

**Encina Wastewater Authority  
Annual Pretreatment Program Report**

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## **Program Summary**

The Encina Wastewater Authority (EWA) operates an approved pretreatment program in North San Diego County. EWA is a joint powers authority consisting of six member agencies: the Cities of Vista, Carlsbad and Encinitas, as well as the Vallecitos Water District, the Buena Sanitation District and the Leucadia Wastewater District. The Encina System is comprised of the collection, treatment and disposal facilities of its member agencies including: the Encina Water Pollution Control Facility, the Shadowridge Water Reclamation Facility, the Gafner Water Reclamation Facility, the Meadowlark Water Reclamation Facility and the Encina Ocean Outfall.

The Encina service area encompasses a population in excess of 250,000 and covers a 125 square mile area. This area is predominantly characterized by residential development. At the end of 2003, the industrial flow to Encina (0.224 MGD) represented only 0.87% of the average daily influent (25.77 MGD). It is anticipated that the percentage of industrial flows will continue to decrease due to continued residential growth in the service area.

During 2003, Encina violated its NPDES permit limits for Total Suspended Solids (TSS) on two occasions. The source of these violations is unknown and was not attributed to industrial users. All other monitoring of EWA's effluent and receiving water demonstrated compliance with regulatory standards.

At the end of 2003, Encina had 72 permitted Industrial Users (IUs): 32 Categorical Industrial Users (CIUs), 5 Non-categorical Significant Industrial Users (SIUs), 29 Class III Industrial Users and 6 Special Use Discharge Permits (SUPs). EWA staff conducted 55 inspections and collected 168 samples in the CIU/SIU categories. Additional inspections and sampling of Class III IUs were also conducted. Laboratory data confirm that the Best Management Practices (BMP) Program implemented during 1999 and 2000 has been effective overall in reducing the level of pollutants discharged to the Encina System.

Encina maintains a proactive enforcement stance and assessed over \$17,000.00 in fines and enforcement costs during 2003. Although 10 of the 37 CIU/SIUs in the Encina service area during the year were in Significant Non-Compliance (SNC), two were in SNC for submitting late reports, two for discharging without a permit, and one for violations which occurred in 2002.

No significant changes were made in the operation of EWA's Pretreatment Program during 2003. A local limits evaluation was conducted by CGvL Engineers and it was decided that no changes in EWA's local limits will be made at the present time.

## Summary Of Analytical Results

The data required in this section was previously reported in both tabular and graphical form in the *Encina Water Pollution Control Facility and Ocean Outfall, 2003 Annual Self-Monitoring Report, for Order No. 2000-36, NPDES Permit No. CA0107395*. This report was submitted to Mr. John Robertus of the San Diego Regional Water Quality Control Board, Surface Water Unit, on January 26, 2004. All data is incorporated herein and can be referenced using the following table. A full priority pollutant scan is attached in Appendix A.

### Influent

Flow Report	Page 5
BOD	Pages 8 and 11
TSS	Pages 20 and 23
Oil & Grease	Pages 32 and 35
pH	Page 38
Metals	Page 131

### Effluent

Flow Report	Page 5
BOD	Page 41
TSS	Page 47
Oil & Grease	Page 51
pH	Page 59
Metals	Pages 119, 122, 125 and 128
Removal	Page 118

### Biosolids

Metals	Pages 134
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## Upset, Interference or Pass-through Incidents

During 2003, there were no incidents of upset, interference, or pass-through at Encina, attributed to industrial users. On June 23, 2003 the Daily Maximum Effluent Limit (50 mg/L) and the Daily Maximum Pounds Per Day Limit (16,000 lb/day) for Total Suspended Solids (TSS) were exceeded with reported values of 93.0 mg/L and 20,490 lb/day, respectively. On December 14, 2003, the Daily Maximum Effluent Limit for Total Suspended Solids (TSS) was once again exceeded with a reported value of 57.4 mg/L. All other regularly scheduled effluent monitoring for 2003 demonstrated that the effluent quality remains consistent and meets or exceeds regulatory standards. Receiving water monitoring during 2003 also met compliance standards.

## Industrial Users

In January of 2003, EWA's Pretreatment Program regulated 68 IUs in the Encina service area: 27 CIUs, 5 SIUs, 31 Class IIIs and 5 SUPs. At the end of the year, the permitted IUs numbered 72: 32 CIUs, 5 SIUs, 29 Class IIIs and 6 SUPs. As shown below, the contribution of industrial flows (CIU/SIU) as a percentage of Encina's average daily influent has declined during the last decade. This trend is expected to continue due to residential growth in the service area.

YEAR	% IW
2003	0.87
2002	0.95
2001	0.90
2000	0.96
1999	1.64
1998	1.72
1997	1.85
1996	2.70
1995	2.23
1994	3.23
1993	3.31

Appendix B contains a list of all SIUs along with: federal category, if applicable; type of pretreatment in place; the number of inspections conducted; the number of samples collected by EWA; the number of samples collected by the IU; the number of violations; the IU's compliance status by quarter; whether all TTO certifications or monitoring data were submitted; and a summary of any enforcement actions taken. Below is a list of additions, changes of status and deletions that occurred during the year.

### Additions

- Global Health Trax - Vista, California - A new Class I permit was issued to this facility which is subject to 40 CFR Part 439.
- Isis Pharmaceuticals – Carlsbad, California - A new Class I permit was issued to this facility which is subject to 40 CFR Part 439.
- Palmer Natural Products - Vista, California - A new Class I permit was issued to this facility which is subject to 40 CFR Part 439.
- Seven Manufacturing – San Marcos, California - A new Class I permit was issued to this facility which is subject to 40 CFR Part 439.
- Sherline Pharmaceuticals – Vista, California - A new Class I permit was issued to this facility which is subject to 40 CFR Part 439.

#### Name Changes

- Osmonics Desal – Vista, California – Company was purchased by GE and changed its name to GE Osmonics.

#### Changes of Status

- None

#### Deletions

- None

### **Baseline Monitoring Report Requirements**

Global Health Trax was issued a Class I permit in July. They manufacture vitamins and thus are subject to 40 CFR Part 439. Baseline monitoring demonstrated compliance with Pharmaceutical Manufacturing Pretreatment Standards and EWA local limits. Additional industry monitoring and EWA monitoring conducted during the fourth quarter also showed compliance with permit limitations.

Isis Pharmaceuticals was issued a Class I permit in January. They conduct pharmaceutical research and development (R & D). They planned to begin manufacturing a drug used for cancer treatment in February, but it did not make it through clinical trials. They have another drug to be used in the treatment of Crohn's disease that is currently undergoing clinical trials. Once they begin manufacturing for sale they will be subject to 40 CFR Part 439. Until such time, they are not federally regulated. Baseline monitoring conducted on wastewater from R & D operations demonstrated compliance with Pharmaceutical Manufacturing Pretreatment Standards and EWA local limits.

Palmer Natural Products was issued a Class I permit in October. They manufacture vitamins and thus are subject to 40 CFR Part 439. Baseline monitoring demonstrated compliance with Pharmaceutical Manufacturing Pretreatment Standards and EWA local limits. Additional industry monitoring and EWA monitoring conducted during the fourth quarter also showed compliance with permit limitations, with the exception of a violation for oil & grease.

Seven Manufacturing was issued a Class I permit in September. They manufacture vitamins and thus are subject to 40 CFR Part 439. Baseline monitoring demonstrated compliance with Pharmaceutical Manufacturing Pretreatment Standards and EWA local limits. Additional industry monitoring and EWA monitoring conducted during the third and fourth quarters also showed compliance with permit limitations.

Sherline Pharmaceuticals was issued a Class I permit in September. They manufacture vitamins and thus are subject to 40 CFR Part 439. Baseline monitoring demonstrated compliance with Pharmaceutical Manufacturing Pretreatment Standards

and EWA local limits. Additional industry monitoring and EWA monitoring conducted during the third and fourth quarters also showed compliance with permit limitations.

### **Enforcement Activities**

EWA maintains a proactive enforcement stance. During 2003, 46 NOV's were issued and over \$17,000.00 in fines and enforcement costs was assessed. (Administrative Orders are not an approved element of EWA's Enforcement Response Plan.) Despite this, 10 of the 37 SIUs in the service area during the year were in SNC. However, this number is not necessarily indicative of ongoing problems. Nature's World and Vitashots submitted their semiannual Compliance Status Reports over thirty days late. Palmer Natural Products and Sherline Pharmaceuticals were found to be discharging without a permit. Vista Industrial Products was in SNC due to violations that occurred in the fourth quarter of 2002 and had no violations during 2003. Compliance issues of more concern are discussed below.

Cintas was in SNC the first three quarters of 2003 for BOD and the third quarter for oil & grease. NOV's were issued and fines of \$3,450.00 imposed. They had a management change mid-year and brought in an expert from one of their other facilities to help them determine the cause of their problems. In early November they replaced two leaking hot water tanks and repaired a damaged pump that was allowing untreated wastewater to be discharged to sewer. Sampling conducted in November and December demonstrated compliance with Cintas' permit.

Hollandia Dairy was issued an Enforcement Compliance Schedule at the end of 2002 due to ongoing problems complying with their discharge limitations for BOD and oil & grease. Hollandia researched both dissolved air flotation and membrane filtration pretreatment systems. Due to the high cost of these systems (in the range of \$250,000), Hollandia was granted an extension of their deadline to come into full compliance so they could hire a consultant to help determine which system to purchase. They subsequently decided on the membrane filtration system, which was completed by the September 15, 2003 compliance schedule deadline. Sampling conducted on five occasions since installation of the new pretreatment system has demonstrated full compliance with Hollandia's permit.

UTZ Engineering was found to be discharging wastewater while their neutralization system was shut off during a site visit on 12/19/03. The contact stated that the power had been shut off in order to remove a defective pH probe at Sample Point #1 so a replacement could be purchased and that they were unaware that the power had also been shut down to the upstream neutralization systems for the etch tanks. An NOV was issued and \$3,000.00 in fines assessed. UTZ Engineering was required to: install an audible alarm and automatic shut off valve at Sample Point #1; conduct weekly cleaning and calibration of their pH meters; and keep a pH maintenance log.

## **Pollution Prevention Plans**

No industries have submitted or been required to submit a pollution prevention plan.

## **Best Management Practices Program**

In addition to the regulation of SIUs, EWA has attempted to reduce the level of pollutants entering the system through the implementation of a BMP Program. The program began in 1999 with staff development of a wide variety of BMPs for non-significant industrial users. A preliminary file review was performed on each user to determine eligibility to participate in the program. This was followed by an inspection, sampling event and interview to identify applicable pollution prevention strategies. Users who demonstrated a willingness to participate in the program agreed to implement a variety of actions directed at reducing the level of pollutants in their discharge. Follow-up sampling and inspections are used to verify program effectiveness. The implementation of the BMP Program resulted in a reduction in the number of Class III Permits in 1999 from 304 to 102 and in the year 2000 from 102 to 35. Few changes to user classifications have occurred in the last three years. EWA influent data appears to indicate that the BMP Program has been effective overall in reducing the level of pollutants discharged to the Encina System.

## **Significant Changes in Pretreatment Program Operation**

No significant changes were made in the operation of EWA's Pretreatment Program during 2003. In June, EWA contracted with CGvL Engineers to conduct a local limits evaluation. CGvL was instructed to develop one set of limits for the entire service area and to base those on the most stringent limit calculated for Encina or either of the upstream reclamation plants. Based on their evaluation, CGvL developed limits for 13 pollutants. Of these, they recommended that four limits be increased (copper, lead, silver, zinc) and one reduced (chromium).

In determining how to proceed with CGvL's recommendations, it was noted that four of the limits developed are based on a local limits study conducted for the Shadowridge Water Reclamation Plant (SWRP) (which is shut down indefinitely) in 1998 and two on a study for the Meadowlark Water Reclamation Plant (MWRP) conducted in 1999. Increasing a local limit would be considered a substantial modification and would require a revision of EWA's Pretreatment Ordinance and approval by the RWQCB. Since this would be a time consuming process and 6 of the 13 limits are based on outdated local limits evaluations, it was decided to postpone any modifications to EWA's local limits until a decision is made regarding the future status of SWRP and until a new local limits evaluation is conducted by the MWRP after plant upgrades next year.

CGvL's report recommended that the limit for chromium be reduced to 1.36 mg/L – the recommended limit for SWRP. Lowering a local limit is considered a non-substantial modification and would not require approval by the RWQCB. Of concern is the fact that the recommended limit is lower than the federal monthly average limit for metal finishers, which is based on EPA's model treatment technology and thus is not technically achievable by industries with appropriate treatment. In light of the reasons stated in the preceding paragraph and since historical sampling data has shown the current local limit of 3.50 mg/L to be adequately protective of EWA's treatment plant, no changes to the limit for chromium will be made at the present time.

### Summary of Annual Pretreatment Budget

In FY 2004, Encina's Pretreatment Program budget totaled \$404,934. (The amount budgeted may vary slightly from actual expenditures.) This shows a decrease in expenditures of approximately 11% over the FY 2003 budget, which included money for the acquisition of new office space and a local limits study. The FY 2004 budget was also adjusted to reflect modifications in the allocation of internal service fund expenses. The number of staff members in the Program was adjusted from 3.4 to 3.3 as a result of allocating an additional 10% of the Environmental Compliance Director's time to the Capital Program to reflect her role in implementing Capital Projects. A line item detail of the budget is attached for your reference in Appendix C. The table below shows a historical summary of program expenditures.

<b>FY</b>	<b>EXPENDITURES (\$)</b>
2004	404,934
2003	456,155
2002	438,698
2001	408,919
2000	401,213
1999	322,727
1998	302,000
1997	322,823
1996	290,000
1995	284,900
1994	284,400
1993	209,200
1992	206,800
1991	185,500

## **Public Education**

EWA conducts wastewater treatment plant tours on a regular basis throughout the year. During 2003, 28 tours were conducted for approximately 573 people. Typical tour groups include classes from elementary schools, high schools and colleges, as well as professional organizations. Special tours are also conducted for SIU contacts. Plant tours include a discussion of the pretreatment program, storm water pollution prevention, household hazardous waste disposal practices, product substitution, and EWA's Environmental Management System (EMS) for biosolids. Free instructional materials are provided to each participant to share with family and friends.

EWA also participates in other community outreach activities. In 2003, EWA staff: made a presentation at the CASA (California Association of Sanitation Agencies) conference about storm water issues relating to the sanitary sewer; developed a brochure entitled "10 Simple Ways You Can Help Protect Our Ocean"; participated in developing a Green Business Program with the San Diego County Pollution Prevention Committee; and developed a brochure discussing EWA's new EMS for biosolids.

40CFR403.8(f)(2)(vii) requires at least annual public notification, in the largest daily newspaper in the POTW's service area, of industrial users, which at any time during the previous twelve months, were found in significant non-compliance. Attached in Appendix D is a copy of the SNC publication for the period of January 1 to December 31, 2003.

## **Sludge Disposal Methods**

In 2003, Encina produced approximately 35,239 wet tons of biosolids. Metals levels in the biosolids remain well below EPA's Table 3 standards for land application. The ability to consistently meet these standards for disposal is largely due to EWA's small industrial base and effective Pretreatment Program.

Encina remains committed to land application of biosolids as its disposal method of choice. As a result of Riverside County's ban on Class B biosolids, Encina entered into an agreement with Ag Tech of Yuma, Arizona for subsurface land application of biosolids. In February 2003, Black & Veatch completed the conceptual design of a biosolids heat drying facility and were subsequently awarded a contract to proceed with the preliminary design in February 2004. Construction of this facility will allow for the production of Class A, pathogen-free biosolids and will maximize the ability to reuse this resource.