

# Regional Water Quality Control Plant

Operated by the City of Palo Alto  
for the communities of East Palo Alto,  
Los Altos, Los Altos Hills, Mountain View,  
Palo Alto, and Stanford University



## PALO ALTO REGIONAL WATER QUALITY CONTROL PLANT 2501 Embarcadero Way, Palo Alto, CA 94303

10/99

TO: Persons Interested in Reclaimed Water

FROM: William Miks, Manager-Water Quality Control Plant

**SUBJECT: PERMIT AND PROCEDURES**

### **NON-POTABLE, UNRESTRICTED REUSE**

The Palo Alto Regional Water Quality Control Plant will permit and provide reclaimed water to contractors, landscapers, industrial and commercial establishments, institutions and government agencies.

### **UNRESTRICTED REUSE**

Uses may include residential landscaping, parks, industrial parks, sod nurseries, pesticide spraying, decorative fountains, cooling towers, dust control, vehicle washing, fire protection, street washing and other areas where there may be similar public access or exposure.

- **Must NOT be used for drinking or bathing**
- **State Department of Health Services Guidelines for Worker Protection must be followed**

### **COST**

The Permit Fee is \$35.00 payable in check or money order (no cash) written to the City of Palo Alto. This allows self-service pickup and use of reclaimed water for one year on a first come-first served basis up to the capacity of the Reclamation Plant (1½ mgd).

### **LOCATION & HOURS**

An overhead standpipe with a 700 gallon per minute fill rate is available for tank trucks at the Plant. Hours are: Daily 7:00 a.m. to 5:00 p.m. except on Household Hazardous Waste collection days (usually the first Saturday of each month).

Additionally, the City of Mountain View operates a filling hydrant on Terminal Blvd. A \$50 key deposit is required. Contact Mountain View meter shop at (650)903-6328 for details.

### **WATER QUALITY**

The reclaimed water meets the State Department of Health Services criteria for unrestricted water reuse. A 1997 laboratory analysis is attached.

### **PERMIT**

Users/distributors are required to fill out and sign a water reuse permit and application and shall be responsible for the proper distribution of the reclaimed water. Water Reuse Permit applications are available from the Water Quality Control Plant, 2501 Embarcadero Way, Palo Alto, CA 94303. Please call the Treatment Plant at (650)329-2598 if you have any questions.

PALO ALTO REGIONAL WATER QUALITY CONTROL PLANT  
2501 Embarcadero Way, Palo Alto, CA 94303

APPLICATION FOR WATER REUSE PERMIT

USER: Name \_\_\_\_\_  
Address \_\_\_\_\_  
Telephone \_\_\_\_\_

DISCHARGER: **PALO ALTO REGIONAL WATER QUALITY CONTROL PLANT**  
2501 Embarcadero Way, Palo Alto, CA 94303 Tel. (650) 329-2598

Type of Reuse (landscape irrigation, commercial, construction)  
\_\_\_\_\_

Distribution (tank truck spray, hose, sprinkler)  
\_\_\_\_\_

Pick-up Schedule, Quantity, Duration of Distribution  
\_\_\_\_\_

Location of Use Areas (cities, vicinities)  
\_\_\_\_\_  
\_\_\_\_\_

Attach List of Names, Addresses and Telephone Numbers of Residents within use area.

**THIS PERMIT IS FOR THE PROPOSED USE OF RECLAIMED WASTEWATER, CONDITIONAL UPON THE FOLLOWING:**

1. The enclosed "Guidelines and Limitations for the Use of Reclaimed Water" shall be complied with.
2. The proposed use shall be ceased immediately when guideline conditions have been violated [by either the producer, user, or the distributor], and shall not be resumed until such time that all conditions causing the violations have been corrected.
3. The enclosed "Guidelines for Worker Protection" shall be complied with.
4. This permit may be terminated by the Producer [City of Palo Alto Regional Water Quality Control Plant] at any time when deemed necessary.

***Reclaimed wastewater is water which has been reclaimed from Sanitary Sewage. I agree to abide by the rules for its use as stated above. Reclaimed water is being provided by the City of Palo Alto to the undersigned at the request of, and for the benefit of, the undersigned. In consideration of its receipt, the undersigned hereby agrees to indemnify, defend, save harmless the City of Palo Alto, its officers, agents, and employees from any and all claims, demands, or liability associated with or arising out of the possession, use or examination of said material by or for the undersigned.***

Executed this \_\_\_\_\_ day of \_\_\_\_\_ at Palo Alto, California.

\_\_\_\_\_  
Signature of Requestor Date

**PERMIT NO.** \_\_\_\_\_

\_\_\_\_\_  
Requestor Name - Please Print

Issue Date \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of Company

\_\_\_\_\_  
Approved: Plant Manager - Water Quality Control

## GUIDELINES AND LIMITATIONS FOR THE USE OF RECLAIMED WATER

### A. RECLAIMED WATER USES - DISINFECTED TERTIARY

1. Water Reuse Permit must specify uses and use areas:
  - a] Reclaimed water used for the irrigation of golf courses, freeway landscapes, parks, and playgrounds.
  - b] Washwater for street cleaning, sewer flushing, dust control, etc.
  - c] Agricultural irrigation such as:
    - Surface irrigation for orchards and vineyards
    - Irrigation for fodder, fiber, and seed crops
    - Irrigation for pastures of milking animals
  - d] Residential landscape, trees, and gardens.
2. For large scale and long term projects, a more detailed application using the regular Board application form [Report of Waste Discharge] must be sent to the Board for review.

### B. GENERAL RECLAIMED WATER GUIDELINES

1. Only reclaimed water that is at all times adequately disinfected and oxidized may be used. The reclaimed water shall meet the following water quality limits at all times:

5-day BOD .....	20 mg/l .....	[30 day average]
	40 mg/l .....	[daily maximum]
Dissolved Oxygen .....	3.0 mg/l .....	minimum
Dissolved Sulfide .....	0.1 mg/l .....	maximum
Turbidity .....	2 turbidity units	average
	5 turbidity units	maximum
Coliform Organisms. ....	Median MPN shall not exceed 2.2 coliform organisms per 100 ml of sample. The median value will be determined from the bacteriological results of the last seven analyses.	
2. Reclaimed water shall not be used as a domestic or animal water supply.
3. Wastewater shall not impair the quality of the waters of the State.
4. The treatment, distribution, or reuse of reclaimed water shall not create a nuisance as defined in section 13050(m) of the California Water Code.
5. No reclaimed water used for irrigation shall be allowed to escape the authorized use area.
6. Adequate measures shall be taken to minimize public contact with reclaimed wastewater and to prevent the breeding of flies, mosquitoes and other vectors of public health significance during the process of reuse.

## **GUIDELINES AND LIMITATIONS FOR THE USE OF RECLAIMED WATER**

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7. Adequate means of notification shall be provided to inform the public that reclaimed water is being used. Conspicuous warning signs with proper wording of sufficient size to be clearly read shall be posted at adequate intervals around the use area, unless public access is otherwise restricted.
8. All reclaimed water valves, outlets and sprinkler heads should be appropriately tagged to warn the public that the water is not safe for drinking or direct contact. Tank trucks used for carrying or spraying reclaimed wastewater should be identified as such.
9. All equipment, including pumps, piping, valves and outlets should be color coded or otherwise marked to differentiate reclaimed water from domestic or other water. Where feasible, differential piping materials should be used to facilitate wastewater system identification.

### **C. LANDSCAPE IRRIGATION**

1. Reclaimed wastewater shall not be applied on walkways, passing vehicles, buildings, or areas not under the control of the user.
2. Irrigation should be practiced during periods when the grounds will have maximum opportunity to dry before use by the public.
  - a] Wastewater should not be applied during periods of rainfall or when soils are saturated.
  - b] Irrigated areas shall be properly graded to minimize ponded water.

### **D. ADDITIONAL RESTRICTIONS FOR RECLAIMED WATER USE IN FISH PONDS AND DECORATIVE PONDS AT INDUSTRIAL AND COMMERCIAL ESTABLISHMENTS**

1. Distribution (filling) would occur from tank truck manually with the operator present at all times.
2. Appropriate signs would be posted to identify the water as being reclaimed wastewater and no wading allowed.
3. Algae growth due to nutrients in reclaimed water to be controlled by manual removal or other appropriate means. Use of chemicals containing metals not recommended.
4. No reclaimed water shall be allowed to escape from the designated use area.
5. Regional Water Quality Control Plant personnel will perform periodic inspections of the use area.

## **GUIDELINES FOR WORKER PROTECTION**

(State Department of Health Services Guidelines)

### **The following guidelines pertain to all categories of Reclaimed Water:**

- A. Workers should be informed that although reclaimed water has been treated to lower health risks, bacterial and viral contamination may be present and potentially may cause illness or infection. Contact with reclaimed water by ingestion, inhalation of mist, or on cuts or abrasions should be avoided, and the precautionary measures listed below should be carefully reviewed and followed.
- B. Precautionary measures should be taken to minimize worker contact with constituents of reclaimed water.
  - 1. Workers should not be subjected to reclaimed water sprays, mists or aerosols.
  - 2. Workers should be protected with protective clothing when there will be more than casual contact with the reclaimed water.
  - 3. Where oxidized, coagulated, clarified, filtered, disinfected wastewater is used, less stringent precautions may be allowed.
- C. Safe drinking water should be supplied for workers. Where bottled water is provided, the water should be in contamination-proof containers and protected from reclaimed water and dust.
- D. Handwashing facilities should be provided consisting of potable water supply, handwashing soap, and single use sanitary paper towels. The importance of handwashing should be stressed when working with reclaimed water, especially before eating or smoking.
- E. Workers should not apply reclaimed water by hand held nozzles or other hand held devices that can produce sprays, mists or aerosols.
- F. Precautions should be taken to avoid contamination of food taken into reclaimed water use areas. Food should not be taken into areas still wet with reclaimed water.
- G. Workers should be notified that reclaimed water is in use. Notification should include the posting of conspicuous warning signs with proper wording of sufficient size to be clearly read.

In those locations where English is not the primary language of the workers, the signs should be in the appropriate language as well as English.
- H. An adequate First Aid kit should be available on location. Cuts and abrasions should be promptly washed, disinfected, and bandaged.

**RECLAIMED WATER ANALYSIS  
1997**

	<b>mg/l</b>
<b>Alkalinity:</b>	
<b>Total .....</b>	<b>120</b>
<b>Boron .....</b>	<b>0.40</b>
<b>Sulfate (SO<sub>4</sub>=).....</b>	
116	
<b>Phosphate (PO<sub>4</sub>=) .....</b>	<b>10.2</b>
<b>Total Dissolved Solids .....</b>	<b>925</b>
<b>Hardness (as CaCO<sub>3</sub>).....</b>	<b>227</b>
<b>Sodium.....</b>	<b>184</b>
<b>Chloride .....</b>	<b>306</b>
<b>Calcium.....</b>	<b>52</b>
<b>Copper .....</b>	<b>0.006</b>
<b>Magnesium .....</b>	<b>35</b>
<b>Manganese .....</b>	<b>0.01</b>
<b>Zinc .....</b>	<b>0.056</b>
<b>pH, units .....</b>	<b>7.2</b>
<b>Specific conductance, micromhos/cm .....</b>	<b>1575</b>
<b>Nitrate Nitrogen.....</b>	<b>16.7</b>
<b>5-Day B.O.D. ....</b>	<b>1.6 mg/l</b>
<b>Suspended Solids.....</b>	<b>1.3 mg/l</b>
<b>Dissolved Oxygen.....</b>	<b>7.8 mg/l</b>
<b>Turbidity .....</b>	<b>0.9 NTU</b>
<b>Coliform Organisms,7-Day Median .....</b>	<b>Less than 2.2 MPN/100 ml</b>

