

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION101 CENTRE PLAZA DRIVE  
MONTEREY PARK, CA 91754-2156  
(213) 266-7500

September 12, 1991

*Copy to TUC*  
*John Kim Hadaway*

Felicia Marcus, President  
Department of Public Works  
City of Los Angeles  
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200 North Main Street, 13th Floor  
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WASTE DISCHARGE REQUIREMENTS AND NPDES PERMIT - DONALD C. TILLMAN  
WATER RECLAMATION PLANT (CA0056227)

Our letter dated August 9, 1991, transmitted tentative requirements for your discharge of treated municipal wastewater from the subject facility and from the wildlife and recreation lakes to the Los Angeles River.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on September 9, 1991, reviewed the tentative requirements, considered all factors in the case, and adopted Order No. 91-102 (copy attached) relative to this waste discharge. This Order serves as a permit under the National Pollutant Discharge Elimination System (NPDES), and expires on August 10, 1996.

The Standard Provisions, which were sent to you with the tentative requirements, were adopted without change and are part of Order No. 91-102. A copy will be mailed upon request.

The Order requires that the following shall be submitted and/or implemented by the respective compliance dates:

1. Monitoring and Reporting Program October 1, 1991
2. Schedule for development of contingency plans (Requirement D3) November 1, 1991
3. Report on delineation of responsibility (Requirement D7) December 19, 1991

Also, as soon as permit approvals for construction of flood protection structures from the Corps of Engineers and Caltrans are



City of Los Angeles  
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obtained, please provide the Board with copies of them.

Please note that any monitoring report due under your previous Monitoring and Reporting Program is still required and must be submitted by the due date.

Please reference all technical and monitoring reports to our Compliance File No. 5695. We would appreciate it if you would not combine other reports, such as progress or technical, with your monitoring reports but would submit each type of report as a separate document.

If you or your staff have any questions, please contact me at (213) 266-7594 or Mercedes S. Hsu at (213) 266-7596.



WINNIE D. JESENA, P.E.  
Chief, Coastal Surface Water  
Regulatory Section

cc: see attached mailing list  
Enclosures



**City of Los Angeles  
Mailing list**

**cc: Environmental Protection Agency, Region 9,  
Permits Branch (W-5)  
U.S. Army Corps of Engineers  
NOAA, National Marine Fisheries Service  
Department of Interior, U.S. Fish and Wildlife Service  
Mr. Archie Matthews, State Water Resources Control Board,  
Division of Water Quality  
Mr. Jorge Leon, State Water Resources Control Board,  
Office of Chief Counsel  
Department of Fish and Game, Region 5  
Department of Health Services, Public Water Supply Branch  
Department of Health Services, Toxic Substances Control  
Division, Southern California Section  
Department of Water Resources  
Los Angeles County, Department of Public Works,  
Waste Management Division  
Los Angeles County, Department of Health Services  
Southern California Association of Governments  
Central and West Basin Water Replenishment District  
South Coast Air Quality Management District  
City of Los Angeles, Department of Water and Power  
City of Los Angeles, Department of Public Works, Bureau of  
Sanitation  
City of Los Angeles, Department of Recreation and Parks  
City of Los Angeles, Wastewater System Engineering Division  
City of Arcadia  
City of Redondo Beach  
Natural Resources Defense Council  
Sierra Club  
Sanford Mohlgemuth, Audubon Society  
Mark Gold, Heal the Bay  
Homeowners of Encino  
Doris Bradshaw  
Daniel Wax**

**Enclosures**



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

ORDER NO. 91-102  
NPDES NO. CA0056227

WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF LOS ANGELES  
(Donald C. Tillman Water Reclamation Plant)

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

1. The City of Los Angeles (hereinafter City) discharges tertiary treated municipal wastewater from the Donald C. Tillman Water Reclamation Plant (hereinafter Tillman Plant) under waste discharge requirements contained in Order No. 85-34 (NPDES Permit No. CA0056227) adopted by this Board on June 24, 1985.
2. The City has filed a report of waste discharge and has applied for renewal of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) Permit.
3. The City operates the Hyperion Treatment System (HTS), which collects, treats, and disposes of sewage from the entire city (except the Wilmington - San Pedro Area, the strip north of San Pedro, and Watts) and from a number of cities and other agencies under contractual agreements. There are about 4 million people in the Hyperion Service area.

The Tillman Plant is one of the two upstream treatment plants of the Hyperion Treatment System. The other upstream plant is the Los Angeles-Glendale Wastewater Reclamation Plant. Sludge from these two plants is returned to the sewage collection system and flows to the Hyperion Treatment Plant for further treatment.

4. The Tillman Plant, located at 6100 Woodley Avenue, Los Angeles, California, is operated by the City's Bureau of Sanitation under the Department of Public Works. (See Attachment 1 - Location Map.) The plant consists of two identical treatment trains (Tillman I and Tillman II), each

with a dry weather average design treatment capacity of 40 million gallons per day (mgd). Operation of Tillman I started in 1985 and in 1990 the plant treated an average of 42.5 mgd with sludge return (consisting of solids from the grit removal system, primary and secondary sedimentation tanks, skimmings, scum, and filter backwash) averaging 4 mgd.

Tillman II, an integral part of the City's 1982 Wastewater Facilities Plan, was constructed in compliance with Cease and Desist Order No. 86-2 (CDO), issued by the Board to the City in January 1986 following numerous incidents of dry weather overflows of untreated sewage to Ballona Creek from the Jackson Avenue Overflow Structure. Increased treatment at the Tillman Plant will relieve hydraulic loading on the Hyperion collection system downstream of the plant. The CDO requires the City to operate both Tillman I and Tillman II treating 80 mgd (dry weather average) by September 15, 1991.

5. Sewage flow to the Tillman Plant comes from the Valley Outfall Relief Sewer (VORS), Additional Valley Outfall Relief Sewer (AVORS) and East Valley Interceptor Sewer (EVIS) collection systems. Tillman serves Chatsworth, Granada Hills, Pacoima, Panorama City, Northridge, Reseda, Tarzana, Canoga Park, Woodland Hills, Sylmar, Lakeview Terrace, and City of San Fernando. In 1986 when the CDO was issued, flow in the collection systems tributary to Tillman averaged 80 mgd. Hydrographs made in October 1989 and June 1990 showed an average flow of 63.5 mgd, representing about 20% reduction compared to the 1986 flow. Therefore, by September 15, 1991, the Tillman Plant may have the capacity but will not be treating 80 mgd.
6. Treatment at the Tillman Plant consists of grit removal, bar screening, comminution, flow equalization, primary sedimentation, activated sludge biological treatment, secondary clarification, coagulation, filtration, chlorination, and dechlorination. The plant uses fine bubble aerators in its activated sludge treatment tanks and Hardinge filters for tertiary treatment. (See Attachment 2 - Treatment Flow Diagram.)

In 1985, the City conducted a virus study in accordance with the State Department of Health Services (DHS) protocols on the use of the Hardinge filters. The virus study demonstrated that the Hardinge filters are capable of meeting Title 22



requirements. DHS approved the findings of the virus study.

7. Use of Tillman tertiary treated wastewater (reclaimed water) is currently limited to the Japanese Garden at the plant site and that delivered by truck haulers for landscape irrigation, street cleaning, and construction dust control. The major portion of the reclaimed water is discharged to the upper Los Angeles River, a water of the United States, at a point near Woodley Avenue extended (Latitude 34° 10' 20", Longitude 118° 28' 50") (Discharge Serial No. 001), above the tidal prism. (See Attachment 3 - Discharge Outfalls and Receiving Water Stations.)

To prevent flow back-up during floods, a new discharge line (Discharge Serial No. 008) will be constructed from Tillman to a point on the Los Angeles River downstream from the existing discharge. The new discharge line is projected to be operational by the end of 1994.

8. With the operation of Tillman II, the City is proposing to use reclaimed water to maintain the existing wildlife lake (currently being maintained with potable water) and the recreation lake (Lake Balboa) that is currently being constructed. The City has also initiated water reclamation projects to use reclaimed water. One proposed project is the East Valley Water Reclamation Project which is a distribution and storage network that will deliver up to 45 mgd of reclaimed water from the Tillman Plant to the Hansen and Pacoima Spreading Grounds for groundwater recharge, and to industrial and irrigation customers in the vicinity of the pipeline. Unused reclaimed water will continue to be discharged to the Los Angeles River.
9. The wildlife and recreation lakes will be operated and maintained by the City's Department of Recreation and Parks. The Department of Recreation and Parks has developed management plans for these lakes. These plans discuss measures to be implemented in the operation, maintenance, and monitoring of the lakes.
10. In the recreation lake management plan, the Department of Recreation and Parks proposes the use of 30 mgd of reclaimed water in the 27.5-acre Lake Balboa. The reclaimed water will be discharged from the Tillman Plant to the lake at the southeast corner of Victory and Balboa Boulevards, Los

Angeles, (Discharge Serial No. 002: Latitude 34° 10' 38", Longitude 118° 28' 20"). The reclaimed water will flow through the lake and will eventually be discharged through weirs, spillways and a bottom drain to three outfalls: at Bull Creek (Lake Discharge Serial No. 004), Hayvenhurst Channel (Lake Discharge Serial No. 005), and Los Angeles River (Lake Discharge Serial No. 006). Bull Creek and Hayvenhurst Channel are tributaries to the Los Angeles River above the tidal prism. (See Attachment 4 - Reclaimed Water Flow Chart and Lakes Location Map.)

The use of 30 mgd of reclaimed water in Lake Balboa is projected to commence around mid-1993. For the period January 1992 to mid-1993, the Department of Recreation and Parks has developed an interim plan to address lake usage of 10 to 20 mgd of reclaimed water. The interim plan discusses concerns of reduced flow, mitigation measures that will be implemented, and an interim monitoring program.

11. In the wildlife lake management plan, the Department of Recreation and Parks proposes the use of 4.7 mgd of reclaimed water in the lake and 1.8 mgd in Haskell Flood Control Channel during September through May. The reclaimed water will flow by gravity to the wildlife lake located northeast of Burbank Boulevard and Woodley Avenue (Discharge Serial No. 003: Latitude 34° 10' 38", Longitude 118° 28' 20"). The reclaimed water will flow through the 10-acre lake and will eventually be discharged to the Haskell Flood Control Channel (Lake Discharge Serial No. 007), thence to the Los Angeles River, above the tidal prism. (See Attachment 4.)

During the summer months the lake will be drained (for maintenance and to minimize nuisance resulting from mosquito breeding), and discharge of reclaimed water to Haskell Flood Control Channel will be increased up to 5 mgd.

12. The Board adopted a revised Water Quality Control Plan for the Los Angeles River Basin on June 3, 1991. The plan incorporates by reference the State Water Resources Control Board's water quality control plan for the control of temperature and antidegradation policy. The plan also identifies water quality objectives and beneficial uses for the Los Angeles River.
13. The beneficial uses of the receiving waters are: ground water recharge, contact and non-contact water recreation, warm

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freshwater habitat, wildlife habitat and (within the tidal prism) industrial service supply, ocean commercial and sport fishing, preservation of rare and endangered species, marine habitat, saline water habitat and potential shellfish harvesting.

14. On April 11, 1991, the State Water Resources Control Board adopted a water quality control plan for inland surface waters of California. This plan contains narrative and numerical water quality objectives. Within one year of adoption of the plan, Regional Boards are required to identify effluent-dominated water bodies that support or will support aquatic habitat and identify numerical objectives that are inappropriate for the water bodies. Site specific objectives for these constituents shall be developed within six years of adoption of the plan.

For the purpose of implementation of the plan, the Los Angeles River is classified as a Category A waterbody, i.e., an effluent-dominated stream which supports aquatic habitat. Flow in the Los Angeles River at the points of discharge from the Tillman Plant and the lakes consists mainly of reclaimed water. Therefore, to protect the beneficial uses of the receiving water from excessive mass loading of pollutants resulting from the discharge, effluent limitations in this order were calculated without providing a mixing zone.

Based on existing effluent data, the Tillman effluent may not be able to consistently meet the plan's objectives for chronic toxicity, arsenic, lead, copper, and mercury. This Order contains interim limits and provisions dealing with requirements of the plan.

15. Effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and ocean discharge criteria established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, and 307 of the Federal Clean Water Act and amendments thereto are applicable to navigable waters and tributaries thereto.
16. Because of public contact in the downstream areas, the quality of wastewater discharges to Los Angeles River must be equivalent to that for nonrestricted recreational impoundments.

17. The 100-year flood water surface elevation under the U.S. Corps of Engineers modified spillway gate operating plan for the Sepulveda Basin is 714.4 feet. At present, the Tillman Plant is protected from flooding at an elevation of 705 feet. This Order contains requirements that the plant be protected from flooding at the modified plan level.

The Department of Public Works proposes to provide flood protection by constructing a berm around the facility to elevation 715 ft. Loss of flood water storage resulting from the presence of the berm will be compensated by excavating the flood plain bottom at the commercial sod farm area. Also, as stated earlier, the City will be constructing an effluent discharge line downstream of the existing one (Discharge Serial No. 001) to prevent flood flow backup. Design of the flood protection components has been completed and the City is awaiting approvals from the Corp of Engineers and Caltrans to proceed with the construction. Construction is estimated to take about 36 months.

18. In July 1990, EPA issued an Administrative Order to the City of Los Angeles for failure to fully implement its pretreatment program. In May 1991, EPA, the Regional Board, and federal and state departments of justice filed a complaint in federal court on this failure.

The Administrative Order requires the City to submit by January 30, 1993, a final report defining the local limits to be in effect in Los Angeles and contract cities.

19. In 1990, chloride concentrations of Tillman effluent ranged from 115 to 176 mg/l (annual average 154). The daily maximum chloride limit in the existing permit is 150 mg/l. In March 1990, the Board adopted Resolution No. 90-04, which stated that because of the long-term drought in California, the Board would temporarily not enforce the chloride limits where violations were primarily due to increased chloride concentrations in imported water. However, for every discharger exceeding chloride limitations, Resolution No. 90-04 requires the discharger to take measures to reduce chlorides in the waste discharge. The City has not yet fully complied with the provisions of Resolution 90-04.

One approach the City is taking to reduce chlorides is to develop and implement local limits on chlorides for industrial

dischargers. This activity is tied to the timetable for local limit development discussed in Finding No. 18.

20. The requirements contained in this Order, as they are met, will maintain and protect the beneficial uses of the receiving water and are in conformance with the goals of the water quality objectives of the water quality plans.
21. Section 176(c) of the Federal Clean Air Act requires that federal actions, including those delegated to state and local agencies, must conform to the approved State Implementation Plan (SIP). Issuance of an NPDES permit is subject to the conformity provisions of Section 176(c) since construction and operation of Tillman II will create new sewage treatment capacity, which may cause an increase in emissions of air pollutants in excess of that allowed by the SIP.

Conformance of wastewater treatment facilities in Los Angeles County is determined by the Southern California Association of Governments (SCAG) at the request of the Regional Board prior to issuance of an NPDES permit. If the finding is one of non-conformity, an NPDES permit may be issued. However, non-conforming service areas must develop and adopt a mitigation plan with an enforceable implementation schedule.

SCAG has found that neither the City nor any of its contractual cities and agencies within the Hyperion Service Area has completed the process of bringing its General Plan into consistency with the SIP. However, the City has developed and adopted a mitigation plan. The mitigation plan includes a commitment by the City to bring its General Plan into consistency with the SIP within a specified timeframe and to implement the applicable local control measures of the Air Quality Management Plan. The City has also agreed to provide written notification to the contract cities and agencies to do the same. With the mitigation plan, SCAG has determined that the City's 1990 Wastewater Facilities Plan Update Projects are in conformity with the SIP/AQMP (SCAG letter dated February 28, 1991, to the City of Los Angeles). In addition (see Finding No. 4), Tillman was an integral part of the City's 1992 Wastewater Facility Plan and was constructed in compliance with the Board's cease and desist order.

22. In October 1982, the City prepared and certified a Final Environmental Impact Statement (EIS) on the City of Los

Angeles' Wastewater Facilities Plan. The City updated the facilities plan and a corresponding Supplemental EIS was prepared and certified in October 1990. The expansion of Tillman is an integral part of the facilities plan.

The major impact identified in the EIS on the Tillman expansion, as far as water quality is concerned, is the increased mass loadings of pollutants in the Los Angeles River that could affect its beneficial uses. Considering the nature of the discharge (tertiary treated effluent) and the beneficial uses of the river, the proposed waste discharge requirements, as they are met, would adequately address and reduce potential water quality impacts to negligible levels.

The City issued Negative Declarations for the recreation and wildlife lake projects and the flood protection projects. No significant adverse impacts were identified.

The Board has notified the discharger and interested agencies and persons of its intent to renew waste discharge requirements for discharges from the Tillman Plant with an increase in discharge volume and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public hearing heard and considered all comments pertaining to the discharge and to the tentative requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act, or amendments thereto, and shall take effect at the end of ten days from the date of adoption provided the Regional Administrator, EPA, has no objections.

IT IS HEREBY ORDERED that the City of Los Angeles, through its Department of Public Works and Department of Recreation and Parks, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

**A. EFFLUENT LIMITATIONS**

The Department of Public Works is responsible for compliance with the effluent limitations.

1. Wastes discharged to Discharge Serial Nos. 001, 002, 003 and 008, shall be limited to treated municipal wastewater only, up to 80 mgd average dry weather flow, as proposed.
2. The discharge of an effluent to Discharge Serial No. 001, 002, 003 and 008 with constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations<sup>[1]</sup></u>		
		<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>
BOD <sub>5</sub> 20°C	mg/l	20	30	---
Suspended solids	mg/l	15	40	---
Oil and grease	mg/l	10		15
Settleable solids	ml/l	0.1		0.3
Total dissolved solids	mg/l	---		950
Chloride	mg/l	---		150
Sulfate	mg/l	---		300
Residual chlorine	mg/l	---		0.1 <sup>[2]</sup>
Boron	mg/l	---		1.5
Nitrate plus nitrite N	mg/l	---		8
Fluoride	mg/l	---		1.6

[1] The discharge rate mass limitations (in lbs/day) shall be determined using the tabulated concentration limits and flow rate of the effluent.

[2] Total residual chlorine concentration excursions of up to 0.3 mg/l shall not be considered in violation of this requirement provided the total duration of such excursions do not exceed 15 minutes during any 24-hour period. Peaks in excess of 0.3 mg/l lasting less than one minute while changing sulfur dioxide tanks shall not be considered in violation of this requirement.

City of Los Angeles  
 Tillman Water Reclamation Plant  
 Order No. 91-102

CA0056227

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations<sup>[1]</sup></u>					
		<u>4-Day Avg.</u>	<u>Daily Avg.</u>	<u>1-Hr Avg.</u>	<u>Inst. Max.</u>	<u>30-Day Avg.</u>	<u>Daily Max.</u>
Arsenic	ug/l	190	---	360	---	16 <sup>[2]</sup>	20 <sup>[2]</sup>
Cadmium	ug/l	b	---	b	---	---	10
Chlordane	ng/l	---	4.3	---	---	0.08	---
Chromium (VI) <sup>[3]</sup>	ug/l	11	---	16	---	---	50
Copper	ug/l	---	---	---	---	57 <sup>[2]</sup>	78 <sup>[2]</sup>
DDT <sup>[4]</sup>	ng/l	---	1.0	---	---	0.59	---
Dieldrin	ng/l	---	1.9	---	---	0.14	---
Endosulfan	ng/l	---	56	---	220	0.9	---
Endrin	ng/l	---	2.3	---	180	800	---
Heptachlor	ng/l	---	3.8	---	---	0.16	---
Hexachlorocyclohexane gamma	ng/l	---	80	---	---	---	---
Lead	ug/l	---	---	---	---	33 <sup>[2]</sup>	46 <sup>[2]</sup>
Mercury	ug/l	---	---	---	---	0.2 <sup>[2]</sup>	0.25 <sup>[2]</sup>

$b = 4\text{-Day Avg Cadmium} = e^{0.7852H-3.490}$ ;  $1\text{-Hr Avg Cadmium} = e^{1.128H-3.828}$   
 $H = \ln(\text{effluent hardness in mg/l as CaCO}_3)$

- [1] The discharge rate mass limitations (in lbs/day) shall be determined using the tabulated concentration limits and flow rate of the effluent.
- [2] Interim limits.
- [3] Discharger may, at their option, meet this limitation as total chromium.
- [4] As defined in the California Inland Surface Waters Plan, 1991.



<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations<sup>(1)</sup></u>					
		<u>4-Day Avg.</u>	<u>Daily Avg.</u>	<u>1-Hr Avg.</u>	<u>Inst. Max.</u>	<u>30-Day Avg.</u>	<u>Daily Max.</u>
Nickel	ug/l	c	---	c	---	600	---
PCBs <sup>(2)</sup>	ng/l	---	14	---	---	0.07	---
Pentachloro-phenol	ng/l	h	---	h	---	280	---
Selenium	ug/l	5.0	---	20	---	---	10
Silver	ug/l	---	---	---	f	---	50
Toxaphene	ng/l	0.2	---	730	---	0.67	---
Tributyltin	ng/l	20 <sup>i</sup>	40	---	60	---	---
Zinc	ug/l	g	---	g	---	---	---

c = 4-Day Avg Nickel =  $e^{0.864H+1.1645}$ ; 1-Hr Avg Nickel =  $e^{0.846H+3.3612}$   
 h = 4-Day Avg Pentachlorophenol =  $e^{1.005(pH)-5.290}$ ;  
 1-hr Avg Pentachlorophenol =  $e^{1.005(pH)-4.830}$   
 f = Instantaneous Max. Silver =  $e^{1.72H-6.52}$   
 i = Six-month median  
 g = 4-Day Avg Zinc =  $e^{0.8473H+0.7614}$ ; 1-Hr Avg Zinc =  $e^{0.8473H+0.8604}$   
 H = ln (effluent hardness in mg/l as CaCO<sub>3</sub>)  
 pH = Effluent pH

[1] The discharge rate mass limitations (in lbs/day) shall be determined using the tabulated concentration limits and flow rate of the effluent.

[2] As defined in the California Inland Surface Waters Plan, 1991.

<u>Constituent</u>	<u>Discharge Limitations<sup>[1]</sup></u>		
	<u>30-Day Units</u>	<u>Daily Average</u>	<u>Maximum</u>
Aluminum	mg/l	---	1.0
Barium	mg/l	---	1.0
4-chloro-3- methylphenol	mg/l	3	----
1,2-dichlorobenzene	mg/l	2.7	----
1,3-dichlorobenzene	mg/l	0.4	----
2,4-dichlorophenol	ug/l	0.30	----
Fluoranthene	ug/l	42	----
Iron	mg/l	---	0.3
Manganese	mg/l	---	0.05
Phenol	ug/l	300	----
Selenium	mg/l	---	0.01
Toluene	mg/l	10	----
Aldrin	pg/l	130	----
Benzene	ug/l	0.34	----
Chloroform	ug/l	100	----
1,4-dichlorobenzene	ug/l	9.9	----
Dichloromethane	ug/l	4.6	----
Halomethanes	ug/l	100	----

[1] The discharge rate mass limitations (in lbs/day) shall be determined using the tabulated concentration limits and flow rate of the effluent.

<u>Constituent</u>	<u>Units</u>	<u>Discharge Limitations<sup>[1]</sup></u>	
		<u>30-Day Average</u>	<u>Daily Maximum</u>
Heptachlor epoxide	ng/l	0.07	----
Hexachlorocyclohexane			
alpha	ng/l	3.9	----
beta	ng/l	14	----
gamma	ng/l	19	----
PAHs <sup>[2]</sup>	ng/l	2.8	----
TCDD <sup>[2]</sup> equivalents	pg/l	0.013	----
2,4,6-trichlorophenol	ug/l	0.34	----

[1] The discharge rate mass limitations (in lbs/day) shall be determined using the tabulated concentration limits and flow rate of the effluent.

[2] As defined in the California Inland Surface Waters Plan, 1991.

3. The arithmetic mean values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of values, of BOD<sub>20°C</sub> and the suspended solids by weight, for influent samples collected at approximately the same time during the same period.

4. Wastes discharged to watercourses shall at all times be adequately disinfected, oxidized, coagulated, clarified, filtered wastewater.

For the purpose of this requirement, the wastes 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.

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 units more than 5 percent of the time during any 24-hour period.

5. The acute toxicity of the effluent shall be such that the average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.
6. The chronic toxicity of the effluent shall be such that the discharge does not cause toxicity in excess of 1.0 TU<sub>c</sub> in a critical life stage test.
7. If the effluent consistently exceeds acute or chronic toxicity limitation, a toxicity reduction evaluation (TRE) shall be conducted by the Department of Public Works. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source of toxicity is identified, the Department of Public Works shall take all reasonable steps necessary to reduce toxicity to the required level. If these provisions are met, the discharger has implemented the narrative objectives for toxicity as required in the Inland Surface Waters Plan, SWRCB, 1991, and the discharge shall not be considered in violation of Effluent Limitations A.5 and A.6 above.
8. The Department of Public Works shall conduct a study to identify the sources of arsenic, copper, lead, and mercury. Once the sources are identified, the Department of Public Works shall take all reasonable steps necessary to reduce these metals in the effluent. The plan and schedule of the study are to be submitted to the Executive Officer for approval prior to implementation.

August 8, 1991

9. Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revision.

**B. RECEIVING WATER LIMITATIONS**

Receiving water limitations apply to direct discharges from the Tillman Plant (Discharge Serial Nos. 001, 002, 003 and 008) and discharges from the wildlife and recreation lakes (Lake Discharge Serial Nos. 004, 005, 006 and 007).

1. The wastes discharged shall not result in residual chlorine concentrations greater than 0.1 mg/l in the receiving waters.
2. The wastes discharged shall not cause the pH of the receiving water to be less than 6.5 nor more than 8.5. The wastes discharged shall not change the normal ambient pH levels of the receiving waters by more than 0.5 units within any given 24-hour period in receiving waters with designated cold or warm beneficial uses.
3. The wastes discharged shall not increase the receiving water temperature at any time or place by more than 5°F above ambient receiving water temperature; except when ambient receiving water is less than 60°F the wastes discharged shall not increase the receiving water temperature above 70°F. The wastes discharged shall not increase the temperature of the receiving waters at any time or place by more than 5°F within any given 24-hour period.
4. The wastes discharged shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 5.0 mg/l; except when natural conditions cause lesser concentrations, in which case the wastes discharged shall not cause any further reduction in the dissolved oxygen concentration of the receiving waters.
5. The first time there is an exceedance of receiving water limitations for pH, temperature, or dissolved oxygen within the first two years after adoption of the permit, the City shall investigate the source of the problem and develop measures to eliminate the problem within 120

days. Any exceedances during this 120-day period shall not be considered in violation of Receiving Water Limitations B.2, B.3, or B.4 above. The City shall notify the Executive Officer within a week of the first exceedance.

6. The wastes discharged shall not produce concentrations of toxic substances in the receiving waters that are toxic to or produce detrimental physiological responses in human, animal or aquatic life.
7. The wastes discharged shall not cause a violation of any applicable water quality standard for receiving waters adopted by this Board or the State Water Resources Control Board.
8. The wastes discharged shall not result in problems due to breeding of mosquitos, gnats, black flies, midges or other pests.
9. The wastes discharged shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth cause nuisance or adversely affect beneficial uses.
10. The wastes discharged shall not cause increase in turbidity that can cause nuisance or adversely affect beneficial uses.
11. The wastes discharged shall not contain individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentration found in bottom sediments or aquatic life.
12. The Department of Parks and Recreation shall manage the recreation lake and wildlife lake such that beneficial uses of the receiving waters are not impaired.

C. PRETREATMENT REQUIREMENTS

1. This Order includes the dischargers pretreatment program as previously submitted to this Board. Any change to the program shall be reported to the Board in writing and shall not become effective until approved by the

**Executive Officer.**

2. The Department of Public Works shall be responsible for the performance of all pretreatment requirements contained in the Federal Regulations 40 CFR Part 403 and shall be subject to enforcement actions, penalties, fines, and other remedies as provided in the Federal Clean Water Act, as amended. The Bureau of Sanitation shall implement and enforce its approved Pretreatment Program. Enforcement actions may be initiated against an industrial user for noncompliance with applicable standards and requirements as provided by the Federal Clean Water Act.
3. The Department of Public Works shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the Federal Clean Water Act. The discharger shall cause industrial users subject to the Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
4. The Department of Public Works shall perform the pretreatment functions as required in the Federal Regulations 40 CFR Part 403 including, but not limited to:
  - a. Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);
  - b. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;
  - c. Implement the programmatic functions as provided in 40 CFR 403.8(f)(2); and
  - d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).
5. The Department of Public Works shall submit annually a report to the Regional Board, the State Board and the Environmental Protection Agency, Region 9, describing the discharger's pretreatment activities over the previous

twelve months. In the event that the Department of Public Works is not in compliance with any conditions or requirements of this permit, then the Department of Public Works shall also include the reasons for non-compliance and state how and when the Department of Public Works shall comply with such conditions and requirements. This annual report is due on March 1 of each year and shall contain, but not be limited to, the information required in the attached "Requirements for Pretreatment-Annual Report."

**D. REQUIREMENTS AND PROVISIONS**

1. This Order includes the attached "Standard Provisions and General Monitoring and Reporting Requirements" ("Standard Provisions"). If there is any conflict between provisions stated hereinbefore and said "Standard Provisions", those provisions stated hereinbefore prevail.
2. Should sewage flow upstream and tributary to the Tillman Plant be not adequate to operate Tillman at 80 mgd, the Department of Public Works shall treat all flows at Tillman except flow necessary to maintain hydraulic integrity in the sewage collection system downstream; otherwise, a written approval from the Executive Officer should be obtained.
3. The Department of Public Works shall develop and implement a contingency plan for operation of the Tillman Plant during wet weather to maximize hydraulic relief to the sewage collection system downstream of the plant to minimize, if not eliminate, the volume and frequency of overflows from the North Outfall Treatment Facility (NOTF) to Ballona Creek. A similar contingency plan shall also be developed for the Hyperion System involving the Tillman Plant, Los Angeles-Glendale Water Reclamation Plant, North Outfall Replacement Sewer, North Outfall Sewer, and the NOTF with the ultimate goal of eliminating overflows when flows to the system do not exceed the combined treatment, storage and/or hydraulic capacities of the facilities. The schedule for the development of these plans is to be submitted to the Board by November 1, 1991, for approval.
4. Standby 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 causes, discharge of raw or inadequately treated sewage does not occur.

5. The Department of Public Works shall comply with all applicable effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 405 of the Federal Clean Water Act and amendments thereto.
6. This Order does not include requirements for sewage sludge to comply with Federal and State laws and regulations under Section 405 of the Federal Clean Water Act as the discharger returns its sludge to the trunk sewer system for transport to the City's Hyperion Treatment Plant. However, if the discharger contemplates any change of the current practice, report of material change must be filed in advance with this Board for the permit to be modified or revoked and reissued to conform to the standard for sludge use and disposal promulgated under Section 405 (d).
7. City of Los Angeles shall provide the Board within 90 days of the effective date of this Order a written report indicating which agency (Bureau of Sanitation or Department of Recreation and Parks) has primary responsibility for compliance with each requirement in the Order. The report shall be signed by the director of each agency to indicate agreement with the contents.
8. The Department of Public Works shall provide protection for the treatment facilities from inundation which could occur as a result of floods having a predicted frequency of once in 100 years. The level of protection shall not be less than 714.4 feet. Compliance with this requirement shall be 36 months after receipt of approvals necessary for construction from the U.S. Corp of Engineers and Caltrans.
9. The Department of Recreation and Parks shall notify the Executive officer in writing no later than six months prior to planned addition of any chemical to the lakes which may be toxic to aquatic life. Such notification

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shall include but not limited to:

- a. Name and general composition of the chemical;
  - b. Estimated frequency of use; and,
  - c. Recommended concentration and estimated quantities to be used.
10. This permit may be reopened and waste discharge requirements may be revised in the event of the following:
- a. the Los Angeles River is classified as a waterbody other than Category A; and/or,
  - b. when studies on toxicity and metals with interim limits are completed, and the Board has determined that either the objectives in the Inland Surface Waters Plan are appropriate or the Board has developed site specific objectives.

**E. EXPIRATION DATE**

This Order expires on August 10, 1996.

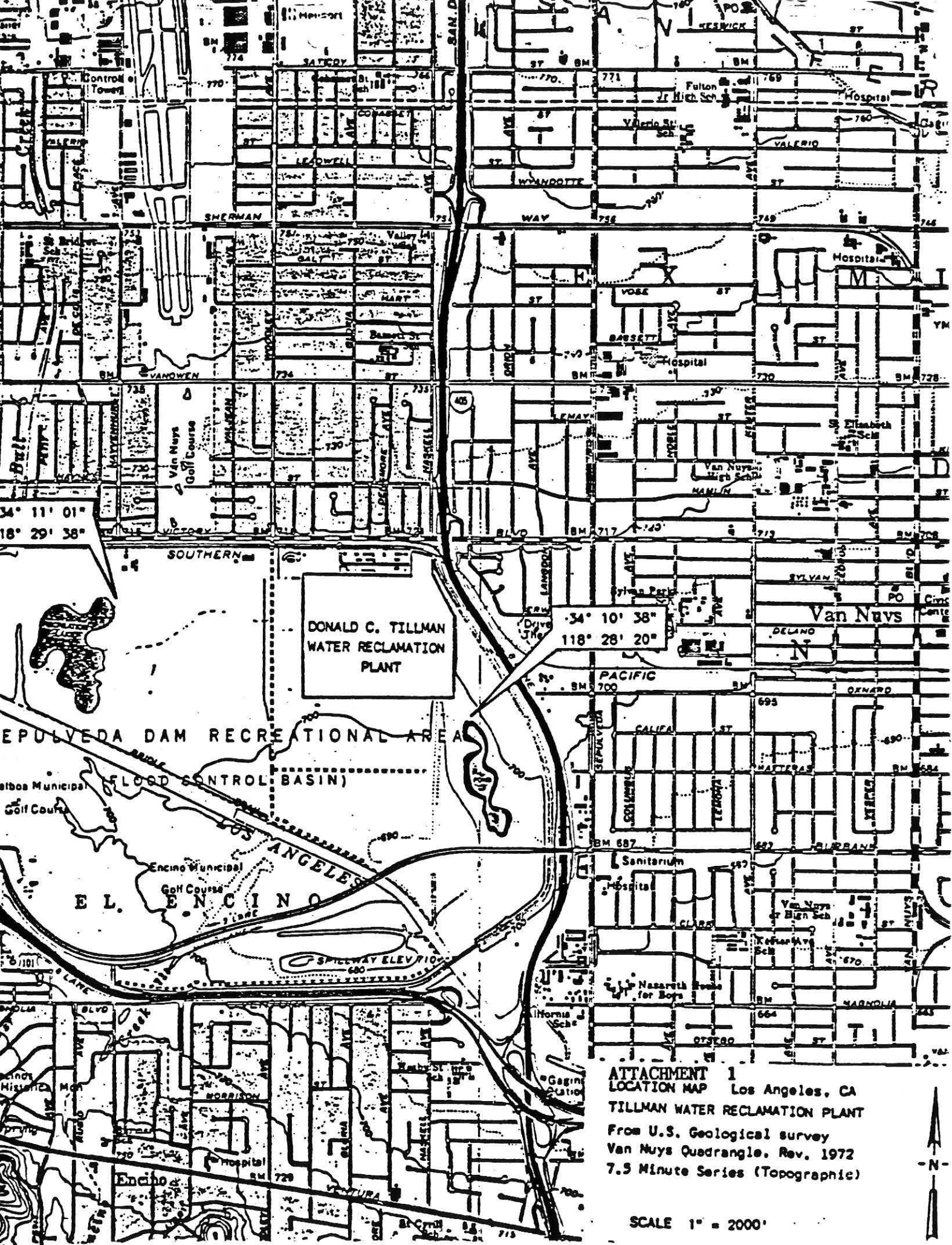
The Department of Public Works and Department of Recreation and Parks must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

**F. RESCISSION**

Order No. 85-34 adopted by this Board on June 24, 1985, is hereby rescinded except for enforcement purposes.

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 September 9, 1991.

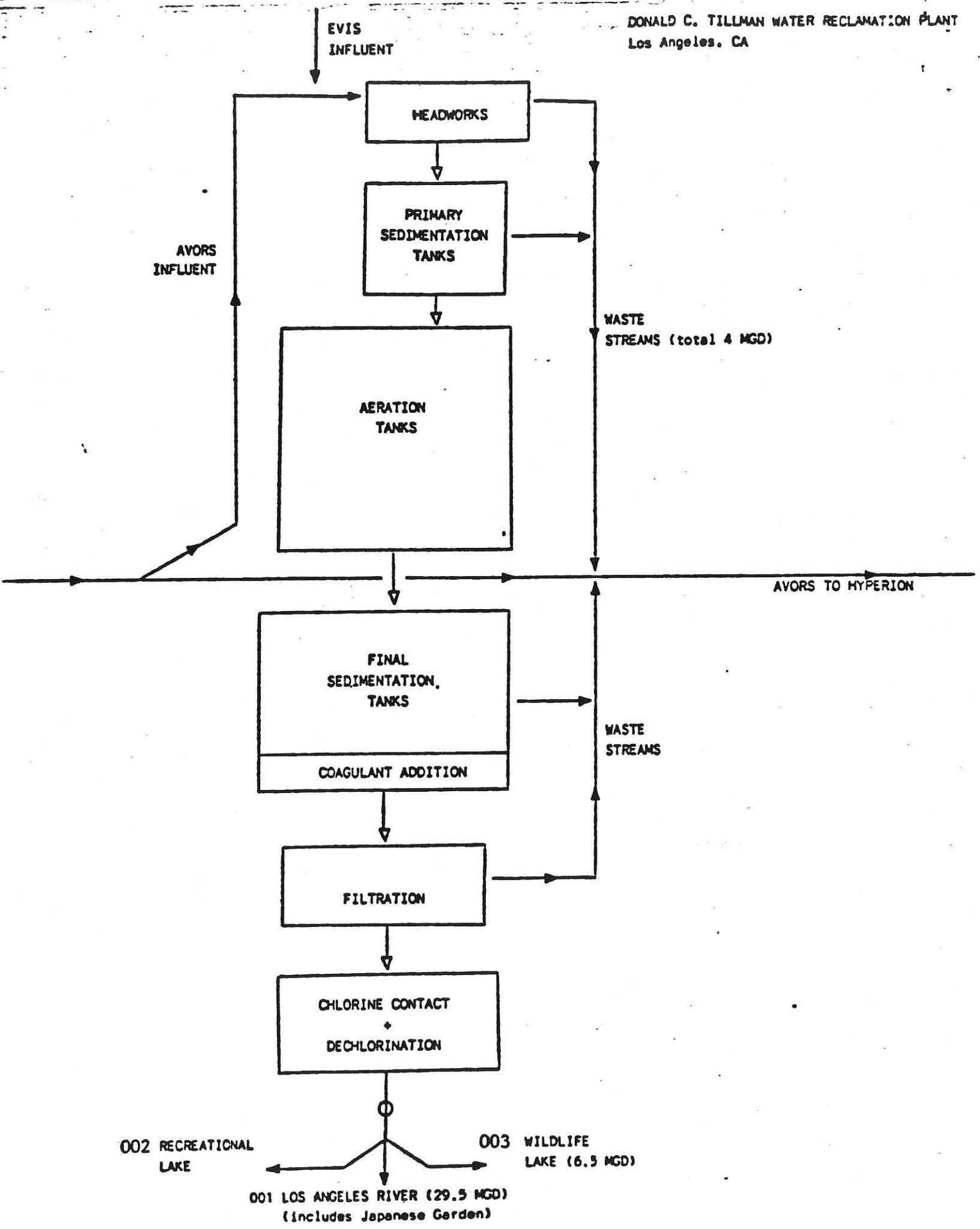
  
ROBERT P. GHIRELLI, D. ENV.  
Executive Officer

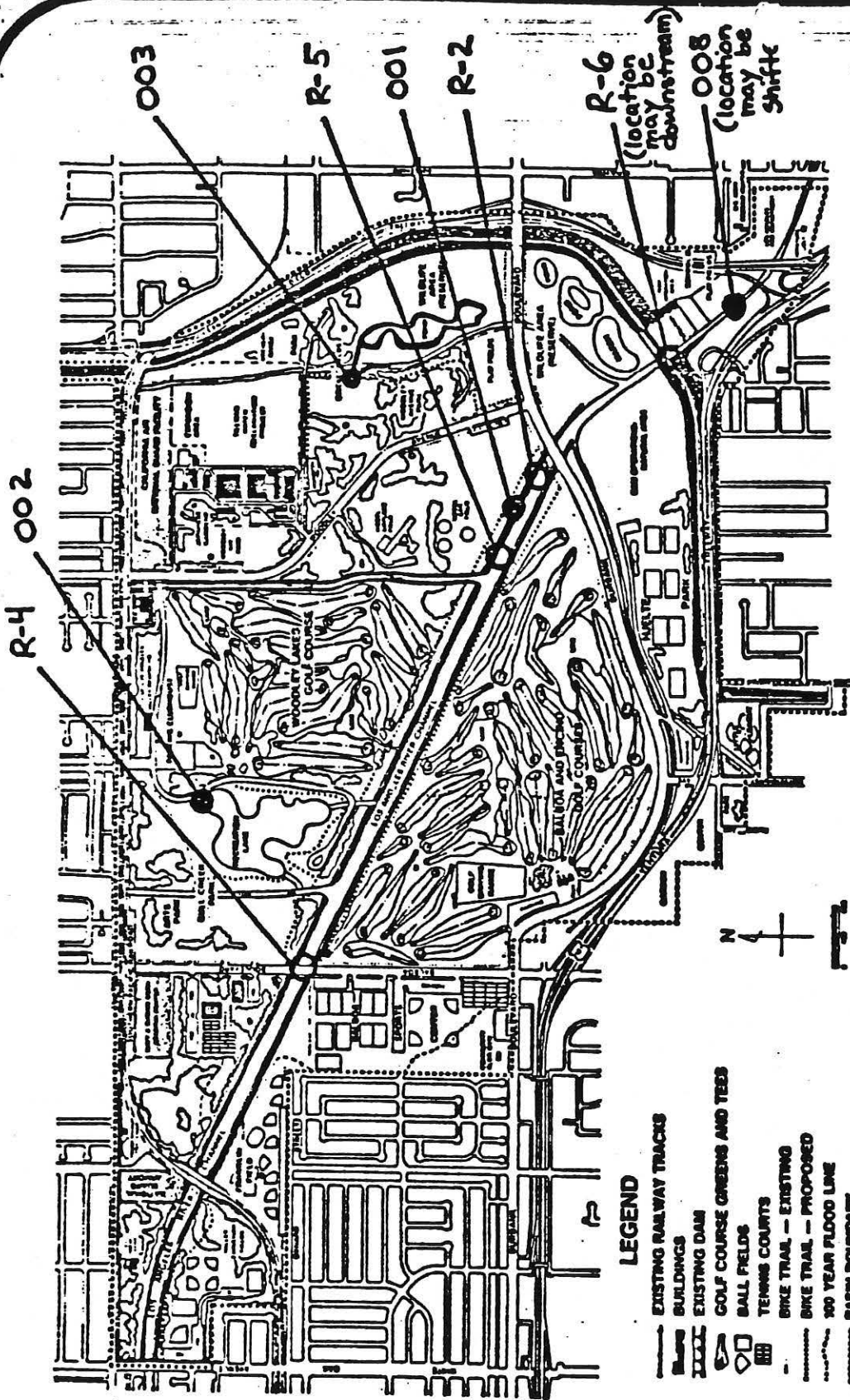


**ATTACHMENT 1**  
**LOCATION MAP** Los Angeles, CA  
**TILLMAN WATER RECLAMATION PLANT**  
 From U.S. Geological survey  
 Van Nuys Quadrangle, Rev. 1972  
 7.5 Minute Series (Topographic)

SCALE 1" = 2000'





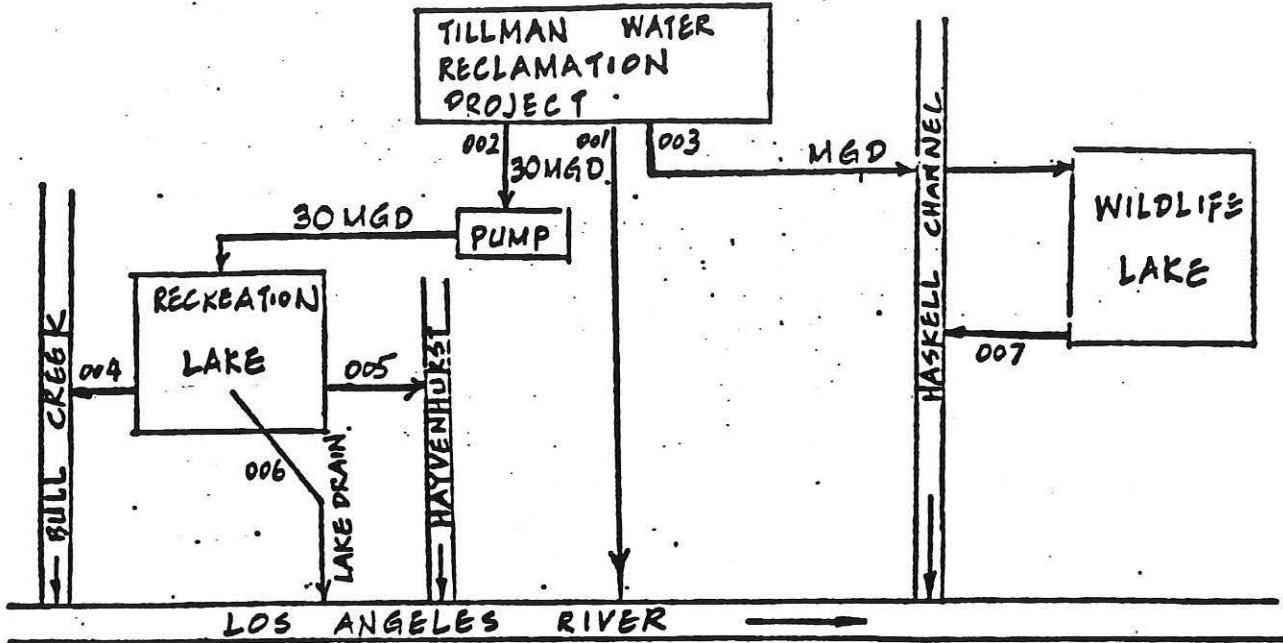


ATTACHMENT 3

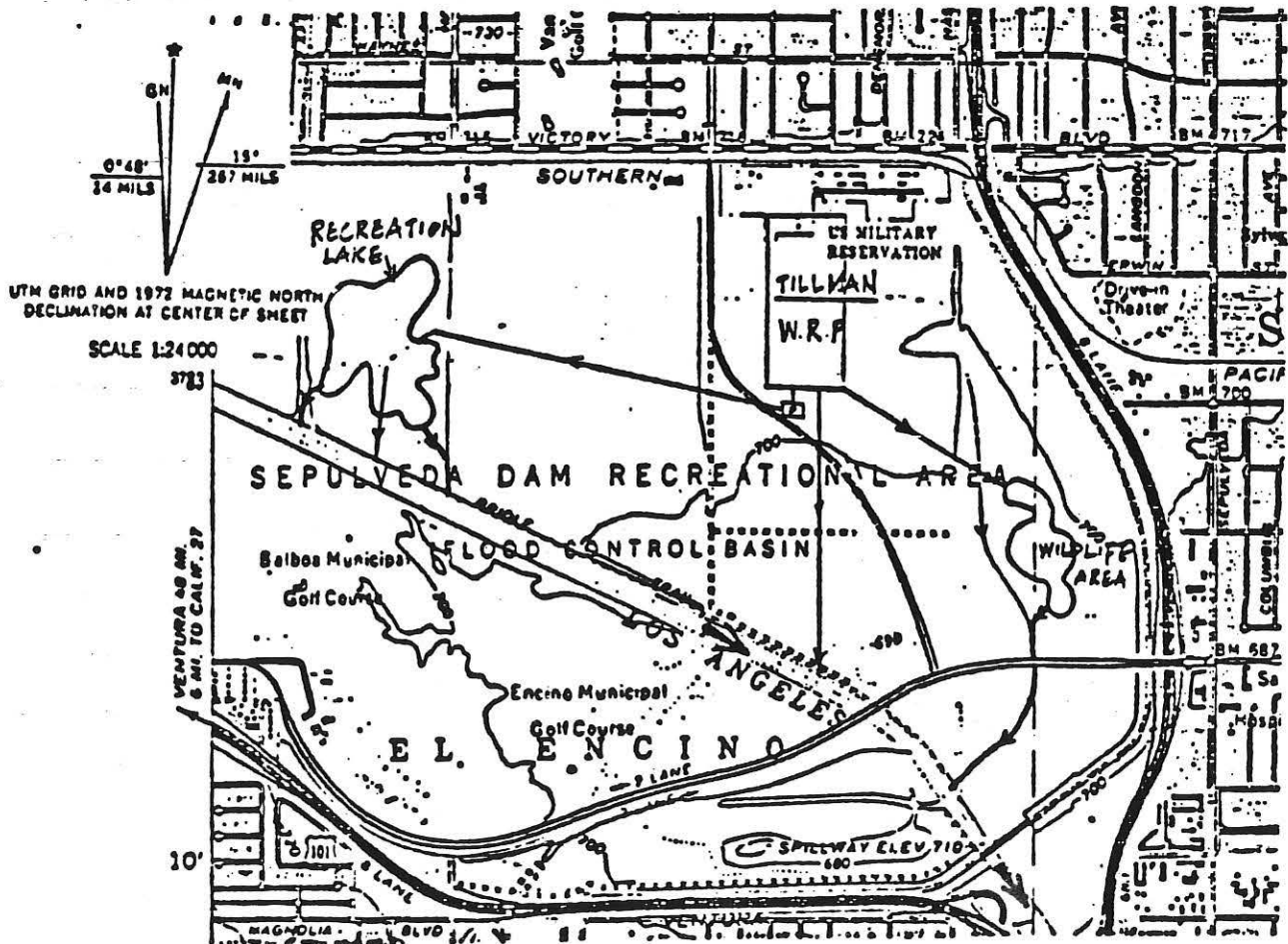
DISCHARGE OUTFALLS AND RECEIVING WATER STATIONS

ATTACHMENT 4

RECLAIMED WATER FLOWCHART AND LAKES LOCATION MAP



SCHEMATIC FLOW CHART



LOCATION MAP

FROM U.S. GEOLOGICAL SURVEY

PHOTOREVISED 1972

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. 5695  
FOR  
CITY OF LOS ANGELES  
(DONALD C. TILLMAN WATER RECLAMATION PLANT)  
NPDES NO. CA0056227

I. Reporting Requirements

The discharger shall implement this monitoring program on the effective date of this Order. All monitoring reports shall be submitted monthly, by the first day of the second month following each monthly sampling period, addressed to the Regional Board, Attention: Technical Support Unit. The first monitoring report under this Program is due by December 1, 1991, and will cover the monitoring period of October, 1991.

The discharger shall submit an annual report containing a discussion of the previous year's effluent and receiving water monitoring data, as well as graphical and tabular summaries of the data. This annual report is due by the fifteenth of March of the year following data collection.

II. Effluent Monitoring Requirements

A sampling station shall be established for each point of discharge and shall be located where representative samples of the effluent (after receiving all treatment) can be obtained. Effluent samples may be obtained at a single station provided that station is representative of the effluent quality at all discharge points. Any changes in sampling station locations shall be approved by the Executive Officer.

Weekly effluent analyses shall be performed on different weekdays during each month. Quarterly monitoring shall be performed during the months of February, May, August and November. Semi-annual monitoring shall be performed during the months of February and August.

- A. The monitoring program for Discharge Serial Nos. 001, 002, 003, and 008 is as follows:  
(for footnotes, see pages T-8 and T-9)

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total waste flow	mgd	continuous <sup>(1)</sup>	----

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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total residual chlorine	mg/l	continuous <sup>[1]</sup>	----
Turbidity <sup>[2]</sup>	NTU	continuous <sup>[1]</sup>	----
Temperature	°F	grab	daily
Total coliform <sup>[2]</sup>	#/100 ml	grab	daily
pH	pH units	grab	daily
Settleable solids	ml/l	grab	daily
Suspended solids	mg/l	24-hr composite	daily
Oil and grease	mg/l	grab	weekly
BOD <sub>5</sub> 20°C	mg/l	24-hr composite	weekly <sup>[3]</sup>
Chloride	mg/l	24-hr composite	weekly
Sulfate	mg/l	24-hr composite	weekly
Total dissolved solids	mg/l	24-hr composite	weekly
Ammonia nitrogen	mg/l	24-hr composite	weekly
Nitrite nitrogen	mg/l	24-hr composite	weekly
Nitrate nitrogen	mg/l	24-hr composite	weekly
Organic nitrogen	mg/l	24-hr composite	weekly
Total nitrogen	mg/l	24-hr composite	weekly
Detergents (methylene blue active substances)	mg/l	24-hr composite	weekly
Total phosphates	mg/l	24-hr composite	monthly
Boron	mg/l	24-hr composite	monthly



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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Fluoride	mg/l	24-hr composite	monthly
Copper	µg/l	24-hr composite	monthly
Iron	mg/l	24-hr composite	quarterly
Chromium	µg/l	24-hr composite	quarterly
Cyanide	mg/l	24-hr composite	quarterly
Aluminum	mg/l	24-hr composite	quarterly
Arsenic	µg/l	24-hr composite	quarterly
Barium	mg/l	24-hr composite	quarterly
Cadmium	µg/l	24-hr composite	quarterly
Lead	µg/l	24-hr composite	quarterly
Manganese	mg/l	24-hr composite	quarterly
Mercury	µg/l	24-hr composite	quarterly
Nickel	µg/l	24-hr composite	quarterly
Selenium	µg/l	24-hr composite	quarterly
Silver	µg/l	24-hr composite	quarterly
Zinc	µg/l	24-hr composite	quarterly
Phenol	µg/l	24-hr composite	quarterly
Phenolic Compounds (non-chlorinated)	µg/l	24-hr composite	quarterly
Phenolic Compounds (chlorinated)	µg/l	24-hr composite	quarterly
Toluene	mg/l	24-hr composite	quarterly

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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Aldrin	pg/l	24-hr composite	quarterly
Benzene	µg/l	24-hr composite	quarterly
Chloroform	µg/l	24-hr composite	quarterly
Lindane (HCH)	µg/l	24-hr composite	quarterly
Endrin	ng/l	24-hr composite	quarterly
Toxaphene	ng/l	24-hr composite	quarterly
Methoxychlor	µg/l	24-hr composite	quarterly
Chlordane	ng/l	24-hr composite	quarterly
Dieldrin	ng/l	24-hr composite	quarterly
Endosulfan	ng/l	24-hr composite	quarterly
Heptachlor	ng/l	24-hr composite	quarterly
Heptachlor epoxide	ng/l	24-hr composite	quarterly
Hexachlorocyclo- hexanegamma	ng/l	24-hr composite	quarterly
Hexachlorocyclo- hexane (alpha)	ng/l	24-hr composite	quarterly
Hexachlorocyclo- hexane (beta)	ng/l	24-hr composite	quarterly
Hexachlorocyclo- hexane (gamma)	ng/l	24-hr composite	quarterly
Pentachlorophenol	ng/l	24-hr composite	quarterly
Tributyltin	ng/l	24-hr composite	quarterly
4-chloro-3- methylphenol	mg/l	24-hr composite	quarterly

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<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
1,2-dichlorobenzene	mg/l	24-hr composite	quarterly
1,3-dichlorobenzene	mg/l	24-hr composite	quarterly
1,4-dichlorobenzene	µg/l	24-hr composite	quarterly
Dichloromethane	µg/l	24-hr composite	quarterly
Halomethanes	µg/l	24-hr composite	quarterly
Fluoranthene	µg/l	24-hr composite	quarterly
2,4-dichlorophenol	µg/l	24-hr composite	quarterly
2,4,6-trichlorophenol	µg/l	24-hr composite	quarterly
2,4-D	µg/l	24-hr composite	quarterly
2,4,5-TP (Silvex)	µg/l	24-hr composite	quarterly
Total Identifiable Chlorinated Hydrocarbons	µg/l	24-hr composite	quarterly
PAHs <sup>[4]</sup>	ng/l	24-hr composite	quarterly
PCBs <sup>[4]</sup>	ng/l	24-hr composite	quarterly
DDTs <sup>[4]</sup>	ng/l	24-hr composite	quarterly
TCDD <sup>[4]</sup> equivalents	pg/l	24-hr composite	quarterly
Radioactivity <sup>[5]</sup> gross alpha, beta	pCi/l	24-hr composite	quarterly
EPA Priority pollutants <sup>[6]</sup>	µg/l	as specified in 40 CFR Part 136, October 1984	semi-annually

## B. Effluent Toxicity Testing

### 1. Acute toxicity

Testing shall be conducted monthly by the method specified in Guidelines for Performing Static Acute Toxicity Fish Bioassays in Municipal and Industrial Wastewaters, California State Water Resources Control Board and Department of Fish and Game, July 1976. Testing shall be performed on a grab sample and shall use the fathead minnow (Pimephales promelas) as the test species. The results of acute toxicity testing shall be reported as percent survival in undiluted effluent. Submission of bioassay results should include the information noted on pages 31 and 32 of the above document.

Ammonia shall not be removed from the bioassay sample prior to the Executive Officer's notification and authorization.

### 2. Chronic toxicity

Testing shall be conducted bimonthly on a composite sample. An initial screening shall be conducted using a minimum of three test species with approved test protocols listed in the California Inland Surface Waters Plan (State Water Resources Control Board, 1991). The initial screening process shall be conducted for a minimum of three bimonthly tests to account for potential variability of the effluent. If possible, the test species used during the screening process shall include a vertebrate, an invertebrate, and an aquatic plant.

After the initial screening period, chronic toxicity testing may be limited to the most sensitive test species. However, the initial screening process shall be repeated annually, with a minimum of three test species with approved test protocols, to ensure use of the most sensitive species for chronic toxicity testing.

Dilution and control waters should be obtained immediately upstream of the wastewater outfall.

Standard dilution water may be used if the above source exhibits toxicity greater than 1.0  $tu_c$ . The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

Chronic toxicity concentration ( $TC_c$ ) shall be expressed and reported as toxic units ( $tu_c$ ), where:

$$TC_c (tu_c) = 100/NOEL$$

and the NOEL (No Observable Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Table 4 of the Inland Surface Waters Plan.

### C. Toxicity Reduction Requirements

If a discharge consistently exceeds an acute or chronic toxicity limitation, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

### III. Influent Monitoring Requirements

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Total waste flow	mgd	continuous	----
BOD <sub>5</sub> 20°C <sup>[7]</sup>	mg/l	24-hr composite	weekly
Suspended solids <sup>[7]</sup>	mg/l	24-hr composite	daily
Chloride	mg/l	24-hr composite	weekly

Footnotes to Effluent and Influent Monitoring Programs

- [1] Where continuous monitoring of a constituent is required, the following shall be reported:

Total chlorine residual - maximum value recorded each day.

Total waste flow - total daily flow and peak daily flow.

Turbidity - maximum value recorded each day, total amount of time each day, in minutes, that turbidity exceeded five (5) turbidity units, and the flow-proportioned average daily value and monthly mean.

- [2] Coliform and turbidity 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 facilities, filtration, and disinfection procedures. The location(s) of the sampling point(s) and any proposed change(s) thereto must be approved by the Executive Officer, and the proposed change(s) shall not be made until such approval has been granted. The Department of Public Works shall provide the Executive Officer by October 9, 1991, the location(s) of the sampling point(s). If the chosen sampling point(s) is/are not immediately prior to discharge, subsequent to all treatment processes, holding ponds, reservoirs, etc., an additional control sample must be obtained of the final effluent and analyzed for coliform. This/These second sample(s), if required, shall be obtained at the same time as, and as frequent as, the other required sample(s).

- [3] During the first year of operation of the 40 mgd expansion facilities, BOD analyses for discharge to Discharge Serial Nos. 001, 002 and 003 shall be conducted on a daily basis. Thereafter, and after compliance with the 7-day and 30-day average limits is demonstrated, the frequency of analysis shall be on a weekly basis.

If any result of weekly BOD analysis yields 90% or greater of the 30-day average limit, the frequency of analyses shall be increased to daily within one week of knowledge of the test result for at least one month and compliance with the 7-day and 30-day average BOD limits is demonstrated; after which the frequency shall revert to weekly.

- [4] As defined in the California Inland Surface Waters Plan, 1991.
- [5] If gross  $\alpha$  activity exceeds 5 pCi/l in any sample, measurement of  $Ra^{226}$  shall be made; if  $Ra^{226}$  exceeds 3 pCi/l, measurement of  $Ra^{228}$  shall be made. If gross  $\beta$  activity exceeds 50 pCi/l in any sample, an analysis of the sample shall be performed to identify the major constituents present and compliance with Title 17, Section 30269 shall also be demonstrated.
- [6] Analyses conducted for pretreatment requirements may be reported in lieu of additional analyses.
- [7] Samples shall be obtained on the same day that effluent  $BOD_{5,20^{\circ}C}$  and suspended solids samples are obtained in order to demonstrate percent removal.

IV. Receiving Water Monitoring Requirements

- A. Receiving water stations for Discharge Serial No. 001 shall be established at the following locations (Figure 1):

<u>Station Number</u>	<u>Los Angeles River Stations</u>
R-2	Los Angeles River, 500 feet downstream of the discharge point
R-4	Los Angeles River at Balboa Boulevard (upstream of the discharge point)
R-5	At the confluence of the Los Angeles River and Encino Creek (upstream of the discharge point)
R-6	Los Angeles River, 0.5 to 1 mile downstream of the discharge point

- B. Receiving water stations for Discharge Serial No. 008 shall be established when location of outfall is finalized.
- C. Receiving water stations for Lake Discharge Serial Nos. 004, 005 and 006, as indicated in the Sepulveda Basin

Recreation Area - Recreation Lake Management Plan (City of Los Angeles, Department of Recreation and Parks, Landscape Design Division, August 1990), shall be established at the following locations (Figure 2):

<u>Station Number</u>	<u>Receiving Water Stations</u>
A	Hayvenhurst Channel, upstream from lake discharge (100 feet upstream of the Recreation Lake Storm Drain No. 5 outlet)
B	Hayvenhurst Channel at lake weir outlet (at Recreation Lake Storm Drain No. 3 outlet)
C	Hayvenhurst Channel at lake weir outlet (at Recreation Lake Storm Drain No. 4 outlet)
D	At the confluence of the Los Angeles River and Hayvenhurst Channel
E	Los Angeles River, downstream from Hayvenhurst Channel and upstream from Woodley Flood Control Channel
F	At the Recreation Lake outlet spillway, prior to discharge into Hayvenhurst Channel
G	Recreation Lake bottom drain outlet at the Los Angeles River
H	At the confluence of the Los Angeles River and Bull Creek
I	Los Angeles River, upstream of Bull Creek (Station R-4 may be substituted for Station I)
J	Bull Creek at lake weir outlet (at Recreation Lake Storm Drain Nos. 1, 2 outlet)



<u>Station Number</u>	<u>Receiving Water Stations</u>
K	Bull Creek, upstream of lake discharge (100 feet upstream of Recreation Lake Storm Drain Nos. 1, 2 outlet)
L	Hayvenhurst Channel at lake weir outlet (at Recreation Lake Storm Drain No. 5 outlet)

- D. Receiving water stations for Lake Discharge Serial No. 007, as indicated in the Sepulveda Basin Recreation Area - Wildlife Lake Area Management Plan (City of Los Angeles, Department of Recreation & Parks, Landscape Design Division, February 1991), shall be established at the following locations (Figure 3):

<u>Station Number</u>	<u>Receiving Water Stations</u>
W-A	Haskell Flood Control Channel, 200 feet upstream from diverter (station upstream from lake discharge)
W-B	Haskell Flood Control Channel at Burbank Boulevard (downstream from confluence of the lake outlet channel)
W-C	At the confluence of the Los Angeles River and Haskell Flood Control Channel (downstream from lake discharge)
W-D	Los Angeles River, upstream of Haskell Flood Control Channel (Station R-2 may be substituted for Station W-D)
W-E	Los Angeles River, downstream of Haskell Flood Control Channel (station R-6 may be substituted for station W-E)

- E. Stations within the Recreation Lake for Discharge Serial No. 002, as indicated in the Revised Addendum to Sepulveda Basin Recreation Lake Management Plan (City of Los Angeles, Department of Recreation & Parks, August 23, 1991), shall be established at the following locations (Figure 2):

<u>Station Number</u>	<u>Recreation Lake Stations</u>
No. 1	400 feet from the shoreline inflow waterfall
No. 2	400 feet southwest from Station No. 1
No. 3	400 feet southeast from Station No. 2
No. 4	400 feet from the outlet spillway
No. 5	In the lake inlet chamber
No. 6	In the northwest lobe of the lake, at the center of the lobe
No. 7	In the southwest cove of the lake, at the center of the cove area

- F. Stations within the Wildlife Lake for Discharge Serial No. 003, as indicated in the above-mentioned wildlife lake management plan, shall be established at the following locations (Figure 3):

<u>Station Number</u>	<u>Wildlife Lake Stations</u>
W-1	In the center of the lake, north of the island, within the deep channel area
W-2	South of the island, near the westerly lake shoreline at 2 foot water depth

Station Number

Wildlife Lake Stations

W-3

Within the concrete-lined lake outlet channel that discharges to Haskell Channel

G. Type and frequency of monitoring. In reference to Stations A through L, W-A through W-E, 1 through 7, and W-1 through W-3, the first year's data will be evaluated and the Executive Officer shall decide whether to modify the sampling constituents, the minimum frequency of analysis, station locations, or the number of stations. Until approval has been given to modify the program, these monitoring requirements shall remain in effect.

1. The following analyses shall be conducted on grab samples obtained at Stations R-2, R-4, R-5, and R-6:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Total residual chlorine	mg/l	weekly
Total coliform	number/100ml	weekly
Dissolved oxygen	mg/l	weekly
pH	pH units	weekly
Temperature	°F	weekly
Nitrate nitrogen	mg/l	quarterly
Nitrite nitrogen	mg/l	quarterly
Ammonia nitrogen	mg/l	quarterly
Organic nitrogen	mg/l	quarterly
Total nitrogen	mg/l	quarterly
Total phosphate	mg/l	quarterly

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<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Conductivity	µmhos/cm	quarterly
MBAS	mg/l	quarterly
COD	mg/l	quarterly
BOD <sub>5</sub> 20°C	mg/l	quarterly
Oil and Grease	mg/l	quarterly
Arsenic	mg/l	semi-annually
Cadmium	mg/l	semi-annually
Total Chromium	mg/l	semi-annually
Copper	mg/l	semi-annually
Lead	mg/l	semi-annually
Mercury	mg/l	semi-annually
Nickel	mg/l	semi-annually
Zinc	mg/l	semi-annually
Cyanide	mg/l	semi-annually
Phenolic compounds	mg/l	semi-annually
Aldrin and Dieldrin	µg/l	semi-annually
Endrin	µg/l	semi-annually
HCH	µg/l	semi-annually
Chlordane	µg/l	semi-annually
Toxaphene	µg/l	semi-annually
PCBs	µg/l	semi-annually

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
DDTs	µg/l	semi-annually
PAHs	µg/l	semi-annually

2. The receiving water monitoring program for the Recreation Lake shall be implemented once the discharge through Serial No. 002 begins. The following analyses shall be conducted on grab samples obtained at Stations A through L:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Total residual chlorine	mg/l	weekly
Total coliform	number/100ml	weekly
Dissolved oxygen	mg/l	weekly
pH	pH units	weekly
Temperature	°F	weekly
Nitrate nitrogen	mg/l	quarterly
Nitrite nitrogen	mg/l	quarterly
Ammonia nitrogen	mg/l	quarterly
Organic nitrogen	mg/l	quarterly
Total nitrogen	mg/l	quarterly
Total phosphate	mg/l	quarterly
Conductivity	µmhos/cm	quarterly
MBAS	mg/l	quarterly
COD	mg/l	quarterly

City of Los Angeles  
 D.C. Tillman Water Reclamation Plant  
 Monitoring and Reporting Program No. 5695

CA0056227

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
BOD <sub>5</sub> 20°C	mg/l	quarterly
Oil and Grease	mg/l	quarterly
Arsenic	mg/l	semi-annually
Cadmium	mg/l	semi-annually
Total Chromium	mg/l	semi-annually
Copper	mg/l	semi-annually
Lead	mg/l	semi-annually
Mercury	mg/l	semi-annually
Nickel	mg/l	semi-annually
Zinc	mg/l	semi-annually
Cyanide	mg/l	semi-annually
Phenolic compounds	mg/l	semi-annually
Aldrin and Dieldrin	µg/l	semi-annually
Endrin	µg/l	semi-annually
HCH	µg/l	semi-annually
Chlordane	µg/l	semi-annually
Toxaphene	µg/l	semi-annually
PCBs	µg/l	semi-annually
DDTs	µg/l	semi-annually
PAHs	µg/l	semi-annually

3. The receiving water monitoring program for the Wildlife Lake shall be implemented once the discharge through Serial No. 003 begins. The following analyses shall be conducted on grab samples obtained at Stations W-A through W-E:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Total residual chlorine	mg/l	weekly
Total coliform	number/100ml	weekly
Dissolved oxygen	mg/l	weekly
pH	pH units	weekly
Temperature	°F	weekly
Nitrate nitrogen	mg/l	quarterly
Nitrite nitrogen	mg/l	quarterly
Ammonia nitrogen	mg/l	quarterly
Organic nitrogen	mg/l	quarterly
Total nitrogen	mg/l	quarterly
Total phosphate	mg/l	quarterly
Conductivity	μmhos/cm	quarterly
MBAS	mg/l	quarterly
COD	mg/l	quarterly
BOD <sub>5</sub> 20°C	mg/l	quarterly
Oil and Grease	mg/l	quarterly
Arsenic	mg/l	semi-annually
Cadmium	mg/l	semi-annually

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Total Chromium	mg/l	semi-annually
Copper	mg/l	semi-annually
Lead	mg/l	semi-annually
Mercury	mg/l	semi-annually
Nickel	mg/l	semi-annually
Zinc	mg/l	semi-annually
Cyanide	mg/l	semi-annually
Phenolic compounds	mg/l	semi-annually
Aldrin and Dieldrin	µg/l	semi-annually
Endrin	µg/l	semi-annually
HCH	µg/l	semi-annually
Chlordane	µg/l	semi-annually
Toxaphene	µg/l	semi-annually
PCBs	µg/l	semi-annually
DDTs	µg/l	semi-annually
PAHs	µg/l	semi-annually

4. The monitoring program for the Recreation Lake shall be implemented once the discharge through Serial No. 002 begins. The following analyses shall be conducted on samples obtained from the Recreation Lake Station Nos. 1 through 7. From the in-lake stations, samples shall be taken at one foot and seven foot water depths:



<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
pH	pH units	daily
Temperature	°F	daily
Dissolved oxygen	mg/l	daily
Total nitrogen*	mg/l	weekly
Ammonia nitrogen*	mg/l	weekly
Organic nitrogen*	mg/l	weekly
Nitrate nitrogen*	mg/l	weekly
Nitrite nitrogen*	mg/l	weekly
Total phosphorus*	mg/l	weekly
Organic phosphorus*	mg/l	weekly
Condensed phosphorus*	mg/l	weekly
Orthophosphorus*	mg/l	weekly

\*After these constituents have been monitored for three months and the non-limiting nutrient has been determined, sampling for that non-limiting nutrient shall be changed to monthly upon approval by the Executive Officer. Until approval has been given, weekly monitoring shall remain in effect.

- The following analyses shall be conducted on grab samples obtained at Recreation Lake Station No. 4 (samples shall be taken at one foot and seven foot water depths):

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Fecal coliform	number/100ml	monthly

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Total coliform	number/100ml	monthly
Suspended solids	mg/l	monthly
Conductivity	μmhos/cm	monthly

6. The monitoring program for the Wildlife Lake shall be implemented once the discharge through Serial No. 003 begins. The following analyses shall be conducted on grab samples obtained at the Wildlife Lake station nos. W-1, W-2, and W-3 (samples shall be taken from mid-depth):

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
pH	pH units	daily
Temperature	°F	daily
Dissolved oxygen	mg/l	daily
Total nitrogen	mg/l	weekly
Ammonia nitrogen	mg/l	weekly
Organic nitrogen	mg/l	weekly
Nitrate nitrogen	mg/l	weekly
Nitrite nitrogen	mg/l	weekly
Total phosphorus	mg/l	weekly
Organic phosphorus	mg/l	weekly
Condensed phosphorus	mg/l	weekly
Orthophosphorus	mg/l	weekly

7. The following analyses shall be conducted on grab samples obtained at Wildlife Lake Station No. W-3:

<u>Constituent</u>	<u>Units</u>	<u>Minimum Frequency of Analysis</u>
Fecal coliform	number/100ml	weekly
Total coliform	number/100ml	weekly
Suspended solids	mg/l	monthly
Conductivity	$\mu$ mhos/cm	monthly

- H. Once every quarter, representative bottom samples shall be collected at Recreation Lake Station No. 4, Wildlife Lake Station No. W-2, and Los Angeles River Station No. R-2. These bottom samples shall be analyzed for total organic nitrogen, total organic carbon, sediment grain size distribution, arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, PCBs, DDTs, PAHs, cyanide, phenols, aldrin, dieldrin, endrin, HCH, chlordane and toxaphene. Constituents to be included in the PAHs analysis shall be approved by the Executive Officer.
- I. At the same time the receiving waters are sampled, observations shall be made in the reaches bounded by Station Nos. R-5 and R-2, Station Nos. K and H, Station Nos. A and D, Station Nos. H and D, and Station Nos. W-A and W-C, and a log shall be maintained thereof. Attention shall be given to the presence and extent, or absence of:
1. oil, grease, scum, or solids of waste origin
  2. sludge deposits
  3. discoloration of surface waters
  4. algal blooms
  5. odors
  6. foam

7. any unusual occurrences

The following shall also be noted in the log:

1. date and time of observation
2. weather conditions
3. estimate of flow

Copies of the above log shall be submitted with the monitoring reports.

- J. In the event of a spill or bypass of raw or partially treated sewage into the Los Angeles River system, total and fecal coliform analyses shall be made on grab samples collected at all potentially affected downstream receiving water stations and at least one unaffected upstream receiving water station. Coliform samples shall be collected at each station on the date of the spill or bypass, if possible, and daily on each of the following four days.
- K. Receiving water samples shall not be taken during or within 48 hours following the flow of rainwater runoff into the Los Angeles River system.

V. Compliance With 4, 7 and 30-Day Average Limits

- A. For any weekly monitored constituent: if any result of a weekly analysis exceeds the 4-day or 7-day average limit (or the 30-day average limit if no 4-day or 7-day limit is prescribed), the frequency of analysis shall be increased to daily within one week of knowledge of the test result. Daily testing shall continue for at least 7 consecutive days and until compliance with the 4-day or 7-day average limit is demonstrated, after which the frequency shall revert to weekly. Chloride monitoring is excluded from this requirement.
- B. For any monthly, quarterly, and semi-annually monitored constituents:

1. If any result of any analysis exceeds the 30-day average limit, the frequency of analysis shall be increased to weekly within one week of knowledge of the test result. Weekly testing shall continue for at least 4 consecutive weeks and until compliance with the 30-day average limit is demonstrated, after which the frequency shall revert to as previously designated.
2. If any result of any analysis exceeds the 4-day average limit, the frequency of analysis shall be increased to daily within one week of knowledge of the test result. Daily testing shall continue for at least 7 consecutive days and until compliance with the 4-day average limit is demonstrated, after which the frequency shall revert to as previously designated.

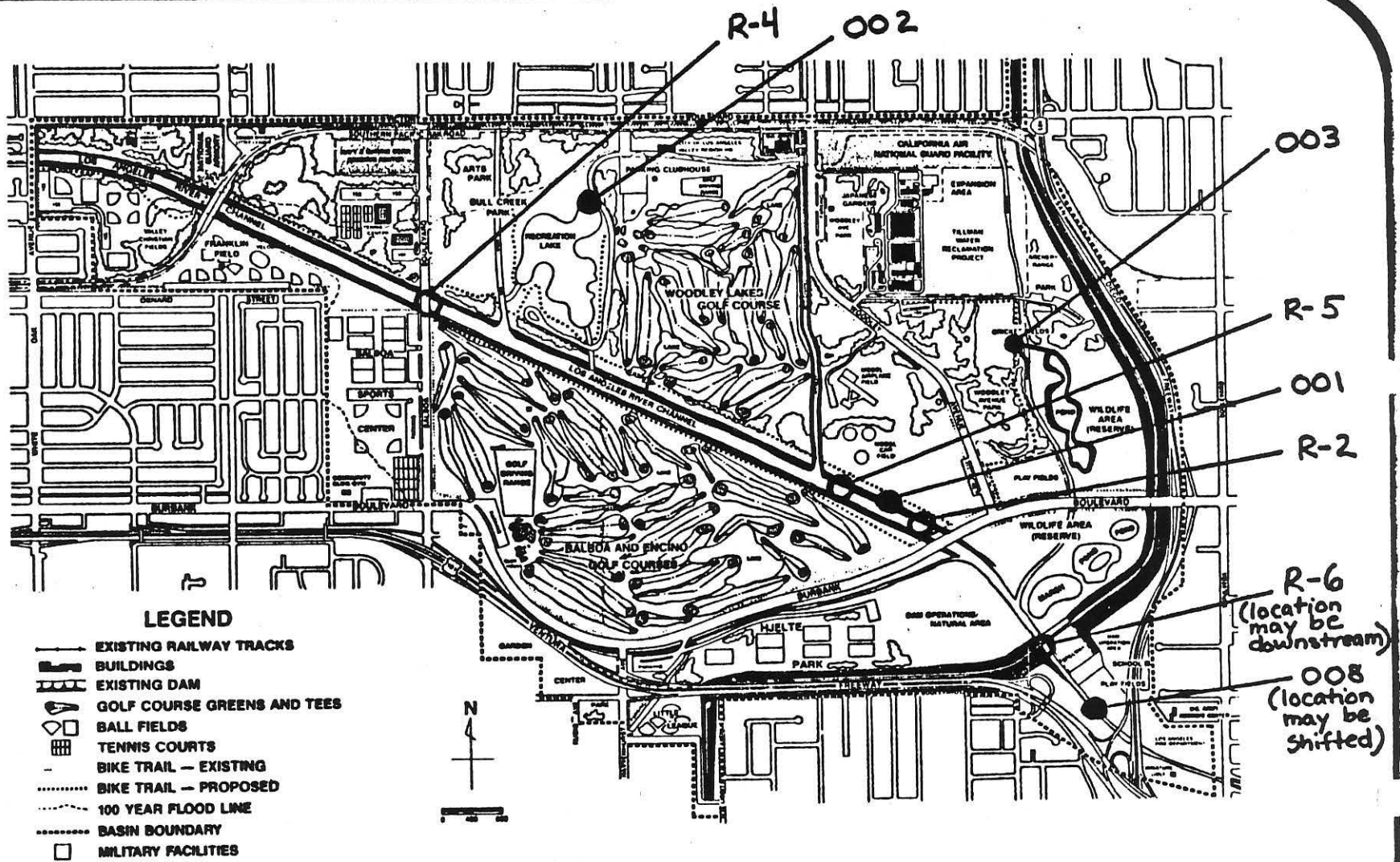
VI. The detection limits employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the discharger can demonstrate that a particular detection limit is not attainable and obtains approval for a higher detection limit for the Executive Officer. At least once a year, the discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures.

Ordered by:



ROBERT P. GHIRELLI, D.Env.  
Executive Officer

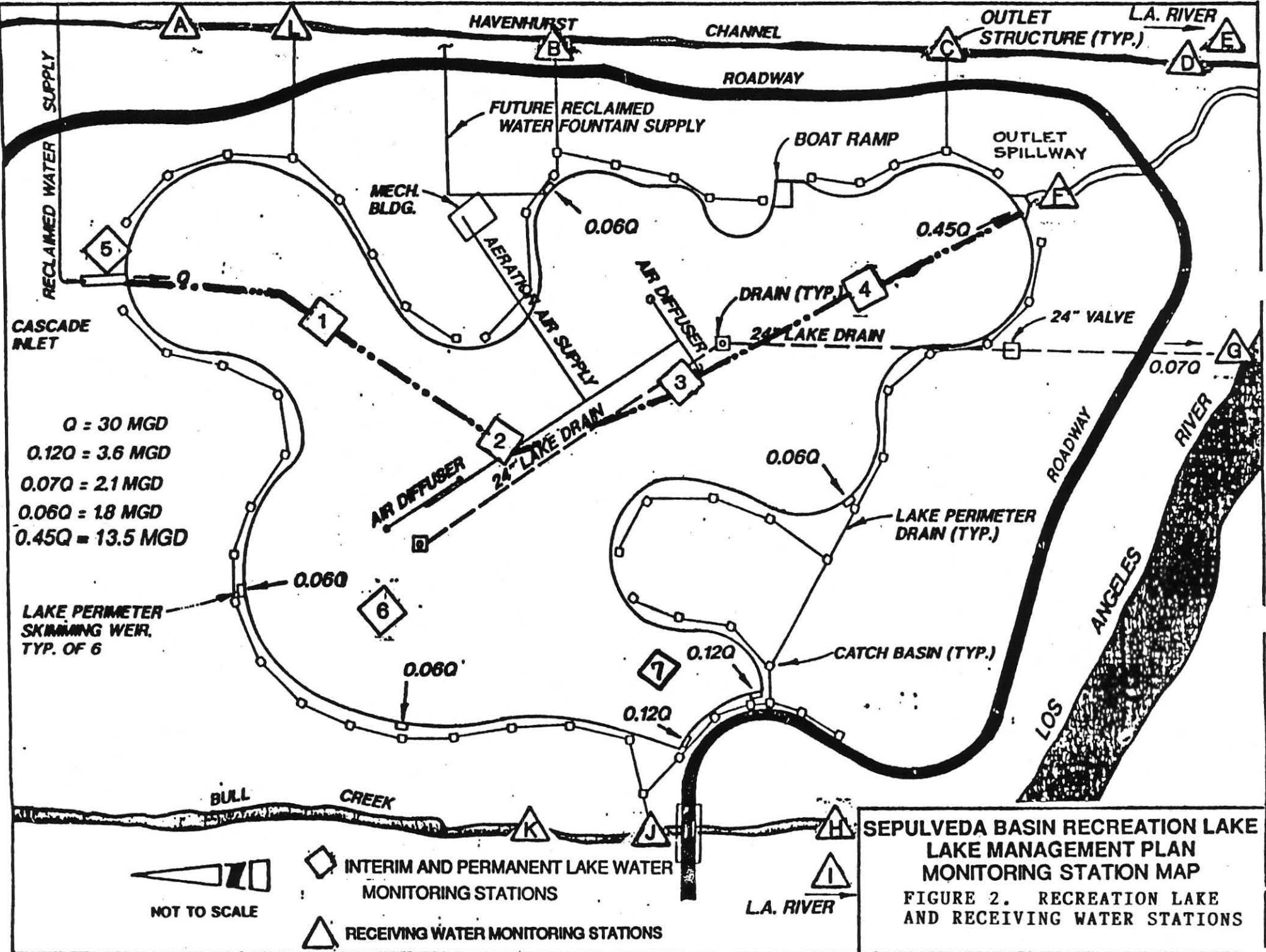
Date: September 9, 1991



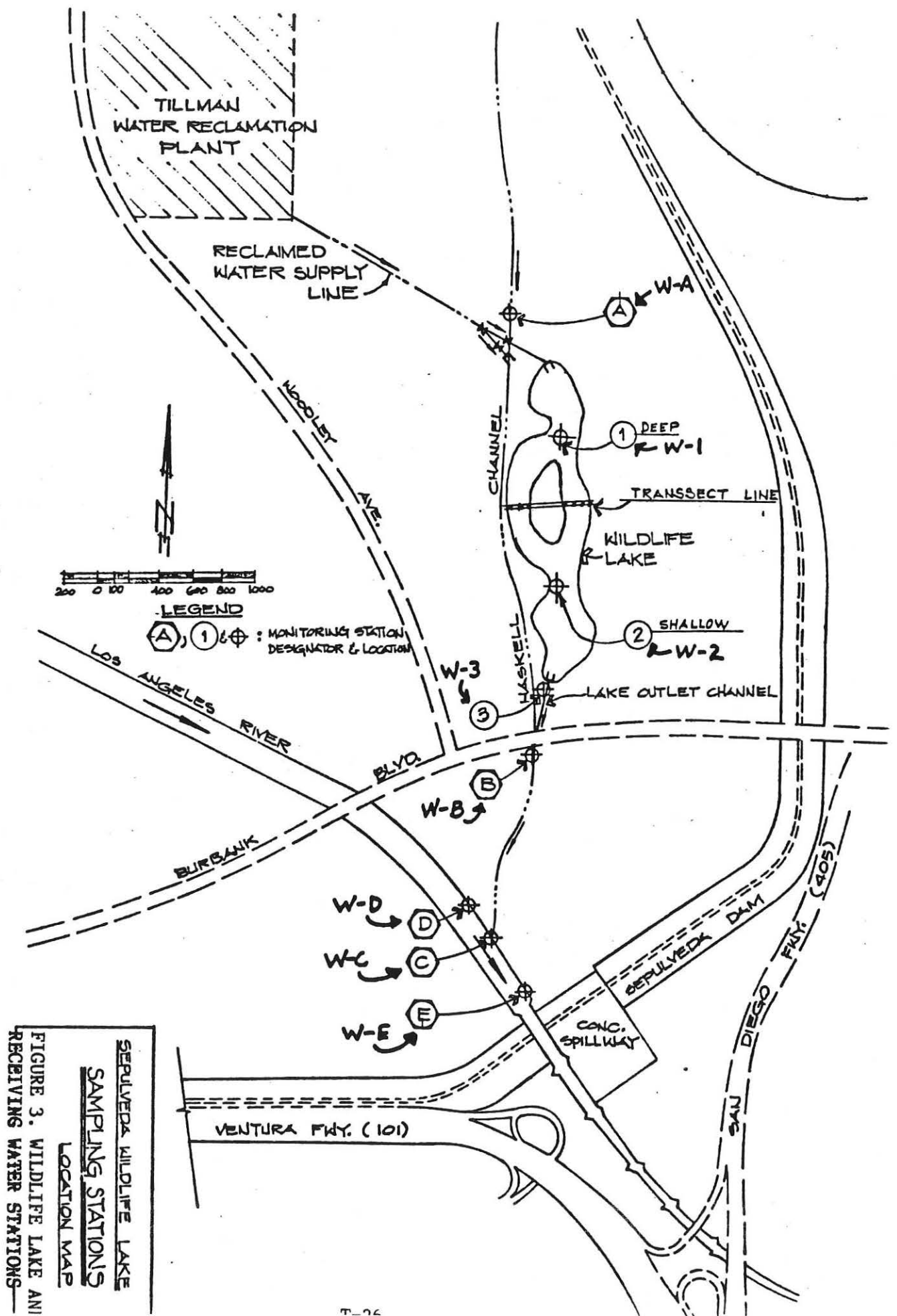
## SEPULVEDA BASIN MASTER PLAN

FIGURE 1. LOCATIONS OF OUTFALLS AND RECEIVING WATER STATIONS

T-25



**SEPULVEDA BASIN RECREATION LAKE LAKE MANAGEMENT PLAN MONITORING STATION MAP**  
**FIGURE 2. RECREATION LAKE AND RECEIVING WATER STATIONS**



**SEPULVEDA WILDLIFE LAKE**  
**SAMPLING STATIONS**  
**LOCATION MAP**

**FIGURE 3. WILDLIFE LAKE AND RECEIVING WATER STATIONS**