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12 BEFORE THE
13 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

14 In the Matter of the City of Santa Rosa's)
15 Petition for Review of Action and Failure to) PETITION FOR REVIEW;
16 Act by the California Regional Water Quality) PRELIMINARY POINTS AND
17 Control Board, North Coast Region, in) AUTHORITIES IN SUPPORT OF
18 Adopting Order No. R1-2013-0001 and) PETITION (WATER CODE
19 Accompanying Fact Sheet and Monitoring and) SECTIONS 13320)
20 Reporting Program.)

21 I. SUMMARY OF PETITION AND REQUESTED ACTION

22 This Petition for Review primarily presents two policy issues for State Water Resources
23 Control Board ("State Water Board") consideration and resolution, which are:

- 24 A. Whether regulatory requirements for the provision and use of recycled water that
25 exceed statewide requirements and policies should be upheld where those requirements will
26 discourage attainment of the State Water Board's clear goals for increased recycled water use; and
- 27 B. Whether a "no net loading" requirement should be imposed for limited discharges of
28 phosphorus to an impaired waterbody prior to completion of a pending Total Maximum Daily Load

1 (“TMDL”) where no “reasonable potential” exists, such a requirement is contrary to clear State
2 Water Board precedent, attaining compliance is very uncertain and will divert scarce resources
3 from continued water recycling efforts, and desired benefits from the requirement are unlikely to
4 occur given the discharge is less than two percent (2%) of the phosphorus load to the affected
5 watershed.

6 These policy issues are being presented to the State Water Board in response and
7 connection to the recent re-adoption of the City’s National Pollutant Discharge Elimination System
8 (“NPDES”) Permit and Master Reclamation Permit (“Permit”) by the Regional Water Quality
9 Control Board for the North Coast Region (“Regional Water Board”) on November 21, 2013,
10 which serves as a Master Water Reclamation Permit for distribution and use of recycled water and
11 regulates the City’s remaining limited discharges to surface water.¹ Through this Petition, the City
12 seeks the State Water Board’s guidance on issues of statewide importance that will undeniably
13 impact the City’s ability to continue efficiently operating one of the State’s most productive and
14 successful recycled water systems.

15 Over the last three decades, and concurrent with the State’s efforts to promote recycled
16 water use, the City of Santa Rosa (“City”) set the progressive and laudable goals of substantially
17 increasing water recycling infrastructure and capability while maintaining compliance with
18 discharge requirements. To this end, the City Council passed a resolution authorizing the financial,
19 engineering, and environmental studies necessary to help the City reach the goal of recycling its
20 effluent, instead of discharging to the nearby Russian River via tributaries, including the Laguna de
21 Santa Rosa.

22 The City’s track record on accomplishing these goals is impressive. After investing over
23 \$350 million in limited ratepayer funds, the City built and now operates a prestigious recycling
24 system.² Improvements to the City’s Water Reclamation Plant, which provides filtered, ultraviolet

26 ¹ See Regional Water Board Order No. R1-2013-0001, NPDES Permit No. CA0022764, WDID No.
27 1B830990SON.

28 ² The City has received numerous awards for its recycling system, including the Association of California
Water Agencies (“ACWA”) Clair A. Hill Award in 2005, the American Council of Engineering Companies

1 (“UV”) disinfected recycled water that meets or exceeds the highest level recognized in California
2 non-potable water recycling regulations, has allowed the City to substantially reduce its discharges
3 to surface waters since 2003. In fact, during several recent discharge seasons, which run from
4 October to May of each year, the City met its goal of recycling one hundred percent (100%) of its
5 wastewater (during the 2008/2009 and 2012/2013 discharge seasons). Other years follow close
6 behind (nine (9) days of discharge during the 2009/2010 discharge season, forty-nine (49) days of
7 discharge during the 2010/2011 discharge season, and one (1) day during the 2011/2012 discharge
8 season for the sole purpose of performing a test). To accomplish this, the City treats and recycles
9 more than six billion gallons of water to produce green electrical power and irrigate agriculture,
10 parks, landscapes, school grounds, and golf courses. Further, to minimize any potential impacts
11 from discharge, the City manages the storage and recycling system to consolidate what limited
12 discharges may occur into a few winter months in accordance with the City’s Discharge
13 Management Plan approved by the Regional Water Board’s Executive Officer.

14 In 2009, the City was one of the top 10 water recyclers in the State,³ and represents the
15 majority of the water recycling in the North Coast Region.⁴ Staff from the Regional Water Board
16 acknowledged these accomplishments at the recent hearing on the City’s Permit, the subject of this
17 Petition for Review, by stating:

18 “Santa Rosa has made great strides to minimize surface water discharges through water
19 reclamation. Since the beginning of the permit term in 2006, the City has controlled
20 discharges so effectively it has been able to eliminate all discharges to surface waters in
21 the [compliance] years 2009 and 2013. The City currently beneficially reuses
approximately 98% of its influent wastewater, which is really impressive.”

22 (ACEC) Honor Award in 2005, the Consulting Engineers & Land Surveyors of California (CELSOC)
23 Excellence Honor Award in 2005, and the WaterReuse Association Institution of the Year Award in 2008.

24 ³ See Table 1 – 2009 Water Recycling Survey
http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/docs/munirecsrvy/Tab1e1.pdf.

25 ⁴ See Figure 2 and Table 2 – 2009 Water Recycling Survey
26 http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/docs/munirecsrvy/fig3.pdf and
27 http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/docs/munirecsrvy/tbl2.pdf.

1 (Sworn Testimony of Mr. Charles Reed, North Coast Regional Water Quality Control Board
2 Hearing, November 21, 2013, Audio Hearing Transcript at timestamp 7:14-7:39.) Regional Water
3 Board members also lauded the robustness of the City's state-of-the-art recycling program. (Audio
4 Hearing Transcript at timestamp 1:25.14-1:25:26.)

5 The City's recycling goals are consistent with and support the State of California's
6 reclamation goals. To address legislative mandates related to water reclamation,⁵ the State Water
7 Board adopted a Strategic Plan Update for 2008-2012, which included a priority to increase by
8 2015 sustainable local water supplies (e.g., recycled water) available for meeting existing and
9 future beneficial uses by 1,725,000 acre-feet per year. In 2009, the State Water Board also adopted
10 a statewide Recycled Water Policy (State Water Board Resolution No. 2009-0011) intended to
11 ensure statewide regulatory consistency for recycled water projects and support the recycled water
12 priorities set forth in the Strategic Plan. That policy is specifically referenced in legislation
13 adopted by the California Legislature as integral to achieving certain statewide recycled water
14 benchmarks. (See Water Code section 13560(a) ("In February 2009, the state board unanimously
15 adopted, as Resolution No. 2009-0011, an updated water recycling policy, which includes the goal
16 of increasing the use of recycled water in the state over 2002 levels by at least 1,000,000 acre-feet
17 per year by 2020 and by at least 2,000,000 acre-feet by 2030").) Increasing the acceptance, and
18 promoting the use, of recycled water is a recognized means for achieving sustainable local water
19 supplies; thus, the State, the State Water Board, and the City all seemingly share the same goal of
20 promoting recycled water use via protective, but *reasonable*, requirements.⁶ (See also Governor
21 Brown's October 8, 2013 signing statement for water recycling bill SB 322 (Sen. Hueso)
22 ("California needs more high quality water and recycling is key to getting there.").

23
24 ⁵ See, e.g., Water Code sections 13510 ("The Legislature finds and declares that a substantial portion of the
25 future water requirements of this state may be economically met by beneficial reuse of recycled water.") and
26 13512 ("It is the intention of the Legislature that the state undertake all possible steps to encourage
development of water recycling facilities so that recycled water may be made available to help meet the
growing water requirements of the state.").

27 ⁶ See accord State Water Board webpage on water recycling -
28 http://www.waterboards.ca.gov/about_us/performance_report_1011/plan_assess/12514_ww_reclamation.shtml

1 Notwithstanding statewide policy regarding recycled water use, and over the City's well-
2 reasoned objections, the Regional Water Board, in the new Permit for the City, added new
3 requirements on recycled water use, more stringent than state laws and policies dictate, that will be
4 exceptionally burdensome on recycled water customers and, in turn, make it much more difficult to
5 maintain and expand the City's recycled water use program. Because the City's recycled water is
6 only marginally less expensive than potable water (e.g., 95% of potable water rate in Rohnert Park
7 and in Santa Rosa for Tier 1 users⁷), new, unnecessary requirements that present additional burdens
8 to recycled water users will discourage the continued use of recycled water by current customers
9 and the expanded use by new customers. This burden, without adequate justification or need, runs
10 counter to the Legislature's and the State Water Board's clear policies of encouraging, not
11 discouraging, recycled water use. The City hopes that as a matter of State policy to encourage
12 recycled water use, the State Water Board will direct the Regional Water Board to remove or
13 modify the specific provisions discussed in Sections 2 and 4 below.

14 Further complicating the City's comprehensive efforts towards reclamation is the continued
15 imposition of an unsupported and unnecessary "no net loading" requirement, applicable to
16 phosphorus, for the City's remaining discharges to the Laguna de Santa Rosa.⁸ The "no net
17 loading" requirement, which requires that phosphorus discharged by the City be completely offset
18 (to zero) by phosphorus-reducing projects within the greater Laguna de Santa Rosa watershed over
19 three-year compliance periods, was imposed, in part, on the Basin Plan's narrative water quality
20 objective for biostimulatory substances and, in part, on Clean Water Act section 303(d) listings for
21 low dissolved oxygen and phosphorus notwithstanding the fact that a TMDL is currently being
22 prepared by Regional Water Board staff.⁹ Given that the City's existing discharge is, on average,

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24 ⁷ Sworn Testimony of Jennifer Burke, City of Santa Rosa, North Coast Regional Water Quality Control
25 Board Hearing, November 21, 2013, audio transcript ("Hearing Transcript") at timestamp 1:05:51-1:06:09.

26 ⁸ See Permit at Section IV.2.b.i., page 9.

27 ⁹ See Permit Fact Sheet at pages F-30 – F-36; see also October 22, 2013 Summary of TMDL Development
28 Data Pertaining to Nutrient Impairments in the Laguna de Santa Rosa Watershed (Revised) by Rebecca
Fitzgerald, Regional Water Board staff.

1 less than two percent (2%) of the total phosphorus load to the Laguna de Santa Rosa,¹⁰ and the
2 City's discharge volume is minimal, occurs during the wet season when substantial flushing
3 occurs, and is located at a one of the lowest downstream locations prior to confluence with the
4 Russian River, no "reasonable potential" exists to justify imposition of the "no net loading"
5 limitation. Further, the "no net loading" limitation is neither required nor recommended by federal
6 and state law or the region's Basin Plan (and is not imposed in any other NPDES Permit in the
7 State) and is unnecessary to avoid further nutrient impacts or preserve the status quo while the
8 TMDL process unfolds. A similar "no net loading" requirement was previously voided by the
9 State Water Board, in favor of interim, performance-based limitations. (*See In the Matter of the*
10 *Review on its Own Motion of the Waste Discharge Requirements for the Avon Refinery*, SWRCB
11 Order No. 2001-06)

12 Compliance with the "no net loading" requirement, originally imposed in 2006, is supposed
13 to be attained via the Nutrient Offset Program ("Program"), Regional Water Board Resolution No.
14 R1-2008-0061, adopted in 2008 after negotiations with the City, a copy of which is included with
15 **Exhibit A**. While the City has attempted in good faith to propose and implement projects that
16 qualify for offset credits under this Program since that time, progress has been very slow, for a
17 variety of reasons (inconsistent communication and action by the Regional Water Board staff in
18 approving proposed projects,¹¹ lack of feasible projects, etc.). After nearly five years, and over
19 \$1.5 million dollars of ratepayer funds invested by the City in identifying and proposing projects
20 under the Program, only three projects have been approved by Regional Water Board staff, with
21 one of those projects having to be abandoned because of landowner willingness to proceed with the
22 project. The remaining two projects are only expected to offset approximately thirty-one percent
23 (31%) of the phosphorus in the City's discharge during the initial three-year compliance period,

24
25 ¹⁰ The City and Regional Water Board staff are in agreement as to 1.8% being the City's relative
26 contribution of phosphorus to the Laguna de Santa Rosa watershed. (*See, e.g.*, Hearing Transcript, time
stamp 57:32-36 and 1:25:55-1:27:04.)

27 ¹¹ *See, e.g.*, the City's May 18, 2012 Petition for Review to the State Water Board (SWRCB/OCC File No.
28 A-2177), contesting Regional Water Board staff's denial of a Ludwigia removal project, for a more
thorough description of these types of issues.

1 which will be assessed in 2017 pursuant to Time Schedule Order No. R1-2013-0048, adopted
2 concurrently with the Permit. At this time, the City is not aware of other specific projects that
3 Regional Water Board staff will approve and compliance is extremely uncertain. Thus, City staff
4 will be forced to divert tremendous City resources away from reclamation and towards attempting
5 to investigate and develop phosphorus offset projects in the near-term, which, if any are possible,
6 are unlikely to address the alleged impairment or incrementally improve water quality, all the while
7 facing strict liability for future compliance.¹² Rather than focusing scarce resources on overly
8 burdensome restrictions for remaining discharges, those resources could be better spent on further
9 expansion of the City's recycled water program, in accordance with the State Water Board's
10 recycled water goals, which might avoid future discharges altogether.

11 Notwithstanding the City's objection to the "no net loading" limitation for phosphorus, the
12 City continues to support the long-term development of a successful offset program in the
13 watershed.¹³ Consistent with previous commitment expressed by the City for the Program, the City
14 requests the State Water Board direct the Regional Water Board to remove the unsupported "no net
15 loading" requirement, and instead impose the limitation suggested by the City in comments made
16 to the Regional Water Board in July 2013, which includes a combination of an interim-
17 performance-based mass limitation based on the City's median phosphorus discharge and the
18 requirement to offset via the Program during those seasons where phosphorus discharges exceed
19 the median value.¹⁴ This approach will continue reducing the City's contribution of phosphorus

20
21 ¹² Unfortunately, the City has faced four citizen suits over the years by Northern California River Watch and
22 related entities, and does not want to be placed in the untenable circumstance of not being able to achieve
23 compliance with its Permit notwithstanding good faith efforts to do so. Further, the City takes compliance
with the Permit terms extremely seriously, for the protection of the people and environment within the
City's jurisdiction.

24 ¹³ The City recently led the effort to secure a nearly \$600,000 federal grant to the Sotoyome Resource
25 Conservation District to establish a water quality trading market for the Laguna de Santa Rosa watershed.
26 The market, the first of its kind in California, would allow the City and others to purchase credits to help
fund conservation projects that improve the health of the watershed. For more information, please see
<http://sotoyomercd.org/programs.html>.

27 ¹⁴ See July 22, 2013 comments submitted to the Regional Water Board at pages 2-4. This approach was
28 recently adopted by the Santa Ana Regional Water Quality Control Board for total inorganic nitrogen in the
NPDES Permit for the Colton/San Bernardino Regional Tertiary Treatment and Water Reclamation

1 into the Laguna de Santa Rosa pending TMDL completion (though the City does not believe such
2 reduction will improve the watershed's nutrient issues, if any), while lessening the near-term
3 burden of non-compliance if offset projects sufficient to offset the entirety of the City's discharge
4 cannot be timely identified and developed. The City believes this is a reasonable outcome in
5 furtherance of the State's goals to protect and enhance the quality of impaired waterbodies while
6 concurrently encouraging feasible offset projects and reclamation as alternatives to discharge.

7 Given the circumstances noted above, the City, in accordance with section 13320 of the
8 Water Code, is petitioning the State Water Board to review the City's renewed Permit and order
9 the changes requested and discussed in Sections 2 and 4 of this Petition. A copy of the Permit and
10 related attachments is enclosed as **Exhibit A**. At such time as the full administrative record is
11 available and any other materials are submitted, the City may file a more detailed memorandum in
12 support of the Petition.¹⁵

13 II. BACKGROUND

14 A. The City's Treatment Facilities

15 The City operates collection, treatment, storage, discharge, and reclamation facilities,
16 employing state of the art advanced, tertiary-treatment facilities, and producing high quality
17 recycled water that is beneficially reused in cutting edge water reclamation projects encouraged by
18 the California Legislature. Specifically, the City owns and operates the Santa Rosa Subregional
19 Water Reclamation System (the "Water Reclamation Plant"), a publicly-owned treatment works,
20 which currently collects and provides treatment for an average dry weather flow of 15 million
21 gallons per day ("MGD") of industrial, commercial, and municipal wastewater from a of

22
23
24 Authority, Order No. R8-2013-0032, at page 13 ("The 12-month flow weighted running average of TIN
25 concentration shall not exceed 10 mg/L, unless the Discharger implements a plan, with the approval of the
Executive Officer, to offset TIN discharges in excess of the TIN limits").

26 ¹⁵ The State Water Board's regulations require submission of a memorandum of points and authorities in
27 support of a petition, and this document is intended to serve as a preliminary memorandum. However, it is
28 impossible to prepare a thorough memorandum or a memorandum that is entirely useful to the reviewer in
the absence of the complete administrative record, which has not yet been requested by the State Water
Board.

1 population of approximately 225,000 in the Cities of Santa Rosa, Cotati, Rohnert Park, Sebastopol,
2 and the unincorporated South Park County Sanitation District.

3 The City's NPDES Permit allows seasonal discharge (October through May of each year)
4 of recycled water from the City's recycled water storage ponds to the Laguna de Santa Rosa and/or
5 Santa Rosa Creek, both tributaries to the Russian River in accordance with discharge restrictions
6 set forth in the Regional Water Board's Basin Plan. (See Permit at Provision III.J., page 7)
7 However, as noted above, the City beneficially reuses almost all of its recycled water throughout
8 the year, providing agricultural operators with water for beneficial water reclamation and reuse
9 (i.e., agricultural irrigation of crops, including vineyards, orchards, animal fodder, pasture, and
10 specialty vegetable crops), participating in urban reuse¹⁶ (i.e., golf courses, playing fields, and
11 landscaped areas), and providing water to the Geysers Recharge Project. Further, as noted above,
12 the City manages the storage and recycling system to consolidate what limited discharges may
13 occur into a few winter months in accordance with the City's Discharge Management Plan
14 approved by the Regional Water Board's Executive Officer.

15 Enormous resources went into the construction and operation of the Geysers Recharge
16 Project, a sophisticated energy project that took over ten years to complete. The Project consists of
17 a 41-mile pipeline to convey recycled water to the Geysers steam field operators' distribution
18 network for steam field injection and generation of electricity. Operation of the Geysers Recharge
19 Project has allowed the City to beneficially reuse, rather than discharge, almost all of the recycled
20 water produced by the Reclamation Plant. Nonetheless, discharges to the Laguna de Santa Rosa
21 and Santa Rosa Creek during the authorized discharge season, and in accordance with the City's
22 Discharge Management Plan, are still occasionally necessary to maintain the water balance within
23 the City's facilities, but these discharges are relatively short in duration. For example, for the past
24 five discharge seasons, the City discharged zero (0) days in the 2008/2009 discharge season, nine
25 (9) days in the 2009/2010 discharge season, forty-nine (49) days in the 2010/2011 discharge
26 season, one (1) day in the 2011/12 discharge season (to perform a test), and zero (0) days in the
27

28 ¹⁶ Approximately 6,388 acres of urban and agricultural land are irrigated with the City's recycled water.

1 2012/13 discharge season.

2 **B. The City’s Progressive and Effective Reclamation Program**

3 The City has developed a robust recycled water program that encourages reuse while
 4 concurrently ensuring efficient and appropriate application. To implement the program, the City
 5 has adopted a variety of ordinances and policies, and a recycled water user agreement, that specify
 6 design, installation, and operation parameters for end user recycled water infrastructure and
 7 impose a variety of Best Management Practices (“BMPS”) consistent with, and sometimes more
 8 stringent than, State law requirements (*See, e.g., [http://ci.santa-](http://ci.santa-rosa.ca.us/departments/utilities/recycle/Pages/default.aspx)*
 9 *[rosa.ca.us/departments/utilities/recycle/Pages/default.aspx](http://ci.santa-rosa.ca.us/departments/utilities/recycle/Pages/default.aspx)*) For example, the City adopted a
 10 water efficient landscape ordinance more stringent than the State’s Model Water Efficient
 11 Landscape Ordinance¹⁷ as well as an ordinance that prohibits water waste due to runoff or breaks
 12 or leaks in the recycled water delivery system. In addition, the City has an aggressive recycled
 13 water rate structure that charges approximately 95% of the potable rate for recycled water use,
 14 providing a strong conservation incentive.

15 A comprehensive Recycled Water User’s Guide has also been prepared by the City, which
 16 requires recycled water systems be designed to protect the potable water system, aquifers, and
 17 surface waters, constructed per the approved design plans, and operated to ensure recycled water
 18 irrigation is efficient and stays on the landscape area. (*See [http://ci.santa-](http://ci.santa-rosa.ca.us/departments/utilities/recycle/sitesup/Pages/RulesandRegulations.aspx)*
 19 *[rosa.ca.us/departments/utilities/recycle/sitesup/Pages/RulesandRegulations.aspx](http://ci.santa-rosa.ca.us/departments/utilities/recycle/sitesup/Pages/RulesandRegulations.aspx)* and
 20 *<http://ci.santa-rosa.ca.us/departments/utilities/recycle/Pages/connect.aspx>*) The City requires all
 21 recycled water sites to designate a Site Supervisor who must attend a 3½ hour training session with
 22 City staff regarding recycled water best management practices, and who is responsible for system
 23 oversight and compliance with the City’s Guide.

24 The City has dedicated staff that constantly communicate with Site Supervisors and site
 25 contacts at recycled water use sites, provide routine inspections, and require corrective actions,
 26

27
 28 ¹⁷ The City’s ordinance requires a Maximum Applied Water allowance (“MAWA”) of 0.6
 evapotranspiration (ETo) as opposed to the State’s recommended MAWA of 0.7 ETo,

1 where necessary. The City also sends weekly emails to the Site Supervisors and site contacts
2 providing recycled water irrigation tips, best management practices, and real time watering
3 recommendations based on daily evapotranspiration rates from the City's California Irrigation
4 Management Information System (CIMIS) weather stations. In the event that corrective action is
5 necessary, the City's standard practice is to shut off the meter/flow until identified issues are
6 resolved, at which point recycled water flows can resume. The City maintains the authority to
7 permanently disconnect a user should corrective action not be appropriately implemented.

8
9 **C. Origin of Water Quality "Impairment" in the Laguna de Santa Rosa
10 and Controversial Nutrient Restrictions Originally Included in the
11 City's Previous NPDES Permit**

12 In the early 1990s, the Laguna de Santa Rosa was placed on the State Water Board's Clean
13 Water Act 303(d) List of Impaired Waterbodies for failing to comply with the Regional Water
14 Board's water quality standards for dissolved oxygen ("DO") and ammonia set forth in the Basin
15 Plan. In response, the City undertook and completed substantial upgrades to its treatment facility
16 to further reduce the concentration of nutrients, including ammonia, in the Laguna. In addition,
17 the City funded an innovative dairy loan program that provided funding for dairy farmers in the
18 Laguna watershed to build barns to house cows during feeding, significantly reducing the amount
19 of manure and nutrients washed off into the local waterways.

20 The Regional Water Board also adopted a Waste Reduction Strategy for the Laguna de
21 Santa Rosa to address potential sources of nutrients to the Laguna. The City worked closely with
22 the Regional Water Board to ensure compliance with this Waste Reduction Strategy and, as a
23 result, the Laguna de Santa Rosa watershed was removed from the 303(d) List of Impaired
24 Waterbodies in 1998.

25 Subsequently, in 2002, because DO levels were not being consistently attained in every part
26 of the Laguna, the Regional Water Board considered re-listing the Laguna de Santa Rosa on the
27 303(d) List of Impaired Waterbodies for DO, and also for nitrogen and phosphorus. After much
28 public comment, the Regional Water Board decided against re-listing the Laguna de Santa Rosa on
the 303(d) List for nitrogen and phosphorus, and instead, included the Laguna on the Monitoring

1 List. Given the capabilities of the City as compared to other entities in the region and watershed,
2 the City volunteered to work with the Regional Water Board to further study the DO and nutrient
3 issues in the Laguna de Santa Rosa.

4 Unfortunately, the United States Environmental Protection Agency (“USEPA”) chose not
5 to follow the very detailed information and rationale presented by the State and Regional Water
6 Boards for not listing the Laguna de Santa Rosa as impaired for nutrients,¹⁸ and unilaterally listed
7 the Laguna de Santa Rosa as impaired for nitrogen and phosphorus. This listing by USEPA has
8 been carried forward to subsequent 303(d) Lists that the Regional Water Board relies upon, in part,
9 for imposing the contested “no net loading” limitation that is the subject of this Petition.

10 At the time the City’s NPDES Permit was renewed in 2006, Regional Water Board staff
11 had not yet drafted a TMDL to address the nutrient listings. Notwithstanding significant protest by
12 the City, and for the stated purpose of implementing the Basin Plan’s narrative water quality
13 objective for “biostimulatory substances,” the Regional Water Board imposed the following
14 effluent limitations for nitrogen and phosphorus:

15 “The Regional Board plans to develop and adopt total maximum daily loads
16 (TMDLs) for nitrogen and phosphorous which will specify wasteload allocations
17 (WLAs) for point sources and load allocations (LA) for non-point sources, as
18 appropriate. Following the adoption of these TMDLs by the Regional Water
19 Board, this Order will be issued with final WQBELs [water quality based effluent
20 limits] based on applicable WLAs. *Alternatively, in the absence of a TMDL at the
21 end of the compliance schedule authorized by this Order [Nov. 9, 2011], the final
22 effluent limitation for nitrogen and phosphorous will be zero, or no net loading⁵.*”

23 (See 2006 Previous NPDES Permit [Order No. R1-2006-0045.] at Provision IV.A.1.g. (emphasis
24 added).) Footnote 5 explains:

25 “A ‘no net loading’ effluent limit may be met by: 1) reducing the effluent
26 concentration below detectable levels through source control and/or treatment; 2)
27 reducing loads through recycling/reclamation; and/or 3) reducing loads elsewhere
28 in the watershed by an amount at least equal to the amount discharged (and of
equivalent bioavailability) through an approved offset program.” (*Id.*)

Despite the City’s extraordinary efforts to beneficially reuse of its recycled water, at the

1 time the 2006 NPDES Permit was adopted, there was no expectation by the City that it could
2 comply with the new, unprecedented alternative final limits of “zero,” or “no net loading” for
3 nutrients. The City’s expectation that a TMDL, which might ease the discharge requirements via
4 calculation of a proper waste load allocation, would be adopted on or before the compliance
5 deadline of Nov. 9, 2011 was equally bleak. Consistent with earlier objections, the City filed a
6 Petition for Review with the State Water Board on October 19, 2006 (SWRCB/OCC File No.A-
7 1779), and a subsequent Petition for Writ of Mandate was filed in Sonoma County Superior Court
8 in July 2007, Case No. SCV 241194, challenging the “zero” or “no net loading” alternative final
9 limitations on the basis that the limits directly contradicted State Water Board precedent (*see e.g.*,
10 State Water Board Order No. WQ 2001-06), were not legally required, constituted an improper
11 interpretation of the narrative objectives for biostimulatory substances and chemical constituents,
12 and were not supported by findings or evidence in the administrative record.

13 **D. Nutrient Reduction Offset Program**

14 In July 2008, the City and the Regional Water Board resolved the City’s then pending legal
15 action through the Regional Water Board’s adoption of the Program, a copy of which is attached
16 with **Exhibit A**. The Nutrient Offset Program satisfied the NPDES Permit’s requirement that the
17 “zero” or “no net loading” limitations could be complied with by “reducing the loads elsewhere in
18 the watershed by an amount at least equal to the amount discharged (and of equivalent
19 bioavailability) through an approved offset program.” (*See* 2006 Previous NPDES Permit at
20 Provision IV.A.1.g., footnote 5.)

21 The Nutrient Offset Program sets forth the following detailed program elements:

- 22 • Identification by the City of the annual nutrient load to be offset
- 23 • Criteria for nutrient reduction credits
 - 24 ○ Detailed method for direct measurement of nutrient reduction
 - 25 ○ Detailed method for estimated nutrient reductions
 - 26 ○ Margin of safety

27 ¹⁸ *Accord*, “Nutrients occur naturally in the environment and are essential for supporting flora and fauna of a
28 waterbody.” (Scoping Document: Nutrient Policy, SWRCB Division of Water Quality (Aug 2011) at page.
1.)

- 1 ○ No nutrient reduction credits for projects/activities already required by the
2 City's NPDES permit for municipal storm water discharges.
- 3 • Accounting for nutrient credits – Regional Water Board and City staff both
4 understood that due to the vagaries of variable and unpredictable annual discharge
5 of water and nutrients, project implementation timelines and varying nutrient
6 reduction values from short and long-term projects, an averaging period for
7 compliance was warranted. Thus, compliance with the no net loading requirement
8 is calculated using a three-year averaging period. The City is deemed compliant if
9 the three-year average difference between actual discharge and offset reduction
10 credits is less than or equal to zero mass units.
- 11 • Effective date and banked credits – the “zero” or “no net loading” limitations are
12 effective November 9, 2011, and the first three-year average compliance
13 determination will occur in 2014 upon conclusion of the 2013-2014 discharge
14 season. Credit for any nutrient removal/reduction actions implemented after 2007
15 and prior to the 2011-2012 discharge season are available to “bank,” and apply to
16 the City's first three-year average compliance period.
- 17 • Process for submission, review, and approval/disapproval – as specifically stated in
18 the Program, the process for obtaining approval for nutrient reduction projects is as
19 follows:
- 20 ○ City identifies nutrient reduction project(s)
 - 21 ○ City submits description of nutrient reduction project(s) to RWQCB
22 documenting consistency with adopted Nutrient Offset Program
 - 23 ○ RWQCB accepts proposed nutrient reduction project(s)
 - 24 ○ City implements project(s)
 - 25 ○ City submits annual report documenting nutrient discharged and controlled.

26 (See Resolution No. R1-2008-0061.)

27 The City always viewed compliance with the Nutrient Offset Program as requiring a varied
28 mix of short and long-term projects, as neither Regional Water Board staff nor the City had
previously identified one singular project that would entirely offset the City's limited, seasonal
discharge into the Laguna de Santa Rosa. The Nutrient Offset Program itself acknowledged this
fact by the constant reference to “project(s)” and inclusion of the three-year averaging period
necessary to allow implementation of a variety of projects. The success of the Nutrient Offset
Program depends on both the City and the Regional Water Board being fully invested and engaged
in successfully identifying and approving multiple projects that will undoubtedly vary in scope and
duration.

1 **E. The City's Good Faith Efforts to Obtain Approval and Implement**
2 **Nutrient Reduction/Offset Compliance Projects Since 2008.**

3 Soon after the Regional Water Board adopted the Nutrient Offset Program in July of
4 2008, City staff began the process of obtaining approval for early implementation of
5 nutrient reduction projects. In February of 2009, following several consultations with
6 Regional Water Board staff, the City provided Regional Water Board staff with a draft
7 Laguna Sediment and *Ludwigia*¹⁹ Removal Project for informal consideration and
8 discussion. A meeting between City and Regional Water Board staffs occurred in April
9 2009, during which Regional Water Board staff indicated general concerns with the draft
10 project description and requested to meet at a later date to discuss further. That next
11 meeting did not occur until June 2010, notwithstanding repeated requests for the meeting
12 from City staff. Further information was provided by the City regarding the project;
13 however, Regional Water Board staff indicated they would deny the project if formally
14 proposed.

15 Refocusing efforts to develop acceptable nutrient reduction projects, City staff again
16 met with Regional Water Board staff, including the Executive Officer, in October 2010.
17 The purpose of the meeting was to develop a list of potentially mutually agreeable nutrient
18 offset project options, including near and long-term projects, as both are necessary for
19 compliance with the effluent limitations set forth in the City's NPDES Permit. Based on
20 discussion at that meeting, in January 2011, City staff presented to Regional Water Board
21 staff various options for a near-term nutrient offset project that could be implemented in
22 2011. At that meeting, verbal support was given by the then Executive Officer for a near-
23 term Laguna *Ludwigia* Nutrient Offset Project that involved the City, in conjunction with
24 the Laguna de Santa Rosa Foundation and the Sonoma County Water Agency, removing
25 *Ludwigia* from specified locations of the Laguna de Santa Rosa. *Ludwigia* contains

26 _____
27 ¹⁹ *Ludwigia* sp. is a non-native invasive aquatic plant from South America that has invaded the Laguna de
28 Santa Rosa watershed.

1 nutrients that are mineralized upon plant decay; therefore, removing *Ludwigia* removes
2 nutrients that could otherwise pose water quality problems in the Laguna. Based on
3 Regional Water Board staff support, the City undertook the resource-intensive process of
4 preparing a formal submission, and on March 14, 2011, the Laguna *Ludwigia* Nutrient
5 Offset Project was submitted to the Executive Officer for formal approval.

6 On April 15, 2011, City staff received correspondence from Regional Water Board
7 staff, asking to resubmit the Laguna *Ludwigia* Nutrient Offset Project because the Regional
8 Water Board could not locate the document. The City provided an electronic copy. A
9 month later, during a call on May 16, 2011, Regional Water Board staff suddenly reversed
10 their previous support for the project, and indicated the project was unacceptable. On May
11 20, 2011, the City received a letter from the Regional Water Board's Executive Officer
12 rejecting the Laguna *Ludwigia* Nutrient Offset Project and listing technical concerns in an
13 attachment to the letter. In that letter, the Executive Officer expressed that acceptable
14 nutrient offset projects would be those involving agricultural discharges, specifically,
15 dairies.

16 To salvage the project initially agreed upon, City staff spoke with the Regional
17 Water Board's Executive Officer on May 26, 2011, and the parties agreed the City would
18 resubmit the Laguna *Ludwigia* Nutrient Offset Project, revised to address the technical
19 concerns of Regional Water Board staff as set forth in the May 20, 2011 letter. A meeting
20 between City and Regional Water Board staffs, as well as a representative from the Laguna
21 Foundation, occurred that same day, during which Regional Water Board staff's technical
22 concerns and the City's proposed resolutions were discussed. With the technical
23 impediments seemingly resolved, a schedule for obtaining approval of the project was also
24 discussed, so as to ensure the project could move forward during Summer/Fall 2011.
25 Regional Water Board staff concurred with a July 15, 2011 date for approval of the
26 resubmitted project.

27 On June 6, 2011, the City submitted the revised Laguna Nutrient Offset Project to
28 the Regional Water Board, which responded to and resolved the technical questions and

1 concerns of Regional Water Board staff expressed in the May 20, 2011 letter, and as
2 discussed at the May 26, 2011 meeting. Throughout June 2010, City staff continued
3 contact with the Regional Water Board staff, offering assistance or clarification, if
4 necessary, to ensure the project would be approved. On June 30, 2011, Regional Water
5 Board staff indicated they were on track to meet the City's requested approval date of July
6 15, 2011 provided the parties could work through some "relatively minor last-minute
7 concerns." City and Regional Water Board staffs spoke further that day, and for the next
8 week, regarding Regional Water Board staff's further concerns, which, if resolved in favor
9 of Regional Water Board staff, would have rendered the project almost useless to the City
10 in terms of nutrient removal credit, especially as compared to the effort expended. The
11 concerns raised by the Regional Water Board went beyond any criteria set forth in the
12 Nutrient Offset Program, and provided a clear signal that Regional Water Board staff
13 simply did not now want to approve any project involving *Ludwigia* removal. Instead,
14 Regional Water Board staff preferred the City to focus its nutrient reduction efforts on
15 agricultural dischargers, to supplement and expedite the Regional Water Board's own
16 agricultural discharge program.

17 On July 22, 2011, the City received a letter from the Regional Water Board's
18 Executive Officer, dated July 14, 2011, stating that the Laguna Nutrient Offset Project
19 (Revised Proposal) was unsuitable for compliance with the Nutrient Offset Program, on the
20 basis that the project did not provide a clear long-term environmental benefit with respect to
21 the overall management of *Ludwigia* in the Laguna de Santa Rosa. The Executive Officer
22 acknowledged the hard work and good faith effort of the City to identify and implement a
23 nutrient offset project, but again, diverted discussion of nutrient offset options to those
24 involving agriculture, including dairies. The City filed a Petition for Review with the State
25 Water Board over the failure to approve the project that clearly met the requirements of the
26 Nutrient Offset Program. (See, May 18, 2012 Petition for Review to the State Water Board
27 (SWRCB/OCC File No. A-2177).)

28 As directed by Regional Water Board staff, the City re-directed its efforts towards

1 identifying nutrient offset projects involving dairies or other agricultural operations. On
2 June 28, 2012 and June 6, 2012, after detailed discussions with Regional Water Board staff,
3 the City submitted two projects for approval under the Program, the Pepperwood and
4 Beretta Dairy projects, respectively. Discussion of the relative merits of these projects
5 occurred with Regional Water Board staff both before and after submittal (some issues
6 existed under the Program because in the interim between directing the City to pursue
7 projects involving dairies, the Regional Water Board adopted a conditional waiver and
8 general waste discharge requirements applicable to dairies, complicating the City's efforts
9 to secure nutrient offset credits for activities not otherwise regulated by the Regional Water
10 Board). Nonetheless, on October 18, 2012 and September 20, 2012, the Pepperwood and
11 Beretta Dairy projects were approved or deemed approved pursuant to the terms of the
12 Program.²⁰ At best, those projects are only expected to offset approximately thirty-one
13 percent (31%) of the phosphorus in the City's discharge during the initial three-year
14 compliance period, which will be assessed in 2017 pursuant to Time Schedule Order No.
15 R1-2013-0048, adopted concurrently with the Permit. However, implementing the Beretta
16 Dairy project has been delayed by environmental regulations protecting the endangered
17 California tiger salamander as the Beretta Dairy is located in California tiger salamander
18 territory.

19 As is evident by the preceding narrative, the Nutrient Offset Program as originally
20 envisioned has suffered substantial setbacks, regarding the types of projects Regional Water
21 Board staff will agree qualify under the Program, the general availability of cost-effective
22 projects for which third parties are willing to participate, and unexpectedly long
23 implementation timeframes driven by compliance with other federal and state
24 environmental laws. The City has already spent over \$1.5 million trying to establish and
25 begin implementing in good faith offset projects that will provide needed credit for Permit
26

27 ²⁰ Since that time, the City also submitted a project proposal for the Nunes –Ocean View Dairy that was
28 approved by the Regional Water Board; however, the City had to abandon that project in 2013 because of an
unwilling landowner whose consent was necessary for implementation.

1 compliance. Thus, five years and several million dollars later, the City is not close to
2 complying with the strict “no net loading” requirement in the Permit, a requirements
3 unlikely to have any substantial effect on the water quality conditions in the Laguna de
4 Santa Rosa watershed. The lack of certainty with respect to future compliance, irrespective
5 of the City’s good faith efforts, cannot be understated.

6 **F. The City’s Recently Re-Adopted NPDES Permit**

7 On November 21, 2013, after several versions of the Permit were circulated for
8 public review and comment, lengthy comments submitted, and extensive discussions
9 occurred between City and Regional Water Board staffs, the Regional Water Board re-
10 adopted the City’s Permit.²¹

11 Regional Water Board staff continued to advocate for Permit provisions regulating
12 recycled water use that the City had repeatedly objected to on the basis that the
13 requirements are not required by State law or policies and would discourage existing or
14 expanded use of recycled water, and the Regional Water Board adopted those contested
15 provisions. (*See, e.g.*, Permit Monitoring and Reporting Program (“MRP”) at Attachmen E,
16 Sections VII.A.1. (Table E-7) and X.D.3.a.i.b.) Regional Water Board staff also requested
17 that a new provision be added to the receiving water limitation for temperature, even
18 though the City raised sound objection to that provision. (*See* Permit at Section V.A.11.d.)

19 Finally, while Regional Water Board staff recommended removing the previous
20 “zero, or no net loading” requirement for nitrogen due to a finding that because
21 “phosphorus is the limiting nutrient controlling biostimulatory conditions in the Laguna de
22 Santa Rosa and lower Mark West Creek, reductions in nitrogen loads beyond current levels
23 are not expected to result in added protection of the beneficial uses, or significant water
24 quality improvements,” Regional Water Board staff continued to recommend retention of
25 the “no net loading” requirement for phosphorus, though the same bases that justified
26

27 ²¹ While the City remains in opposition to the Permit terms discussed in this Petition for Review, the City
28 does want to acknowledge, and appreciates, other changes Regional Water Board staff made to the Permit
prior to adoption.

1 removal for nitrogen equally apply to phosphorus. (*See* Permit, Fact Sheet at F-36 and
2 Section IV.2.b.i.) The Regional Water Board’s primary basis for retaining the “no net
3 loading” requirement is an unproven assertion that “[r]eductions in total phosphorus
4 concentrations are ... expected to reduce algal biomass, carbonaceous biochemical oxygen
5 demand, and sediment oxygen demand, which is the primary driver of low dissolved
6 oxygen.” (*See* Permit, Fact Sheet at F-34.) Simply put, the justification is as simple as
7 Regional Water Board staff believing that any phosphorus load reductions are necessary,
8 and from there, identifying the fact that the City’s extremely limited discharge contains
9 some phosphorus, and asserting that the phosphorus in that discharge can and will be
10 stringently controlled. This logic lacks reference or consideration to the *effect*, or lack
11 thereof, of the City’s discharge on the identified watershed issues sought to be remedied via
12 the effluent limitation. As discussed further below, given the volume, season, and location
13 of the City’s discharge, and data from uninfluenced portions of the watershed, the Regional
14 Water Board’s justification for retaining the “no net loading” requirement for phosphorus is
15 invalid and unlikely to bear true.

16 Given the amount of time previously devoted by City staff and consultants to
17 discussing the City’s discharges and unrelated nutrient and dissolved oxygen conditions in
18 the Laguna de Santa Rosa watershed, the City was particularly frustrated that the primary
19 justification for the findings noted above and herein was data and information presented in
20 an October 22, 2013 memorandum drafted by Regional Water Board staff (revised from a
21 previously circulated June 14, 2013 version) provided to the City along with the Regional
22 Water Board’s response to comments on November 7, 2013, just fourteen days before the
23 public hearing on the Permit. (*See* June 14, 2013 Memorandum from Rebecca Fitzgerald,
24 TMDL Unit Supervisor, entitled “Summary of TMDL Development Data Pertaining to
25 Nutrient Impairments in the Laguna de Santa Rosa Watershed” (“Fitzgerald
26 Memorandum”) and revised October 22, 2013 version (“Revised Fitzgerald
27 Memorandum”).
28

DOWNEY BRAND LLP

III. PETITION FOR REVIEW

1. NAME, ADDRESS, TELEPHONE NUMBER, AND EMAIL ADDRESS OF PETITIONER:

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In addition, all materials in connection with this Petition for Review should also be provided to the City's counsel at the following addresses:

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2. THE SPECIFIC ACTION OF THE REGIONAL BOARD WHICH THE STATE BOARD IS REQUESTED TO REVIEW:

The City seeks review of Order No. R1-2013-0001 amending NPDES Permit No. CA0022764, and specifically requests review of the following permit requirements:

(A) Recycled water provisions at Sections IV.C.2.a. (Table 6) of the Permit, Sections VII.A.1. (Table E-7) and X.D.3.a.i. and ii. of the Monitoring and Reporting Program, and Section B.21 of Attachment G (Water Reclamation Requirements and Provisions);

(B) The newly justified final "no net loading" effluent limitation for total phosphorus set forth in Section IV.2.b.i. of the Permit and the compliance options described in Section VII.N.;

1 (C) The newly imposed, additional receiving water limitation for temperature set forth
2 in Section V.A.11.d. of the Permit; and

3 (D) The newly imposed requirement in Section VI.C.5.d.i. of the Permit mandating that
4 the City obtain and maintain coverage under independently applicable General Waste Discharge
5 Requirements for application of biosolids to land (which the City secured back in 2006) in the
6 absence of any discharge to waters of the United States subject to the federal Clean Water Act or
7 the NPDES Permit program.

8 A copy of the contested Permit as proposed at the hearing and related attachments are enclosed as
9 **Exhibit A.**

10 **3. THE DATE ON WHICH THE REGIONAL BOARD ACTED:**

11
12 The Regional Water Board re-adopted the City's Permit on November 21, 2013.

13
14 **4. A FULL AND COMPLETE STATEMENT OF THE REASONS THE ACTION
WAS INAPPROPRIATE OR IMPROPER:**

15 **A. The Permit Imposes New Water Recycling Requirements that Are Inconsistent
16 With and Violate the State Water Board's Priority of Increasing the Acceptance
17 and Promoting the Use of Recycled Water and Achieving Sustainable Local Water
Supplies.**

18 The Permit adopted by the Regional Water Board operates as an NPDES Permit and a
19 Master Reclamation Permit for the distribution and use of recycled water.²² As noted in detail
20 above, the City's recycling goals are consistent with and support the State of California's
21 reclamation goals; however, the City will be unable to maintain or expand its exemplary recycled
22 water program unless the City's program is subject to *reasonable* regulation.

23 The reissuance of the City's Permit saw a marked increase in the breadth and depth of
24

25
26 ²² The City objected to the Master Reclamation Permit and its corresponding requirements, imposed solely
27 under state law, being incorporated into an NPDES Permit for reasons similar to those stated in Section
28 III.4.D. herein. Regional Water Board staff have committed to separate the NPDES Permit and Master
Reclamation Permit requirements into different permits in the future. (See Regional Water Board's response
to comments, Comment 2, at pages 27-28)

1 regulation by the Regional Water Board of the City's recycled water program, with many new
2 requirements seemingly treating the City's high quality recycled water as a detrimental waste
3 instead of a beneficial resource. (*See, accord*, Water Code §§13050 (n) (defining "recycled water"
4 as a "valuable resources" and 13576(d) and (e) (extolling environmental benefits of recycled water
5 and declaring the use as safe from a public health standpoint).) Most of these new requirements
6 sharply increase City resources required to implement an already well-functioning program,
7 discourage recycled water use by end users, and provide little to no benefit to water quality.
8 Furthermore, the Regional Water Board's imposition of overly stringent and burdensome site-
9 specific requirements on the City without justification ignores action by the State Water Board for
10 the past decade to streamline recycled water requirements as well as ensure statewide consistency
11 in their application. (*See, e.g.*, Recycled Water Policy, State Water Board Resolution No. 2009-
12 0011) Such action also violates the California Legislature's mandate that "the state undertake all
13 possible steps to encourage development of water recycling facilities so that recycled water may be
14 made available to help meet the growing water requirements of the state." (Water Code §13512)
15 The City asserts that the Regional Water Board acted without authority and unreasonably in
16 imposing the requirements detailed below, and that the requirements are not properly supported by
17 findings or evidence of need in the administrative record. Since Water Code section 13523.1(a)
18 prescribes that a Master Reclamation Permit cannot be issued without the consent of the permittee,
19 and in this case, the City clearly objected to a variety of recycled water requirements including
20 those specified below, the State Water Board must remand the Permit and specify that Regional
21 Water Board staff must revise the Permit in a manner that secures the City's consent.

22 **1. Section IV.C.2.a. (Table 6) of the Permit (Improper Recycled Water**
23 **Specifications for BOD₅, TSS, and pH).**

24 Section IV.C.2 of the Permit, entitled "Reclamation Specifications," specifies that all
25 recycled water delivered to the Geysers Recharge Project and to the recycled water system (urban
26 and agricultural) must meet BOD₅, TSS, and pH limitations set forth in Table 6. (*See* Permit at
27 Section IV.C.2, pages 10-11; *see also* Section VII.A.1. (Table E-7) of the MRP imposing daily and
28 2x/weekly monitoring for these constituents at recycled water distribution points). Though the

1 Permit acknowledges that the state and local requirements regarding the production and use of
2 recycled water are set forth in Water Code sections 13500 – 13577 and California Department of
3 Public Health (CDPH) regulations at title 22, sections 60301 – 60357 of the California Code of
4 Regulations, those referenced sources do not include nor demand regulation of BOD₅, TSS, or pH.
5 (See Permit at Section IV.C.1.) Rather, the limitations included in Table 6 appear to be derived
6 from technology-based water quality limitations that apply to discharges to surface waters of the
7 United States by publicly-owned treatment works. (See 40 C.F.R. §125.3 and Part 133; see also
8 Permit Fact Sheet at pages F-24 and F-25). No justification is provided in the Fact Sheet for the
9 imposition of these requirements for recycled water deliveries that do not involve discharges to
10 waters of the U.S. (See Permit Fact Sheet at pages F-60 and F-61, omitting any mention or
11 justification for the contested provisions) For this reason, the City requests the State Water Board
12 to remove the reclamation specifications at Section IV.C.2.a., including Table 6, and to remove the
13 constituents from the monitoring requirements set forth in Section VII.A.1. (Table E-7) of the
14 Permit's MRP.

15
16 **2. Section VII.A.1. (Table E-7) of the MRP (Unreasonable Flow Monitoring).**

17 Monitoring requirements for recycled water are set forth in Section VII.A.1., at Table E-7.
18 Included in that table is a requirement to monitor “flow,” with footnote 1 to that Table defining the
19 flow monitoring requirement as “Each month, the Permittee shall report the number of days that
20 treated wastewater was used for reclamation at all authorized reclamation sites, as well as the
21 average and maximum daily flow rate.” (See Permit MRP at Section VII.A.1., Table E-7, page E-
22 18) This requirement is not dictated by either the applicable Water Code provisions or Title 22,
23 and does not serve a regulatory purpose. Further, the City has no way to independently provide the
24 information requested, so the City is being placed in an untenable position regarding compliance
25 and potential enforcement inconsistent with the reasonableness requirements of Water Code
26 section 13000. Recycled water users are not currently required to inform the City the number of
27 days that recycled water is used, and further reporting burdens on recycled water users will simply
28 discourage water reclamation in favor of potable water use. Further, the City should not be held

1 responsible for reporting this third-party information, where securing accurate information is
2 questionable, and strict regulatory and third-party enforcement may attach. Finally, the City does
3 not currently possess the ability to efficiently collect and report average and maximum daily flow
4 rates at each and every reclamation site. To do so would require City staff to physically read the
5 meter at each use of the over one hundred use sites on a daily basis; this effort would represent a
6 tremendously considerable burden on City staff with limited resources, for no identified benefit.
7 For these reasons, the City requests that the State Water Board remove footnote 1 to Table E-7.

8
9 **3. Sections X.D.3.a.i. and ii. of the MRP (Quarterly and Annual Recycled
Water Report).**

10
11 New quarterly and annual reporting requirements for the City's water reclamation system
12 are included in the Permit's MRP at Sections X.D.3.a.i. and ii. These new reports, as demanded,
13 are not required by state law, regulation, or policy, and significantly expand the information the
14 City and recycled water users are required to provide to the Regional Water Board. This will
15 impose significant burdens on the City and recycled water users, thereby discouraging recycled
16 water use, and potentially subjecting the City to enforcement, contrary to the State Water Board's
17 clearly enunciated positions in support of recycled water programs like the City's.

18 The Regional Water Board attempts to justify the expanded reporting requirements by
19 citing Water Code section 13523.1(b)(4); however, that provision of the Water Code states that
20 Master Reclamation Permits must include "a requirement that the permittee submit a quarterly
21 report summarizing recycled water use, including the total amount of recycled water supplied, the
22 total number of recycled water use sites, and the locations of those sites, including the names of the
23 hydrologic areas underlying the recycled water use sites." (*See* Water Code §13523.1(b)(4)). The
24 quarterly reporting requirements imposed in the Permit's MRP far exceed the provisions of Water
25 Code section 13523.1(b)(4) in scope, and that Water Code provision does not support the
26 imposition of any annual reporting requirement, thereby rendering the provisions unreasonable
27 under Water Code section 13000, contrary to State policy demanding the encouragement of
28 recycled water use, and unsupported by findings and evidence in the administrative record.

1 Specifically, Section X.D.3.a.ii.(a) – (f) requires the City to prepare and submit an
2 unnecessary annual report, which must include such unreasonable and burdensome details as “a
3 summary of major repairs scheduled or completed that affected the reclamation system
4 appurtenances and irrigation areas.” (See Permit MRP at Section X.D.3.a.ii.(a) – (f)) Since the
5 City has no way of independently knowing the information sought from each end user reuse site,
6 this provision would necessitate the City requiring *all* of the City’s recycled water users to report to
7 the City each and every major repair not only completed, but those that might have been
8 “scheduled” at a given reuse site. Given that third party contractors may perform these tasks at a
9 given recycled water site, recycled water users would, in turn, have to obtain that information from
10 third party contractors on an ongoing basis. This provision alone could create an endless amount
11 of effort needed by recycled water users and the City (which is already resource-restricted in the
12 current economic climate), with no associated water quality benefit. The City expects some
13 recycled water users will simply choose to pay the additional 5% for potable water and avoid
14 altogether the need to provide any of this information. Further, if the City was unable to obtain all
15 the responsive information from its recycled water users, the City could face enforcement, an
16 absurd result stemming from over-zealous provisions entirely inconsistent with the State Water
17 Board’s positions encouraging recycled water use.

18 Further, Section X.D.3.a.i., pertaining to the quarterly reporting requirement, requires the
19 City to report a significant amount of information in excess of Water Code requirements,
20 including:

21 “A summary of recycled water use site inspections conducted by the Permittee or
22 recycled water users. Required reporting including the number and dates of
23 inspections conducted for each use site during the reporting period; all
24 observations of recycled water over-application and/or runoff; and the number of
25 observations of non-compliance for each use site including description of the
26 noncompliance and its cause, the period of noncompliance, and if the
27 noncompliance has not been corrected, the anticipated time it is expected to
28 continue and steps taken or planned to reduce, eliminate, and prevent recurrence
of the non-compliance.”

For many of the same reasons enunciated above for annual reporting requirements, this reporting
requirement is extremely unreasonable and burdensome, will likely reduce the number of recycled

1 water users and preclude expansion of the City's program, will increase the costs of the City's
 2 recycled water program, and the City may face non-compliance for being unable to report
 3 information that is simply unknown to the City (*e.g.*, cause of non-compliance).

4 For these reasons, the City requests that the State Water Board remove Section
 5 X.D.3.a.ii.(a) – (f) of the MRP in its entirety and delete Sections X.D.3.a.i.(d)-(e) of the MRP.

6 4. Section B.21 of Attachment G (Anti-Degradation).

7 Section B.21 of Attachment G (Water Reclamation Requirements and Provisions) states,
 8 “The use of recycled water shall not cause degradation of any water supply, except in conformance
 9 with the State Antidegradation Policy.” This provision implies that *no* degradation can occur from
 10 use of recycled water; however, this finding is contrary to the express terms of the State Water
 11 Board's Recycled Water Policy, which finds that irrigation with recycled water, though such
 12 irrigation may affect groundwater quality over time, is consistent with the State's Anti-degradation
 13 Policy (State Water Board Resolution No. 68-16) and to the benefit of the people of the State of
 14 California.²³ (*See* State Water Board's Recycled Water Policy at Section 9.d.) For this reason, the
 15 City requests the State Water Board to modify Section B.21 to state, “The use of recycled water
 16 shall not cause statistically significant degradation of any water supply above applicable water
 17 quality objectives.”
 18

19 B. The “No Net Loading” Effluent Limitation For Phosphorus Will Not Result in 20 Measurable Water Quality Improvement, Is Unsupported, Unreasonable, and 21 Inconsistent with Law.

22 1. The City of Santa Rosa Rarely Discharges Phosphorus Due to Stringent 23 Discharge Restrictions and Substantial Water Recycling.

24 The City's Permit contains a discharge prohibition disallowing “the discharge of
 25 wastewater effluent from the Subregional System to the Russian River or its tributaries... during
 26

27 ²³ Per the Recycled Water Policy's terms, impacts from long-term recycled water use are best addressed via
 28 the adoption of salt/nutrient management plans. (*See* Recycled Water Policy at Section 9) The final
 salt/nutrient management plan for the use area relevant to this matter was submitted to the Regional Water
 Board in 2013. Thus, a comprehensive regulatory approach to protect water resources is already in place.

1 the period from May 15 through September 30 of each year. (*See* Permit at Provision III.I., page 7)
2 During this time, the Permit requires that the City “maintain, at a minimum, a total reclamation
3 capacity of 4,015 million gallons for Geysers discharge, and maintain the capability to irrigate
4 2,590 million gallons per year at 21.34 mgd average dry weather flow.” (*See* Permit Provision
5 IV.C.3., page 11) During periods when the City *is* allowed to discharge (from October 1 through
6 May 14 (“discharge season”)), the Permit requires that discharges to tributaries to the Russian
7 River not exceed five percent of the flow of the Russian River. (*Id.* Provision III.J.) Further, the
8 City must manage the storage and recycling system to consolidate what limited discharges may
9 occur into a few winter months in accordance with the City’s approved Discharge Management
10 Plan, as that Plan further restricts discharge in the Fall and Spring shoulder seasons when enough
11 sunlight may be present for algae to respond to nutrients. Thus, only rarely does the City discharge
12 to surface waters, and those discharges cannot occur when flows are lower and when concerns
13 regarding nutrient additions are at their peak (*i.e.*, when ambient factors like light might stimulate
14 response to algae to nutrients).

15 In addition to substantially reducing surface water discharges since 2003, and achieving
16 almost three years of *no* discharge during the past five years, the concentration of phosphorus in
17 the City’s actual discharge has been substantially reduced over time due to process and treatment
18 improvements, and so to have the ambient levels of phosphorus in the Laguna de Santa Rosa. (*See*
19 *accord* Revised Fitzgerald Memorandum at pages 8-9, Figures 2 and 3.)

20 As noted above, and consistent with the Permit and approved Discharge Management Plan,
21 the City discharges only in late winter/early spring months, if at all, when nuisance growths do not
22 pose a threat to waters, and the minimal discharges occur at a very low downstream location just
23 prior to the confluence with the Russian River. (*See* City’s July 22, 2013 comments and the
24 attached **Exhibit B**) Regional Water Board and City staff agree that available data demonstrates
25 that the City’s estimated phosphorus contribution is *less than 2%* of the total annual phosphorus
26 load to the Laguna de Santa Rosa watershed, so miniscule that further progress towards the “no net
27 loading” concept by the City alone will not likely produce any reduction in nuisance plant growths,
28 higher dissolved oxygen levels, or other benefits sought by the Regional Water Board. (*Id.*) If

1 phosphorus is indeed a limiting plant growth nutrient in the Laguna de Santa Rosa watershed as the
 2 Regional Water Board asserts, these types of water quality benefits will not occur until such time
 3 that major reductions loads from other sources of total phosphorus in the watershed are
 4 implemented. (*Id.*) Given the factual and technical issues and legal deficiencies described
 5 herein, and very real compliance uncertainty, the City objects to the Regional Water Board's
 6 imposition of a "no net loading" provision for total phosphorus.

7
 8 **2. The Regional Water Board's Finding of "Reasonable Potential" to Justify
 Imposing the "No Net Loading" Requirement is Inadequately Supported,
 Unreasonable, and Not Required by Law.**

9 Federal regulations applicable to NPDES Permits require a "reasonable potential" analysis
 10 prior to the imposition of conventional, non-conventional and toxic pollutant effluent limits. (40
 11 C.F.R. §122.44(d)(1)(i)-(iii) ("reasonable potential" being whether a discharge has the "reasonable
 12 potential to cause, or contributes to an in-stream excursion above" a narrative or numeric water
 13 quality criteria) Where "reasonable potential" exists for a given pollutant, an NPDES permit must
 14 contain an effluent limitation for that pollutant.²⁴ (40 C.F.R. §§122.44(d)(1)(i)-(iii).) Conversely,
 15 effluent limitations for a given pollutant are not required where "reasonable potential" is not
 16 demonstrated. (*Id; see, accord*, SWRCB Order No. 2003-0012, p.15-16; Order Granting Writ of
 17 Administrative Mandamus, *City of Woodland v. Central Valley Regional Water Quality Control
 18 Board*, Alameda County Sup. Ct., Case No. RG04-188200 (May 16, 2005) at pages 4 and 13.)

19 In this circumstance, the Regional Water Board based the "reasonable potential" analysis
 20 and resulting "no net loading" requirement on the Basin Plan's narrative water quality objective for
 21 biostimulatory substances, which states, "Waters shall not contain biostimulatory substances in
 22 concentrations that promote aquatic growths to the extent that such growths cause nuisance or
 23 adversely affect beneficial uses." (*See* Basin Plan at page 3-3.00). Federal regulations governing
 24

25 ²⁴ These limitations, however, do not need to be numeric. (*See Communities for a Better
 26 Environment (CBE) v. State Water Board/Tesoro*, 109 Cal.App.4th 1089, 1103-07 (2003); 40
 27 C.F.R. § 122.44(d) (federal rules do not mandate numeric limitations); 40 C.F.R. §122.2 (the
 28 definition of "effluent limitation" refers to any restriction and does not specify that the limitation
 must be numeric); and 40 C.F.R. §122.44(k)(3) (limitations may be expressed as best management
 practices ("BMPs") where numeric limits are infeasible.).)

1 the determination of “reasonable potential” when a narrative water quality objective is involved
2 prescribes, “when determining whether a discharge causes, has the reasonable potential to cause, or
3 contributes to an in-stream excursion above a narrative criteria within a State water quality
4 standard, the permitting authority shall use procedures which account for existing controls on point
5 and nonpoint sources of pollution, the variability of the pollutant in the effluent, the sensitivity of
6 the species to toxicity testing (when evaluating whole effluent toxicity), and, where appropriate, the
7 dilution of the effluent in the receiving water.” (40 C.F.R. §122.44(d)(1)(ii).) In this case, the
8 Regional Water Board did not undertake an appropriate analysis to justify “reasonable potential” to
9 support the imposition of the “no net loading” effluent limitation.

10 Unlike the “reasonable potential” analysis (“RPA”) undertaken for most other constituents
11 (see Permit Fact Sheet at Tables F-13 and F-14), no formal RPA calculations were performed for
12 phosphorus or provided in the Fact Sheet with regulatory-accepted criteria. Instead, the Regional
13 Water Board compared City discharge and receiving water data for phosphorus, nitrogen, and
14 chlorophyll-a to certain non-regulatory “recommended” guidance numbers that Regional Water
15 Board staff believe “translate” the narrative biostimulatory substances objective. From that
16 analysis, the Regional Water Board concluded that because receiving water levels continue to
17 exceed those “criteria,” the City’s discharge has “reasonable potential” because “any additional
18 load of total phosphorus exacerbates the level of degradation and impedes recovery of the impaired
19 beneficial uses of the Laguna de Santa Rosa and lower Mark West Creek.” (See Permit Fact Sheet
20 at pages F-30 and F-34)

21 The Regional Water Board’s findings and conclusion focus entirely on receiving water
22 quality in the Laguna de Santa Rosa and Mark West Creek at locations uninfluenced by the City’s
23 discharge, and ignores the actual volume (in almost three of the last five years, the City’s discharge
24 was zero), seasonality, and location of the City’s discharge. Further, the Regional Water Board’s
25 findings fail to recognize that continued discharge by the City in a manner consistent with the last
26 decade, and consistent with the approved Discharge Management Plan, would not “add” additional
27 load to the watershed; in fact, the City has already substantially reduced its load to the watershed,
28 and water quality conditions have actually worsened. (See Revised Fitzgerald Memo at page 10,

1 “Measured Chlorophyll *a* Concentrations,” demonstrating an increasing trend of chlorophyll *a*
2 downstream of the City’s discharge point in the decade AFTER the City has virtually eliminated its
3 discharge at upstream locations).

4 Though the Regional Water Board acknowledged the City’s significantly reduced discharge
5 over the last decade resulting from the City’s comprehensive recycled water programs, the
6 justifications for continuing to regulate the City as a contributor to alleged nutrient issues were in
7 the form of generalized statements - that the City’s discharge “remains a *potentially* significant
8 point source” - and that due to the Permit’s allowance for the City to discharge up to 5 percent of
9 the flow in the Russian River in any month from October 1 through May 14, it “leav[es] open the
10 *possibility* of much larger wastewater discharges than have occurred in recent years.” (See Permit
11 Fact Sheet at page F-33 (emphasis added).) These findings failed to acknowledge the lack of water
12 quality improvement in parts of the Laguna watershed to which the City has not discharged since
13 2006. The mere “possibility” of future discharges that have not occurred for more than a decade,
14 and demonstrated as unlikely to occur given the approved Discharge Management Plan, which
15 *might* have some impact on pollutant levels in a receiving water body, simply cannot form the basis
16 for a finding of “reasonable potential” and the imposition of a novel, stringent “no net loading”
17 limitation. Furthermore, they did not acknowledge the lack of water quality improvement in parts
18 of the Laguna to which the City has not discharged since 2006 as evidence of lack of “reasonable
19 potential”.

20 No express findings of a causal connection were made linking the City’s phosphorus
21 discharges, which have been zero in almost three of the last five years, and concentration or mass
22 loading levels that “promote[s] aquatic growths to the extent that such growths cause nuisance or
23 adversely affect beneficial uses.” (See Basin Plan at page 3-3.00) In fact, there is evidence *denying*
24 this connection. In the Regional Water Board’s response to comments, the Regional Water Board
25 admits that “it is true that certain indicators of impairment, particularly low dissolved oxygen and
26 the presence of nuisance benthic macrophytes (*Ludwigia*), are most pronounced in reaches of the
27 Laguna de Santa Rosa that are upstream of the City’s preferred discharge location at Delta
28 Pond...” (See Regional Water Board Response to Comments at page. 4 (emphasis added).) As

1 noted above, the Revised Fitzgerald Memo²⁵ also disputes a linkage since it acknowledges a
2 chlorophyll-*a* increase at Occidental Road since the early 1990s despite “large reductions in total
3 phosphorus concentrations . . . which is likely due to significant improvements to municipal
4 wastewater treatment facilities. . . over the last several decades” (*See* Revised Fitzgerald Memo at
5 pages 8 and 10²⁶). This lack of linkage between existing phosphorus discharges from the City and
6 the evidence of biostimulatory reactions calls into question any determination of reasonable
7 potential. Because there is no demonstrated link between the City’s discharge of phosphorus and
8 the biostimulatory reactions observed, the Regional Water Board cannot demonstrate that this
9 effluent limit is “necessary to achieve water quality standards established under section 303 of the
10 CWA, including State narrative criteria for water quality,” or “will attain and maintain applicable
11 narrative water quality criteria and will fully protect the designated use.” (*See* 40 C.F.R.
12 §§122.44(d)(1) and (1)(vi)(A).)

13 Further, a simple comparison to non-regulatory “recommended” phosphorus values
14 represents an insufficient basis for a reasonable potential determination, particularly when the
15 Regional Water Board failed to identify any in-stream conditions caused by these indicators that
16 would qualify as promoting aquatic growth to “cause nuisance or adversely affect beneficial uses”
17 as specified in the biostimulatory substances objective.²⁷ Not only did the Regional Water Board
18 not identify any nuisance conditions (as defined by Water Code section 13050(m)) resulting from

19
20 ²⁵ The City presents additional technical rebuttal to the Revised Fitzgerald Memorandum in **Exhibit B**
attached to this Petition.

21
22 ²⁶ Other disconnects exist in the Regional Water Board’s explanations. For example, in the Regional Water
Board’s response to comments, the Regional Water Board inaccurately states that “Butkus (2011) was not
23 used as a supporting document for the Revised Fitzgerald Memorandum, nor was it used to support staff’s
reasonable potential analyses in the Fact Sheet for the Draft Order or in the Proposed Order.” (*See*
24 *Response to Comments* at page 22.) However, the Revised Fitzgerald Memo cites the Butkus (2011) report
on page 11 for “diel dissolved oxygen data collected at various sites in the greater Laguna de Santa Rosa
25 watershed between 1995 and 2011” and on page 16 related to DO conditions.

26
27 ²⁷ *See, accord*, “[A] statewide numeric nutrient objective is currently not available for evaluating a water
body-pollutant combination . . . it has become increasingly evident that a numeric objective or tool for bio-
stimulatory substances by itself may not be sufficient for determining whether a water body-pollutant
28 combination for nutrients was responsible for impacts to water-bodies beneficial use(s).” (Staff Report,
Division of Water Quality, Nutrient Screening Tools for Use in the Clean Water Act Section 303(d) Listing
Process (December 26, 2007) at pg. 11.)

1 the City's limited discharge, the Regional Board failed to identify any actual adverse effects on any
2 specified beneficial uses resulting from the City's limited discharge. Instead, the findings in the
3 Permit discuss the litany of things that *may* happen from biostimulatory substances, such as that
4 they "can stimulate the growth rates of photosynthetic bacteria, algae and other aquatic plants," or
5 "can result in the excessive growth and decay of these organisms" (Permit at page F-30) Without
6 evidence that these impacts have actually occurred, *and* are directly due, at least in part, to
7 phosphorus discharges from the City, and not some other factor such as "high levels of instream
8 sedimentation, hydrological and physical habitat changes, and high water temperatures" (Permit
9 Fact Sheet at F-32),²⁸ the Regional Water Board has failed to demonstrate that the City's
10 occasional discharges and particular levels of phosphorus have caused or contributed to an in-
11 stream excursion of the narrative biostimulatory substances water quality objective.

12 Moreover, the specific "recommended" values cited by the Regional Water Board criteria
13 to establish "reasonable potential" are flawed for this purpose and have been expressly repudiated
14 by USEPA and the State Water Board.²⁹ For example, the Regional Water Board compared
15 ambient water quality data of unspecified origin³⁰ to USEPA guidance criteria from 2000 and 2001

17 ²⁸ The State Water Board has stated that "In contrast to other pollutants, identifying an excessive level of
18 nutrients is not always straightforward. The chemistry, waterbody shape and other secondary factors such
19 as light, morphology, and residence time need to be considered to see if nutrients are causing the
20 impairment. Except in extreme cases, nutrients alone do not impair beneficial uses." (Scoping Document:
21 Nutrient Policy, SWRCB Division of Water Quality (Aug 2011) at pg. 1.) Further, "[s]everal researchers
22 have demonstrated the shortcomings of using ambient nutrient concentrations within a waterbody alone to
23 predict eutrophication, particularly in streams." (Tetra Tech, Inc., Technical Approach to Develop Nutrient
24 Numeric Endpoints for California (July 2006) at pg. 1-2 *citing* Heiskary and Markus, 2001; Prairie, et al.,
25 1989; Welch, et al., 1989; Chételat, et al., 1999; Dodds, et al., 2002; Van Nieuwenhuysse and Jones, 1996.)
26 This paper went on to conclude that "[a]mbient concentration data may not be effective in assessing
27 eutrophication and the subsequent impact on water use because algal productivity depends on several
28 additional factors such as morphology, light availability, flooding frequency, biological structure, etc." and
the "problems associated with using nutrient concentrations alone to predict use-support status are
demonstrated by a California pilot study conducted in Ecoregion 6 (TetraTech, 2003)" that found weak
correlations between nutrient concentrations and beneficial use attainability. (*Id.* at 1-2.) Instead, waters are
supposed to be first classified into tiers and then compared to numerous different factors, not just nutrient
concentrations. (*Ibid.*) That was not done in this case.

²⁹ See EPA testimony at hearing, Hearing Transcript, timestamp 1:46:21.

³⁰ The Regional Water Board used data from 1989 – 2008 (see Figure 1 in the Revised Fitzgerald
Memorandum, which may not reflect water quality conditions in the Laguna in the most recent 5-year

1 for Ecoregion III, which includes California. By its own terms, “EPA’s recommended section
 2 304(a) criteria are not laws or regulations; they are guidance that States and Tribes may use as a
 3 starting point in creating their own water quality standards.”³¹ Moreover, these USEPA guidance
 4 criteria have been specifically rejected by the State Water Board for use in California,³² discounted
 5 as inexact,³³ and likely overprotective.³⁴ In addition, the Regional Water Board utilized the more

6
 7 period, especially given the fact that the City’s discharge practices changed radically in 2003 with the
 8 commencement of the Geysers Recharge Project). Courts have previously held that only the last three years
 9 of data should be used to determine reasonable potential since data before that timeframe may not accurately
 10 reflect the actual plant performance. (*See City of Woodland v. CVRWQCB and SWRCB, Order Granting*
 11 *Writ of Administrative Mandamus*, Alameda County Superior Court Case No. RG04-188200 (May 16,
 12 2005) at page 13 (if no detections in 3 years prior to date of RWQCB Order, then no reasonable potential
 13 and the Order should not contain limits for that substance); *see also* 40 C.F.R. §122.21(j)(4)(vi)(suggesting
 14 using last 4.5 years of data.)

15 ³¹ *See* EPA Ambient Water Quality Criteria Recommendations; Information Supporting the Development of
 16 State and Tribal Nutrient Criteria, Lakes and Reservoirs in Nutrient Ecoregion III (EPA 822-B-00-008) at
 17 pg. iii; and EPA Ambient Water Quality Criteria Recommendations; Information Supporting the
 18 Development of State and Tribal Nutrient Criteria, Rivers and Streams in Nutrient Ecoregion III (EPA 822-
 19 B-00-016) at pg. ii.

20 ³² In 2001, the State Water Board created the State Regional Board Technical Advisory Group (STRTAG)
 21 to work in parallel with EPA Region IX’s Regional Technical Advisory Group and assume responsibility for
 22 nutrient criteria development for California. (*See* Tetra Tech, Inc., White Paper: A Risk-Based Approach to
 23 Development of Nutrient Criteria and TMDLs (April 13, 2004) at pg. 1.) The RTAG and STRTAG
 24 reviewed and evaluated the USEPA Level III Ecoregion’s default 304(a) criteria and determined that a
 25 simple comparison of these guidance criteria to ambient data would result in a large number of potentially
 26 un-impacted waterbodies being misclassified as impaired and adopted a resolution to not utilize the
 27 guidance criteria, but instead “pursue the EPA approved alternative” to develop alternative criteria. (*Id.*)
 28 The California approach “suggests secondary response indicators in place of complex models or simplistic
 nutrient concentration limitations.” (Tetra Tech, Inc., Technical Approach to Develop Nutrient Numeric
 Endpoints for California (July 2006) at pg. 1-2.)

³³ The criteria document itself states that States “should critically evaluate this information in light of the
 specific designated uses that need to be protected.” (EPA Ambient Water Quality Criteria
 Recommendations; Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers
 and Streams in Nutrient Ecoregion III (EPA 822-B-00-016) at pg. 5.) Because some parts of the country
 have naturally higher soil and parent material enrichment, and different precipitation regimes, the
 application of the criterion development process has to be adjusted by region.” (*Id.* at 3.)

³⁴ The USEPA criteria, which are set at the 25 percentile, “automatically delineates 75% of your
 waterbodies as being impaired,” “was not directly linked to the protection of designated uses and was,
 therefore, potentially overprotective; and “would general criteria that harm designated uses, such as
 recreational or commercial fishing.” (Water Quality Criteria: Nitrogen & Phosphorus Pollution” located at
 the following website:
http://www.waterboards.ca.gov/academy/courses/wqstandards/materials/mod12/12nutn_pca.pdf)
 Interestingly, this same presentation identified the phosphorus goals set for the Klamath River, where fish
 kills and toxic algae were present, and these goals were 0.025 to 0.071 mg/L, much higher than the river and
 stream criteria reviewed in Tables F-4 and F-5 on page F-31 of the Permit Fact Sheet.

1 generalized and stringent Aggregate Ecoregion III Stream Reference Criteria, instead of the
2 available and more site-specific Level III Ecoregion 6 Reference Stream Criteria.³⁵ Ambient water
3 quality was also compared to certain recommended screening criteria proposed in a guidance
4 document from the State Water Board for making 303(d) listing determinations,³⁶ not for
5 determining reasonable potential, and their use may be limited to summertime conditions.³⁷ (*See*
6 Permit at page F-31, Table F-5.) Thus, the Regional Water Board unreasonably and
7 inappropriately utilized these “recommended” values.

8 The Regional Water Board also failed to evaluate “reasonable potential” in light of the
9 seasonal nature of the identified watershed problems and by using appropriate seasonal criteria.
10 Other Regional Water Boards have stated that “it might be appropriate to establish summer nutrient
11 concentration targets to supplement algal and dissolved oxygen targets” that would be “based on
12 locally-observed algal growth responses to nutrient concentrations.” (SFRWQCB, Conceptual
13 Approach for Developing Nutrient TMDLs for San Francisco Bay Area Waterbodies (June 18,
14 2003) at page 10 (emphasis added).) Comparison of the City’s discharge data to such seasonal
15 criteria would likely result in a finding no “reasonable potential” since the City does not have, and,
16 by virtue of the seasonal discharge prohibition in the Permit and the further limitations set forth in
17 the Discharge Management Plan, is prohibited from discharging at any time when winter

18
19 ³⁵ (*See* EPA Ambient Water Quality Criteria Recommendations; Information Supporting the Development
20 of State and Tribal Nutrient Criteria, Rivers and Streams in Nutrient Ecoregion III (EPA 822-B-00-016) at
21 pages 16-17, referenced in the Permit Fact Sheet at page F-31, Table F-4.) The more specific Ecoregion 6
22 criteria (*id.* at 8), that encompasses the area near the City, is 0.030 mg/L instead of the lower, more general
23 number used by the Regional Water Board of 0.02188 mg/L. (Permit at Table F-4.) The difference is more
24 pronounced for the Lakes and Reservoirs criteria, where the Aggregate Ecoregion III number cited in the
25 permit at pg. F-31, Table F-4 is 0.017 mg/L, while the more site-specific recommended criteria is 1.72
26 mg/L, an order of magnitude higher. (*See* EPA Ambient Water Quality Criteria Recommendations;
27 Information Supporting the Development of State and Tribal Nutrient Criteria, Lakes and Reservoirs in
28 Nutrient Ecoregion III (EPA 822-B-00-008) at pages. 18-19.)

24 ³⁶ While 303(d) listings may be considered when determining reasonable potential, a 303(d) listing alone is
25 inadequate to require an effluent limitation if the discharge is not demonstrated to be causing or contributing
26 to that impairment. (*See accord* Tosco Order, SWRCB Order No. WQ 2001-06, page 20.)

26 ³⁷ In addition, there is some indication that these screening tools are only valid for use during the summer
27 season. (*See* Nutrient Scoping Meeting, Powerpoint Presentation (SWRCB October 27, 2011)(“monitoring
28 would take place during the summer season since the freshwater CA NNE framework and scoping tools are
developed for this season only.”))

1 conditions (which are not conducive to algal growth) are not present.

2 For the reasons cited herein, the Regional Water Board failed to properly analyze and
 3 establish “reasonable potential” for phosphorus. Therefore, the City requests that the State Water
 4 Board determine no “reasonable potential” exists and remove the resulting “no net loading” limit
 5 for phosphorus, or, alternatively, remand the Permit to the Regional Water Board with instruction
 6 to remove the “no net loading” limit for phosphorus until or unless “reasonable potential” can be
 7 validly determined, with instruction by the State Water Board as to how “reasonable potential”
 8 should be evaluated in this circumstance and consistent with the City’s position herein.

9 **3. The “No Net Loading” Effluent Limitation for Phosphorus is Not Required,
 10 Contrary to State Water Board Precedent, Unsupported, Unreasonable, and
 Unnecessary to Protect Beneficial Uses.**

11 For the stated purpose of implementing the Basin Plan’s narrative water quality objective
 12 for “biostimulatory substances,” the Permit contains the following final effluent limitation for total
 13 phosphorus: “There shall be no net loading of total phosphorus to the water bodies of the greater
 14 Laguna de Santa Rosa watershed.” (*See* Permit Section IV.A.2.b.i., page 9) The Permit states that
 15 “Compliance with this effluent limitation shall be determined in accordance with section VII.N
 16 (Compliance Determination) of the Order,” which references the Nutrient Offset Program
 17 (Attachment H) (*Id.*) The “no net loading” final effluent limitations for total phosphorus is the
 18 only limitation of its kind imposed in the State, is neither supported nor required pursuant to the
 19 Clean Water Act, California Water Code, or the Regional Water Board’s Basin Plan, directly
 20 contradicts State Water Board precedent prescribing appropriate limitations for discharges into a
 21 303(d) listed waterbody prior to completion of a TMDL, is contrary to applicable provisions of the
 22 Water Code (demanding reasonableness and necessity), constitutes an improper interpretation of
 23 the narrative objective for biostimulatory substances, and is not supported by findings or evidence
 24 in the administrative record.

25 The federal Clean Water Act established the TMDL program as the mechanism for
 26 quantifying wasteload and load allocations to allow pollutant reductions to be equitably
 27 apportioned among sources discharging into an “impaired” water body. (*See* 40 C.F.R.,
 28 §130.2(g).) When a TMDL is developed, discharge limits in NPDES permits must be made

1 consistent with the WLAs in the TMDL. (*See* 40 C.F.R., § 122.44(d)(1)(vii)(B).) In 2001, the
2 State Water Board confronted a very similar case as the City’s involving the Tosco (now Tesoro)
3 refinery and the discharges of dioxin, a pollutant listed as impairing a portion of the San Francisco
4 Bay. In that case, the San Francisco regional water board issued an NPDES permit to the refinery
5 with alternative final limits of “zero” or “no net loading” pending completion of the relevant
6 TMDL. As a result of that case, the State Water Board issued a precedential decision, State Water
7 Board Order No. WQ 2001-06 (“Tosco” or “Tosco Order”), disposing of the instant issues in favor
8 of the City. (*See* Cal. Gov’t Code §11425.60 (setting forth rules for relying on agency precedent).)

9 The State Water Board recognized that permit reissuance before TMDL completion can be
10 “problematic” because:

11 “if a water body is impaired, the water may not be able to assimilate more of the impairing
12 pollutant. If this is the case, effluent limitations for the pollutant may be based solely on
13 the applicable criterion or objective with no allowance for dilution. Hence, they may be
14 extremely stringent. Ultimately, when the TMDL is done, the stringent limitations may
15 become unnecessary because nonpoint source controls may provide assimilative capacity
16 for the point source discharges.”

17 (*See* Tosco Order at pages 21-22).

18 The Tosco Order establishes that where a TMDL is not yet complete, and a discharger
19 cannot comply with a final effluent limit calculated by the Regional Water Board, the permit limit
20 or final water-quality based effluent limit (“WQBEL”) should be enunciated as the WLA in the
21 anticipated TMDL. (*See* Tosco Order at page 36.) In this situation, “[t]he permit findings should
22 state that final water quality-based effluent limitations will be based on the wasteload allocations in
23 the TMDL.” (*Id.*) For this reason, the State Water Board denounced use of the “zero” or “no net
24 loading” limitation imposed by that regional water board on the Tosco facility. In 2003, the
25 California Court of Appeal, First Appellate District, affirmed the State Water Board’s decision.
26 (*See* *Communities for a Better Environment v. State Water Board/Tesoro*, 109 Cal.App.4th 1089
27 (2003).) The court specifically upheld the inclusion of a future WLA derived from a TMDL as the
28 final WQBEL, noting that the San Francisco regional water board, State Water Board, and USEPA
all concurred with this approach. (*Id.* at 1107.)

In 2005, the State Water Board also adopted the “Water Quality Control Policy for

1 Addressing Impaired Waters: Regulatory Structure and Options” (“2005 Water Quality Control
 2 Policy”). (See State Water Board Resolution 2005-0050.) This policy contains an “Impaired
 3 Waters Regulatory Decision Tree” that directs the regional water boards to calculate loading
 4 capacity for waters that do not attain water quality standards due to anthropogenic causes before
 5 redressing the impairment by issuing or revising an individual permit. (See State Water Board Res.
 6 2005-0050, Attachment A.) The Decision Tree also indicates that if, after the receiving water’s
 7 loading capacity has been calculated, it is determined that the impairment’s cause must be
 8 redressed through multiple actions of a regional water board or other entities, individual permits
 9 should be issued or revised only as tools to implement a TMDL. (*Id.*) This further evinces the
 10 State Water Board policy that loading capacities, WLAs, and TMDLs be used to establish permit
 11 limits when addressing discharges into 303(d)-listed waterbodies.

12 Thus, under court-affirmed State Water Board precedent, the final effluent limitation for
 13 total phosphorus assigned to the City should have been based on the WLA in the upcoming TMDL.
 14 To the extent that phosphorus discharged by the City at all contributes to impairment in the Laguna
 15 de Santa Rosa, the pollutant must be comprehensively addressed at the watershed level, rather than
 16 simply imposing limitations on one point source discharge. As the State Water Board has
 17 consistently held, pollution problems involving multiple sources “are best addressed through the
 18 TMDL program.” (See *Tosco Order* at page 38.)

19 Furthermore, the final effluent limitation of “no net loading” for total phosphorus
 20 contradicts the express holdings and direction of the State Water Board in the *Tosco Order*.³⁸ As
 21 the State Water Board stated unequivocally in *Tosco*:

22 “The Board does not construe the Clean Water Act as mandating the alternative final limits

23 ³⁸ *In the Matter of the Review on its Own Motion of the Waste Discharge Requirements for the Avon*
 24 *Refinery*, SWRCB Order No. 2001-06 at page 21 (March 7, 2001)(The State Water Resources Control
 25 Board (“State Board”) questioned EPA Region IX’s interim permitting “requirements” for no net loading or
 26 criterion applied end-of-pipe prior to implementation of a TMDL. (See Draft EPA Region IX Guidance for
 27 Permitting Discharges into Impaired Waters in the Absence of a TMDL,
 28 <http://www.epa.gov/region09/water/npdes/index.html#draftguidance> (document footer states “DRAFT
 5/09/00. Do not cite or quote. Does not represent EPA policy”); see also Letter from USEPA Region IX to
 Loretta Barsamian, Executive Officer, SFRWQCB (July 22, 1999). This interim permitting guidance was
 judicially challenged by the Western States Petroleum Association (“WSPA”) and, as part of a settlement
 agreement, was withdrawn by EPA Region IX. Therefore, and as explained in detail in the City’s December
 2012 comments, there is no valid legal foundation for “no net loading” requirements.)

1 [of “zero” or “no net loading”]. The Clean Water Act authorizes compliance schedules for
2 water quality standards that are adopted or revised after July 1, 1977. A TMDL, as
3 explained previously, is a quantitative plan to attain and maintain water quality standards
4 for an impairing pollutant. A TMDL, thus, is ‘derived from, and complies with’ the
5 applicable water quality standard. A water quality-based effluent limitation that is
6 consistent with the waste load allocations in a TMDL likewise is derived from and complies
with the standard. The Board concludes, therefore, that a compliance schedule that leads to
compliance with a water quality standard through TMDL development satisfies applicable
legal requirements, and that an alternative default limitation is unnecessary.”

7 (*See* Tosco Order at pages 41-42 (emphasis added; footnotes omitted).))

8 The State Water Board in the *Tosco* case determined that the findings regarding the
9 alternative final limits of “zero” or “no net loading” presumed that the receiving waters lack
10 assimilative capacity for the constituent on the 303(d) list. (*Id.* at page 37.) The State Water Board
11 held that the mere fact that a water body is listed as impaired for a pollutant is not a sufficient basis
12 to conclude that a water body lacks assimilative capacity for the pollutant. (*Id.* at pages 33, 37
13 (“The listing itself is only suggestive; it is not determinative.”).) Here, the Regional Water Board
14 here has failed to provide adequate support for the “no net loading” final effluent limitations
15 imposed on the City. In fact, the volume, seasonality, and location of the City’s discharge does not
16 in any way support a conclusion that the Laguna de Santa Rosa cannot assimilate the City’s
17 existing, limited, seasonal discharge, and that additional, onerous requirements must apply in the
absence of the TMDL.

18 The State Water Board also determined that the alternative final limits of “no net loading”
19 may be technically infeasible to achieve and ultimately unnecessary. (*See* Tosco Order at page 37;
20 *see, accord, Communities for a Better Environment v. SWRCB*, 109 Cal.App.4th 1089, 1107 (2003)
21 (ultimate control strategy may instead require a “carefully conceived, agency-approved, long-term
22 pollution control procedure for a complex environmental setting.”).) Here, the Permit specifies that
23 “no net loading” limits must be met by implementing the Nutrient Offset Program. The City has
24 repeatedly expressed its grave concerns regarding the difficulty and impracticality of fully
25 offsetting the City’s discharges, and that the costs expended to achieve compliance, if possible, will
26 outweigh any demonstrable benefits (or lack thereof). The Regional Water Board was well aware
27 of the struggles faced to date by the City to identify and implement adequate nutrient offset
28 projects, and to secure Regional Water Board concurrence of project acceptability and offset credit.

1 (*See, supra*, Section II.E.) While the City is still supportive of the Nutrient Offset Program, and is
2 committed to the Program on a long-term basis, the City is extremely concerned about its ability to
3 successfully use the Program as the sole basis to meet strict and time-sensitive compliance
4 requirements enforceable by, among other things, significant fines and third parties. Thus, the City
5 requests the State Water Board take action to remove the “no net loading” requirement.

6 Implementation of projects pursuant to the Nutrient Offset Program is not a reliable
7 compliance solution for the City, particularly in light of the fact that the pending TMDL could--
8 indeed, likely would-- result in a different final effluent limitation for total phosphorus. In
9 addition, here, as in *Tosco*, even if the City were to achieve compliance with the “no net loading”
10 requirements via the Nutrient Offset Program, there is no evidence to support the conclusion that a
11 demonstrable water quality effect would result. Thus, the alleged impairments “are best addressed
12 through the TMDL program” rather than by unreasonable “no net loading limits.” (*See, accord*,
13 *Tosco Order* at page 38.)

14 Additionally, no federal or state statutory or regulatory provisions authorize or require the
15 imposition of the “no net loading” final effluent limitations proposed in the Permit, which explains
16 why none are cited by the Regional Water Board. Thus, the Regional Water Board’s action in
17 imposing such requirements is unsupported and unreasonable, in violation of Cal. Water Code
18 section 13000 and 13263(a) (requiring “reasonable” water quality regulation and requirements that
19 are “reasonably required” to protect the receiving waters). Indeed, the Basin Plan’s narrative water
20 quality objective for biostimulatory substances does not mandate the inclusion of the “no net
21 loading” requirement, and the Regional Water Board has failed to appropriately explain how the
22 limit was derived from this or any other water quality objective.

23 The narrative objective for biostimulatory substances states that “[w]aters shall not contain
24 biostimulatory substances in concentrations that promote aquatic growths to the extent that such
25 growths cause nuisance or adversely affect beneficial uses.” (*See Basin Plan* at page 3-3.00). In
26 imposing the “no net loading” final effluent limitation, the Regional Water Board did not articulate
27 how the “no net loading” as applied to the City’s unique discharge circumstances is necessary to
28

1 prevent nuisance or adversely affect beneficial uses in the Laguna de Santa Rosa.³⁹ When
2 interpreting narrative objectives, a Regional Water Board must demonstrate “why any effluent
3 limitations . . . are necessary in light of site-specific conditions” in accordance with Water Code
4 sections 13000 and 13377. (*See City of Woodland v. California Regional Water Quality Control*
5 *Board, Central Valley Region, Alameda County Superior Court Case No. RG04-188200 (May 16,*
6 *2005) at page 15; State Water Board Order 2004-13, In the Matter of Petition of Yuba City at pages*
7 *17-18.*) In this case, the Regional Water Board’s technical rationale for the “no net loading”
8 requirement does not support the necessity or validity of the limitation. (*See July 22, 2013*
9 *comments submitted by City to Regional Water Board; see also Exhibit B to this Petition and*
10 *Section 4.B.2. above).*

11 Further, there is no evidence that the factors set forth in Water Code section 13241 (*e.g.*, the
12 quality of the water available, reasonably achievable water quality conditions, economic
13 considerations, need to develop recycled water) were originally considered for this type of
14 interpretation of the narrative biostimulatory substances objective when the narrative objective was
15 adopted, and there is no evidence that the Regional Water Board considered those factors when
16 preparing the Permit in accordance with Water Code section 13263(a). Finally, no implementation
17 plan, as required by Water Code section 13242, has been incorporated into the Basin Plan for
18 compliance with “no net loading” requirements imposed via the narrative water quality objective,
19 even though a City-specific implementation plan is set forth therein, revealing that the “no net
20 loading” provision was not contemplated to apply to the City as a result of the narrative water
21 quality objective for biostimulatory substances. (*See Basin Plan at pages 4-5.00 – 4-6.00*) Finally,
22 the same rationale for removal of the “no net loading” nitrogen requirement should have applied
23 equally to total phosphorus, and the failure to similarly change the phosphorus limit represented an
24 abuse of discretion. (*See Permit Fact Sheet at page F-53*)

25
26 ³⁹ The City’s phosphorus loads might be considered *de minimus*. The State of Minnesota has adopted the
27 concept that municipal facilities with certain phosphorus loads are considered “*de minimus*,” because in
28 their experience, these small discharges generally do not have a measurable impact on the environment.
(*Cities of Annandale and Maple Lake NPDES/SDS Permit Issuance for the Discharge of Treated Wastewater*, 731 N.W.2d 502, 523 (Sup.Ct. Minn. 2007).)

1 For these reasons, the City requests that the State Water Board remove the “no net loading”
2 final effluent limitation for total phosphorus from the Permit, as was done for total nitrogen, and
3 replace that limitation with the City’s proposed effluent limitation discussed in Section III.4.B.4.
4 below or, alternatively, remand the Permit to the Regional Water Board with instruction to remove
5 the “no net loading” limit for phosphorus and replace that limitation with the limitation set forth in
6 Section III.4.B.4 below. As stewards of the local environment, the City remains fully committed to
7 continuing to pursue opportunities for nutrient reduction and other watershed improvement projects
8 even if the overly stringent and unprecedented permit limit for phosphorus is removed.

9 **4. Proposed Resolution to Regulating Phosphorus in the City’s Limited Discharge**
10 **While Continuing to Develop the Nutrient Offset Program.**

11 The City appreciates that the Regional Water Board removed the previously imposed
12 “zero” or “no net loading” requirement for total nitrogen in favor of a performance-based effluent
13 limitation. (See Permit at pg. 9, Provision IV.A.2.b.ii and Fact Sheet page F-53 (replacing the “no
14 net loading” requirement with a performance-based limit for nitrogen of 10.6 mg/L as an average
15 monthly concentration).) While the City continues to believe its limited discharge has little to no
16 effect on nutrient-related issues in the Laguna de Santa Rosa watershed (and no evidence to the
17 contrary has been presented), that no “reasonable potential” exists, and that the “no net loading”
18 requirement should be removed, the City proposed to the Regional Water Board and is willing to
19 accept a performance-based effluent limitation for phosphorus that also continues to rely on offsets
20 under the Nutrient Offset Program until or unless wasteload allocations are prescribed in an
21 adopted nutrient Total Maximum Daily Load for the Laguna de Santa Rosa.⁴⁰ (See July 22, 2013
22 comments submitted by the City to the Regional Water Board at pages 2-4)

23 Specifically, as an alternative to the “no net loading” requirement for total phosphorus, the
24

25 ⁴⁰ As noted above, newly included findings for treating phosphorus differently are based on selective parts
26 of a single technical memo, and ignore the other possible biostimulatory substances or factors, such as wind,
27 temperature, sunlight, channel geometry, water flow rates, chlorophyll a, and benthic macrophytes that are
28 included on pages 2-3 of that same memo. Further, the new discussion in the Fact Sheet fails to
acknowledge the significant decline in phosphorus levels over time as shown in Figure 2, page 7 of that
memo. These findings must be revised to reflect the need for performance-based limits until the TMDL is
complete.

1 City offered the following proposal,⁴¹ which more appropriately regulates phosphorus, while
 2 preserving the viability and utility of the Regional Water Board's Nutrient Offset Program, to
 3 which the City continues to be committed:

4 **IV.2.b.** The Permittee shall maintain compliance with the following effluent limitations at
 5 Discharge Points 006A, 006B, 012A(1), 0012B, and 015, with compliance measured at
 6 Monitoring Locations EFF-006A, EFF-006B, EFF-012A(1), EFF-012A(2), EFF-012B, and
 7 EFF-001, respectively, as described in the MRP, when discharges occur, until the TMDL
related to the following constituents is complete and appropriate WLAs are incorporated
into the Permittee's permit.⁴²

8 **i. Effluent Limitation for Total Phosphorus for Compliance with Narrative**
Objective for Biostimulatory Substances. ~~There shall be no net loading of total~~
 9 ~~phosphorus to the water bodies of the greater Laguna de Santa Rosa watershed⁴. The~~
 10 mass emission rate of the discharge of total phosphorus shall not exceed 10,050 lbs. in
the discharge season.

11 Compliance with this effluent limitation shall be determined in accordance with section
 12 VII.N. (Compliance Determination) of this Order.

- 13 **VII.N. 1.** For each discharge season (i.e., October 1st through May 14th), the Permittee shall
 14 calculate the mass of the total phosphorus discharged to the Laguna de Santa Rosa
 15 (and tributaries) from the Subregional System ~~and the mass of total phosphorus and~~
 16 ~~total nitrogen that was controlled during the same season through approved nutrient~~
 17 ~~offset projects. If the mass discharged is equal to or less than the mass controlled~~
 18 the performance-based mass effluent limitation in sections IV.A.2.b.i., then the
 19 Permittee shall be deemed in compliance with the effluent limitation in IV.A.2.b.i.
 20 **2.** If the mass discharged is greater than the mass ~~controlled~~ -based effluent limitations
 21 in section IV.A.2.b.i. of this Order, then the Permittee may use nutrient offset
 22 credits generated via the Regional Water Board Resolution No. R1-2008-0061
 23 approving the Santa Rosa Nutrient Offset Program (Attachment H), as follows:
 24 **a.** For each discharge season, the Permittee shall calculate the mass of total
 25 phosphorus discharged in excess of the effluent limitation in sections
 26 IV.A.2.b.i., if any, and mass of total phosphorus controlled during the same
 27 discharge season through approved nutrient offset projects the mass of total
 28 phosphorus that was controlled during the same season through approved
nutrient offset projects.
b. The Permittee shall calculate the three-year average mass of total phosphorus
 discharged in excess of ~~the mass controlled using the discharges~~ the effluent
limitation in sections IV.A.2.b.i., if any, (mass basis) that occurred during the
previous three discharge seasons.

⁴¹ The City's proposal has been slightly modified to conform to the final language adopted in the Permit.

⁴² This language is consistent with the Reopener Provision on page 19 in Provision VI.C.1.d, which states that
 "Following the adoption of these TMDLs, this Order may be reopened and modified to include final WQBELs based
 on applicable WLAs."

1 c3. The Permittee will compare the three-year average mass of total phosphorus
2 discharged in excess of the effluent limitation in Section IV.A.2.b.i., if any, to
3 the mass of total phosphorus controlled during the previous three discharge
4 seasons.

5 d4. The Permittee will be determined to be in compliance with the effluent
6 limitation in IV.A.2.b.i. if the total phosphorus controlled for the previous three
7 years is greater than or equal to the three-year average of total phosphorus
8 discharged in excess of the effluent limitation in IV.A.2.b.i.

9 35. The Permittee shall document compliance with the effluent limitations in an annual
10 report, submitted to the Regional Water Board by July 1st of each year.

11 It is important to note that the interim-performance-based mass limitation proposed by the
12 City is based on the City's median phosphorus discharge, and the City would be required to offset
13 phosphorus discharges via the Program during those seasons where the value exceeds the mass
14 limit. This approach will continue reducing the City's existing, limited contribution of phosphorus
15 into the Laguna de Santa Rosa pending TMDL completion (though the City does not believe such
16 reduction will improve the watershed's nutrient issues, if any), while lessening the near-term
17 burden of non-compliance if offset projects sufficient to offset the entirety of the City's discharge
18 cannot be timely identified and developed. The City believes this is a reasonable outcome in
19 furtherance of the State's goals to protect and enhance the quality of impaired waterbodies while
20 concurrently encouraging reclamation as an alternative to discharge.

21 **C. A New Element of the Receiving Water Limitation for Temperature is**
22 **Unsupported by Law, Policy, and is Based on Inapplicable Analysis from A**
23 **Dissimilar Geographic Region.**

24 The Permit contains a new receiving water limitation for temperature at Section V.A.11.d.,
25 which has no basis in applicable federal or state law, or even the Regional Water Board's Basin
26 Plan. (See Permit at Section V.A.11.d. ("Additionally, the discharge shall not cause the 7-day
27 average of the daily maximum receiving water temperature to exceed 64.4°F, but is based on a
28 guidance document from EPA Region 10, not Region 9 that has jurisdiction".)) Rather, this never
before seen temperature requirement is based on a guidance document from USEPA Region 10
(EPA 910-B-03-002), not Region 9 that has jurisdiction over the City's Permit. (See Permit Fact
Sheet at page F-63). USEPA Region 10 recommended that temperature requirement for protection

1 of salmonids in the extreme Northwest of the United States, and the requirement has not been
2 adopted or justified for use in Northern California. No adequate justification was provided to
3 include this provision in the City's Permit and no need for this severe restriction identified.

4 In the response to comments, the Regional Water Board states that the Region 10 guidance
5 "was developed for the salmonid species present in the northwest, but is based on the species, not
6 the geography." (See Regional Water Board's Response to Comments, Comment 23, and page 32)
7 However, tolerance of salmonid species to temperature varies based on geography and Regional
8 Water Board staff failed to consider this different factor.⁴³

9 Use of this inapplicable guidance from USEPA to impose a new receiving water limit is
10 unreasonable, unnecessary to protect local beneficial uses, contrary to the Regional Water Board's
11 own Basin Plan, and constitutes an improper underground regulation. (*Iowa League of Cities v.*
12 *EPA*, 711 F.3d 844 (8th Cir., March 25, 2013); *Appalachian Power v. EPA*, 208 F.3d 1015, 1022
13 (D.C. Cir. 2000).) Aquatic life is already adequately protected by the existing three-part receiving
14 water temperature limitation. Therefore, the new temperature requirement set forth at Section
15 V.A.11.d. must be removed.

16 For these reasons, the City requests the State Water Board remove Section V.A.11.d. from
17 the Permit, or, alternatively, remand the Permit to the Regional Water Board with instruction to
18 remove the new temperature receiving water limitations at Section V.A.11.d.

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24 ⁴³ The response to comments further states that "thermal criteria presented in the USEPA Region 10
25 guidance is completely consistent with the salmonid species of Coho salmon, steelhead trout, and
26 occasionally Chinook salmon which are present in the mainstem Laguna de Santa Rosa and lower Mark
27 West Creek. The thermal criteria presented in the USEPA Region 10 guidance are also consistent with
28 literature describing salmonid temperature thresholds in the North Coast Region. The Regional Water Board
has no information to suggest the 7-day average of the daily maximum criterion is inappropriate, given the
known thermal tolerances of these species. No change is necessary." (See Regional Water Board's
Response to Comments at pages 32-33) However, absolutely no substantiation for any of these assertions is
provided. Limitations not supported by findings and evidence in the administrative record must be
removed.

1 **D. Including the Requirement to Obtain and Maintain Coverage With State-Only**
 2 **General WDRs for the Discharge of Biosolids to Land in A Federally-**
 3 **Enforceable NPDES Permit is Unreasonable and Inappropriate.**

4 Section VI.C.5.d.i. of the Permit states:

5 “For the discharge of biosolids from the Subregional System, the Permittee shall comply
 6 with the following requirements:

- 7 i. For the land application of biosolids, as soil amendment within the North
 8 Coast Region, the Permittee shall obtain or maintain coverage under the
 9 State Water Board Water Quality Order No. 2004-0012-DWQ General
 10 Waste Discharge Requirements for the Discharge of Biosolids to Land or
 11 Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and
 12 Land Reclamation Activities; or
 13 ii. Alternatively, the Permittee may dispose of biosolids at another
 14 appropriately permitted facility.
 15 iii. New sludge treatment and storage facilities must comply with the
 16 requirements of the Water Code and title 27, CCR, for the protection of
 17 water quality.”

18 The corresponding Fact Sheet at Section III.D.3. states, in part, “This Order requires the Permittee
 19 to continue to maintain coverage under the General Order for land application of Class B biosolids
 20 on City property and at the Lakeville Highway site located within the jurisdiction of the San
 21 Francisco Bay Regional Water Quality Control Board.”

22 The Regional Water Board’s action in adopting these provisions is unreasonable,
 23 inappropriate, and unnecessarily expands the scope and reach of an NPDES Permit to regulatory
 24 activities governed solely by state law. Order No. 2004-0012-DWQ is a General WDR adopted
 25 pursuant solely to the Porter-Cologne Water Quality Control Act, Water Code sections 13000 *et*
 26 *seq.*, for the protection of groundwater underlying discharges of biosolids to land. The activities
 27 regulated by that General WDR do not involve discharges to waters of the United States, and are
 28 not subject to federal oversight or enforcement under the federal Clean Water Act or by an NPDES
 Permit. (*See* 33 U.S.C. §§1251, *et seq.*) The Regional Water Board nonetheless mandated in an
 NPDES Permit the requirement to obtain and maintain coverage under the General WDR and to
 comply with relevant provisions of the Water Code and Title 27 for non-federally regulated
 activities, notwithstanding the City’s clear objection. (*See, e.g.*, Comment 30, July 22, 2013

1 comment letter submitted by the City). This unjustified expansion of the scope of the federal Clean
2 Water Act and corresponding NPDES Permits should be rejected. The City already obtained
3 coverage under the General WDR in May 2006, and will continue to separately comply with state-
4 law requirements applicable to land application of biosolids.

5 The City also objects to the inclusion of the Lakeville Highway site in the Fact Sheet, as the
6 regulation of this location is expressly outside the jurisdiction of this Regional Water Board.
7 Further, this location is on lands falling under the Bay Conservation and Development
8 Commission and, as such, is specifically exempt from the referenced General WDRs and instead
9 subject to 40 C.F.R. §503. (See Order No. 2004-0012-DWQ at para. 21.g.)

10 For these reasons, the City requests that the State Water Board (1) remove Section
11 VI.C.5.d.i. of the Permit, (2) remove the second sentence of Fact Sheet Section III.D.3., and (3)
12 replace the second sentence of Fact Sheet Section III.D.3. with the following sentence: "The
13 Permittee applied for coverage in May 2006 and is separately subject to the requirements of Order
14 No. 2004-0012-DWQ for land application of Class B biosolids." Alternatively, the City requests
15 the State Water Board to remand the Permit to the Regional Water Board with instruction to
16 modify the Permit and Fact Sheet in accordance with the City's request above.

17 **E. The Regional Water Board's Action in Adopting the Contested Provisions of**
18 **the Permit is Not Reasonable As Required by Water Code section 13000**

19 The California Legislature has found and declared that activities affecting water quality
20 "shall be regulated to attain the highest water quality which is *reasonable*, considering all demands
21 being made and to be made on those waters and the total values involved, beneficial and
22 detrimental, economic and social, tangible and intangible." See Water Code §13000 (emphasis
23 added). This section sets state policy and imposes an overriding requirement on the Regional
24 Boards that all orders be reasonable considering all circumstances. For the reasons set forth above,
25 the Regional Water Board's adoption of the contested provisions described is not reasonable,
26 considering all of the related circumstances.

1 **F. The Regional Water Board's Action in Adopting the Contested Provisions of**
2 **the Permit is Not Supported by Findings and Evidence**

3 Orders adopted by the Regional Water Board not supported by the findings, or findings not
4 supported by the evidence, constitute an abuse of discretion. *Topanga Association for a Scenic*
5 *Community v. County of Los Angeles*, 11 Cal.3d 506, 515; *California Edison v. SWRCB*, 116 Cal.
6 App.3d 751, 761 (4th Dt. 1981); *see also In the Matter of the Petition of City and County of San*
7 *Francisco, et al.*, State Board Order No. WQ-95-4 at page 10 (Sept. 21, 1995). In this case, as
8 discussed herein, the Regional Water Board's adoption of the contested provisions of the Permit
9 was not supported by adequate findings, and the findings made were not supported by evidence in
10 the administrative record.

11 **5. THE MANNER IN WHICH THE PETITIONER IS AGGRIEVED.**

12 Given the current economic climate and declining municipal resources, the City is being
13 placed in the untenable situation of having to expend significant and limited resources with
14 increasingly diminished expectations that those resources will result in either compliance or water
15 quality improvement or benefit, or both, all the while facing potential non-compliance with an
16 NPDES Permit enforceable by third parties and the Regional Water Board and for which strict
17 penalties and other relief may apply. Compounding the situation is the fact that the Regional
18 Water Board's adoption of the Permit was an abuse of discretion and not supported by findings or
19 evidence in the administrative record.

20 The Permit imposes new requirements on recycled water use, more stringent than state laws
21 and policies dictate, that will be exceptionally costly and burdensome on the City and recycled
22 water customers with no corresponding water quality benefit, and, in turn, make it much more
23 difficult to maintain and expand the City's recycled water use program. Because the City's
24 recycled water is only marginally less expensive than potable water (*e.g.*, 95% of potable water rate
25 in Rohnert Park and in Santa Rosa for Tier 1 users), new, unnecessary, and unsupported
26 requirements that present additional burdens to recycled water users will discourage the continued
27 use of recycled water by current customers and the expanded use by new customers. This burden,
28 without adequate justification or need, runs counter to the Legislature's and the State Water
Board's clear policies of encouraging, not discouraging, recycled water use.

1 The Permit also imposes a “no net loading” requirement that, as described in Section
2 III.4.B. herein, is overly stringent, unlikely to achieve the water quality benefits sought, costly, and
3 compliance is uncertain. The City is critically concerned that it is being placed in a position
4 whereby City staff is and will undertake all necessary actions towards compliance, but the City
5 may nonetheless be unreasonably precluded from achieving compliance with its NPDES Permit
6 due to a variety of circumstances outside the City’s control.

7 The City maintains the concerns enunciate herein for the other unsupported Permit
8 provisions imposed by the Regional Water Board that the City believes are unreasonable,
9 unnecessary, and in error

10 **6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH**
11 **PETITIONER REQUESTS:**

12 The City seeks an Order by the State Water Board that will modify the Permit, or remand
13 the Permit to the Regional Water Board for revisions and with direction, to:

14 (A) Remove or modify recycled water provisions at Sections IV.C.2.a. (Table 6) of the
15 Permit, Sections VII.A.1. (Table E-7) and X.D.3.a.i. and ii. of the Monitoring and Reporting
16 Program, and Section B.21 of Attachment G (Water Reclamation Requirements and Provisions) as
17 proposed in Section III.A. herein;

18 (B) Remove the final “no net loading” effluent limitation for total phosphorus set forth in
19 Section IV.2.b.i. of the Permit and replace that limitation with the language proposed by the City in
20 Section III.4.C. herein;

21 (C) Remove the newly imposed, additional receiving water limitation for temperature set
22 forth in Section V.A.11.d. of the Permit; and

23 (D) Remove the newly imposed requirement in Section VI.C.5.d.i. of the Permit mandating
24 that the City obtain and maintain coverage under independently applicable General Waste
25 Discharge Requirements, State Water Board Water Quality Order No. 2004-0012-DWQ, already
26 independently secured by the City, and dictating other terms of compliance, and modify Finding
27 III.D.3. as proposed in Section III.4.D. herein.

28

1 **7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL**
2 **ISSUES RAISED IN THE PETITION:**

3 The City's preliminary statement of points and authorities are set forth in Section 4 above.
4 The City may supplement this statement upon receipt and review of the administrative record.
5

6 **8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE REGIONAL**
7 **BOARD AND TO THE DISCHARGER, IF NOT THE PETITIONER:**

8 A true and correct copy of this Petition was mailed by First Class mail on December 23,
9 2013 to the Regional Water Board at the following address:

10 Matthias St. John
11 Executive Officer
12 North Coast Regional Water Quality Control Board
13 5550 Skylane Blvd., Suite A
14 Santa Rosa, CA 95403

13 **9. A STATEMENT THAT THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED**
14 **IN THE PETITION WERE RAISED BEFORE THE REGIONAL BOARD, OR AN**
15 **EXPLANATION WHY NOT.**

16 With the exception of the information described in Section 10 below, the substantive factual
17 and legal issues and objections set forth in this Petition were presented to the Regional Water
18 Board in written comments or during the Permit adoption hearing.

18 **10. REQUEST FOR CONSIDERATION OF SUPPLEMENTAL EVIDENCE AND/OR**
19 **SUPPLEMENTAL HEARING.**

20 Pursuant to 23 Cal. Code of Regulations section 2050.6, the City requests that the State
21 Water Board consider evidence not previously provided to the Regional Water Board due to the
22 timing of the Regional Water Board's release of information and the time restrictions at the public
23 hearing. After the close of public comments and just weeks before the public hearing on the
24 Permit, on November 7, 2013, the Regional Water Board provided the City with the October 22,
25 2013 "Summary of TMDL Development Data Pertaining to Nutrient Impairments in the Laguna
26 de Santa Rosa Watershed (Revised)," drafted by Rebecca Fitzgerald, TMDL Unit Supervisor, and
27 relied upon by Regional Water Board staff to justify the contested "no net loading" requirement
28 contained in the Permit. The Regional Water Board simultaneously provided its written Response

DOWNEY BRAND LLP

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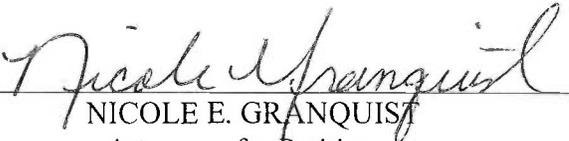
to Comments. The forty-five (45) minute timeframe for the City’s presentation was not adequate to delve into the very technical details of the Regional Water Board’s newly provided information. The supplemental evidence enclosed here as **Exhibit B** consists of rebuttal to the October 22, 2013 Revised Fitzgerald Summary and related provisions of the Regional Water Board’s response to comments.

Alternatively, or supplementally, pursuant to 23 C.C.R. §2050.6(a)(3), the City requests that the State Water Board allow for additional witness testimony and evidence by the City on the specific issues raised in the Revised Fitzgerald Memo and the Regional Water Board’s related response to comments that were not able to be fully made at the hearing due to the time constraints imposed. This information is vitally important to the State Water Board’s understanding of the “impairment” issues related to the areas to which Santa Rosa discharges, and a proper analysis as to whether the City’s discharges have a reasonable potential to exceed the narrative water quality objective for biostimulatory substances and/or whether a “no net loading” requirement is appropriate.

Respectfully submitted,

DATED: December 23, 2013

DOWNEY BRAND LLP

By: 
NICOLE E. GRANQUIST
Attorneys for Petitioner
CITY OF SANTA ROSA

1349092.1

EXHIBIT A

North Coast Regional Water Quality Control Board

ORDER NO. R1-2013-0001
NPDES NO. CA0022764
WDID NO. 1B830990SON

WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT

FOR THE

CITY OF SANTA ROSA SUBREGIONAL WATER RECLAMATION SYSTEM
SONOMA COUNTY

The following Permittee is subject to waste discharge requirements as set forth in this Order:

Table 1. Permittee Information

Permittee	City of Santa Rosa
Name of Facility	Santa Rosa Subregional Water Reclamation System
Facility Address	4300 Llano Road
	Santa Rosa, CA 95407
	Sonoma County
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow (Existing)	21.34 million gallons per day (mgd) (average dry weather design flow) 64 mgd (peak weekly wet weather design flow) 47.3 mgd (peak monthly wet weather design flow)

Table 2a. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
006A (Meadow Lane Pond D)	Disinfected tertiary treated municipal wastewater	38° 22' 17" N	122° 46' 31" W	Laguna de Santa Rosa
006B (Meadow Lane Pond D)	Disinfected tertiary treated municipal wastewater	38° 22' 17" N	122° 46' 31" W	Laguna de Santa Rosa

DAVID M. NOREN, CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

5550 Skyline Blvd., Suite A, Santa Rosa, CA 95403 | www.waterboards.ca.gov/northcoast

Table 2a. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
012A (Delta Pond)	Disinfected tertiary treated municipal wastewater	38° 26' 54" N	122° 49' 27" W	Santa Rosa Creek
012B (Delta Pond)	Disinfected tertiary treated municipal wastewater	38° 26' 54" N	122° 49' 27" W	Santa Rosa Creek
015	Disinfected tertiary treated municipal wastewater	38° 22' 17" N	122° 46' 31" W	Laguna de Santa Rosa

Table 2b. Reclamation Sites

Distribution Point	Effluent Description	Distribution Point Latitude	Distribution Point Longitude	Use Location
001	Disinfected tertiary treated municipal wastewater	38° 45' 46" N	122° 45' 38" W	Geysers Recharge Project
002	Disinfected tertiary treated municipal wastewater	See Table G-1 in Attachment G	See Table G-1 in Attachment G	Irrigation Distribution System

Table of Contents

I. Facility Information.....5
 II. Findings.....5
 III. Discharge Prohibitions.....6
 IV. Effluent Limitations And Discharge Specifications7
 A. Effluent Limitations..... 7
 B. Land Discharge Specifications – Not Applicable..... 10
 C. Reclamation Requirements and Specifications..... 10
 D. Other Requirements..... 12
 V. Receiving Water Limitations15
 A. Surface Water Limitations..... 15
 B. Groundwater Limitations 17
 VI. Provisions.....18
 A. Standard Provisions..... 18
 B. Monitoring and Reporting Program (MRP) Requirements 18
 C. Special Provisions 18
 VII. Compliance Determination28

List of Tables

Table 1. Permittee Information 1
 Table 2a. Discharge Location..... 1
 Table 2b. Reclamation Sites..... 2
 Table 3. Administrative Information..... 3
 Table 4. Technology-Based Effluent Limitations..... 8
 Table 5. Water Quality-Based Effluent Limitations 9
 Table 6. Water Reclamation Specifications..... 11

List of Attachments

Attachment A – DefinitionsA-1
 Attachment B – Map of Santa Rosa Subregional Water Reclamation SystemB-1
 Attachment C – Facility Flow Schematic.....C-1
 Attachment D – Standard ProvisionsD-1
 Attachment E – Monitoring and Reporting ProgramE-1
 Attachment F – Fact Sheet.....F-1
 Attachment G – Water Reclamation Requirements and ProvisionsG-1
 Attachment G-1: Approved Recycled Water Use SitesG-11
 Attachment H: Santa Rosa Nutrient Offset ProgramH-1

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	November 21, 2013
This Order shall become effective on:	February 1, 2014
This Order shall expire on:	January 31, 2019
The Permittee shall file a Report of Waste Discharge as application for issuance of new waste discharge requirements in accordance with title 23, California Code of Regulations, no later than:	August 3, 2018
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as follows:	Major Discharge

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) Order No. R1-2006-0045, as amended by Regional Water Board Order No. R1-2008-0091, and Monitoring and Reporting Program (MRP) No. R1-2006-0045, are rescinded upon the effective date of this Order except for enforcement purposes, and in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements of this Order. This action in no way prevents the North Coast Regional Water Quality Control Board (Regional Water Board) from taking enforcement action for past violations of the previous permit.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on November 21, 2013.

 Matthias St. John, Executive Officer

I. FACILITY INFORMATION

Information describing the City of Santa Rosa Subregional Water Reclamation System (hereinafter Subregional System) is summarized in Table 1 of this Order and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the City's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds:

- A. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for point source discharges from the Subregional System to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260) and a Master reclamation permit pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with sections 13260 and 13520, respectively).
- B. Basis and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee's application for permit renewal, monitoring data submitted during the term of the Permittee's previous Order, and other available information. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order, and is hereby incorporated into this Order as additional findings. Attachments A through G are also incorporated into this Order. Attachment B provides a map of the area around the Subregional System. Attachment C provides a flow schematic of the Subregional System.
- C. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections III.E, III.F, IV.B, IV.C, IV.D, V.B, VI.C.1.g and h, VI.C.2.b, VI.C.5.a, VI.C.5.d-f, and VI.C.6.a of this Order, and sections VI, VII, VIII.B, IX,A-C, X.D.2 and 4, and X.E of the MRP are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. Notification of Interested Parties. The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet of this Order (Attachment F).

E. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the California Water Code (Water Code) is prohibited.
- C. The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c of this Order (Sludge Disposal and Handling Requirements).
- D. The discharge or reclamation use of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in section IV.C.2 (Reclamation Specifications) and in Attachment D, Standard Provisions G (Bypass) and H (Upset).
- E. Any sanitary sewer overflow (SSO) that results in a discharge of untreated or partially treated wastewater to (a) waters of the State or (b) land that creates pollution, contamination, or nuisance, as defined in Water Code section 13050 (m) is prohibited.
- F. The discharge of waste to land that is not owned by the Permittee, governed by City ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the California Code of Regulations (CCR).
- G. The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Resources Control Board (State Water Board) or another Regional Water Board is prohibited, except for use for fire suppression.
- H. The average daily dry weather flow (ADWF) of waste into the Subregional System in excess of 21.34 MGD is prohibited until such time as additional treatment, storage, and/or total reclamation capacity has been added to accommodate a higher ADWF, not to

exceed 25.9 MGD. Compliance with this prohibition shall be determined as defined in section VII.M and in accordance with section VI.C.6.a of this Order.

- I. The discharge of wastewater effluent from the Subregional System to the Russian River or its tributaries is prohibited during the period from May 15 through September 30 of each year.
- J. During the period from October 1 through May 14 (discharge season), discharges of advanced treated wastewater to the unnamed ditch, the Laguna de Santa Rosa or Santa Rosa Creek, tributaries to the Russian River, shall not exceed five percent of the flow of the Russian River, as measured at the Hacienda Bridge (USGS Gage No. 11467000). For purposes of this Order, compliance with this discharge prohibition shall be determined as follows:
 - 1. The discharge of advanced treated wastewater shall be adjusted at least once daily to avoid exceeding, to the extent practicable, five percent of the most recent daily flow measurement of the Russian River at Hacienda Bridge. Daily flow shall be based on flow meter comparisons reasonably read between the hours of 12:01 am to 12:00 midnight; and
 - 2. In no case shall the total volume of advanced treated wastewater discharged in a calendar month exceed five percent of the total volume of the Russian River at Hacienda Bridge in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume shall be based on the first day of the calendar month to the date when the discharge ceased for the season.
- K. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Technology-Based Effluent Limitations

- a. The discharge of advanced treated wastewater, as defined by the Laguna Treatment Plant's design and the numeric limitations below, to all discharge locations shall maintain compliance with the following effluent limitations at Monitoring Location EFF-001, as described in Monitoring and Reporting Program (MRP)(Attachment E), when discharges occur:

Table 4. Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly ¹	Average Weekly ¹	Maximum Daily ¹	Instantaneous Minimum ¹	Instantaneous Maximum ¹
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	10	15	--	--	--
Total Suspended Solids (TSS)	mg/L	10	15	--	--	--

Table Notes:
 1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

- b. Disinfection.** The disinfected effluent, sampled in each of the disinfection channels, shall not contain concentrations of total coliform bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001:
 - i.** The median concentration of the disinfection channels shall not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters (mL), using the daily bacteriological results¹ of the last 7 days for which analyses have been completed²; and
 - ii.** The number of coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one daily result¹ in any 30-day period.
 - iii.** No daily result¹ shall exceed an MPN of 240 total coliform bacteria per 100 mL.
- c. Percent Removal.** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over the same time period as measured at Monitoring Location EFF-001.

2. Final Effluent Limitations – Water Quality-Based Effluent Limitations

- a.** The Permittee shall maintain compliance with the following effluent limitations at Discharge Points 006A, 006B, 012A(1), and 015, with compliance measured at Monitoring Locations EFF-006A, EFF-006B, EFF-012A(1), and EFF-001, respectively, as described in the MRP, when discharges occur:

¹ The daily result is the geometric mean of samples analyzed from all on-line channels.

² See section VII.C of this Order regarding compliance with bacteriological limitations.

Table 5. Water Quality-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly ¹	Average Weekly ¹	Maximum Daily ¹	Instantaneous Minimum ¹	Instantaneous Maximum ¹
Chlorodibromomethane	µg/L	0.4	--	1.0	--	--
Dichlorobromomethane	µg/L	0.56	--	1.3	--	--

Table Notes:
 1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

b. The Permittee shall maintain compliance with the following effluent limitations at Discharge Points 006A, 006B, 012A(1), 012A(2), 012B, and 015, with compliance measured at Monitoring Locations EFF-006A, EFF-006B, EFF-012A(1), EFF-012A(2), EFF-012B, and EFF-001, respectively, as described in the MRP, when discharges occur:

i. **Effluent Limitation for Total Phosphorus for Compliance with Narrative Objective for Biostimulatory Substances.** There shall be no net loading of total phosphorus to the water bodies of the greater Laguna de Santa Rosa watershed.³

Compliance with this effluent limitation shall be determined in accordance with section VII.N (Compliance Determination) of this Order.

ii. **Effluent Limitation for Total Nitrogen.** The average monthly concentration of total nitrogen shall not exceed 10.6 mg/L.

iii. **Effluent Limitation for Acute Toxicity.** There shall be no acute toxicity in treated wastewater discharged to the Laguna de Santa Rosa or Santa Rosa Creek. The Permittee will be considered in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following.

(a) Minimum for any one bioassay: 70 percent survival; and

(b) Median for any three or more consecutive bioassays: at least 90 percent survival.

Compliance with these effluent limitations shall be determined in accordance with section VII.K (Compliance Determination) of this Order.

³ For purposes of this Order, the greater Laguna de Santa Rosa watershed consists of the Laguna de Santa Rosa, Santa Rosa Creek, and Mark West Creek hydrologic subareas (HSAs), as mapped in the Basin Plan.

iv. Effluent Limitations for pH. The discharge of treated effluent shall be within the pH limits of 6.5 and 8.5 standard units at all times.

Compliance with these effluent limitations shall be determined in accordance with sections VII.G and H (Compliance Determination) of this Order.

B. Land Discharge Specifications – Not Applicable

This section is not applicable to the Permittee as treated wastewater is not discharged to or applied to land for the purpose of disposal. The Permittee reclaims treated wastewater, thus the Permittee has Reclamation Requirements and Specifications rather than Land Discharge Specifications.

C. Reclamation Requirements and Specifications

Reclaimed water delivered to Distribution Points 001 and 002 shall maintain compliance with the following reclamation requirements and specifications, when deliveries occur:

1. Reclamation Requirements

- a. The Permittee shall comply with applicable state and local requirements regarding the production and use of reclaimed wastewater, including requirements of Water Code sections 13500 – 13577 (Water Reclamation) and California Department of Public Health (CDPH) regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria).
- b. The Permittee shall comply with the requirements contained in Reclamation Requirements and Provisions – Attachment G of this Order.

2. Reclamation Specifications

- a. All treated effluent delivered to the recycled water system is from on-site recycled water storage ponds, therefore, the Permittee shall maintain compliance with the following reclamation specifications at Monitoring Location EFF-001 for deliveries to the Geysers Recharge Project and to the recycled water system (Distribution Points 001 and 002):

Table 6. Water Reclamation Specifications

Parameter	Units	Effluent Limitations				
		Average Monthly ¹	Average Weekly ¹	Maximum Daily ¹	Instantaneous Minimum ¹	Instantaneous Maximum ¹
BOD ₅	mg/L	10	15	--	--	--
TSS	mg/L	10	15	--	--	--
pH	s.u.	--	--	--	6.0	9.0

Table Notes:
 1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

- b. Disinfection.** The disinfected effluent, sampled in each of the disinfection channels, shall not contain concentrations of total coliform bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001:
 - i.** The median concentration of the disinfection channels shall not exceed a MPN of 2.2 per 100 milliliters (mL), using the daily bacteriological results⁴ of the last 7 days for which analyses have been completed⁵; and
 - ii.** The number of coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one daily result in any 30-day period.
 - iii.** No daily result shall exceed an MPN of 240 total coliform bacteria per 100 mL.
- c. Diversions.** In the event of treatment plant failure such that the disinfected effluent does not meet water Reclamation Specifications in section IV.C.2.b, the Permittee is authorized to divert the partially-treated waste to City-owned land provided that all diversions of partially-treated waste comply with the Laguna Treatment Plant emergency response procedure (Off-Spec Condition Response Plan) and consistent with title 22 requirements.
- 3. Reclamation Capacity.** The Permittee shall maintain, at a minimum, a total reclamation capacity of 4,015 million gallons for Geysers recharge, and maintain the capability to irrigate 2,590 million gallons per year at 21.34 mgd average dry weather flow. Prior to allowing an increase in the permitted water reclamation flows, the Permittee shall submit to the Regional Water Board, an engineering report detailing modifications to the treatment and/or reclamation capacity. The engineering report shall demonstrate the capability of meeting the Subregional System's capacity requirements of 25.9 mgd ADWF without necessitating an increase in discharge volumes to surface waters above those permitted. The Incremental Recycled Water Program (IRWP) was developed by the City of Santa Rosa as a means of planning for

⁴ The daily result is the geometric mean of samples analyzed from all on-line channels.

⁵ See section VII.C of this Order regarding compliance with bacteriological limitations.

future flows to the Subregional Water Reclamation System. The Master Plan for the IRWP has been designed to meet the Subregional System's capacity requirements and manages flows with a mixture of conservation and reuse. The design ADWF volume permitted to be reclaimed may be modified provided the Permittee demonstrates the agreements, modifications, and capacity are adequate to ensure surface water discharge volumes remain unchanged.

- 4. Reclamation Operation.** The Permittee shall operate recycled water storage and distribution according to the *Discharge Management Plan*, submitted May 2011 and approved by the Executive Officer, as may be amended and subsequently approved by the Executive Officer, from time to time.

D. Other Requirements

1. Filtration Process Requirements

- a. Filtration Rate.** The rate of filtration through the tertiary filters, as measured at EFF-001 shall not exceed 5 gallons per minute per square foot of surface area or other filtration rates authorized in writing by the Executive Officer and under conditions recommended by CDPH.
- b. Turbidity.** The effluent from the filtration system shall at all times be filtered such that the filtered effluent does not exceed any of the following specifications at Monitoring Location INT-001B, prior to transfer to the disinfection unit.
- i.** An average of 2 Nephelometric Turbidity Units (NTU) during a 24-hour period;
 - ii.** 5 NTU more than 5 percent of the time during a 24-hour period; and
 - iii.** 10 NTU at any time.
 - iv.** Filtered effluent in excess of the turbidity specifications shall not enter the reclamation distribution system. Pursuant to title 22 sections 60304 and 60307, the Permittee shall have the capability to automatically activate chemical addition or divert the wastewater should the filter influent exceed 10 NTU at any time or 5 NTU for more than 15 minutes, or if the filter effluent turbidity exceeds 2 NTU. The Permittee shall provide notification of non-compliance with the filtration process requirements as required in section VI.A.2.b of this Order.

2. Disinfection Process Requirements for UV Disinfection System

The Permittee shall operate the ultraviolet (UV) disinfection system in accordance with the following operating protocol and technical and administrative requirements

data sheet should be posted at the treatment plant and include the following information:

- i. The alarm set points for secondary and tertiary turbidity, high and low flow, UV dose and transmittance, UV lamp operation hours, and power.
 - ii. The values of secondary and tertiary turbidity, high and low flow, UV dose and transmittance, UV lamp operation hours, and power when flow must be diverted to waste.
 - iii. The values of high daily and weekly median total coliform when flow must be diverted to waste.
 - iv. The required frequency of calibration for all meters measuring turbidity, flow, UV transmittance, and power.
 - v. The required frequency of mechanical cleaning/wiping and equipment inspection.
 - vi. The UV lamp age tracking procedures and replacement intervals.
- i. The UV lamps shall be maintained below the maximum value of 10,000 hours of operation.
 - j. Flow meters and UV transmittance (UVT) monitors must be properly calibrated to ensure proper disinfection.
 - k. UVT meter must be inspected and checked against a reference bench-top unit weekly to document accuracy.
 - l. If the on-line analyzer UVT reading varies from the bench-top spectrophotometer UVT reading by 2 percent or more, the on-line UVT analyzer must be recalibrated by a procedure recommended by the manufacturer.
 - m. The Trojan UV4000 UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. If the measured UV dose goes below the minimum UV dose, the UV reactor in question must alarm and startup the next available UV lamp bank or reactor.
 - n. Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance.

in order to demonstrate compliance with Reclamation Specifications specified in section IV.C.2.b of this Order:

- a. Disinfection of tertiary treated wastewater shall be accomplished using a disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. The demonstration shall be performed on-site at the Subregional System's Laguna Treatment Plant at both maximum and minimum plant flows. At a minimum, the Permittee shall demonstrate a 99.99 percent removal and/or inactivation through the UV disinfection system only.
- b. The Permittee shall provide continuous, reliable monitoring of flow per channel, UV transmittance, UV dose, UV power, and turbidity. The Permittee must demonstrate compliance with the UV dose requirement.
- c. The Permittee shall operate the UV disinfection system to provide a minimum UV dose of 100 millijoules per square centimeter (mJ/cm^2) at all times, unless otherwise approved by CDPH. This dose shall apply to recycled water for delivery to use sites that require "disinfected tertiary recycled water." All other use sites and surface water discharges do not require a dose of 100 mJ/cm^2 .
- d. The UV transmittance (at least 254 nanometers) in the wastewater shall not fall below 50 percent of maximum at any time, unless otherwise approved by CDPH.
- e. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.
- f. The quartz sleeves shall be wiped/cleaned at least every 12 hours.
- g. Upon review and approval of the UV disinfection system by CDPH, the Permittee shall comply with all of the conditions set out by CDPH for its approval of the UV disinfection system.
- h. The UV disinfection system shall be operated in accordance with an approved operations and maintenance plan, which specifies clearly the operational limits and responses required for critical alarms. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies. A quick reference plant operations

- o. When extreme storm flow conditions are anticipated, the Permittee shall operate the UV disinfection system in accordance with a CDPH-approved Emergency Operation, Redundancy, and Response Plan.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. However, a receiving water condition not in conformance with the limitation is not necessarily a violation of this order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP. The Regional Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred. Discharges from the Subregional System shall not cause the following in the receiving waters.

A. Surface Water Limitations

1. The discharge shall not cause the dissolved oxygen concentration of receiving waters to be depressed below 7.0 mg/L. Additionally, the discharge shall not cause the dissolved oxygen content of receiving waters to fall below 10.0 mg/L more than 50 percent of the time, or below 7.5 mg/L more than 10 percent of the time in a calendar year. In the event that the receiving waters are determined to have a dissolved oxygen concentration of less than 7.0 mg/L, the discharge shall not depress the dissolved oxygen concentration below the existing level.
2. The discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.
3. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.
4. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
5. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
6. The discharge shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

7. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.
8. The discharge shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
9. The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses. Compliance with water quality-based effluent limitations for total phosphorus and total nitrogen established in section IV.A.2.b of this Order will satisfy this requirement.
10. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.
11. The following temperature limitations apply to the discharge to the receiving waters:
 - a. When the receiving water is below 58°F, the discharge shall cause an increase of no more than 4°F in the receiving water, and shall not increase the temperature of the receiving water beyond 59°F. No instantaneous increase in receiving water temperature shall exceed 4°F at any time.
 - b. When the receiving water is between 59°F and 67°F, the discharge shall cause an increase of no more than 1°F in the receiving water. No instantaneous increase in receiving water temperature shall exceed 1°F at any time.
 - c. When the receiving water is above 68°F, the discharge shall not cause an increase in temperature of the receiving water.
 - d. Additionally, the discharge shall not cause the 7-day average of the daily maximum receiving water temperature to exceed 64.4°F.
12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, mercury, or other toxic pollutant concentrations in bottom sediments or aquatic life to levels which are harmful to human health.
13. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of the limiting concentrations set forth in Table 3-2 of the Basin Plan or in excess of more stringent Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.

14. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.
15. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.
16. The discharge shall not cause concentrations of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent MCLs established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.
17. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life.

B. Groundwater Limitations

1. The collection, storage, and use of wastewater or recycled water shall not cause a statistically significant degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Title 27) and reasonable best management practices, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
2. The collection, treatment, storage, and/or use of wastewater or recycled water shall not cause alterations of groundwater that result in chemical concentrations in excess of limits specified in title 22, sections 64431 (Tables 2 and 3) and 64444, and the Basin Plan.
3. The collection, treatment, storage and disposal of the treated wastewater shall not cause levels of radionuclides in groundwater in excess of the limits specified in title 22, division 4, chapter 15, article 5, section 64443 of the CCR.
4. The collection, storage, and use of wastewater or recycled water shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Permittee shall comply with all applicable Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following Regional Water Board standard provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
 - a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from the Subregional System, may subject the Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
 - b. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, reclamation specification, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, recycled water main break or equivalent release, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall notify Regional Water Board staff within 24 hours of having knowledge of such noncompliance. Spill notification and reporting shall be conducted in accordance with section V.E of Attachment D and section X.E of the Monitoring and Reporting Program.

B. Monitoring and Reporting Program (MRP) Requirements

The Permittee shall comply with the MRP included as Attachment E to this Order, and future revisions thereto.

C. Special Provisions

1. Reopener Provisions

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

- b. Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation, if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.
- c. Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.
- d. 303(d)-Listed Pollutants.** The Regional Water Board plans to develop and adopt total maximum daily loads (TMDLs) for nitrogen, phosphorus, dissolved oxygen, sediment, temperature, and mercury that will specify wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources, as appropriate. Following the adoption of these TMDLs, this Order may be reopened and modified to include final WQBELs based on applicable WLAs.
- e. Water Effects Ratios (WERs) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Permittee performs studies to determine site-specific WERs and /or site-specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with USEPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.
- f. Nutrients.** This Order contains effluent limitations and monitoring requirements for nitrogen compounds and total phosphorus. If new water quality objectives for nutrients are established, if monitoring data indicate the need for new or revised effluent limitations for any of these parameters, or if new or revised methods for compliance with effluent limitations for any of these parameters are developed, this Order may be reopened and modified to include new or modified effluent limitations or other requirements, as necessary.
- g. Salt and Nutrient Management Plans (SNMPs).** The Recycled Water Policy adopted by the State Water Board on February 3, 2009 and effective May 14, 2009 recognizes the fact that some groundwater basins in the state contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water

quality objectives for salt or nutrients. The Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional SNMPs rather than through imposing requirements solely on individual recycled water projects. This Order may be reopened to incorporate provisions consistent with any SNMPs adopted by the Regional Water Board.

- h. Title 22 Engineering Report.** This Order implements title 22 requirements to protect public health. If future revisions to the Permittee's title 22 engineering report require modifications to this Order to adequately implement title 22, this Order may be reopened and modified as necessary.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

- i. Whole Effluent Toxicity.** In addition to a numeric limitation for whole effluent acute toxicity, the MRP requires routine monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity. As established by the MRP, if either of the effluent limitations for acute toxicity is exceeded (a single sample with less than 70% survival or a three sample median of less than 90% survival) or if the chronic toxicity monitoring trigger of either a single sample maximum of 1.6 chronic toxicity units (TUc) or a monthly median of 1.0 TUc (where TUc = 100/NOEC)⁶ is exceeded, the Permittee shall conduct accelerated monitoring as specified in section V. of the MRP.

Results of accelerated toxicity monitoring will indicate a need to conduct a TRE, if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring. TREs shall be conducted in accordance with the TRE workplan prepared by the Permittee pursuant to Section VI.C.2.a.ii of this Order, below.

- ii. Toxicity Reduction Evaluations (TRE) Workplan.** The Permittee submitted a TRE workplan to the Regional Water Board on May 7, 2007. This plan shall be reviewed by the Permittee within 180 days of the adoption of this Order and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The Permittee shall notify the Regional Water Board of this review and submit any revision of the TRE workplan with each Report of Waste Discharge.

⁶ This Order does not allow any credit for dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

The TRE workplan shall describe the steps the Permittee intends to follow if toxicity is detected, and should include at least the following items:

- a) A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- b) A description of the Permittee's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of the Subregional System.
- c) If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

iii. Toxicity Reduction Evaluations (TRE) Implementation. The TRE shall be conducted in accordance with the following:

- a) The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring testing, required by Sections V.A.7 and V.B.9 of the MRP, observed to exceed either the acute or chronic toxicity trigger.
- b) The TRE shall be conducted in accordance with the Permittee's TRE workplan.
- c) The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B 99/002.
- d) The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity. The Permittee shall notify the Regional Water Board of this determination.
- e) The Permittee may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. TIEs shall be conducted in accordance with current technical guidance and reference material, including, at a minimum, the Permittee shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
- f) As toxic substances are identified or characterized, the Permittee shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity parameters.
- g) Many recommended TRE elements accompany required efforts of source control, pollution prevention, and storm water control programs. TRE

efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements of recommendations of such programs may be acceptable to comply with requirements of the TRE.

- h) The Regional Water Board recognizes that chronic toxicity may be episodic and identification of a reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Permittee's actions and efforts to identify and control or reduce sources of consistent toxicity.

- b. **Storage Pond Leak Monitoring Program.** By March 1, 2014, the Permittee shall review and revise as appropriate and resubmit for approval by the Regional Water Board Executive Officer its Storage Pond Leak Monitoring Program. The Storage Pond Leak Monitoring Program shall commence within 90 days of Executive Officer approval of the program.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

- i. The Permittee shall, as required by the Executive Officer, develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as detected, but not quantified (DNQ) when the effluent limitation is less than the method detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:
 - a) A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
 - b) A sample result is reported as "Not Detected" (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.5.
- ii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
 - a) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
 - b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

- c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- e) An annual status report that shall be submitted as part of the Annual Facility Report due March 1st to the Regional Water Board and shall include:
 - 1) All PMP monitoring results for the previous year;
 - 2) A list of potential sources of the reportable priority pollutant(s);
 - 3) A summary of all actions undertaken pursuant to the control strategy; and
 - 4) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

- a. This Order (Attachment D, Standard Provision I.D) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.
- b. The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the operational components of the Subregional System. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following.
 - i. Description of the Subregional System's organizational structure showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the Subregional System so as to achieve the required level of treatment at all times.
 - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
 - iii. Description of laboratory and quality assurance procedures.
 - iv. Process and equipment inspection and maintenance schedules.

- v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.
- vi. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Wastewater Collection Systems

i. Statewide General WDRs for Sanitary Sewer Systems

The Permittee has coverage under, and is separately subject to, the requirements of State Water Board Order No. 2006-003-DWQ, Statewide General WDRs for Sanitary Sewer Systems. As such, the Permittee provides notification and reporting of SSOs in accordance with the requirements of Order No. 2006-0003-DWQ and any revisions thereto for operation of its wastewater collection system.

b. Industrial Pretreatment Provisions

- i. The Permittee shall be responsible for the performance of all pretreatment requirements contained in title 40 of the Code of Federal Regulations (CFR) Part 403 and shall be subject to enforcement actions, penalties, fines and other remedies by the USEPA or other appropriate parties as provided in the CWA, as amended (33 USC 1351 et seq.). The Permittee shall implement and enforce its approved Wastewater Treatment Facility (WWTF) Pretreatment Program. The Permittee's approved WWTF Pretreatment Program is hereby made an enforceable condition of this Order. USEPA may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the CWA.
- ii. The Permittee shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(d) of the CWA. The Permittee shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
- iii. The Permittee shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

- (a.)** Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);
 - (b.)** Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;
 - (c.)** Implement the programmatic functions as provided in 40 CFR 403.8(f)(2); and
 - (d.)** Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).
- iv.** The Permittee shall implement, as more completely set forth in 40 CFR 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
 - (a.)** Wastes which create a fire or explosion hazard in the treatment works;
 - (b.)** Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;
 - (c.)** Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
 - (d.)** Any waste, including oxygen demanding pollutants (BOD, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
 - (e.)** Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F);
 - (f.)** Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - (g.)** Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and
 - (h.)** Any trucked or hauled pollutants, except at points predesignated by the Permittee.
- v.** The Permittee shall implement, as more completely set forth in 40 CFR 403.5, the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:

- (a.) Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
- (b.) Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

c. Sludge Disposal and Handling Requirements

- i. Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Biosolids refers to sludge that has been treated, tested, and demonstrated to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.
- ii. All collected sludges and other solid waste removed from liquid wastes shall be removed from screens, sumps, ponds, and tanks as needed to ensure optimal plant operation and disposed of in accordance with applicable federal and State regulations.
- iii. The use and disposal of biosolids shall comply with all of the land application and disposal requirements in 40 CFR 503, which are enforceable by the USEPA, not the Regional Water Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, the Regional Water Board may also initiate enforcement where appropriate.
- iv. Sludge or biosolids that are disposed of in a municipal solid waste landfill or used as daily landfill cover shall meet the applicable requirements of 40 CFR 258. In the annual self-monitoring report, the Permittee shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.
- v. The Permittee shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that may adversely affect human health or the environment.
- vi. Solids and sludge treatment and storage shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
- vii. Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from a design storm with a 100-year recurrence interval and 24-hour duration.

viii. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the State.

d. Biosolids Management

For the discharge of biosolids from the Subregional System, the Permittee shall comply with the following requirements:

- i. For the land application of biosolids as soil amendment within the North Coast Region, the Permittee shall obtain or maintain coverage under the State Water Board Water Quality Order No. 2004-0012-DWQ General Waste Discharge Requirements for the Discharge of Biosolids to Land or Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities; or
- ii. Alternatively, the Permittee may dispose of biosolids at another appropriately permitted facility.
- iii. New sludge treatment and storage facilities must comply with the requirements of the Water Code and title 27, CCR, for the protection of water quality.

e. Operator Certification

Supervisors and operators of municipal WWTFs shall possess a certificate of appropriate grade in accordance with title 23, CCR, section 3680. The State Water Board may accept experience in lieu of qualification training. In lieu of a properly certified WWTF operator, the State Water Board may approve use of a water treatment facility operator of appropriate grade certified by CDPH where water reclamation is involved.

f. Adequate Capacity

If the Subregional System or effluent disposal areas will reach capacity within 4 years, the Permittee shall notify the Regional Water Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies, and the press. Factors to be evaluated in assessing reserve capacity shall include, at a minimum, (1) comparison of the wet weather design flow with the highest daily flow, and (2) comparison of the average dry weather design flow with the lowest 30-day flow. The Permittee shall demonstrate that adequate steps are being taken to address the capacity problem. The Permittee shall submit a technical report to the Regional Water Board showing how flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Water Board, or within 120 days after receipt of Regional Water Board notification, that the WWTF will reach capacity within four years. The time for filing the required technical report may

be extended by the Regional Water Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Water Board itself.

6. Other Special Provisions

- a. **Capacity Increase Engineering Report.** At such time that the Permittee makes improvements or other changes that increase the treatment and/or total reclamation capacity, the Permittee shall submit to CDPH and the Regional Water Board an updated Recycled Water Engineering report, prepared in accordance with title 22, documenting that treatment and/or total reclamation capacity has been added. This report shall document that the Permittee exceeds the total reclamation capacity of 4,015 million gallons for Geysers recharge, and maintains the capability to irrigate at least 2,590 million gallons per year at 21.34 mgd ADWF. The Executive Officer will inform the Permittee within 90 days after receipt of the report that the additional capacity is recognized by the Regional Water Board.
- b. **Storm Water.** For the control of storm water discharge from the Subregional System, the Permittee shall seek separate authorization to discharge under the requirements of the State Water Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (or subsequent renewed versions of NPDES General Permit CAS000001), which is not incorporated by reference in this Order.

7. Compliance Schedules- Not Applicable

This section is not applicable to the Permittee.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Permittee shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Permittee shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Bacteriological Limitations (Total Coliform)

1. Median. The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.
2. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, this requirement shall apply to each weekly sample.

D. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the

AMEL, the Permittee will be considered out of compliance for that calendar month. The Permittee will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

E. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week (Sunday to Saturday) exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

F. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

G. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 CFR 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

H. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

If the Permittee monitors pH continuously, pursuant to 40 CFR 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

I. Mass-Based Effluent Limitations

This Order does not include mass-based effluent limitations.

J. Receiving Water Objectives

Compliance with the surface water limitations for dissolved oxygen, pH, turbidity, and temperature for the discharge from Discharge Point 012B (Delta Pond) shall be determined at RSW-012BD-S (formerly RSW-018) as specified below:

1. The Permittee shall monitor flow, dissolved oxygen, turbidity, pH, and temperature in effluent and upstream receiving waters and use this information to modulate each day (or more frequently if receiving water conditions are variable) the amount of discharge such that receiving water quality objectives in Section V of this Order are not exceeded at RSW-012BD-S, the edge of the Zone of Initial Dilution, as determined according to the model incorporated into and described in the Laguna Subregional Water Reclamation System Receiving Water Quality Limit Compliance Assurance and Monitoring Plan.

Note: The Zone of Initial Dilution (ZID) applies only to compliance with receiving water quality objectives for dissolved oxygen, pH, turbidity, and temperature at Discharge Point 012B. The ZID concept was not used for determining reasonable potential or establishing water quality-based effluent limitations (WQBELs) for priority pollutants or water quality objectives other than dissolved oxygen, pH, turbidity, and temperature.

K. Acute Toxicity Limitation.

Compliance with this effluent limitation shall be determined at each monitoring location when there is a discharge, by calculating the median percent survival of the three most recent consecutive samples meeting all test acceptability criteria. All effluent samples shall be collected and analyzed in accordance with methods described in section V.A the MRP.

L. Chronic Toxicity Triggers

1. When a single chronic toxicity test result is available in a monthly monitoring period, the need for accelerated monitoring will be determined by comparing the single result to the monthly median chronic toxicity trigger of 1.0 TUc.
2. If two or more chronic toxicity test results are available in a monthly monitoring period, the need for accelerated monitoring will be determined by calculating the median of the test results and comparing the calculated median to the monthly median chronic toxicity trigger of 1.0 TUc, and the individual sample results will be compared to the single sample chronic toxicity trigger of 1.6 TUc. If the first monthly chronic toxicity result is greater than 1.0 TUc, a minimum of three chronic toxicity test results would be needed to determine the need for accelerated monitoring based on the monthly median chronic toxicity trigger of 1.0 TUc.

M. Mean Daily Dry Weather Flow

1. Compliance with the mean daily dry weather flow prohibition in section III.H of this Order will be determined by evaluating all flow data collected in a calendar year. The lowest 30 day period of flow must be 21.34 MGD or less (prior to adding storage and reclamation capacity to handle higher), or a higher ADWF up to 25.9 MGD upon concurrence by the Regional Water Board Executive Officer that the Permittee has treatment, storage and/or reclamation capacity to accommodate the full average dry weather design capacity.

N. Water Quality-Based Effluent Limitation for Total Phosphorus

1. For each discharge season (i.e., October 1st through May 14th), the Permittee shall calculate the mass of total phosphorus discharged to the Laguna de Santa Rosa (and tributaries) from the Subregional System and the mass of total phosphorus that was controlled during the same season through approved nutrient offset projects. If the mass discharged is equal to or less than the mass controlled, then the Permittee shall be deemed in compliance with the effluent limitation in IV.A.2.b.i.

2. If the mass discharged is greater than the mass controlled, then the Permittee may use nutrient offset credits generated via the Regional Water Board Resolution No. R1-2008-0061 approving the Santa Rosa Nutrient Offset Program (Attachment H), as follows:
 - a. For each discharge season, the Permittee shall calculate the mass of total phosphorus discharged in excess of the mass of total phosphorus controlled during the same discharge season through approved nutrient offset projects.
 - b. The Permittee shall calculate the three-year average mass of total phosphorus discharged in excess of the mass controlled using the discharges (mass basis) that occurred during the previous three discharge seasons.
 - c. The Permittee will compare the three-year average mass of total phosphorus discharged in excess of the mass of total phosphorus controlled during the previous three discharge seasons.
 - d. The Permittee will be determined to be in compliance with the effluent limitation in IV.A.2.b.i if the total phosphorus controlled for the previous three years is greater than or equal to the three-year average of total phosphorus discharged.
3. The Permittee shall document compliance with the effluent limitations in an annual report, submitted to the Regional Water Board by July 1st of each year.

ATTACHMENT A - DEFINITIONS

Arithmetic Mean (μ): also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative Pollutants: substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic Pollutants: substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV): a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ): sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit: the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effective Concentration (EC): a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA): a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays: indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration: the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries: waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inhibition Concentration (IC): the IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

Inland Surface Waters: all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median: the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL): the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML): the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone: a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND): those sample results less than the laboratory's MDL.

Ocean Waters: the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants: substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP): waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste

management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention: any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Publicly Owned Treatment Works (POTW): a treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality as defined by section 502(4) of the CWA. [Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Reporting Level (RL): the ML (and its associated analytical method) used for reporting and compliance determination. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System: the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water: any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ): a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

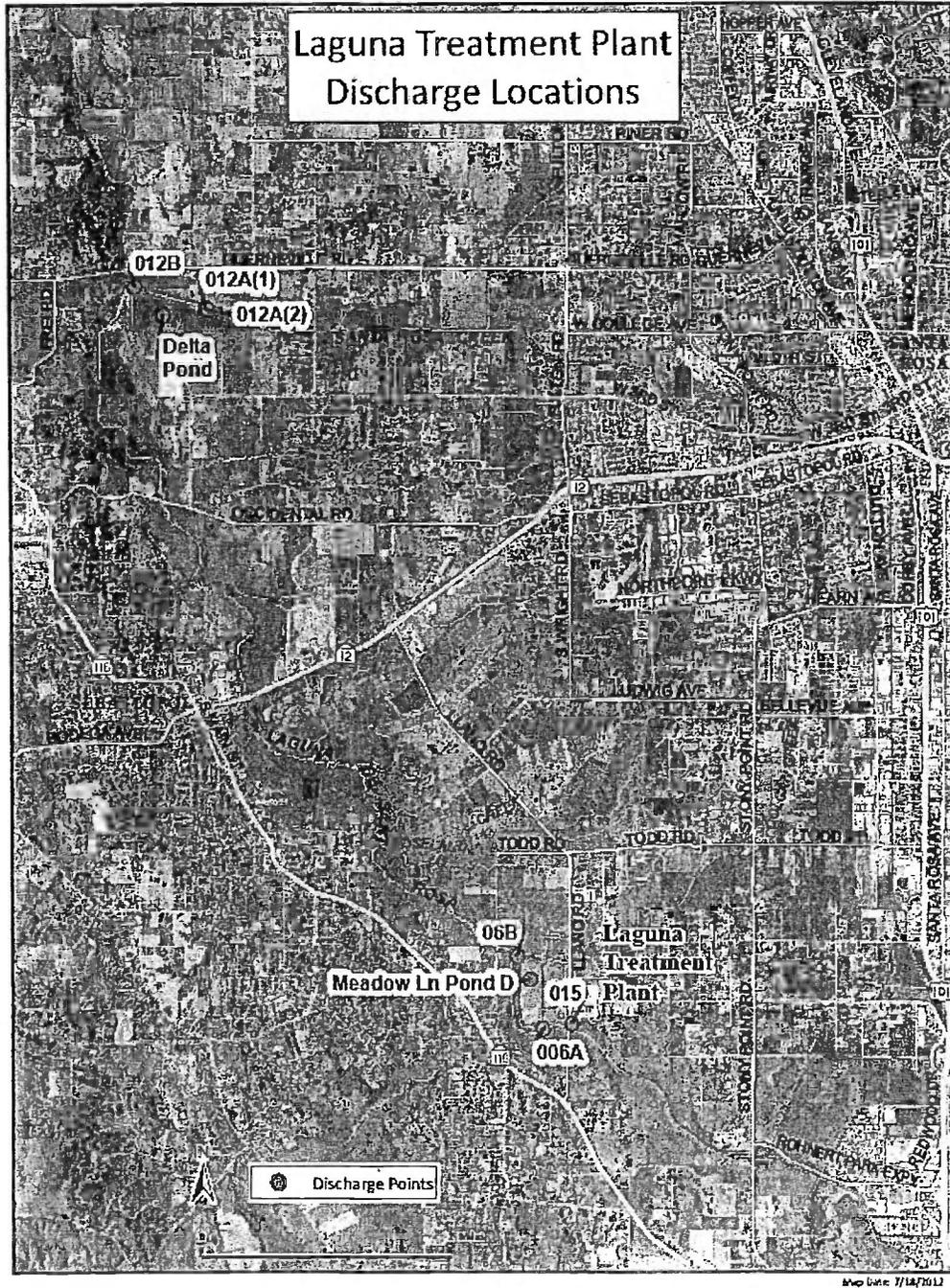
x is the observed value;

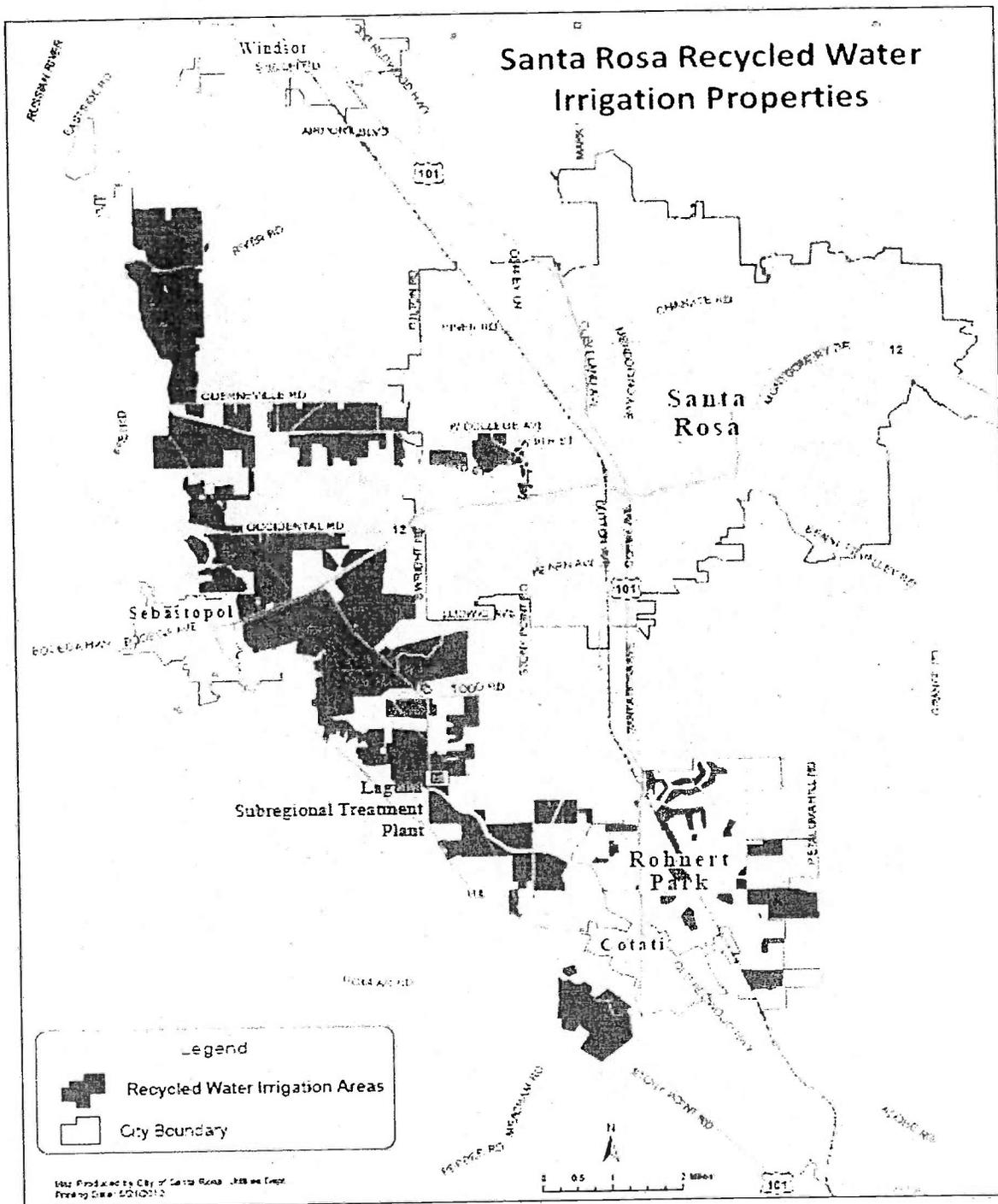
μ is the arithmetic mean of the observed values; and

n is the number of samples.

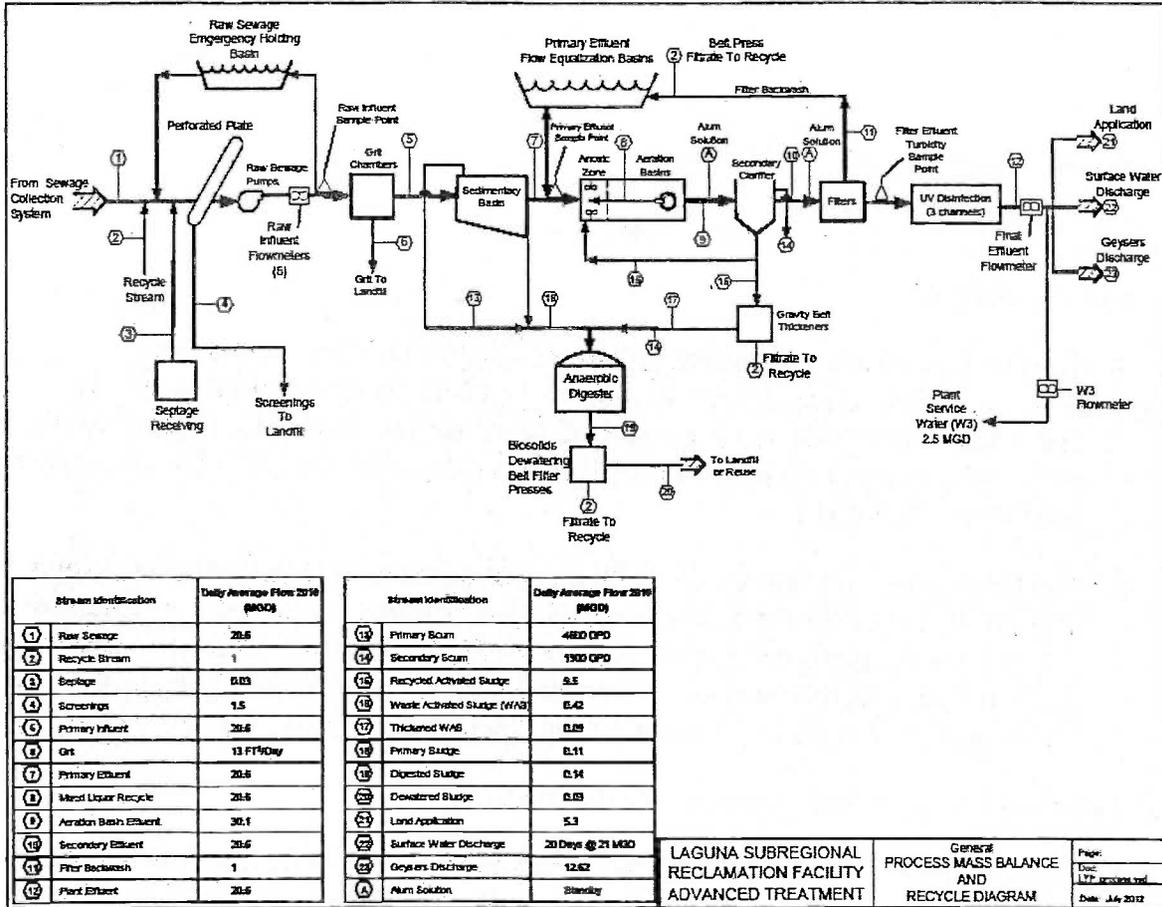
Toxicity Reduction Evaluation (TRE): a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP OF SANTA ROSA SUBREGIONAL WATER RECLAMATION SYSTEM





ATTACHMENT C - FACILITY FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 122.41(a).)
2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

C. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

D. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR § 122.41(i)(4).)

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be

expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Permittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 CFR § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
 - c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.6 below. (40 CFR § 122.41(m)(4)(i)(C).)
4. Burden of Proof. In any enforcement proceeding, the Permittee seeking to establish the bypass defense has the burden of proof.
5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 122.41(m)(4)(ii).)
6. Notice
 - a. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR § 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):
 - a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
 - c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
 - d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or

a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

B. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 CFR § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of this Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS - MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS - RECORDS

- A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)
- B. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
 3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
 4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
 5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
 6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)
- C. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):
1. The name and address of any permit applicant or Permittee (40 CFR § 122.7(b)(1)); and
 2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS - REPORTING

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions - Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, 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.) (40 CFR § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.” (40 CFR § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR § 122.41(l)(4)(i).)
3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

- c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR § 122.41(l)(6)(ii)(C)]
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

The Permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR § 122.41(l)(7).)

I. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Permittee shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Regional Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 CFR § 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

I.	General Monitoring Provisions.....	E-3
II.	Monitoring Locations.....	E-5
III.	Influent Monitoring Requirements	E-6
	A. Monitoring Location INF-001.....	E-6
IV.	Effluent Monitoring Requirements	E-7
	A. Monitoring Location EFF-001	E-7
	B. Monitoring Locations EFF-006A, EFF-006B, EFF-012A(2), and EFF-012B	E-9
V.	Whole Effluent Toxicity Testing Requirements	E-11
	A. Acute Toxicity Testing.....	E-11
	B. Chronic Toxicity Testing	E-12
	C. Chronic Toxicity Reporting.....	E-15
VI.	Land Discharge Monitoring Requirements – Not applicable	E-17
VII.	Reclamation Monitoring Requirements	E-17
	A. Recycled Water Monitoring.....	E-17
	B. Recycled Water Production and Use	E-19
VIII.	Receiving Water Monitoring Requirements – Surface Water and Groundwater	E-19
	A. Surface Water Monitoring Locations RSW-006AU, RSW-006BU-C, RSW-006BU-L, RSW-012AU, RSW-012BU, and RSW-015U	E-19
	B. Groundwater Monitoring.....	E-21
IX.	Other Monitoring Requirements.....	E-22
	A. Sludge Monitoring (Monitoring Location BIO-001)	E-22
	B. Filtration Process Monitoring (Monitoring Locations INT-001A and INT-001B)	E-22
	C. UV System Monitoring (Monitoring Location INT-002)	E-23
X.	Reporting Requirements	E-24
	A. General Monitoring and Reporting Requirements	E-24
	B. Self Monitoring Reports (SMRs).....	E-24
	C. Discharge Monitoring Reports (DMRs)	E-27
	D. Other Reports	E-28
	E. Spill Notification.....	E-34

List of Tables

Table E-1.	Test Methods and Minimum Levels for Priority Pollutants.....	E-4
Table E-2.	Monitoring Station Locations.....	E-5
Table E-3.	Influent Monitoring.....	E-7
Table E-4.	Effluent Monitoring for Discharges to 006A, 006B, 012A(2), and 012B.....	E-7
Table E-5.	Effluent Monitoring for Discharges to 012A(1) and 015.....	E-8
Table E-6.	Effluent Monitoring for Discharges to 006A, 006B, EFF-012A(2), and EFF-012B.....	E-9
Table E-7.	Reclamation Monitoring Requirements.....	E-18
Table E-8.	Recycled Water Production and Use.....	E-19
Table E-9.	Receiving Water Monitoring Requirements – RSW-006AU, RSW-006BU-C, RSW-006BU-L, RSW-012AU, RSW-012BU, and RSW-015U.....	E-20
Table E-10.	Receiving Water Monitoring Requirements – RSW-012BD-S.....	E-21
Table E-11.	Monitoring Periods and Reporting Schedule.....	E-25

Attachment E – Monitoring and Reporting Program (MRP)

The Code of Federal Regulations at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 also authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour.
- B.** If the Permittee monitors any pollutant more frequently than required by this MRP, using test procedures approved by 40 CFR Part 136 or as specified in this MRP, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.
- C.** Laboratories analyzing monitoring samples shall be certified by the CDPH in accordance with the provisions of Water Code section 13176, and must include quality assurance / quality control data with their analytical reports.
- D.** All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E.** Compliance and reasonable potential monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no Minimum Level (ML) value is below the effluent limitations, the lowest ML shall be selected as the Reporting Level (RL). Table E-1 lists the test methods the Permittee may use for compliance and reasonable potential monitoring to analyze priority pollutants with effluent limitations.

Table E-1. Test Methods and Minimum Levels for Priority Pollutants

CTR#	Constituent Types of Analytical Methods Minimum Levels (µg/L)	Types of Analytical Methods Minimum Levels (µg/L)				
		Gas Chromatography (GC)	Gas Chromatography/Mass Spectroscopy (GCMS) ¹	Colorimetric	Inductively Coupled Plasma/ Mass Spectroscopy (ICPMS)	Stabilized Platform Graphite Furnace Atomic Absorption
23	Chlorodibromomethane	0.5	2	---	---	---
27	Dichlorobromomethane	0.5	2	---	---	---

Table Notes:
 1. The Permittee may use the GCMS method when the laboratory ML for CGMS is comparable to the lowest ML listed in Appendix 4 for chlorodibromomethane and dichlorobromomethane.

II. MONITORING LOCATIONS

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-2. Monitoring Station Locations

Discharge/Distribution Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Untreated influent wastewater collected at the plant headworks at a representative point preceding primary treatment. Formerly M-INF.
--	INT-001A	Location for reporting the surface loading rate of the advanced wastewater (AWT) filtration process. The flow rate through the effluent filters is measured at EFF-001. Formerly M-INTA.
--	INT-001B	Treated wastewater immediately following the advanced wastewater (AWT) process and prior to UV disinfection. Formerly M-INTB.
--	INT-002	Location for monitoring UV radiation dose and UV transmittance of the UV Disinfection System.
001	EFF-001	Treated wastewater following all treatment and before it enters the Geysers Project distribution system.
002	EFF-001	Treated wastewater following all treatment and before it enters the irrigation distribution system.
006A	EFF-006A	Treated wastewater following all treatment and storage in Meadow Lane Pond D, and prior to discharge to the Laguna de Santa Rosa. EFF-006A is also the downstream receiving water monitoring location for 006A. Formerly M-002.
006B	EFF-006B	Treated wastewater following all treatment and storage in Meadow Lane Pond D, and prior to discharge to the confluence of the Laguna de Santa Rosa and Colgan Creek. EFF-006B is also the downstream receiving water monitoring location for 006B. Formerly M-003.
012A(1)	EFF-001	Treated wastewater that is discharged directly to Santa Rosa Creek from the distribution trunk line rather than being stored in Delta Pond, which is monitored prior to discharge to Santa Rosa Creek. Formerly M-001.
012A(2)	EFF-012A(2)	Treated wastewater following all treatment and storage in Delta Pond, and prior to discharge to Santa Rosa Creek. Formerly M-004.

Table E-2. Monitoring Station Locations

Discharge/Distribution Point Name	Monitoring Location Name	Monitoring Location Description
012B	EFF-012B	Treated wastewater following all treatment and storage in Delta Pond, and prior to discharge to the confluence of Santa Rosa Creek and the Laguna de Santa Rosa. Formerly M-005.
015	EFF-001	Treated wastewater following all treatment but prior to discharge to the Laguna de Santa Rosa, prior to discharge to the reclamation system and prior to storage in Meadow Lane and Delta ponds. Formerly M-001.
--	RSW-006AU	At a point in the Laguna de Santa Rosa just upstream of the D-Pond incline pump discharge. Formerly R-007.
--	RSW-006BU-C	At a point in Colgan Creek upstream of confluence with the Laguna de Santa Rosa. Formerly R-001.
	RSW-006BU-L	At a point in the Laguna de Santa Rosa upstream of the discharge from Discharge Point 006B. Formerly R-002.
--	RSW-012AU	At a point in Santa Rosa Creek upstream of the discharge from Discharge Point 012A(2). Formerly R-004.
--	RSW-012BU	At a point in Santa Rosa Creek upstream of the discharge from Discharge Point 012B. Formerly R-105.
--	RSW-012BD-S	At a point in Santa Rosa Creek near confluence with the Laguna de Santa Rosa. Exact location determined by the Model and variable depending on flows. Formerly R-018.
--	RSW-012BD-L	At a point in the Laguna de Santa Rosa approximately 75 feet upstream of confluence of Santa Rosa Creek and Laguna de Santa Rosa. Formerly R-019.
--	RSW-015U	At a point in the Laguna de Santa Rosa approximately 100 feet upstream of Llano Bridge Road. Formerly R-006.
--	BIO-001	A representative sample of the sludge or biosolids generated when removed for disposal.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Permittee shall monitor influent to the Subregional System at Monitoring Location INF-001 as follows:

Table E-3. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD ₅	mg/L	24-hr composite ¹	2X/Week	Standard Methods ²
TSS	mg/L	24-hr composite	2X/Week	Standard Methods
CTR Priority Pollutants ²	µg/L	24-hr composite	Quarterly ³	40 CFR 136
Influent Flow ⁴	mgd	Meter	Continuous	--

Table Notes;

1. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.
2. 24-hour composite samples shall be collected, except for those constituents that are volatile and or require grab sampling for other reasons (e.g., ultraclean sample collection methods required). The priority pollutant monitoring report shall document the sampling method used for each constituent and justify the use of grab sampling for specific constituents (e.g., volatile, ultraclean method required, etc.) Holding times for unpreserved cyanide samples shall not exceed one hour.
3. Influent monitoring shall consist of an annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants detected in the full scan. The Permittee is not required to sample and analyze for asbestos.
4. Each month, the Permittee shall report average daily and average monthly flows.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Permittee shall monitor disinfected, advanced-treated wastewater discharged to Discharge Points 006A, 006B, 012A(2), and 012B, when discharges occur, at Monitoring Location EFF-001, as follows:

Table E-4. Effluent Monitoring for Discharges to 006A, 006B, 012A(2), and 012B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ¹	MGD	Meter	Continuous	--
BOD ₅	mg/L	24-hour composite ²	2X/Week	Standard Methods ³
TSS	mg/L	24-hour composite	Daily	Standard Methods
pH	s.u.	Grab	Daily	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Daily	Standard Methods
Radioactivity ⁴	pCi/L	Grab	1X/ Permit Term	40 CFR 136

Table Notes:

1. Mean and peak daily and peak weekly effluent flow rates.
2. 24-hour composite samples shall be collected, except for those constituents that are volatile and or require grab sampling for other reasons (e.g., ultraclean sample collection methods required). The priority pollutant monitoring report shall document the sampling method used for each constituent and justify the use of grab sampling for specific constituents (e.g., volatile, ultraclean method required, etc.)
3. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public

Table E-4. Effluent Monitoring for Discharges to 006A, 006B, 012A(2), and 012B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Health Administration) or current test procedures specified in 40 CFR Part 136.				
4. Radionuclides measured shall include: Combined Radium-226 and Radium-228, Gross Alpha, Gross Beta, Tritium, Strontium-90, and Uranium.				

2. The Permittee shall monitor disinfected, advanced-treated wastewater discharged to Discharge Points 012A(1) and 015, when discharges occur, at Monitoring Location EFF-001, as follows:

Table E-5. Effluent Monitoring for Discharges to 012A(1) and 015

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ¹	MGD	Meter	Continuous	--
BOD ₅	mg/L	24-hour composite ²	2X/Week	Standard Methods ³
TSS	mg/L	24-hour composite	Daily	Standard Methods
pH	s.u.	Grab	Daily	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Daily	Standard Methods
Mercury, Total Recoverable	µg/L	Grab	Weekly	USEPA Method 1631E
Nitrate Nitrogen (as N), Total	mg/L	Grab	Weekly	Standard Methods ²
Nitrite Nitrogen (as N), Total	mg/L	Grab	Weekly	Standard Methods
Ammonia, Total	mg/L	Grab	Weekly	Standard Methods
Unionized Ammonia	mg/L	Grab	Weekly	Calculation
Organic Nitrogen, Total	mg/L	Grab	Weekly	Standard Methods
Phosphorus, Total	mg/L	Grab	Weekly	Standard Methods
Dissolved Oxygen	mg/L	Continuous	Weekly	Standard Methods
Turbidity	NTU	Continuous	Weekly	Standard Methods
Temperature	°F	Continuous	Weekly	Standard Methods
Specific Conductivity	µmhos/cm	Continuous	Weekly	Standard Methods
Hardness	mg/L as CaCO ₃	Grab	Quarterly	Standard Methods
Total Dissolved Solids (TDS)	mg/L	Grab	Weekly	Standard Methods
Total Chlorine Residual	mg/L	Grab	Weekly	Standard Methods
Chlorodibromomethane	µg/L	Grab	Monthly	EPA Method 624
Dichlorobromomethane	µg/L	Grab	Monthly	EPA Method 624
Bis(2-ethylhexyl)phthalate	µg/L	Grab	Weekly	EPA Method 625
Acute Toxicity	% Survival	Grab	Annually	See Section V.A.

Table E-5. Effluent Monitoring for Discharges to 012A(1) and 015

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic Toxicity	TUc	Grab	Quarterly	See section V.B below
Chronic Toxicity (narrative)	Passed/Triggered ⁴			---
Remaining CTR Priority Pollutants ⁵	µg/L	24-hr composite	Quarterly	40 CFR 136
Radioactivity ⁶	pCi/L	Grab	1X/ Permit Term	40 CFR 136

Table Notes:

- Mean and peak daily and peak weekly effluent flow rates.
- 24-hour composite samples shall be collected, except for those constituents that are volatile and or require grab sampling for other reasons (e.g., ultraclean sample collection methods required). The priority pollutant monitoring report shall document the sampling method used for each constituent and justify the use of grab sampling for specific constituents (e.g., volatile, ultraclean method required, etc.)
- In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.
- The Permittee shall include reporting regarding compliance with the narrative toxicity objective in Receiving Water Limitation V.A.11 by reporting whether the chronic toxicity test "passed" or "triggered" in relation to the chronic toxicity trigger of 1.6 TUc (where TUc=100/NOEC) for each single sample or 1.0 TUc as a monthly median. For narrative chronic toxicity reporting, "Passed" shall be reported when chronic toxicity effluent results do not trigger accelerated testing (e.g., a single sample result of ≤1.6 TUc or a monthly median of ≤1.0 TUc). "Triggered" shall be reported when chronic toxicity effluent results trigger accelerated testing by exceeding the chronic toxicity trigger of 1.6 TUc for a single sample or 1.0 TUc as a monthly median.
- Holding times for unpreserved cyanide shall not exceed one hour.
- Radionuclides measured shall include: Combined Radium-226 and Radium-228, Gross Alpha, Gross Beta, Tritium, Strontium-90, and Uranium.

B. Monitoring Locations EFF-006A, EFF-006B, EFF-012A(2), and EFF-012B

The Permittee shall monitor disinfected, advanced-treated wastewater discharged at Discharge Points 006A, 006B, 012A(2), and 012B, when discharges occur, at Monitoring Locations EFF-006A, EFF-006B, EFF-012A(2), and EFF-012B, respectively, as follows:

Table E-6. Effluent Monitoring for Discharges to 006A, 006B, EFF-012A(2), and EFF-012B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ¹	MGD	Meter	Continuous	--
pH	s.u.	Continuous	Daily	Standard Methods
Mercury, Total Recoverable	µg/L	Grab	Weekly	USEPA Method 1631E
Nitrate Nitrogen (as N), Total	mg/L	Grab	Weekly	Standard Methods ²
Nitrite Nitrogen (as N), Total	mg/L	Grab	Weekly	Standard Methods
Ammonia, Total	mg/L	Grab	Weekly	Standard Methods
Unionized Ammonia	mg/L	Grab	Weekly	Calculation

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Organic Nitrogen, Total	mg/L	Grab	Weekly	Standard Methods
Phosphorus, Total	mg/L	Grab	Weekly	Standard Methods
Dissolved Oxygen ³	mg/L	Continuous	Weekly	Standard Methods
Turbidity ³	NTU	Continuous	Weekly	Standard Methods
Temperature ³	°F	Continuous	Weekly	Standard Methods
Specific Conductivity	µmhos/cm	Continuous	Weekly	Standard Methods
Hardness	mg/L as CaCO ₃	Grab	Quarterly	Standard Methods
Total Dissolved Solids (TDS)	mg/L	Grab	Weekly	Standard Methods
Total Chlorine Residual	mg/L	Grab	Weekly	Standard Methods
Chlorodibromomethane	µg/L	Grab	Monthly ⁴	EPA Method 624
Dichlorobromomethane	µg/L	Grab	Monthly ⁴	EPA Method 624
Bis(2-ethylhexyl)phthalate	µg/L	Grab	Weekly ⁵	EPA Method 625
Acute Toxicity	% Survival	Grab	Annually	See Section V.A.
Chronic Toxicity	TUc	Grab	Quarterly	See section V.B below
Chronic Toxicity (narrative)	Passed/Triggered ⁶			---
Remaining CTR Priority Pollutants ⁷	µg/L	Grab	Quarterly	40 CFR 136
Radioactivity ⁸	pCi/L	Grab	1X/ Permit Term	40 CFR 136

Table Notes:

1. Mean and peak daily and peak weekly effluent flow rates.
2. In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR 136.
3. For Discharge Point 012B, effluent monitoring for hydrogen ion, dissolved oxygen, turbidity, and temperature shall be conducted as described in the Discharge Monitoring Plan included in the Report of Waste Discharge. The results will be used to calculate the volume of effluent to be discharged and remain in compliance with receiving water objectives for these constituents.
4. Monthly monitoring for chlorodibromomethane and dichlorobromomethane is not required for Monitoring Locations EFF-012A(2) and EFF-012B. Instead, quarterly monitoring is required.
5. Weekly monitoring for bis(2-ethylhexyl)phthalate is not required for Monitoring locations EFF-012A(2) and EFF-012B. Instead, quarterly monitoring is required.
6. The Permittee shall include reporting regarding compliance with the narrative toxicity objective in Receiving Water Limitation V.A.11 by reporting whether the chronic toxicity test "passed" or "triggered" in relation to the chronic toxicity trigger of 1.6 TUc (where TUc=100/NOEC) for each single sample or 1.0 TUc as a monthly median. For narrative chronic toxicity reporting, "Passed" shall be reported when chronic toxicity effluent results do not trigger accelerated testing (e.g., a single sample result of ≤1.6 TUc or a monthly median of ≤1.0 TUc). "Triggered" shall be reported when chronic toxicity effluent results trigger accelerated testing by exceeding the chronic toxicity trigger of 1.6 TUc for a single sample or 1.0 TUc as a monthly median.
7. Holding times for unpreserved cyanide shall not exceed one hour.
8. Radionuclides measured shall include: Combined Radium-226 and Radium-228, Gross Alpha, Gross Beta, Tritium, Strontium-90, and Uranium.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

The Permittee shall conduct acute whole effluent toxicity testing (WET) to determine compliance with the effluent limitation for acute toxicity established by section IV.A., 2 of this Order.

- 1. Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Points 006A, 006B, 012A(1), 012A(2), 012B, or 015, as summarized in Table E-5, above.
- 2. Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be grab samples.
- 3. Test Species.** Test species for acute WET testing shall be with an invertebrate, the water flea (*Ceriodaphnia dubia*) and a vertebrate, the rainbow trout (*Oncorhynchus mykiss*). The next two species acute WET test shall be conducted during the first surface water discharge following the Permit's effective date.
- 4. Test Methods.** The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Executive Officer.

Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.
- 5. Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent.
- 6. Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- 7. Accelerated Monitoring.** If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all test acceptability criteria, the Permittee shall take two more samples, one within 14 days and

one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a.ii of this Order. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all test acceptability criteria, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification shall describe actions the Permittee has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.
9. **Reporting.** The acute toxicity test results shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5th Edition or subsequent editions). The submitted report shall clearly identify test results.
10. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing to demonstrate compliance with the Basin Plan's water quality objective for toxicity. The Permittee shall meet the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittee shall conduct quarterly chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Points 006A, 006B, 012A(1), 012A(2), 012B, and 015, as summarized in Tables E-5, above.
2. **Sample Type.** Effluent samples for chronic toxicity shall be 24-hour composite samples for direct discharges to surface waters at Discharge Points 012A(1) and 015, and shall be representative of the volume and quantity of the discharge. For discharges to surface waters from storage ponds, the storage ponds are presumed to be completely mixed, so effluent samples shall be grab samples. For toxicity tests requiring renewals, grab

samples collected on consecutive days are required. When tests are conducted off-site, a minimum of three samples shall be collected, in accordance with USEPA test methods.

3. **Test Species.** Test species for chronic WET testing shall be a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth Test Method 1000.0), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction Test Method 1002.01), and a plant, the green algae, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (growth Test Method 1003.0). At least every 5 years, the Permittee shall conduct two suites of chronic WET testing using the three species listed above. After this screening period, monitoring shall be conducted annually using the most sensitive species. The next multiple species chronic WET test shall be conducted during the first discharge to surface waters following the Permit's effective date.
4. **Test Methods.** The presence of chronic toxicity shall be estimated as specified in USEPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (USEPA Report No. EPA-821-R-02-013, or subsequent editions).

Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each chronic toxicity report submitted to the Regional Water Board. The control of pH in chronic toxicity tests is allowed, provided the test pH is maintained at the pH of the receiving water measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

5. **Test Dilutions.** The chronic toxicity test shall be conducted using a series of at least five dilutions and a control. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent, and a control. Effluent dilution and control water may be receiving water or standard synthetic laboratory water, as described in the USEPA test methods manual. Where toxicity or biostimulatory issues are not a concern in the receiving water, receiving water is preferred for control and dilution water. If the dilution water used is different from the test organism culture water, a second control using culture water shall be used.
6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).

7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.
8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after receipt of test results exceeding the chronic toxicity monitoring trigger during regular or accelerated monitoring.
9. **Accelerated Monitoring Requirements.** If the result of any routine chronic toxicity sampling exceeds the chronic toxicity monitoring trigger of 1.6 TUc as specified in section VI.C.2.a of this Order, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of up to four additional effluent samples and dilution series (specified in number 5 above) – with one test for each test species showing toxicity results exceeding the toxicity trigger, as defined by conditions a. through c. below. Accelerated monitoring test shall be conducted approximately every week over a four week period.

Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity trigger. If the discharge will cease before the additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to address elevated levels of chronic toxicity in effluent and/or receiving water. The following protocol shall be used for accelerated monitoring and TRE implementation:

- a. If the result of any accelerated toxicity test exceeds 1.0 TUc, the Permittee shall cease accelerated monitoring, and within 30 days of the date of completion of the accelerated monitoring, initiate the TRE Workplan developed in accordance with section VI.C.2.a.ii of this Order to investigate the cause(s) and identify actions to reduce or eliminate the chronic toxicity. Within 30 days of completing the TRE Workplan implementation, the Permittee shall submit a report to the Regional Water Board that shall include, at a minimum:
 - i. Specific actions the Permittee took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
 - ii. Specific actions the Permittee took to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - iii. Recommendations for further actions to mitigate continued toxicity, if needed; and
 - iv. A schedule for implementation of recommended actions.

- b. If the results of four consecutive accelerated monitoring tests do not exceed 1.0 TU_c, as a monthly median, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, if there is adequate evidence of a pattern of effluent toxicity, the Regional Water Board's Executive Officer may require that the Permittee initiate a TRE.
- c. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Permittee shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the chronic toxicity has been removed, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring.

10. Ammonia Toxicity. The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

C. Chronic Toxicity Reporting

1. **Routine Reporting.** Chronic toxicity monitoring results shall be submitted with the monthly self-monitoring report for the month that chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:
 - a. WET test reports shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals and this MRP. Chronic toxicity test results shall be submitted with the self-monitoring report. The WET test report shall contain a narrative report that includes details about WET test procedures and results, including the following:
 - i. Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics;
 - ii. The source and make-up of the lab control/diluent water used for the test;
 - iii. Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
 - iv. Identification of any reference toxicant testing performed;
 - v. Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of NOEC, TU_c and IC₂₅;

- vi. Identification of any anomalies or nuances in the test procedures or results;
 - vii. Summary and conclusions section; and
 - viii. WET test results shall include, at a minimum, for each test:
 - (a) sample date(s);
 - (b) test initiation date;
 - (c) test species;
 - (d) end point values for each dilution (e.g., number of young, growth rate, percent survival);
 - (e) NOEC value(s) in percent effluent;
 - (f) IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;
 - (g) TUC values (100/NOEC);
 - (h) Mean percent mortality (\pm s.d.) after 96 hours in 100 percent effluent (if applicable);
 - (i) NOEC and LOEC values for reference toxicant test(s);
 - (j) IC50 or EC50 value(s) for reference toxicant test(s);
 - (k) Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);
 - (l) Statistical methods used to calculate endpoints;
 - (m) the statistical output page, which includes the calculation of percent minimum significant difference (PMSD); and
 - (n) results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.
- b. **Compliance Summary.** In addition to the WET report, the Permittee shall submit a compliance summary of chronic toxicity tests results, expressed in NOEC and TUC, for at least three of the most recent tests, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the

effluent discharge is below the chronic toxic monitoring trigger and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, and the status of efforts (e.g., accelerated monitoring, TRE, TIE) to identify the source of chronic toxicity as required by section V.B.9 of this MRP.

2. **Quality Assurance Reporting.** Because the permit requires sublethal hypothesis testing endpoints from methods 1000.0, 1002.0, and 1003.0 in the test methods manual titled *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA Report No. EPA-821-R-02-013, 2002, or subsequent editions), with-in test variability must be reviewed for acceptability and variability criteria (upper and lower PMSD bounds) must be applied, as directed under section 10.2.8 – *Test Variability* of the test methods manual. Under section 10.2.8, the calculated PMSD for both reference toxicant test and effluent toxicity test results must be compared with the upper and lower PMSD bounds variability criteria specified in Table 6 – *Variability Criteria (Upper and Lower PMSD Bounds) for Sublethal Hypothesis Testing Endpoints Submitted Under NPDES Permits*, following the review criteria in paragraphs 10.2.8.2.1 through 10.2.8.2.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

This section is not applicable to the Permittee as treated wastewater is not discharged to or applied to land for the purpose of disposal. The Permittee reclaims treated wastewater; thus, the Permittee has Reclamation Monitoring Requirements rather than Land Discharge Monitoring Requirements.

VII. RECLAMATION MONITORING REQUIREMENTS

A. Recycled Water Monitoring

1. In addition to monitoring for compliance with reclamation specifications, referred to in section IV.C of this Order, the Permittee shall monitor treated disinfected wastewater at monitoring location EFF-001 prior to reclamation at Distribution Points 001 and 002, as follows: