CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0136

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF WINTERS
WASTEWATER TREATMENT FACILITY
YOLO COUNTY

The California Regional Water Quality Control Regional Board, Central Valley Region, (hereafter Regional Board) finds that:

1. Waste Discharge Requirements Order No. 91-232, adopted by the Board on 22 November 1991, prescribes requirements for the City of Winters Wastewater Treatment Facility (WWTF), which consists of wastewater collection, treatment, storage and land application areas.

2. Existing waste discharge requirements established by Order No. 91-232 are neither adequate nor consistent with current plans and policies of the Regional Board.

3. On 31 January 2002, the City of Winters (hereafter Discharger) submitted a Report of Waste Discharge (RWD) for a phased expansion of the WWTF to treat and dispose of domestic wastewater generated in the City of Winters.

4. For the purposes of this Order, the WWTF shall mean the wastewater treatment and storage ponds, and land application areas. The facility site location is shown on Attachment A, which is attached hereto and made part of this Order by reference.

5. The WWTF property is owned by the City of Winters (hereafter Discharger). The Assessor Parcel Numbers are 30-180-017, 30-210-012, -012, -009, -020, -010, 30-030-047, -046 and -012. As of the date of this Order, EcoResources is contracted to operate and maintain the WWTF.

6. The WWTF is located on County Road 32, northwest of the city of Winters in Sections 16 and 17, T8N, R1W, MDB&M. The WWTF is primarily surrounded by agricultural land and orchards. The facility site map is shown on Attachment B, which is attached hereto and made part of this Order by reference.

7. The 31 January 2002 RWD proposes that upon certified completion of improvements to the WWTF the maximum discharge be increased using a phased approach. Phase 1B consists of increasing the discharge from the existing 0.80 MGD to 0.92 MGD and Phase 2 consists of increasing the discharge from the 0.92 MGD to 1.20 MGD.

Existing Facility and Discharge

8. The WWTF consists of influent pumping, two 0.2-acre primary aeration ponds, two 0.4-acre secondary aeration ponds, one 5-acre polishing pond, 4 storage ponds having 43.3 total acres,

chlorination system and approximately 170 acres of land application areas. A schematic of the treatment and storage ponds are shown on Attachment C, which is attached hereto and made part of this Order by reference.

9. The following table summarizes the data submitted by the Discharger in monthly monitoring reports as required by Order No. 91-232.

		Specific Conductivity (µmhos/cm)	
Date	Flow (mgd)	Influent	Effluent
1/2001	0.624	1033	1145
2/2001	0.648	1019	1038
3/2001	0.616	1204	1005
4/2001	na	na	na
5/2001	0.591	na	na
6/2001	0.623	1029	1122
7/2001	0.632	1054	1210
8/2001	0.677	1202	1113
9/2001	0.635	1164	1080
10/2001	0.688	1104	1128
11/2001	0.688	1031	na
12/2001	0.652	1043	1012
1/2002	0.596	852	896
AVERAGE	**0.639**	**1067**	**1075**

na denotes not available, mgd denotes million gallons per day.

10. The land application areas that are irrigated with disinfected secondary wastewater are vegetated by native grasses, which are periodically grazed by sheep and cattle from the neighboring ranch. The recycled water is applied to the 130-acre land application area using big-gun sprinklers (104 installed) and 1-nozzle impact sprinklers (448 installed) are used for irrigation on the 40-acre land application area. The tailwater control system consists of 2 pumps at a capacity of 1,200 gpm.

Sanitary Sewer System

11. Wastewater from homes and businesses in the City of Winters is conveyed by gravity to the East Street pumping station from which it is pumped through a 2.7-mile, 14-inch diameter force main to the WWTF.

12. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs this raw sewage to the wastewater treatment facility. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary

sewer system at any point upstream of the wastewater treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities.

13. Sanitary sewer overflows consist of varying mixtures of domestic sewage, industrial wastewater, and commercial wastewater; this mixture depends on the pattern of land use in the sewage collection system tributary to the overflow. The chief causes of sanitary sewer overflows include grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and contractor caused blockages.

14. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause temporary excedences of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

15. The Discharger is expected to take all necessary steps to adequately maintain, operate, and prevent discharges from its sanitary sewer collection system. This Order requires the Discharger to prepare and implement a Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan.

Planned Changes in Discharge

16. The Discharger is presently planning to expand the WWTF to be able to treat anticipated increased flows due to forecasted population increases. The expansion will be implemented in a phased approach. This phased approach includes 4 phases, however, this Order will focus on Phase 1B and Phase 2.

17. Phase 1B includes improvements that have been proposed in the RWD that will support a maximum discharge of 0.92 MGD (from the current 0.80 MGD). Some of the improvements include regrading the existing 130-acre land application areas to allow fuller use, and replacement of two existing 15-hp aerators in the primary aeration ponds with two 25-hp brush type aerators.

18. Phase 2 includes improvements that have been proposed in the RWD that will support a maximum discharge of 1.20 MGD. Some of the Phase 2 improvements include the installation of a new influent pump station, new 25-hp brush type aerator to the existing polishing pond, expand chlorination system to 100 lbs/d, replacement of the existing big-gun sprinklers in the north spray field with small sprinklers and an automated system, expand irrigation pumping capacity to 1,365 gpm, add an additional 133-acre-ft storage reservoir and add 56 new acres of land application areas.

19. The Discharger has provided treatment process capacity computations for Phases 1B and 2 that include water balance calculations utilizing data from a 100-year storm event.

Site-Specific Conditions

20. Annual average precipitation in the vicinity averages approximately 17.27 inches per year. The average evapotranspiration rate is approximately 57 inches per year.

21. The facility lies within the Valley Putah-Cache Hydrologic Unit Area No. 511.00, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

Groundwater Considerations

22. There are no existing groundwater monitoring wells located at the WWTF. This Order requires the discharge to install a monitoring well network to assess background and down gradient water quality of the WWTF. The wells will be installed to such a depth that will allow monitoring of the first encountered groundwater bearing zone.

23. Quarterly groundwater monitoring and complete a technical analysis of groundwater monitoring data is appropriate and necessary to determine applicable background concentrations and the nature and extent of groundwater impacts attributable to the discharge, if any.

24. The water supply for the City of Winters is from five groundwater wells. The water is disinfected prior to distribution. Based on data from the 1998 Consumer Confidence Report the source water quality is as follows:

Constituent	Weighted Average	Range
Nitrate, mg/L	19	10 - 27
Total Dissolved Solids, mg/L	399	260-450
Specific conductance, µmhos/cm	710	460-810
Chloride, mg/L	27	15-31
Sulfate, mg/L	32	21-34
Coliform bacteria	non detect	----------

Groundwater Degradation

25. State Water Resources Control Regional Board (State Board) Resolution No. 68-16 (hereafter Resolution 68-16 or the "Antidegradation Policy") requires that high quality waters of the state (i.e., background water quality) be maintained until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the water quality policies (e.g., quality that exceeds water quality objectives). Any discharge to existing high quality waters must

be required to meet waste discharge requirements that will result in best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained.

26. Some degradation of groundwater beneath the WWTF (excluding the land application areas) is consistent with Resolution 68-16 provided that:

    a. The degradation is confined within a specified boundary;

    b. The discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures;

    c. The degradation is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order; and

    d. The degradation does not result in water quality less than that prescribed in the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan).

27. Some degradation of groundwater by some of the typical waste constituents released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of California. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less. Degradation of groundwater by constituents (e.g., toxic chemicals) other than those specified in the groundwater limitations in this Order, and by constituents that can be effectively removed by conventional treatment (e.g., total coliform bacteria) is prohibited. When allowed, the degree of degradation permitted depends upon many factors (i.e., background water quality, the waste constituent, the beneficial uses and most stringent water quality objective, source control measures, waste constituent treatability).

28. Economic prosperity of local communities and associated industry is of maximum benefit to the people of California, and therefore sufficient reason exists to accommodate growth and groundwater degradation around the wastewater treatment facility, provided that the terms of the Basin Plan are met.

29. These waste discharge requirements do not allow degradation of groundwater beneath the land application areas. The Discharger is required to monitor the groundwater under the land application areas and, if the monitoring data indicate that the discharge of waste to the land application areas is causing groundwater to contain waste constituents in concentrations statistically greater than background water quality, then the Discharger may be required to submit a report to indicate how such degradation will comply with Resolution 68-16. Upon review of such report, this Order may be revised, including the groundwater limitations.

Treatment and Control Practices

30. This WWTF provides treatment and control of the discharge that incorporates:

    a. Technology for secondary treatment of municipal wastewater;

    b. Recycling of wastewater;

    c. Staffing and training to assure proper operation and maintenance.

31. The WWTF treats wastewater to secondary standards. Because of the lack of information regarding the shallow groundwater table, assumptions cannot be made regarding constituent attenuation in the vadose zone. In addition, the potential impacts on groundwater and the appropriate level of degradation that complies with Resolution 68-16 have not been fully evaluated. Therefore, the Discharger's current effort may not constitute BPTC as intended in Resolution 68-16, and this Order establishes a schedule for tasks to evaluate BPTC for each conveyance, treatment, storage, and disposal component of the facility and to further characterize groundwater for selected constituents. Completion of these tasks, and implementation of the approved strategies developed from that work, will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.

32. This Order establishes interim groundwater limitations for the WWTF that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. Based on the results of the scheduled tasks, this Order may be reopened to reconsider groundwater limitations and other requirements to comply with Resolution 68-16.

Water Recycling

33. The Department of Health Services (DHS) has established statewide water recycling criteria in Title 22, CCR, Section 60301 et. seq. (hereafter Title 22). DHS revised the water recycling criteria contained in Title 22 on 2 December 2000. The revised Title 22 requires that all wastewater used for reclamation receive, at a minimum, secondary treatment. However, Title 22 does not define secondary treatment with respect to numerical limits for BOD_5 and total suspended solids (TSS). According to DHS, for uses not requiring disinfection, treated wastewater should, at a minimum, be adequately oxidized, contain dissolved oxygen near saturation levels, and be nonputrescible when applied to land.

Basin Plan, Beneficial Uses, and Regulatory Considerations

34. The Basin Plan designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.

35. Surface water drainage is to Highland Canal, thence to Dry Creek, thence to Putah Creek thence to the Yolo Bypass. The beneficial uses of the Putah Creek to Yolo Bypass are municipal and domestic supply; agricultural irrigation and stock watering supply; contact recreation, other noncontact recreation; warm and potential cold freshwater habitat; warm water spawning and wildlife habitat.

36. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

37. The Basin Plan encourages water recycling.

38. The Basin Plan establishes numerical and narrative water quality objectives for surface and groundwater within the basin for implementation in waste discharge requirements. For narrative water quality objectives translators can be employed as prescribed in the Basin Plan to derive numerical limitations that protect designated beneficial uses.

39. The Basin Plan identifies numerical water quality objectives for waters designated as municipal supply. These are the maximum contaminant levels (MCLs) specified in Title 22, California Code of Regulations: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Table 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) of Section 64449. The Basin Plan's incorporation of these provisions by reference is prospective to incorporate changes as they take effect.

40. Narrative water quality objectives cover chemical constituents, tastes and odors, and toxicity. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants or animals. The chemical constituent objective requires that groundwater shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The tastes and odors objective requires that groundwater shall not contain tastes or odors producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

41. Water quality numeric criteria and guidelines developed and published by other agencies and organizations as necessary to protect designated beneficial uses are summarized in the attached information sheet. To not unreasonably affect any beneficial use, the most stringent of the

translated water quality criteria and numeric water quality objectives for a constituent must be the groundwater limitation implemented herein.

42. Section 13241 of the Water Code requires the Regional Board to consider various factors, including economic considerations, when adopting water quality objectives into its Basin Plan. Water Code Section 13263 requires the Regional Board to address the factors in Section 13241 in adopting waste discharge requirements. The State Board, however, has held that a Regional Board need not specifically address the Section 13241 factors when implementing existing water quality objectives in waste discharge requirements because the factors were already considered in adopting water quality objectives. As waste discharge requirements implement adopted water quality objectives, no additional analysis of Section 13241 factors is required.

43. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge,* which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.

44. The Regional Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Regional Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.

45. The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. If the wastewater treatment facility facilities are designed to collect all runoff and redirect them to the plant headworks then the Discharger will not be required to obtain coverage under the General Permit No. CAS000001. However, if the runoff in the plant area is not redirected to the headworks, then the Discharger is required to submit a notice of intent or notice of non-applicability for coverage under General Permit No. CAS000001.

46. On date 18 February 1997, in accordance with the California Environmental Quality Act (CCR, Title 14, Section 15261 et. seq.), the City of Winters certified a final Envionmental Impact Report for the phased expansion of the wastewater treatment facility including new spray fields and ultimately increasing the plants capacity from 0.55 MGD to 1.63 MGD. Recommended mitigation measures for potential significant impacts for water and groundwater quality are as follows:

    Water Quality

    a. California Regional Water Quality Control Board discharge requirements shall be met via the final design of the project. Requirements will include the specification that no applied wastewater reused for irrigation leave the site as surface runoff. Title 22 requirements will be met for reuse of wastewater for irrigation in design of treatment and disinfection systems.

b. Consistent with the General Plan policy VI.A.6, grading should be carried out during the dry months, April-October. Areas not being graded should be disturbed as little as possible. Construction and grading areas, as well as soil stockpiles should be covered or temporarily revegetated when left for long periods. Revegetation of slopes should be carried out immediately upon completion of grading. Temporary drainage structures and sedimentation basins must be installed to prevent sediment from entering and thereby degrading the quality of downgradient surface waters. A temporary and permanent erosion control plan shall be prepared with the final project design. These measures shall be incorporated into the State's required Stormwater Pollution Prevention Plan.
c. Facilities shall not be constructed and grading shall not be allowed with 100 feet of Dry Creek.

Groundwater Quality

a. California Regional Water quality Control Board requirements shall be met via the final design of the project.
b. A detailed geotechnical design report shall be performed prior to the final project design to determine groundwater levels across the site and seepage concerns resulting in recommendations with the intent of ensuring that significant groundwater impacts will not occur. The report shall meet the requirements of the Water Quality Control Board and recommendations of the final report shall be followed in the final design.
c. The final design shall incorporate drainage and pond sizing to accommodate 100-year rainfall events.

The Regional Board reviewed the mitigated negative declaration and concurs that implementing the outlined mitigation measures and compliance with Board adopted Waste Discharge Requirements will mitigate the risk of significant impacts to water quality.

47. Section 13267(b)(1) of the CWC provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

48. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2002-0136" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

49. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.

50. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 et seq. (hereafter Title 27). The exemption, pursuant to Section 20090(a) of Title 27, is based on the following:

    a. The waste consists primarily of domestic sewage and treated effluent;

    b. The waste discharge requirements are consistent with water quality objectives; and

    c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment facility.

51. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 are appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

52. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

53. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

54. The State Department of Health Services was consulted regarding the public health aspects of water recycling.

55. The conditions of discharge in this Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Discharger may request that this Order be reopened if applicable laws and regulations change.

56. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge, and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

57. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the California Water Code, Order No. 91-232 is rescinded and the City of Winters, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definition and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provisions" and are attached hereto and made part of this Order by reference.]

A. Discharge Prohibitions

1. The direct or indirect discharge of wastes and/or recycled water to surface waters or surface water drainage courses is prohibited.

2. The bypass or overflow of untreated or partially treated waste is prohibited.

3. The application of recycled water to areas other that the designated land application areas is prohibited.

4. The application of recycled water that is applied at rates in excess of the vegetation nitrogen requirements, or at rates that would cause excess nitrogen, dissolved solids, or metals to leach to groundwater is prohibited.

5. The grading of surface water drainage courses and/or wetland areas in the land application areas is prohibited without water quality certification. Water Quality Certification is required for any project that impacts waters of the State (such as streams and wetlands). Those projects include, but are not limited to, stream crossings, modification of stream banks or stream courses, and filling or modification of wetlands.

6. The discharge of sewage from a sanitary sewer system at any point upstream of a wastewater treatment facility is prohibited. Discharge of treated wastewater downstream of the treatment plant, other than at the approved land application areas, is prohibited.

7. The discharge of waste classified as 'hazardous' under Section 2521, Title 23 CCR or 'designated', as defined in Section 13173 of California Water Code is prohibited.

8. The discharge of septage to the sanitary sewer system or the WWTF is prohibited.

9. The grazing of livestock in the land application areas, is prohibited.

B. Discharge Specifications

1. The monthly average dry weather flow shall not exceed 0.80 MGD. Upon certified completion of the facility improvements for Phase 1B, the Discharger shall submit a report prepared by a California licensed engineer describing the improvements. Upon written approval of the Phase 1B report from the Executive Officer, the monthly average dry weather flow shall not exceed 0.92 MGD. Upon certified completion of the improvements for Phase 2 the Discharger shall submit a report prepared by a California licensed engineer describing the improvements. Upon approval of the Phase 2 improvement report from the Executive Officer the monthly average flow shall not exceed 1.20 MGD. The flow rate limits shall be applied to the flow entering the headworks.

2. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.

3. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.

4. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the property owned by the Discharger.

5. As a means of discerning compliance with Discharge Specification No. 4, the dissolved oxygen content in the upper one foot of any wastewater storage pond shall not be less than 1.0 mg/L.

6. All treatment, storage, and land application areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

7. Application of recycled water shall be confined to the designated land application areas as defined in this Order.

8. Wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular,

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

9. The facility shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

10. Freeboard in any pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.

11. On or about **15 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.9 and B.10.

C. Effluent Limitations

1. Treated effluent discharged from the treatment plant/storage ponds to the land application areas shall not have total coliform exceeding a monthly average of 23 MPN/100 mL or a daily maximum of 240 MPN/100 mL.

2. No stored wastewater or effluent shall have a pH less than 6.5 or greater than 9.5.

D. General Solids Disposal Specifications

Sludge, as used in this document, 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. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has been treated and tested and shown 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.

1. Sludge and solid waste shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.

2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

3. Any storage of residual sludge, solid waste, and biosolids at the WWTF shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Quality Control Board will satisfy this specification.

5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a Regional Water Quality Control Board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order No. 2000-10-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities*). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

6. Use and disposal of biosolids shall comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations (CFR), Part 503, which are subject to enforcement by the U.S. EPA, not the Regional Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, then the Regional Board may also initiate enforcement where appropriate.

E. Land Application Area Specifications

1. Public contact with recycled wastewater shall be controlled through use of fences and cautionary signs, and/or other appropriate means. Perimeter warning signs indicating that recycled water is in use shall be posted at least every 500 feet along the property boundary and at each access road entrance to the properties. Each sign shall be in English and Spanish languages.

2. Any connection between the recycled water conveyance system and any potable water conveyance system, groundwater supply well, or surface water supply source for the purpose of supplementing recycled water shall be equipped with an appropriate backflow prevention device.

3. Direct or windblown spray shall be confined to the designated land application area and shall be prevented from contacting outdoor eating areas, drinking water facilities, homes, or surface watercourses.

4. The Discharger shall comply with the following setbacks within the land application areas:

Setback Distance (feet)	To
25	Property Lines
30	Public Roads
50	Surface Water Drainage Courses
100	Domestic/Irrigation Wells

5. The perimeter of the land application areas shall be graded to control runoff and prevent ponding along public roads or other public areas.

6. Irrigation with recycled water shall not be performed within 24 hours before, during, or within 24 hours after any precipitation event, nor shall it be performed when the land application areas is saturated.

7. Application rates for recycled water shall not exceed agronomic rates considering the crop, soil, climate, and irrigation management system in accordance with the operation and maintenance plan required by Provision G.1.b.

8. The land application area shall be managed to prevent breeding of mosquitoes. In particular:

   a. There shall be no standing water on the irrigation parcel areas 24 hours after effluent application to a parcel ceases;

   b. Ditches must be maintained essentially free of emergent, marginal, and floating vegetation, and;

   c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store effluent.

F. Groundwater Limitations

1. Release of waste constituents from any wastewater treatment, storage system component, or land application area associated with the WWTF shall not cause groundwater degradation under and beyond that system component, as determined by an approved well monitoring network, to:

   a. Contain any of the following constituents in concentration greater than as listed or greater than ambient background quality, whichever is greater:

Constituent	Units	Limitation
Boron	mg/L	0.6
Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 mL	non detect
Total Dissolved Solids[1]	mg/L	450
Total Nitrogen	mg/L	10
Nitrite (as N)	mg/L	1

Constituent	Units	Limitation
Nitrate (as N)	mg/L	10
Ammonia (as N)	mg/L	0.5
Bromoform	µg/L	4
Bromodichloromethane	µg/L	0.27
Chloroform	µg/L	1.1
Dibromochloromethane	µg/L	0.37

[1] A cumulative impact limit that accounts for several dissolved constituents in addition to those listed here separately [e.g., alkalinity (carbonate and bicarbonate), calcium, hardness, phosphate, and potassium].

b. Contain any constituent not identified in Groundwater Limitation F.1.a in concentrations greater than background quality (whether chemical, physical, biological, bacteriological, radiological, or some other property or characteristic).

c. Exhibit a pH of less than 6.5 or greater than 8.5 pH units.

d. Impart taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

G. Provisions

1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All of the following reports shall be submitted pursuant to Section 13267 of the California Water.

   a. By **1 August 2003** submit a technical evaluation of the suspected seepage occuring from Storage Pond No. 4. Please include a workplan that will outline a schedule that will incorporate the mitigation measures to address this problem.

   b. By **1 August 2003**, the Discharger shall submit an Operation and Maintenance (O&M) Plan for the wastewater treatment facility and land application area. The O&M Plan shall instruct field personnel on how to manage the day-to-day discharge operations to comply with the terms and conditions of this Order and how to make field adjustments, as necessary, to preclude nuisance conditions (e.g., standing water and objectionable odors from ponded wastewater). It shall also include a nuisance condition troubleshooting flowchart and a description of notification requirements. A copy of the

O&M Plan shall be kept at the facility for reference by operating personnel. Key personnel shall be familiar with its contents. The O&M Plan shall include the following documents as report appendices:

i. A Cropping and Tailwater Control Plan which identifies the land application areas, wastewater application method, tailwater control method, tailwater control system schematic, berms/checks/furrows, crops to be grown, nitrogen removal calculations, and crop cutting/harvesting/disposal procedure, if applicable. This plan shall identify what measures will be taken to prevent wastewater from entering surface water drainage courses.

ii. A Grading Plan which describes grading activities which will allow application of wastewater in accordance with the WDRs, particularly Section D, Land Application Area Specifications. The grading of surface water drainage courses and/or wetland areas in the land application areas is prohibited without water quality certification. Water Quality Certification is required for any project that impacts waters of the State (such as streams and wetlands). Those projects include, but are not limited to, stream crossings, modification of stream banks or stream courses, and filling or modification of wetlands.

SANITARY SEWER EVALUATION

c. By **1 August 2004**, the Discharger shall submit a *Sanitary Sewer System Operation, Maintenance, Overflow Prevention, and Response Plan* (SSS Plan) that describes the actions designed to prevent, or minimize the potential for sanitary sewer overflows. The Discharger shall maintain the SSS Plan in an up-to-date condition and shall amend the SSS Plan whenever there is a change (e.g., in the design, construction, operation, or maintenance of the sanitary sewer system or sewer facilities) that materially affects the potential for sanitary sewer overflows, or whenever there is a sanitary sewer overflow. The Discharger shall ensure that the up-to-date SSS Plan is readily available to sewer system personnel at all times and that sewer system personnel are familiar with it.

i. At a minimum, the Operation and Maintenance portion of the plan shall contain or describe the following:

1. Detailed maps of the sanitary sewer system, identifying sewer mains, manholes, and lift stations;

2. A detailed listing of elements to be inspected, a description of inspection procedures and inspection frequency, and sample inspection forms;

3. A schedule for routine inspection and testing of all pipelines, lift stations, valves, and other key system components. The inspection/testing program shall

be designed to reveal problems that might lead to accidental spills and ensure that preventive maintenance is completed;

4. Provisions for repair or replacement of old, worn out, or defective equipment;

5. Provisions to minimize the need for manual operation of critical systems and provide spill alarms or other "fail safe" mechanisms;

6. The ability to properly manage, operate and maintain, at all times, all parts of the collection system that the Discharger owns or over which the Discharger has operational control;

7. The ability to provide adequate capacity to convey base flows and peak flows for all parts of the collection system the Discharger owns or over which the Discharger has operational control; and

8. How the Discharger will take all feasible steps to stop and mitigate the impact of sanitary sewer overflows in portions of the collection system the Discharger owns or over which the Discharger has operational control.

ii. At a minimum, the Overflow Prevention and Response Plan shall contain or describe the following:

1. Identification of areas of the collection system that historically have overflowed and an evaluation of the cause of the overflow;

2. Maintenance activities that can be implemented to address the cause of the overflow and means to prevent future overflows. Maintenance activities may include pretreatment of wastewater from industrial dischargers who discharge high concentrations of oil and grease in their wastewater;

3. Procedures for responding to sanitary sewer overflows designed to minimize the volume of sewer overflow that enters surface waters, and minimize the adverse effects of sewer overflows on water quality and beneficial uses;

4. Steps to be taken when an overflow or spill occurs, and procedures that will be implemented to ensure that all overflows and spills are properly identified, responded to and reported; and

5. A public notification plan, in which any posting of areas contaminated with sewage is performed at the direction of the Yolo County Health Department. All parties with a reasonable potential for exposure to an overflow event shall be notified.

GROUNDWATER QUALITY EVALUATION

d. By **1 August 2003**, the Discharger shall submit a workplan, prepared by a Registered Geologist, for characterization of groundwater quality. The workplan shall describe the installation of monitoring wells that will provide an adequate monitoring well network to evaluate groundwater quality upgradient and downgradient of the WWTF, including the land application areas. Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment D, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"

e. By **1 January 2004**, the Discharger shall submit a groundwater well installation report prepared by a Registererd Geologist. The report shall be consistent with, and include the items listed in, the second section of Attachment D.

f. By **1 March 2005**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least four consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with: 1) the calculated background concentration, and 2) the interim numeric limitations set forth in Groundwater Limitation F.1.a. Where background concentrations are statistically greater than the interim limitations specified in Groundwater Limitation F.1.a, the report shall recommend final groundwater limitations which comply with Resolution 68-16 for the waste constituents listed therein. Subsequent use of a concentration as a final groundwater limitation will be subject to the discretion of the Executive Officer. Where background concentrations are statistically less than the listed interim concentrations and the concentrations in the downgradient wells are statistically greater than background concentrations, the Discharger shall begin the preparation of a BPTC Evaluation Report to be approved by the Executive Officer.

If the BPTC evaluation report is required by this provision and subsequent monitoring results demonstrate the need to modify groundwater limitations this Order will be reopened and modified groundwater limitations adopted.

BPTC EVALUATION REPORT

Provisions G.1.h through G.1.j outline the schedule and compliance dates to be adhered to if the Discharger is required to submit a BPTC Evaluation Report per Provision G.1.g:

g. By **1 March 2006**, the Discharger shall submit a *BPTC Evaluation Workplan* that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent listed in the Groundwater Limitation F.1.a of this Order. The workplan shall contain a preliminary evaluation of each component of the WWTF and effluent disposal system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year.

h. By **1 August 2007**, the Discharger shall submit a *BPTC Evaluation Report and Implementation Workplan*. The report shall include a comprehensive evaluation of the BPTC measures studied, a discussion of BPTC measures proposed for implementation (i.e., recommendations for WWTF modifications), estimated concentration or mass loading reductions for each BPTC measure, specific methods the Discharger proposes to monitor and assure continuous optimal performance of BPTC measures, the source of funding, and proposed schedule for modifications. The schedule for full implementation shall be as short as practicable, and in no case shall it exceed four years past the Executive Officer's approval of the workplan unless specifically approved by the Regional Board. The component evaluation, recommended improvements, and implementation schedule are subject to the Executive Officer's approval.

i. By **30 November 2011**, the Discharger shall submit a technical report that proposes specific numeric groundwater limitations that (a) reflects compliance with applicable water quality objectives, background water quality, and full implementation of BPTC measures, and (b) describes how these were determined considering actual data from compliance monitoring wells, impact reductions through full implementation of BPTC, reasonable growth, etc. The Discharger should submit results of a validated groundwater model to support its proposal. In addition, the technical report shall describe the overall status of compliance with implementation of BPTC measures and compliance with all groundwater limitations.

OTHER REPORTS

j. **At least 60 days prior** to any biosolids removal and disposal, the Discharger shall submit a *Biosolids and Sludge Management Plan*. The plan shall include a detailed program and schedule for periodic pond cleanout and disposal of biosolids removed during pond cleanout, including at least the items listed in Attachment E of this Order.

k. A detailed design technical report shall be submitted to the Regional Board prior to the final design of the Phase II improvements. The technical report shall provide groundwater conditions within the area of the proposed reservoir and outline what engineering alternatives will be incorporated into the design of the reservoir that will provide adequate protection of water quality. If it is determined that a liner is required then a Construction Quality Assurance Plan shall be submitted for the installation of the liner.

2. Upon completion of tasks set forth in Provision G.1, the Regional Board shall consider the evidence provided and make a determination regarding whether the Discharger has justified BPTC and the appropriate final numeric groundwater limitations that comply with Resolution 68-16.

3. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the Discharger shall take any necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:

   a. Interception and rerouting of sewage flows around the sewage line failure;

   b. Vacuum truck recovery of sanitary sewer overflows and wash down water;

   c. Use of portable aerators where complete recovery of the sanitary sewer overflows are not practicable and where severe oxygen depletion is expected in surface waters; and

   d. Cleanup of sewage-related debris at the overflow site.

4. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2002-0136, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

5. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

6. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with discharge limits specified in this order.

7. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.

11. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the

Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

12. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

13. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.

14. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

15. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Regional Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

16. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.

17. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

18. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Acting Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Regional Board, Central Valley Region, on 19 July 2002.

THOMAS R. PINKOS, Acting Executive Officer

MMW: 7/19/02

AMENDED INFORMATION SHEET

ORDER NO. R5-2002-0136
CITY OF WINTERS
WASTEWATER TREATMENT FACILITY
YOLO COUNTY

Background

The City of Winters is a community of approximately 6,200 residents located on the western edge of the Sacramento Valley about 30 miles west of Sacramento. The City is primarily surrounded by orchards and pasture lands.

The City of Winters wastewater treatment facility (WWTF) provides secondary treatment. The City owns the plant and the operation and maintenance is currently contracted to EcoResources. The WWTF provides treatment for primarily domestic wastewater, with the exception of a few large industrial dischargers, one being a nut processing facility.

The existing Winters WWTF was constructed in 1980. The original dry weather capacity was estimated at 1.0 MGD. However, due to apparent leakage from one of the storage ponds, the Regional Board adjusted the plant capacity to 0.70 MGD. As outlined in Order No. 91-232, the average daily dry weather discharge flow (ADWF) was limited to 0.70 MGD. As outlined in Discharge Specification B.4 of Order No. 91-232, upon completion of proposed improvements to the WWTF the ADWF could be increased, with staff approval, to 0.80 MGD. The expansion was completed and improvements included the construction of an additional 140 acre-ft storage pond (No. 4) and the addition of land application areas. In March 2001, the Regional Board granted the increase of the ADWF to 0.80 MGD. Order No. 91-232 is no longer consistent with the Regional Board's current plans and policies and will be rescinded upon the adoption of this Order.

The Discharger is proposing to increase the treatment, storage and disposal capacity of the existing aeration and storage ponds, and increase acreage of the land application areas. Existing wastewater treatment processes include influent pumping, two 0.2-acre (20 acre-ft) primary aeration ponds, two
0.4-acre (40 acre-ft) secondary aeration ponds, one 5-acre polishing pond, 4 storage ponds having 43.3 total acres (380 acre-ft), chlorination system and approximately 170 acres of land application areas.

The proposed improvements to the WWTF are to be implemented in phases (Phase 1B and Phase 2). Phase 1B proposed improvements will support a maximum discharge of 0.92 MGD. Some of the improvements include regrading the existing 130-acre land application areas and the replacement of two existing 15-hp aerators in the primary aeration ponds with two 25-hp brush type aerators.

Phase 2 proposed improvements will support a maximum discharge of 1.20 MGD. Examples of the Phase 2 improvements include the installation of a new influent pump station, new 25-hp brush type aerator to the existing polishing pond, expand chlorination system to 100 lbs/d, replacement of the existing big-gun sprinklers in the north spray field with small sprinklers and an automated system, expand irrigation pumping capacity to 1,365 gpm, add an additional 133-acre-ft storage reservoir and add 56 new acres of land application areas.

Effluent Disposal

The land application areas that are irrigated with disinfected secondary wastewater are vegetated by native grasses, which are periodically grazed by sheep and cattle from the neighboring ranch. The recycled water is applied to the 130-acre land application area using big-gun sprinklers (104 installed) and 1-nozzle impact sprinklers (448 installed) are used for irrigation on the 40-acre land application area. The tailwater control system consists of 2 pumps at a capacity of 1,200 gpm.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The beneficial uses of the Putah Creek to Yolo Bypass are municipal and domestic supply; agricultural irrigation and stock watering supply; contact recreation, other noncontact recreation; warm and potential cold freshwater habitat; warm water spawning and wildlife habitat. The *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition* (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. Beneficial uses often determine the water quality objectives that apply to a water body. For example, waters designated as municipal and domestic supply must meet the maximum contaminant levels (MCLs) for drinking waters. The Basin Plan sets forth the applicable beneficial uses (industrial, agricultural, and domestic supply in this instance) of groundwater, procedure for application of water quality objectives, and the process for and factors to consider in allocating waste assimilation capacity.

Antidegradation

The antidegradation directives of Section 13000 of the California Water Code require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policies and procedures for complying with this directive are set forth in the Basin Plan (including by reference State Water Board Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation" Policy).

Resolution 68-16 is applied on a case-by-case, constituent-by-constituent basis in determining whether a certain degree of degradation can be justified. It is incumbent upon the Discharger to provide technical information for the Regional Board to evaluate that fully characterizes:

- All waste constituents to be discharged;
- The background quality of the uppermost layer of the uppermost aquifer;
- The background quality of other waters that may be affected;
- The underlying hydrogeologic conditions;
- Waste treatment and control measures;
- How treatment and control measures are justified as best practicable treatment and control (BPTC);
- The extent the discharge will impact the quality of each aquifer; and
- The expected degradation to water quality objectives.

In allowing a discharge, the Regional Board must comply with CWC section 13263 in setting appropriate conditions. The Regional Board is required, relative to the groundwater that may be affected by the discharge, to implement the Basin Plan and consider the beneficial uses to be protected along with the water quality objectives essential for that purpose. The Regional Board need not authorize the full utilization of the waste assimilation capacity of the groundwater (CWC 13263(b)) and must consider other waste discharges and factors that affect that capacity.

This discharge has been occurring for years. Certain waste constituents in municipal wastewater are not fully amenable to waste treatment and control and it is reasonable to expect some impact on groundwater. Some degradation for certain constituents is consistent with maximum benefit to the people of California because the technology, energy, water recycling, and waste management advantages of municipal utility service to the State far outweigh the environmental impact damage of a community that would otherwise be reliant on numerous concentrated individual wastewater systems. Economic prosperity of

local communities is of maximum benefit to the people of California, and therefore sufficient reason to accommodate increases in wastewater discharge provided terms of reasonable degradation are defined and met. The proposed Order authorizes some degradation consistent with the maximum benefit to the people of the State.

This Order requires the Discharger to install a groundwater monitoring well network and perform groundwater monitoring at the site. There is insufficient groundwater data to date to establish the most appropriate groundwater limits. In addition, certain aspects of waste treatment and control practices have not been and are unlikely to be justified as representative of best practicable treatment and control BPTC. Reasonable time is necessary to gather specific information about the WWTF and the site to make informed, appropriate, long-term decisions. Therefore, this proposed Order, establishes interim receiving water limitations to assure protection of the beneficial uses of groundwater of the State pending the completion of certain tasks and provides time schedules to complete specified tasks. The Discharger is expected to identify, implement, and adhere to BPTC as individual practices are reviewed and upgraded in this process. During this period, degradation may occur from certain constituents, but can never exceed water quality objectives (or ambient background water quality should it exceed objectives) or cause nuisance.

Water quality objectives define the least stringent limits that could apply as water quality limitations for groundwater at this location, except where ambient background quality unaffected by the discharge of waste already exceeds the objective. The values below reflect water quality objectives that must be met to maintain specific beneficial uses of groundwater. Unless natural background for a constituent proves higher, the groundwater quality limit established in proposed Order is the most stringent of the values listed for the listed constituents.

Constituent	Units	Value	Beneficial Use	Criteria or Justification
Ammonia	mg/L	0.5	MUN [1]	Taste and Odor [2]
Boron	mg/l	0.7	AGR [3]	Boron Sensitivity [4]
	mg/l	0.63	MUN [1]	USEPA toxicity level [9]
Chloride	mg/L	106	AGR [3]	Chloride sensitivity on certain crops irrigated via sprinklers [4]
		142	AGR [3]	Chloride sensitivity on certain crops [4]
		250	MUN [1]	Secondary MCL [5] - Recommended
		500	MUN [1]	Secondary MCL [5] - Upper
Iron	mg/L	0.3	MUN [1]	Secondary MCL [6]
Manganese	mg/L	0.05	MUN [1]	Secondary MCL [6]
Nitrate as N	mg/L	10	MUN [1]	Primary MCL [7]
Nitrite as N	mg/L	1	MUN [1]	Primary MCL [7]
Sodium	mg/L	69	AGR [3]	Sodium sensitivity on certain crops [4]
Total Dissolved Solids	mg/L	450	AGR [3]	Salt sensitivity for certain crops [4]
		500	MUN [1]	Secondary MCL [5] - Recommended
		1,000	MUN [1]	Secondary MCL [5] - Upper
Total Coliform Organisms	MPN/100 ml	2.2	MUN [1]	Basin Plan
Trihalomethanes	µg/L	100	MUN [1]	MCL [8]
Bromoform	µg/L	4	MUN [1]	USEPA Cancer Potency Factor [9]
Bromodichloromethane	µg/L	2.7	MUN [1]	Cal/EPA Cancer Potency Factor [10]
Chloroform	µg/L	1.1	MUN [1]	Cal/EPA Cancer Potency Factor [10]
Dibromochloromethane	µg/L	0.37	MUN [1]	Cal/EPA Cancer Potency Factor [10]
pH	pH Units	6.5 to 8.5	MUN [1]	Secondary MCL [9]

[1] Municipal and domestic supply
[2] Council of the European Union, On the Quality of Water Intended for Human Consumption, Council Directive 98/83/EC (3 November 1998).
[3] Agricultural supply
[4] Ayers, R. S. and D. W. Westcot, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985)
[5] Title 22, California Code of Regulations (CCR), section 64449, Table 64449-B
[6] Title 22, CCR, section 64449, Table 64449-A
[7] Title 22, CCR, section 64431, Table 64431-A
[8] Title 22, CCR, section 64439
[9] USEPA Integrated Risk Information System
[10] Cal/EPA Toxicity Criteria Database (OEHHA)

Municipal wastewater contains numerous dissolved inorganic waste constituents (i.e., salts, minerals) that together comprise total dissolved solids (TDS). Each component constituent is not individually critical to any beneficial use. Critical constituents are individually listed. The cumulative impact from these other constituents, along with the cumulative affect of the constituents that are individually listed can be effectively controlled using TDS as a generic indicator parameter.

Not all TDS constituents pass through the treatment process and soil profile in the same manner or rate. Chloride tends to pass through both rapidly to groundwater. As chloride concentrations in most groundwaters in the region are much lower than in treated municipal wastewater, chloride is a useful indicator parameter for evaluating the extent to which effluent reaches groundwater. Boron is another TDS constituent that may occur in wastewater in concentrations greater than groundwater

depending on the source water, to the extent residents use cleaning products containing boron, and whether any industrial dischargers utilize boron (e.g., glass production, cosmetics). Other indicator constituents for monitoring for groundwater degradation due to recharged effluent include total coliform bacteria, ammonia, total nitrogen, and Total Trihalomethanes (TTHMs), a by-product of chlorination. Dissolved iron and manganese are useful indicators to determine whether components of the WWTF with high-strength waste constituents, such as sludge handling facilities, are ineffective in containing waste. Exceptionally high TDS and nitrogen also typifies this type of release.

Treatment Technology and Control

Given the character of municipal wastewater, secondary treatment technology is generally sufficient to control degradation of groundwater from decomposable organic constituents. Adding disinfection significantly reduces populations of pathogenic organisms, and reasonable soil infiltration rates and unsaturated soils can reduce them further. Neither organics nor total coliform organisms, the indicator parameter for pathogenic organisms, should be found in groundwater in a well-designed, well-operated facility.

Chlorine disinfection of effluent causes formation of TTHMs, which are toxic priority pollutants. Treatment to reduce these in wastewater generally has not been performed, and little is known at this point on the typical impact on groundwater.

Municipal wastewater typically contains nitrogen in concentrations greater than water quality objectives, which vary according to the form of nitrogen. Degradation by nitrogen can be controlled by an appropriate secondary treatment system (e.g., oxidation ditch), tertiary treatment for nitrogen reduction, and agronomic reuse on harvested crops. The effectiveness varies, but generally BPTC should be able to control nitrogen degradation at a concentration well below the water quality objectives. The proposed interim limitation reflects water quality objectives.

Waste constituents that are forms of salinity pass through the treatment process and soil profile and effective control of long-term affects relies upon effective source control and pretreatment measures. In the best of circumstances, long-term land discharge of treated municipal wastewater will degrade groundwater with salt (as measured by TDS and EC) and the individual components of salts (e.g., sodium, chloride). The proposed Order sets water quality objectives for the interim while site-specific, constituent-specific limits are developed in conjunction with a BPTC evaluation of source control and pretreatment. The next Order will likely contain effluent limits for salt components other than chloride that, if met, assure groundwater quality will be controlled to an acceptable level.

Other constituents in treated municipal waste that may pass through the treatment process and the soil profile include recalcitrant organic compounds (e.g., ethylene glycol, or antifreeze), radionuclides, and pharmaceuticals. Hazardous compounds are not usually associated with domestic wastes and when present are reduced in the discharge to inconsequential concentrations through dilution with domestic waste, treatment, and the implementation of effective pretreatment programs. It is inappropriate to allow degradation of groundwater with such constituents, so proposed limitations are nondetect.

A discharge of wastewater that overloads soils with nutrients and organics can result in anaerobic conditions in the soil profile, which in turn creates organic acids and decreases soil pH. Under conditions of low soil pH (i.e., below 5), iron and manganese compounds in the soil can solubilize and leach into groundwater. Discharge of residual sludge to land may also lead to increases in groundwater alkalinity and hardness to concentrations that impair the water's beneficial uses and contribute to an overall increase in TDS. Overloading is preventable. Though iron and manganese limits are set at the water quality objective, groundwater pH is expected to remain the same as background.

Title 27

Title 27, CCR, section 20005 et seq. ("Title 27"), contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and

specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under Section 20090(a), provided that the facilities will not result in a violation of any water quality objective. As the exemption specifically excludes the discharge to land of 1) solid waste that results from treatment of domestic sewage (e.g., grit and screenings) and 2) residual sludge (sludge that will not be subjected to further treatment by the WWTF), such discharges must compy with provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment facility can be allowed without requiring compliance with Title 27, but only if resulting degradation of groundwater is in accordance with the Basin Plan. This means, among other things, that degradation of groundwater must be consistent with Resolution No. 68-16 and in no case greater than water quality objectives.

Discharge Prohibitions and Specifications

The proposed order establishes a monthly average dry weather flow limit of 0.80 MGD. Upon certified completion of the facility improvements for Phase 1B the Discharger shall submit a report prepared by a California licensed engineer describing the improvements. Upon approval of the Phase 1B report from the Executive Officer the monthly average dry weather flow shall not exceed 0.92 MGD. Upon certified completion of the improvements for Phase 2 the Discharger shall submit a report prepared by a California licensed engineer describing the improvements. Upon approval of the Phase 2 improvement report from the Executive Officer the monthly average flow shall not exceed 1.20 MGD. The flow rate limits shall be applied to the flow entering the headworks. The discharge specifications regarding dissolved oxygen and freeboard are consistent with Regional Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

In order to protect public health and safety, the proposed Order requires the Discharger to comply with many of the provisions of Title 22 and to implement best management practices with respect to effluent disposal (e.g., to dispose of effluent at reasonable rates considering the crop, soil, climate, and irrigation management plan.). This Order requires that the Discharger submit a Title 22 Engineering Report if the grazing of livestock is to continue.

Monitoring Requirements

Section 13267 of the CWC authorizes the Regional Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the state. In recent years there has been increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment civil administrative liability where appropriate.

The proposed Order increases the previous Order's influent and effluent monitoring requirements, and includes flow rates, wastewater storage ponds, land application areas, and groundwater monitoring requirements. In order to adequately characterize its wastewater effluent, the Discharger is required to monitor for settleable solids, BOD, coliform, TDS, nitrogen, sodium, and chloride. Monitoring of additional minerals is required on an annual basis. To ensure that disposal ponds do not create nuisance conditions, the Discharger is required to monitor freeboard available and dissolved oxygen content weekly.

The Title 27 zero leakage protection strategy relies heavily on extensive groundwater monitoring to increase a discharger's awareness of, and accountability for, compliance with the prescriptive and performance standards. With a high volume,

concentrated, uncontained discharge to land, monitoring takes on even greater importance. The proposed Order includes monitoring of applied waste quality, application rates, and groundwater.

Title 27 regulations pertaining to groundwater monitoring and the detection and characterization of waste constituents in groundwater have been in effect and successfully implemented for many years. No regulation currently specifies similar criteria more suitable for a situation where extensive infiltration into groundwater occurs. However, where, as here, such infiltration occurs, it is appropriate that the Title 27 groundwater monitoring procedures be extended and applied on a case-by-case basis under Water Code section 13267.

The Discharger must monitor groundwater for constituents present in the discharge and capable of reaching groundwater and violating groundwater limitations if its treatment and control, and any dependency of the process on sustained environmental attenuation, proves inadequate. The Discharger's existing network of groundwater monitoring wells is not adequate to fully characterize background water quality and potential groundwater impacts for the wastewater treatment facility and land application areas.

For each constituent listed in the Groundwater Limitations section, the Discharger must, as part of each monitoring event, compare concentrations of constituents found in each monitoring well to the background concentration or to prescribed numerical limitations to determine compliance.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. However, information is presently insufficient to develop final effluent and groundwater limitations, so the proposed Order contains interim limitations. Additional information must be developed and documented by the Discharger as required by schedules set forth in the proposed Order. As this additional information is obtained, decisions will be made concerning the best means of assuring the highest water quality possible and that could involve substantial cost. It may be appropriate to reopen the Order if applicable laws and regulations change, but the mere possibility that such laws and regulations may change is not sufficient basis for reopening the Order. The CWC requires that waste discharge requirements implement all applicable requirements.

Surface water drainage is to Highland Canal, thence to Dry Creek, thence to Putah Creek thence to the Yolo Bypass.

MMW: 7/19/02
AMENDED

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0136

FOR
CITY OF WINTERS
WASTEWATER TREATMENT FACILITY
YOLO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring domestic wastewater, treated effluent, wastewater storage ponds, land application areas, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH, specific conductivity and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Influent flow monitoring shall be performed at the headworks. Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent. Influent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Influent Flow	gpd	Meter	Continuously	Monthly

Monthly Average Daily Flow	gpd	Calculated	Monthly	Monthly
BOD_5[1]	mg/L,	Grab	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Electrical Conductivity	µmhos/cm	Grab	Weekly	Monthly

[1] 5-day Biochemical Oxygen Demand

STORAGE POND MONITORING

Each of the storage ponds shall be sampled for the parameters specified below:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard	±0.1 feet	Measurement	Weekly	Monthly
Dissolved Oxygen[1]	mg/L	Grab	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Electrical Conductivity	µmhos/cm	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Levee condition[2]	--	Observation	Weekly	Monthly

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

[2] Pond containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms.

EFFLUENT MONITORING

Effluent samples shall be collected before discharge to the land application areas and shall be representative of the volume and nature of the discharge. Effluent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow	mgd	Continuous	Continuous	Monthly
BOD_5	mg/L	Grab	Weekly	Monthly
Total Coliform Organisms[1]	MPN/100 ml	Grab	Weekly	Monthly
Electrical Conductivity	µmhos/cm	Grab	Weekly	Monthly
pH	Standard	Grab	Weekly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sodium	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly
Nitrate as NO_3	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Nitrogen	mg/L	Grab/calculated	Monthly	Monthly

[1] If positive results are reported, a duplicate sample shall be collected and re-analyzed within ten days after the initial sample. If the concentration is >1600 MPN/100mL the lab shall be instructed to carry out the dilutions to 4 or 5, or until termination, which ever yields an actual concentration number.

LAND APPLICATION AREA MONITORING

Monitoring of the land application area shall be conducted daily and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to ascertain loading rates at the application area. Monitoring of the land application areas shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Rainfall	Inches	Measurement	Daily	Monthly
Acreage Applied[1]	Acres	Calculated	Daily	Monthly
Application Rate[2]	Gal/acre/day	Calculated	Daily	Monthly
BOD_5 Loading Rate[2]	lbs/acre/day	Calculated[3]	Monthly	Monthly
Total Nitrogen Loading Rate[2]	lbs/acre/month	Calculated[3]	Monthly	Monthly
Total Dissolved Solids Loading Rate[2]	lbs/acre/month	Calculated[3]	Monthly	Monthly

[1] Land application areas shall be identified
[2] For each land application area.
[3] BOD_5, Total Nitrogen and TDS loading rates shall be calculated using the daily applied volume of wastewater, daily application area, and a running average of the three most recent results of BOD_5, Total Nitrogen and TDS which shall also be reported along with supporting calculations.

GROUNDWATER MONITORING

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly
Groundwater Elevation[1]	0.01 feet	Calculated	Quarterly
Gradient	feet/feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
pH	pH units	Grab	Quarterly
Trihalomethanes	µg/L	Grab	Quarterly
Total Coliform Organisms	MPN/100 ml	Grab	Quarterly
Boron	mg/L	Grab	Quarterly

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Chloride	mg/L	Grab	Quarterly
Iron	mg/L	Grab	Quarterly
Manganese	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly
Standard Minerals[2]	mg/L	Grab	Annually

[1] Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

[2] Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Potassium, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

SLUDGE MONITORING

A composite sample of sludge shall be collected when removed from the ponds in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the following metals:

Cadmium Copper Nickel
Chromium Lead Zinc

Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. The water supply data collected for the City of Winters and compiled in the Consumer Confidence Report may be used. Data from each well shall be submitted. The Discharger may submit an average of each of the five wells and the high/low range. Water supply monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling and Reporting Frequency
TDS	mg/L	Grab	Annually
Electrical Conductivity	µmhos/cm	Grab	Annually
pH	pH units	Grab	Annually
Standard Minerals[1]	mg/L	Grab	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: Barium, Calcium, Magnesium, Sodium, Potassium, Chloride, Nitrate, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

REPORTING

In reporting monitoring data, the District shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e., the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, effluent, pond, and land application area monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Monitoring Reports

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Regional Board by the **1st day of the second month after the quarter** (i.e., the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring;

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);

5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

6. Summary data tables of historical and current water table elevations and analytical results;

7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;

8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last sampling event of the year;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;

3. An evaluation of the groundwater quality beneath the wastewater treatment facility;

4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;

5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

6. A copy of the certification for each certified wastewater treatment facility operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.

7. Summary of information on the disposal of sludge and/or solid waste;

8. The results from annual monitoring of the groundwater wells and water supply;

9. The results from any sludge monitoring required by the disposal facility; and

10. A forecast of influent flows, as described in Standard Provision No. E4.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

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

Based on results of the monitoring program after a minimum of two years, the Discharger may request a reduction in the constituents monitored and/or sample frequency. If such reductions are warranted, this MRP may be revised by the Executive Officer.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:

THOMAS R. PINKOS, Acting Executive Officer

19 July 2002
(Date)

MMW: 7/19/02
AMENDED