

## FACILITY PERMIT TO OPERATE EASTERN MUNICIPAL WATER DIST.

### PERMIT TO CONSTRUCT

**GRANTED AS OF: TBD  
A/N 479451**

#### **Equipment Description:**

ALTERATION OF PERMIT TO OPERATE G1450 (APPL.NO. 455648):

SEWAGE TREATMENT FACILITY, 17.1 MGD CAPACITY, CONSISTING OF:

I. PRELIMINARY TREATMENT PROCESS COMPRISED OF:

1. ONE 22-MGD INFLUENT PUMP STATION VENTED TO ODOR CONTROL EQUIPMENT CONSISTING OF:
  - A. FOUR BAR SCREENS
  - B. ONE GRIT CHAMBER, 18' DIA. X 18' H.

II. CONVENTIONAL ACTIVATED SLUDGE (ANAEROBIC) PLANT NO. 1, 10 MGD CAPACITY CONSISTING OF:

1. SIX GRIT CHAMBERS, EACH 12' L. X 9' W. X 10' D.
2. EIGHT PRIMARY CLARIFIERS, EACH 65' L. X 15' W. X 10' D.
3. SIX AERATION BASINS, EACH 150' L. X 30' W. X 15' D.
4. SIX SECONDARY CLARIFIERS, EACH 88' L. X 16' W. X 10' D.
5. EIGHT SECONDARY CLARIFIERS, EACH 84' L. X 12' W. X 10' D.
6. TWO DISSOLVED AIR FLOATATION TANKS, EACH 30' DIA. X 6' D.
7. ONE INFLUENT EQUALIZATION BASIN, 150' L. X 150' W. X 15' D.

III. AEROBIC SEWAGE TREATMENT PLANT NO. 2 CONSISTING OF:

1. ANOXIC ZONE 1, 0.3 MG CAPACITY.
2. AEROBIC ZONE 1, 0.49 MG CAPACITY.
3. ANOXIC ZONE 2, 0.22 MG CAPACITY.
4. AEROBIC ZONE 2, 0.77 MG CAPACITY.
5. ANOXIC ZONE 3, 0.4 MG CAPACITY.
6. AEROBIC ZONE 3.1, 0.54 MG CAPACITY.
8. TWO SECONDARY CLARIFIERS, 125'-0" DIA. X 14'-0" H.

IV. TERTIARY SEWAGE TREATMENT PLANT CONSISTING OF:

1. TWO FLOW EQUALIZATION BASINS, 2.4 MILLION GALLON TOTAL CAPACITY.
2. ONE FLOCCULATION BASIN, 43,758 GALLONS CAPACITY.
3. TWELVE TERTIARY FILTERS, SAND BED TYPE, EACH WITH 200 SQ. FT. FILTER AREA.
4. ONE CHLORINE INJECTION/SPLITTER BOX.
5. TWO CHLORINE CONTACT BASINS, FIVE PASS, EACH 110'-0" L. X 64'-0" W. X 11'-0" D. WITH TOTAL OF 16 MILLION GALLONS CAPACITY.
6. ONE TERTIARY EFFLUENT PUMP STATION.

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7. TWO 30-TON CHLORINE COMPRESSED LIQUID/GAS STORAGE VESSELS VENTED TO AN EMERGENCY VENTILATION AND CONTROL SYSTEM (RULE 219 (d)(9) EXEMPT).

V. SEWAGE SLUDGE HANDLING AND STORAGE FACILITY CONSISTING OF:

1. FOUR FIXED ROOF ANAEROBIC DIGESTERS, 48'-0" DIA. X 22'-0" D.
2. ONE FIXED ROOF ANAEROBIC DIGESTER, 75'-0" X 29'-0" H.
3. ONE ENCLOSED, BELOW GRADE, SLUDGE HOLDING TANK, 35'-0" DIA. X 15'-0" D., VENTED TO DIGESTER GAS COLLECTION SYSTEM.
4. ONE DIGESTER GAS STORAGE SPHERE, 35'-0" DIA. OR 22,449 CUBIC FEET CAPACITY.
5. TWO FILTER BELT PRESSES, ENCLOSED AND ASSOCIATED POLYMER SYSTEM, VENTED TO ODOR CONTROL EQUIPMENT.
6. ONE SLUDGE OFFLOADING STATION WITH ASSOCIATED CONVEYOR SYSTEM.
7. EIGHTEEN SEWAGE SLUDGE DRYING BEDS, EACH 100' L. X 40' W. X 1' D.
8. BOILER, NATURAL GAS-FIRED, RALPH B. CARTER CO., MODEL H1500C41-GX, 1.5 MMBTU/HR (RULE 219 EXEMPT).
9. THREE ROTARY DRUM THICKENERS, 240 GALLON PER MINUTE CAPACITY.
10. ONE CENTRIFUGE.

VI. TREATED SEWAGE EFFLUENT EVAPORATION/PERCOLATION STORAGE PONDS CONSISTING OF:

1. TWO EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 31.0 MG CAPACITY, 670'-0" L. X 326' W. X 375'-0" W. X 21'-0" D.
2. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 30 MG CAPACITY, 662'-0" L. X 353'-0" W. X 22'-0" D.
3. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 31 MG CAPACITY, 662'-0" L. X 353'-0" W. X 22'-0" D.
4. TWO EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 12.65 MG CAPACITY, 370'-0" L. X 331'-0" W. X 22'-0" D. (EXISTING- NO CHANGE).
5. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.23 MG CAPACITY, 362'-0" L. X 329'-0" W. X 22'-0" D.
6. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.01 MG CAPACITY, 359'-0" L. X 327'-0" W. X 22'-0" D.
7. ONE L-SHAPED EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 44.20 MG CAPACITY, 1,080'-0" L. X 250'-0" W. X 745'-0" L. X 413'-0" W. X 335'-0" L. X 663'-0" W. X 22'-0" D.
8. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.30 MG CAPACITY, 357'-0" L. X 335'-0" W. X 22'-0" D.
9. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 11.99 MG CAPACITY, 363'-0" L. X 323'-0" W. X 22'-0" D.
10. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 11.62 MG CAPACITY, 356'-0" L. X 321'-0" W. X 22'-0" D.
11. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 15.16 MG CAPACITY, 391'-0" L. X 363'-0" W. X 22'-0" D.
12. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 15.00 MG CAPACITY, 393'-0" L. X 358'-0" W. X 22'-0" D.

VII. STORM WATER POND:

1. ONE STORM WATER COLLECTION POND, 358'-0" X 344'-0" L. X 20'-0" D.

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BY THE ADDITION OF:

1. ONE GRIT CHAMBER, VORTEX, 18'-0" DIA. (Preliminary Treatment)
2. TWO SECONDARY CLARIFIERS, EACH 125'-0" DIA. X 14'-0" D. (Plant 2)
3. ONE DIGESTER, ACID PHASE, 4 CHAMBERS, EACH 20'-0" W. X 20'-0" L. X 21'-0" H. (Sludge Handling and Storage)
4. ONE DIGESTER, METHANE-PHASE, 70'-0" DIA. X 29'-0" H. (Sludge Handling and Storage)
5. TWO DIGESTED SLUDGE STORAGE TANKS, 48'-0" DIA. X 18'-0" H. (Sludge Handling and Storage)
6. ONE LOW PRESSURE DIGESTER GAS STORAGE TANK, 7,500 CUBIC FEET CAPACITY. (Sludge Handling and Storage)
7. ONE FERRIC ACID STORAGE TANK, 2,600 GALLON CAPACITY.
8. FOUR TERTIARY FILTERS, ROTARY DISC CLOTH, EACH 636 SQ. FT. (Tertiary Sewage Treatment)
9. SLUDGE OVERFLOW STORAGE TANK (CONVERTED FROM SLUDGE HOLDING TANKS (VI)(3)).
10. ONE CHLORINE CONTACT BASIN, FIVE PASS, EACH 110'-0" L. X 64'-0" W. X 11'-0" D. WITH TOTAL CAPACITY OF 8 MG.

BY THE REMOVAL OF:

1. TWO DIGESTERS, METHANE-PHASE, 48'-0" DIA. X 21'-0" H.
2. ONE DIGESTED SLUDGE STORAGE TANKS, 30'-0" DIA. X 14'-6" H.
3. BOILER, NATURAL GAS-FIRED, RALPH B. CARTER CO., MODEL H1500C41-GX, 1.5 MMBTU/HR (RULE 219 EXEMPT).

AND BY THE INCREASE OF INFLUENT FLOW CAPACITY TO 17.4 MGD (EXCEPT DURING WET WEATHER CONDITIONS)

**Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]
4. THE MAXIMUM DAILY INFLUENT WASTEWATER TREATED BY THIS EQUIPMENT, ON AN ANNUAL BASIS, SHALL NOT EXCEED 17.4 MILLION GALLONS PER DAY (MGD), EXCEPT DURING WET WEATHER CONDITIONS.  
[RULE 1303]

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5. HEADWORKS AND DIGESTER GAS SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL OPERATION AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE SCAQMD.  
[RULE 1303]
6. ALL SLUDGE SHALL BE PIPED AND STORED IN AN ENCLOSED MANNER TO PREVENT THE RELEASE OF AIR CONTAMINANTS UNTIL AFTER IT IS DEWATERED.  
[RULE 1303]
7. AT LEAST ONE SAMPLE OF THE TREATED DIGESTER GAS DOWNSTREAM OF THE GAS PURIFIER SHALL BE ANALYZED DAILY FOR H<sub>2</sub>S AND RECORDED. ANALYTICAL METHOD SHALL BE APPROVED BY THE EXECUTIVE OFFICER.  
[RULE 431.1]