

State of California  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. 86-39

WATER RECLAMATION REQUIREMENTS  
FOR  
CITY OF LOS ANGELES  
(Donald C. Tillman Water Reclamation Plant)  
(File NO. 70-117)

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. City of Los Angeles proposes to reclaim water from the Donald C. Tillman Water Reclamation Plant for use in park irrigation and impoundments under requirements, contained in Order No. 79-161, adopted by this Board October 22, 1979.
2. City of Los Angeles operates the Donald C. Tillman Water Reclamation Plant at 6100 Woodley Avenue, Los Angeles, California, with a dry weather design capacity of 40 million gallons per day (mgd) and is treating an average flow of 23 mgd of municipal wastewater. All or a portion of ~~the~~ treated municipal wastewater may be reused.
3. Reclaimed wastewater from the facility may be used for landscape irrigation, recreational impoundment and fire protection.
4. Treatment consists of grit removal, barminators, primary sedimentation, activated sludge biological treatment, secondary clarification, coagulation, rapid sand filtration, chlorination and decoloration (temporary system). The sludge from the primary and secondary treatment processes is returned to the interceptor and transported for treatment at Hyperion Treatment Plant.
5. The treated wastewater from the proposed facility may also be discharged to Los Angeles River under separate waste discharge requirements and National Pollutant Discharge Elimination System permit (NPDES Permit No. CA0056227) previously adopted by this Board.
6. ~~The areas of reuse~~ are located in Sections 7, 8, 17, and 18, T1N, R15W, S2B & M, within San Fernando Hydrologic Subunit.
7. The Board adopted a revised Water Quality Control Plan for Los Angeles River Basin on November 27, 1978. The Plan contains water quality objectives for the San Fernando Subunit. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Water Quality Control Plan.
8. The beneficial uses of ground water of San Fernando Subunit are: municipal supply, agricultural supply, industrial service and process supply.

Revised June 23, 1986  
June 3, 1986

9. Section 13523 of the California Water Code provides that regional board, after consulting with and receiving the recommendations of the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall establish requirements for uses of water which is used or will be used directly as reclaimed wastewater. Section 13523 further provides that such requirements shall conform to the statewide reclamation criteria.
10. The direct use of reclaimed wastewater for impoundments and irrigation could affect the public health, safety, or welfare; requirements for such uses are therefore necessary in accordance with Section 13523 of the Water Code.
11. City of Los Angeles has prepared an Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for City of Los Angeles Wastewater Facilities Plan. No significant adverse impacts on ground water quality were identified in the EIS/EIR as a result of the irrigation project.

The Board has notified City of Los Angeles and interested agencies and persons of its intent to prescribe requirements for wastewater reclamation and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public meeting heard and considered all comments pertaining to the wastewater reclamation and to the tentative requirements.

IT IS HEREBY ORDERED, that City of Los Angeles shall comply with the following:

A. Effluent Limitations

1. Reclaimed water shall be limited to treated municipal wastewaters only, as proposed.
2. Reclaimed water shall not exceed the following limits:

Constituent	Unit	Discharge Limitations		
		30-day	7-day	Maximum
		Average	Average	
Suspended solids	mg/l	15	45	-
Settleable solids	mg/l	0.1	-	0.3
BCD <sub>5</sub> 20°C	mg/l	20	30	-
Total dissolved solids	mg/l	-	-	800
Chloride	mg/l	-	-	100
Sulfate	mg/l	-	-	300
Boron	mg/l	-	-	1.5
Fluoride	mg/l	-	-	1.2
Total nitrogen	mg/l	30	-	40

3. The pH of wastes discharged shall at all times be within the range 6.0 to 9.0.
4. Reclaimed water shall not contain trace constituents in concentrations exceeding the limits contained in the current California Drinking Water Standards.
5. ~~Radioactivity shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64413, of California Administrative Code, or subsequent revision.~~

B. Specification for Use of Reclaimed Wastewater

1. Reclaimed water used for surface or spray irrigation or fodder, fiber, and seed crops shall have a level of quality no less than that of primary effluent.

Primary effluent is the effluent from a wastewater treatment process which provides removal of sewage solids so that it contains not more than 0.5 milliliter per liter per hour of settleable solids as determined by an approved laboratory method.

2. Reclaimed water used for spray irrigation of food crops shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters and the number of coliform organisms does not exceed 23 per milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed.

An oxidized wastewater means wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen. A filtered wastewater means an oxidized, coagulated, clarified wastewater which has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth, so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 turbidity units and does not exceed 5 turbidity more than 5 percent of the time during any 24-hour period.

3. Reclaimed water used for surface irrigation of food crops shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters, as determined for the bacteriological results of the last 7 days for which analyses have been completed. Orchard and vineyards may be surface irrigated

with reclaimed water that has the quality at least equivalent to that of primary effluent provided that no fruit is harvested that has come in contact with the irrigating water or the ground.

4. Exceptions to the quality requirements for reclaimed water used for irrigation of food crops may be considered on an individual case basis where the reclaimed water is to be used to irrigate a food crop which must undergo extensive commercial, physical or chemical processing sufficient to destroy pathogenic agents before it is suitable for human consumption.
5. Reclaimed water used for the irrigation of pasture to which milking cows or goats have access shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.
6. Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analysis have been completed, and the number of coliform organisms does not exceed 240 per 100 milliliters in any two consecutive samples.
7. Reclaimed water used for the irrigation of parks, playgrounds, a schoolyards, and other areas where the public has similar access or exposure shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by a sequence of unit processes that will assure an equivalent degree of treatment and reliability. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 milliliters as determined from the bacteriological results of the last 7 days for which analysis have been completed, and the number of coliform organisms does not exceed 23 per 100 milliliters in any sample.
8. Reclaimed water used for irrigation shall not be allowed to run off into recreational lakes unless it meets the criteria for such lakes.
9. Reclaimed water used as a source of supply in a nonrestricted recreational impoundment (A Body of reclaimed water in which no limitations are imposed on a body-contact water sport activities) shall be at all times an adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be



considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters and the number of coliform organisms does not exceed 23 per 100 milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed.

10. Reclaimed water used as a source of supply in a restricted recreational impoundment (A body of reclaimed water in which recreation is limited to fishing, boating, and other non-body-contact water recreation activities) shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.
11. Reclaimed water used as a source of supply in a landscape impoundment (A body of reclaimed water which is used for aesthetic enjoyment or which otherwise serves a function not intended to include public contact) shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.
12. Reclaimed wastewater shall be retained on the areas of use and shall not be allowed to escape as surface flow except as provided for in a National Pollutant Discharge Elimination System permit. For the purpose of this requirements, however, minor amounts of irrigation return water secondary or better, from peripheral areas shall not be considered a violation of this Order provided the discharge meets the requirements contained in a National Pollutant Discharge Elimination System Permit for City of Los Angeles (Donald C. Tillman Water Reclamation Plant).
13. Reclaimed wastewater shall not be directly used for uses other than those enumerated above until requirements for these uses have been established by this Board in accordance with Section 13523 of the California Water Code, unless the Board waives such requirements or finds that the above-cited standards are applicable to these uses.

C. General Requirements

1. Standard or emergency power facilities and/or storage capacity or other means shall be provided so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.
2. Neither the treatment of waste nor any use thereof, shall cause pollution or nuisance.
3. The reclamation of wastes shall not result in problems due to breeding of mosquitoes, gnats, midges, or other pests.
4. The wastes reclaimed shall not impart tastes, odors, color, foaming, or other objectionable characteristics to receiving ground waters.
5. Reclaimed wastewater which could affect ground waters shall not contain any substance in concentrations toxic to human, animal, or plant life.
6. Odors of sewage origin shall not cause a nuisance.
7. All permanent structures and storage areas shall be protected against 100-year floods.

D. Provisions

1. A copy of these specifications shall be maintained at the reclamation facility so as to be available at all times to operating personnel.
2. In the event of any change in name, ownership, or control of these reclamation facilities, the City shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this order by letter, copy of which shall be forwarded to the Board.
3. The City shall file with the Board technical reports on self monitoring work performed according to the detailed specification contained in any Monitoring and Reporting Programs as directed by the Executive Officer.
4. The City shall submit to the Board, at least three months prior to the initial date of reclaimed water use, a report demonstrating compliance with the requirements specified in Chapter 3, Division 4, Title 22, California Administrative Code (Wastewater Reclamation Criteria).

5. This Order includes the attached "General Monitoring and Reporting Provisions".
6. Supervisors and operators of this publicly owned wastewater treatment plant shall possess a certificate of appropriate grade as specified in California Administrative Code, Title 23, Chapter 3, Subchapter 14, Sections 2455 and 2460.
7. The City shall provide to each user of reclaimed water from Donald C. Tillman Reclamation Plant a copy of these requirements, to be maintained at the user's facility as to be available at all times to operating personnel.
8. The City shall submit to the Board, at least two months prior to commencing reclaimed water use, a fail-safe procedure for approval by the Executive Officer.
9. Order No. 79-161, adopted by this Board on October 22, 1979, is hereby rescinded.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on June 23, 1986.



ROBERT P. GHIPELLI, D.Env.  
Executive Officer

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. <sup>6185</sup> 5635

FOR

City of Los Angeles  
(Donald C. Tillman Water Reclamation Plant)  
(File No. 70-117)

City of Los Angeles shall implement this monitoring program beginning the first day of water reclamation use. Monitoring reports shall be submitted to the Board monthly by the 15th day of the second following month. The first monitoring report under this program is due the 15th day of the second month following the initial date of reclaimed water use.

Values obtained for the NPDES monitoring report during periods of discharge to surface waters may be reported here in lieu of duplicate testing, if representative. However, non-NPDES self-monitoring reports shall be submitted separately from the NPDES monitoring reports. Quarterly monitoring shall be performed during the months of January, April, July, and October.

If no water was delivered for reuse on any day(s) during the reporting period, the report shall so state.

Each monitoring report must affirm in writing that:

All analyses were conducted at a laboratory certified for such analyses by the State Department of Health Services or approved by the Executive Officer and in accordance with current EPA guideline procedures, or as specified in the Monitoring Program.

For any analyses performed for which no procedure is specified in the EPA guidelines in this Monitoring Program, the constituent or parameter analyzed and the method or procedure used must be specified in the report.

I. Reclaimed Water Monitoring

A sampling station shall be established where representative samples of reclaimed water can be obtained. Reclaimed water samples may be obtained at a single station provided that station is representative of the quality at all discharge points. Each sampling station shall be identified. The following shall constitute the reclaimed water monitoring program:

Monitoring and Reporting Program  
 City of Los Angeles  
 (Donald C. Tillman  
 Water Reclamation Plant)

Minimum Frequency of Analysis	Type of Sample	Units	Constituent
continuous [1]	continuous	mgd	Flow
continuous [2]	continuous	mg/l	Total chlorine residual
continuous [3]	continuous	N TU	Turbidity [3]
daily	24-hour composite	mg/l	BC <sub>520</sub> C
daily	24-hour composite	mg/l	Suspended solids
daily	grab	mgN/100 ml	Coliform group [4]
daily	grab	pH units	pH
daily	grab	ml/l	Settleable solids
monthly	24-hour composite	mg/l	Total dissolved solids
monthly	24-hour composite	mg/l	Chloride
monthly	24-hour composite	mg/l	Sulfate
monthly	24-hour composite	mg/l	Boron
quarterly	24-hour composite	pc/l	Radioactivity
monthly	24-hour composite	mg/l	Fluoride
monthly	24-hour composite	mg/l	Total nitrogen

- [1] The total amount reclaimed each day shall be reported. In addition, the monthly quantity of reclaimed wastewater delivered to each user and his use(s) of the water shall also be reported.
- [2] The maximum value recorded each day shall be reported.
- [3] The average recorded each day and amount of time that 5 NTU was exceeded each day shall be reported. Turbidity samples may be obtained anywhere in the treatment process subsequent to the filtration procedures.
- [4] Samples shall be obtained at some point in the treatment process at a time when wastewater flow and characteristics are most demanding on the treatment facility and disinfection procedures. If reclaimed water is used for irrigation of golf courses, cemeteries, freeway landscapes, parks, playgrounds, schoolyards, or other areas where the public has similar access or exposure, samples shall be obtained subsequent to the chlorination procedures. Coliform values obtained must meet the strictest effluent requirement specified for all uses during periods of multiple use, unless separate coliform analyses are obtained at each particular point of use.

II. Reporting

- A. The City shall file a report with this Board describing the purposes for which reclaimed water from this facility is used, estimating quantities used for each type of use, depicting on a map or drawing the area(s) of use, and stating the name and address of each user of reclaimed water if other than the City. This report shall be updated at least annually, and shall be included with the annual report due March 15 of each year.
- B. Each monthly report shall include a statement that all reclaimed wastewater was used only as specified in the requirements during the month.
- C. The attached General Monitoring and Reporting Provisions shall be applicable to this Program.
- D. If no water was delivered for reuse during the month, the report shall so state.

Demonstration of Compliance with 30-day Average Limitations

For parameters where both 30-day average and maximum limits are specified but where the monitoring frequency is less than four times a month, the following procedure shall apply. Initially, beginning not later than the first week of the second month after the adoption of this permit, a representative sample shall be obtained of each waste discharge at least once per week for at least four consecutive weeks and until compliance with the 30-day average limit has been demonstrated. Once that compliance has been demonstrated, sampling and analyses shall revert to the frequency specified in the table above. However, if future analyses of two successive samples yield results greater than 90% of the maximum limit for a parameter, the sampling frequency for that parameter shall be increased (within one week of receiving the laboratory result on the second sample) to a minimum of once weekly until at least four consecutive weekly samples have been obtained and compliance with the 30-day average limit has been demonstrated again and the discharger has set forth for the approval of the Executive Officer a program which ensures future compliance with the 30-day average limit.

Ordered by: Robert P. Ghirelli  
ROBERT P. GHIRELLI, D.Env.  
Executive Officer

Dated: June 23, 1986

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