BARRETT'S BIOLOGICAL SURVEYS

2035 Forrester Road El Centro, Ca 92243 760 352 4159 fax: 760 353 0465
email: mariebarrett@roadrunner.com

December 12, 2008

Mr. Francisco Rodriguez
Waterworks Supervisor
Heber Wastewater Treatment Plant
1184 Rockwood Ave
Heber, CA

Re: Biological Assessment of the Heber Wastewater Treatment Facility Discharge Location

Dear Mr. Rodriguez,

This letter report documents the results of the bioassessment of the Central Drain 3-D No 1 Drain (Map: attached) at the Heber wastewater treatment facility discharge. Samples were taken at two locations along the undergrounded Central Drain 3-D No 1 Drain. These samples were gathered at the discharge and 220 meters downstream of the discharge (first available manhole). Water samples were collected at the same areas. The Central Drain 3-D No 1 Drain flows to Alamo River. The Alamo River flows approximately 50 miles north through Imperial County to the Salton Sea.

Objective

Barrett's Biological Surveys was retained by Heber wastewater treatment facility to conduct a rapid assessment of aquatic and shore organisms in the Central Drain 3-D No 1 Drain at the point of discharge from the Heber wastewater treatment facility (located at 1184 Rockwood Ave, Heber, CA). The objective of this survey was to determine whether the water, plant life and aquatic life at this discharge point are more typical of saltwater or freshwater environments. The goal of Heber wastewater treatment facility is to gain approval from the U.S. Environmental Protection Agency (EPA) to use alternative freshwater criteria for a body of water segment where no marine beneficial use designation occurs, even if the salinity is above one part per thousand.

Background

The Heber wastewater treatment facility discharges into the undergrounded Central Drain 3-D No 1 Drain which ultimately flows north to the Salton Sea. The Central Drain

3-D No 1 Drain is undergrounded from Rockwood Ave east to Pitzer Road.

The Central Drain 3-D No 1 Drain discharges into the Alamo River which drains into the Salton Sea. The Alamo River flows north from the All American Canal. Agricultural drain and runoff water and treated wastewater enter the Alamo River. All agricultural water is from the Colorado River and enters Imperial County through the All American Canal.

Agricultural water from the Colorado River has elevated salt levels. Farmers have installed tile at an average depth of 3 to 4 feet in their farm ground to remove excess salinity and prevent salt contamination of their ground. As a result of removing salt from the soil, drain waters show an elevated salinity level.

The California Toxics Rule (CT) 40 CFR 131.38©(3) provides that waters that have salinity between 1 and 10 parts per thousand should be addressed as follows:

> For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs at (3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis, the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate.

Methods

A bioasessment of the outfall was conducted between the hours of 1030 and 1130 (73°F) on December 8, 2008 by M. Barrett and G. Barrett of Barrett's Biological Surveys. Sampling stations were established at the discharge and 100 meters upstream and 220 meters downstream. At each sampling station the following data were collected:

- Water salinity
- Dominant vegetation
- Aquatic organisms (if present)
- Animals

Due to the underground pipe, no aquatic invertebrates were collected using an aquatic kick net, as the manhole was not large enough to accommodate the kick net. Shore vegetation and animal species were visually observed.

Equipment used:

- Aquatic kick net
- Swing sampler/wide mouth bottles
- Garmin GPS
- Swarovski binoculars
- Caldwell wind wizard

Results and Discussion

The Central Drain 3-D No 1 Drain serves as the discharge point for the Heber wastewater treatment plant. The dominant plant in the project area included quail brush (Atriplex lentiformis) and salt cedar (*Tamarix sp.*).

Salinity

Water salinity was measured using a hand held, temperature compensated salinity refractometer (VeeGee Refractometer Model STX-3). Instrument is accurate to 1% . Equipment was cleaned after each sampling.

Readings:
100 meters upstream of discharge: no water present
Discharge: 2% = 2 ppt
220 meters downstream of discharge: 2% = 2 ppt

Vegetation

Vegetation was similar at all sampling sites (Photographs: Attached). The dominate species included quail brush (Atriplex lentiformis) and salt cedar (Tamarix spp.). Also observed: alkali mallow (Malvella leprosa), curly dock (Rumex crispus) and mustards (Brassica sp.)

Aquatic Invertebrates

It was not possible to collect aquatic invertebrates due to the underground piping of the drain downstream and the lack of water upstream.

Fishes

It was not possible to collect fishes due to the underground piping of the drain downstream and the lack of water upstream.

Vertebrates

The following vertebrates were observed in the area: American kestrel (Falco sparverius), cabbage butterfly (Pieris rapae) and various ants.

Conclusion

Based on the freshwater vegetation and wildlife at the Central Drain 3-D No 1 Drain where it receives the discharge from the Heber wastewater treatment plant, it is concluded that this is a freshwater ecosystem.

Species typically found in a saltwater system, such as barnacles (*Balanus amphrite*), pileworms (*Nenathes succinea*), or brackish water snail (*Thiara granifera*) were not observed. Saltwater vegetation or wildlife were also not observed.

The discharge area is a undergrounded agricultural drain found in Imperial County and accessed through manhole covers. As a result, the samples collected during this rapid assessment are considered representative of the overall system.

Sincerely,

Marie D. Barrett

Marie Barrett
Biologist

PHOTOGRAPHS

Sample taken at Discharge Manhole Access
Central Drain 3D No 1 (undergrounded)

Downstream Sampling Manhole Access
Salt Cedar (Tamarix spp.)

Upstream Central Drain 3D No 1
No Water Found in Drain. Typical Vegetation

North Portion of Heber Wastewater Treatment Facility


agricultural fields
E Correll Rd
Central Drain 3D-No 1
upstream
discharge
Vacant Lot
downstream
Correll Rd
Heber Ave
2nd St
Baker St
Lettuce St
Heber St
3rd St
Perkyns Ave
Cantaloupe St
Niki St
E Hawk St
Valley Blvd
Grand Ave
Pheasant Ct
Heber Wastewater Treatment Plant
Rockwood Ave
Littlefield Way
Bloomfield St
Fairfield Way
Goldfield Way
Harmony Way
© 2008 Tele Atlas
Rockwood Ave, Heber, CA 92249
Google
Pointer 32°44'15.23" N 115°31'34.13" W elev 0 ft
Streaming 100%
Eye alt 4390 ft

DEC 16 2008