinfected secondary-treated water to City-owned ponds 2 and 3, Basin No. 4, 250 acres of City-owned land authorized under WDRs Order R5-2014-0076, 168 acres of City-owned land, and up to 2,525 acres of contracted dairy farms which the City was previously permitted to reclaim undisinfected secondary recycled water at. The proposed tentative WDRs include a provision that limits the duration of any discharge of undisinfected secondary-treated wastewater (referred to as Type 2 Discharge in the tentative WDRs) to the time required to respond to any malfunction or planned maintenance.

Use area agreements for TID users identify the following crops will be grown with disinfected tertiary-treated wastewater: corn, wheat, alfalfa, pistachio, cotton, walnuts, and cherries. Copies of signed TID user agreements have been submitted to the Central Valley Water Board. Table 1 below provides the description of the Recycled Water Use Areas. Attachment A – Site Location Map shows the location of the Recycled Water Use Areas.

Table 1 Recycle Water Use Areas

<u>Description</u>	<u>Acreage/Storage</u>
City farmland	996 acres
On-site Pond 2	84 acre-feet
On-site Pond 3	304 acre-feet
City-owned Basin No. 4	1,287 acre-feet
Contracted land (dairies)	2,525 acres
Tulare Irrigation District (TID)	10,700 acres
City-owned farmland near the airport	664 acres
Landscape Reuse	253 acres

The City of Visalia and TID have a water exchange agreement dated 18 March 2013. Under the agreement, the City of Visalia will deliver available disinfected tertiary-treated water to TID and the City will receive exchange water from TID. The initial term of the agreement is the 20th anniversary of the first delivery of available recycled water. After the initial term expires, the

agreement is automatically renewed for successive terms of five years without further action. After ten years, either party may terminate the agreement by giving five years notice.

On 14 August 2017 James Funk of Provost and Pritchard submitted a memorandum containing a hydraulic analysis supporting that disinfected tertiary treated water discharged from the WCP cannot backflow into Packwood Creek or Mill Creek.

On 11 April 2018 the City's consultant submitted copies of the TID user area agreements on the Dischargers behalf. The use area agreements identify the land owner, APN, crop, acreage, irrigation type, and the maximum monthly and annual recycled water allotment.

The NOI states that future potential users could include Caltrans along State Highway 99 and other farmers. The NOI states that site specific information will be submitted to DDW and the Central Valley Water Board for any future users beyond what was requested in the NOI.

Potential recycled water users may include dairies. Any dairies requesting to receive recycled water from the WCP, must provide the City and Central Valley Water Board with a revised Nutrient Management Plan and/or Waste Management Plan for their respective dairy. The dairy should ensure compliance with the Dairy General Order R5-2013-0122 (if applicable) and manage all applications of recycled water correctly. Acting as the Administrator, the City is obligated to remind dairies and other recycled water users to apply recycled water agronomically in accordance with a certified Nutrient Management Plan (if applicable).

DIVISION OF DRINKING WATER (DDW) CONSIDERATIONS

The City submitted an amendment to its 2011 Title 22 Engineering Report for regulatory coverage under the General Order. A 1 September 2017 DDW letter attached a memorandum that provided comments on the UV Operations Plan and Spot-Check Bioassay report. The memorandum also established conditional acceptance of the 2012 NWRI UV dose equation and 16,000-hour lamp age factor for the Ozonia Aquaray 3X HO VLS UV Disinfection System.

On 20 March 2018, DDW issued an UV Operations Plan Acceptance and Completion of Critical Alarms Testing letter. The letter provides documentation of DDW staff's review and acceptance of the 21 February 2018 revised final UV Operations Plan and the successful demonstration of critical alarms testing at the WCP on 16 February 2018.

DDW issued an acceptance letter dated 22 March 2018 for use of disinfected tertiary recycled water for City-owned and contracted use areas identified in the City's NOI with the understanding of the following:

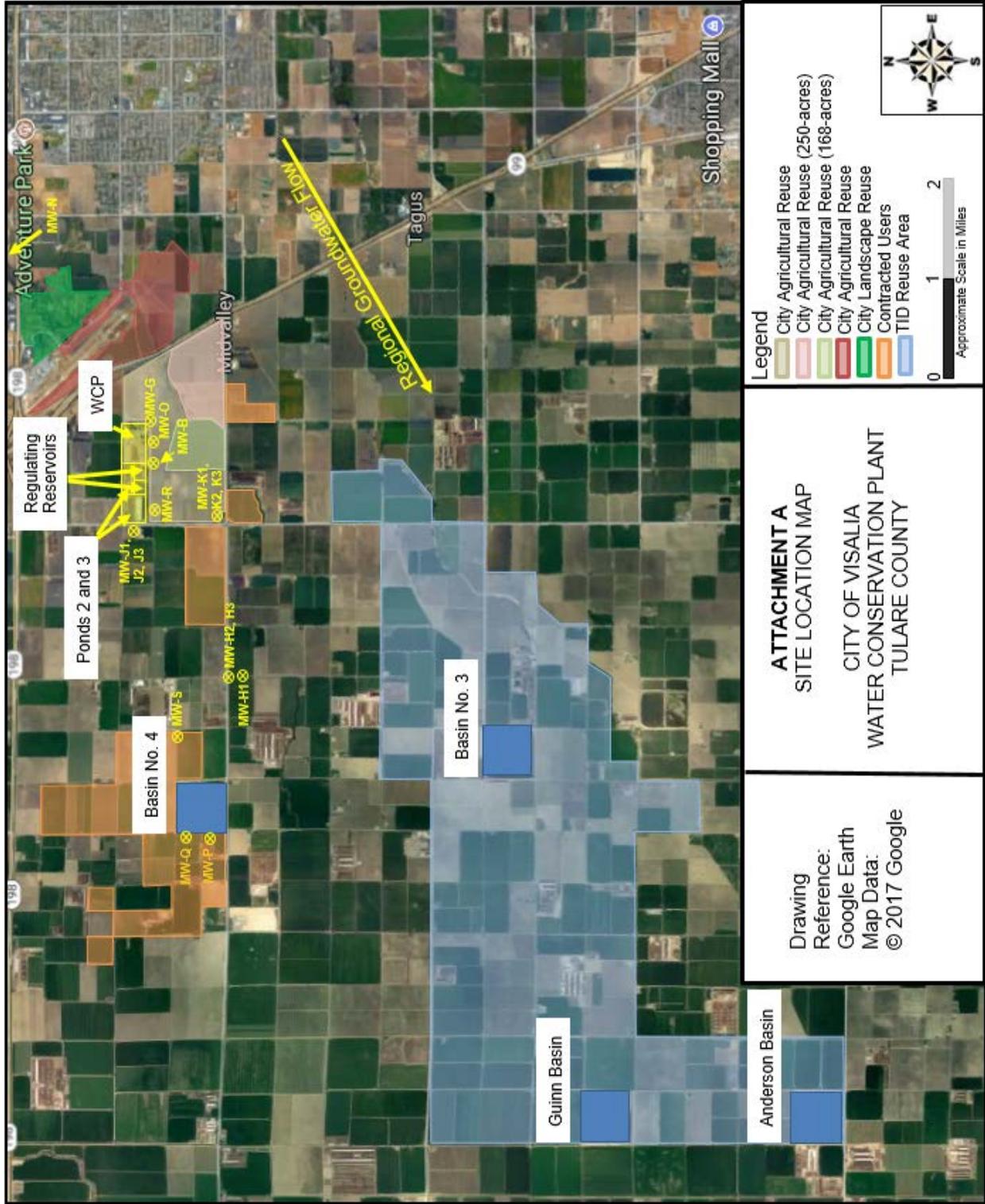
- The City is to submit recycled water pipeline drawings for any future landscape irrigation use area.
- The City is to conduct a cross connection control test prior to distributing tertiary recycled water to any future landscape irrigation use areas. The inspections shall be conducted by a certified cross connection control specialist. The test shall be observed by DDW, the Use Area Supervisor, potable water purveyor, and the recycled water distributor. A written report documenting the results of the test shall be submitted to DDW within two weeks of completion of the test.

The City of Visalia is required to notify DDW and receive approval prior to making any changes to the facility and operations described in the approved engineering report.

MONITORING REQUIREMENTS

Monitoring requirements included in the following sections of Attachment B of the General Order are appropriate for this discharge:

- Recycled Water Monitoring,
- Disinfection System Monitoring, and
- Use Area Monitoring.



State Water Resources Control Board

Division of Drinking Water

March 22, 2018

Mr. Scott Hatton
Central Valley Regional Water Quality Control Board, Non-15 Unit
1685 E Street
Fresno, CA 93706

CITY OF VISALIA FINAL AMENDMENT TO 2011 TITLE 22 RECYCLED WATER ENGINEERING REPORT FOR VISALIA WATER CONSERVATION PLANT TERTIARY FACILITY (5490003-701)

Dear Mr. Hatton,

This letter documents Division of Drinking Water (DDW) acceptance of the Amendment to 2011 Title 22 Recycled Water Engineering Report (Amendment) for Visalia Water Conservation Plant (VWCP) Tertiary Facility dated February 2018. The City of Visalia submitted the revision in response to DDW letter to the Central Valley Regional Water Quality Control Board (Regional Board) dated February 5, 2018.

The City of Visalia (City) completed upgrades to the VWCP in early 2017, which include replacement of existing activated sludge facility with a membrane bioreactor (MBR) facility and installation of ultraviolet (UV) disinfection facility. The VWCP current capacity is 18 million gallons per day (MGD) average daily flow (ADF) and 18.9 MGD maximum monthly flow (MMF), which is expandable to ultimate capacity of 22 MGD.

The City intends to produce, distribute, and use disinfected tertiary recycled water for irrigation of city owned land and other contracted users:

- City owned use areas include 996 acres of agricultural land (tree crops and fodder crops) and landscape irrigation at City-owned irrigation use areas (City Plaza Park, the Visalia Municipal Airport, and city owned public golf course (Valley Oaks)). About 418 acres of fodder crops (out of the 996 acres of agricultural land) are already permitted to be irrigated with undisinfected secondary recycled water.
- Other contracted use areas consists of three parcels located along the conveyance canal between the VWCP and Basin No. 4 for agricultural irrigation.

The City also intends to produce and distribute 11,000 – 13,000 acre feet per year of disinfected tertiary recycled water to Tulare Irrigation District (TID). TID will distribute to its customers primarily for agricultural irrigation.

DDW recommends the following requirements be incorporated into the City's Waste Discharge Requirements (WDRs) or Notice of Applicability, including any necessary additions into Monitoring and Reporting Program:

1. Submit recycled water pipeline drawings and use area information when the City provides Caltrans with water for State Highway 99 median irrigation that borders VWCP and City owned airport.
2. Before tertiary recycled water can be distributed to any City owned irrigation use areas (City Plaza Park, the Visalia Municipal Airport, and the City-owned public golf course (Valley Oaks)), a cross connection control test shall be performed, and the following requirements shall be met:
 - a) The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements.
 - b) The Use Area Supervisor, the potable water purveyor and the recycled water distributor must all perform/witness the cross-connection control test. The potable water purveyor must be involved because it is their responsibility to ensure protection the potable water system.
 - c) The test shall be witnessed by DDW. The City shall provide a notification to DDW when scheduling the test. Please identify the cross control specialist performing the cross connection control-test. Please include a documentation to describe the method for cross connection testing (pressure, dye, or other method) and the steps to be taken during the cross-connection control test.
 - d) Within two weeks of completion of the test, the City shall submit to DDW a written report documenting the results of the cross-connection inspection and shutdown tests.

Future landscape irrigation use areas, where the facility is served by recycled water and potable water sources are available for irrigation, are also subject to the requirement for cross-connection control test.

3. Tulare Irrigation District (TID) must be named as a co-permittee for the WDRs since TID has been delegated numerous critical responsibilities as a distributor of tertiary recycled water. If TID use of recycled water is permitted using the statewide water recycling requirements (2016-0068-DDW) and the City is named as Administrator, the Regional Board should consider how enforcement of a recycled water program in the TID use areas are administered, including any responsibilities for implementing a cross connection control program.
4. The City's UV disinfection facility shall be operated in accordance with the DDW recommendation described in the letter titled "City of Visalia UV Operations Plan and Spot-Check Bioassay Testing of the Visalia Water Conservation Plant Ultraviolet Disinfection System June 2017 Ozonia Aquaray® 3X HO VLS UV Disinfection System" dated September 1, 2017, with the exception of item 11.d. DDW accepts replacing condition described in 11.d. for diversion of effluent to waste to be replaced with "level of water either of the UV channel exceeds a depth of 69 inches".
5. The effluent shall be monitored at least once daily for total coliform bacteria. The samples shall be taken from the disinfected tertiary effluent and shall be analyzed by an approved laboratory.
6. Filter effluent turbidity analyses should be conducted continuously using a continuous monitoring and recording turbidimeter.
7. Compliance with the turbidity standard of not exceeding 0.2 NTU more than 5 percent of the time over a 24-hour period should be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period.

8. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2-hours may be substituted for a period of up to 24-hours.
9. UV dose, UV transmittance (UVT), temperature, and flowrate through the UV disinfection system must be monitored continuously.
10. Monitoring of the following UV disinfection system components shall be provided as following:
 - e) Status of each UV module, on/off.
 - f) Status of each UV lamp, on/off.
 - g) Liquid level in the UV disinfection reactor trains.
 - h) Age of each UV lamp.
11. Minimum quarterly reporting requirements shall include the following:
 - a) Results of daily total coliform bacteria monitoring,
 - b) Total coliform running 7-day median calculation,
 - c) Maximum daily coliform reading for previous month,
 - d) Minimum daily UV dose,
 - e) 95 percentile effluent turbidity (24 hour period),
 - f) Daily maximum turbidity reading,
 - g) Minimum daily UV operational dose,
 - h) Minimum daily filter effluent UV transmittance.
12. The following conditions shall initiate a plant shut down, diversion of inadequately treated water, and notification of the Regional Board and DDW within 24 hours:
 - a) Failure of UV disinfection equipment,
 - b) Membrane effluent turbidity greater than 0.5 NTU,
 - c) UV dose lower than 80 mJ/cm²,
 - d) Level of water either of the UV channel exceeds a depth of 69 inches, and
 - e) UV transmittance lower than 56.6%.
13. The City's 2011 Title 22 Engineering Report and this Amendment does not describe any proposed use for dual plumbed use areas. Per Title 22 section 60301.250, a dual plumbed system means a system that utilizes separate piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:
 - a) to serve plumbing outlets within a building, or
 - b) outdoor landscape irrigation at individual residences.

Table 9, TID Land Use Summarized by Land Owner and Crop Type, currently shows 33 acres designated for "Residential." Should the City or TID decide to distribute recycled water to a dual plumbed use area, such as for landscape irrigation uses, the Amendment shall be revised to reflect this new use type, and the City and/or TID shall demonstrate compliance with Title 17 sections 7583 – 7605 and Title 22 sections 60313 – 60316.

14. Future revisions and updates to the Engineering Report (including its attachments) must be provided to DDW to demonstrate applicable changes to operations and management programs in place. If applicable, any updates or changes to the Engineering Report must also be made in any application documents and submitted to the Regional Water Quality Control Board (i.e. any technical support documents and Report of Waste Discharge documents).

If you have any questions regarding this letter, please contact me at (559) 447-3398 or tricia.wathen@waterboards.ca.gov.

Sincerely,



Tricia A. Wathen, P.E.
Senior Sanitary Engineer, Visalia District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

District webpage: http://www.waterboards.ca.gov/drinking_water/programs/districts/visalia_district.shtml

TAW/BB/taw

cc: Brian Bernados, Senior Engineer – DDW Recycled Water Unit
Sherly Rosilela, WRCE – DDW Recycled Water Unit
Nilsa Gonzalez, Tulare County Environmental Health Department
Jim Ross, City of Visalia, Public Works Manager, 7579 Ave. 288, Visalia, CA 93277
Tammy Kelly, CWS – Visalia District Manager, 216 Valley Oaks Drive, Visalia, CA 93292