CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

WASTE DISCHARGE/RECYCLED WATER REQUIREMENTS ORDER NO. R3-2003-0007

Waste Discharger Identification No. 3 401078001

For

LOS OSOS COMMUNITY SERVICES DISTRICT
LOS OSOS WASTEWATER FACILITY
San Luis Obispo County

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds that:

PURPOSE OF ORDER

1. The purpose of the Order is to issue new Waste Discharge and Recycled Water Requirements for the Los Osos Community Services District (hereafter Discharger). The Discharger submitted a report of waste discharge on July 8, 2002, for authorization to discharge treated municipal wastewater from the proposed Los Osos Wastewater Facilities serving the communities of Cuesta-by-the-Sea, Baywood Park and Los Osos, in San Luis Obispo County. The purpose of the Los Osos Wastewater Facilities is to collect, treat and dispose of domestic and municipal wastewater and to eliminate discharges from on-site systems in accordance with Resolution No. 83-13.

FACILITY OWNER AND LOCATION

2. The Discharger's Wastewater Treatment Plant will be located on property owned by the Discharger in San Luis Obispo County at the intersection of Ravenna Avenue and Los Osos Valley Road (Latitude 35°18'40" Longitude 120°50'24"), as shown on Attachment A, included as part of this Order.

FACILITY/SITE DESCRIPTION

3. **Treatment -** The proposed treatment system consists of grit removal, secondary treatment (extended aeration process), denitrification, secondary sedimentation, filtration and disinfection. Solids will be aerobically digested, dewatered and disposed of at an approved biosolids disposal site. The treatment plant's annual average flow design capacity is 1.4 million gallons per day (MGD) and peak capacity is 1.6 MGD. A diagram of the treatment processes is shown on Attachment B, included as part of this Order.

4. **Disposal and Reuse -** Treated municipal wastewater will be discharged to leachfields or reused for landscape irrigation within the community. Discharge areas are depicted on Attachment C of this Order. Details of the Discharger's reuse program are not yet available, therefore reclamation requirements according to Water Code Section 13523 are included in this Order as guidance for development of that program and may be updated and/or revised to address reuse program specifics.

5. **Geology, Soils and Ground Water** – The vicinity of the discharge is characterized by sandy soils overlying an upper aquifer (Old Dune Sand deposits) and a lower aquifer (Paso Robles formation). The primary disposal area is located in sandy soils on moderately sloping terrain, overlying 150 feet separation to ground water in the Los Osos Valley Ground Water

Basin. Other disposal and reuse areas are located on level to gently sloping terrain with depth to ground water varying from 30 to 150 feet. The direction of ground water flow is predominantly northwest toward Morro Bay, however localized flow direction variations occur due to pumping of ground water.

6. **Watershed and Surface Waters** - Morro Bay State and National Estuary abuts the community of Los Osos along the northern and western perimeters. Los Osos Creek meanders east of the community and discharges to Morro Bay at the northeastern tip of Los Osos. Both water bodies are depicted on Attachment C of the proposed Order. Water quality in Morro Bay is impaired by pathogens, metals and sediment.

   A DNA study completed in 2002 for Morro Bay identified humans as the primary source of coliform bacteria in freshwater seeps from shallow groundwater along the estuarine edge of Los Osos. Los Osos Creek is impaired by nutrients and priority organic pollutants. However, based on local topography and direction of ground water flow, such impacts are likely the result of surface runoff to Los Osos Creek rather than seepage of ground water. On December 13, 2002, the Regional Board adopted a pathogen Total Maximum Daily Load (TMDL) for Morro Bay, including an associated implementation plan to achieve TMDL goals. Completion of the community wastewater system in Los Osos is a vital component of the Pathogen TMDL Implementation Plan.

7. **Existing Disposal Practices** – A small portion of the Los Osos community (approximately 80 homes plus a motel) is served by a tertiary treatment facility which produces fully treated and disinfected water for reuse as golf course irrigation. The remainder of the community's wastewater treatment and disposal (from approximately 5000 homes) is by septic systems. Many of these septic systems discharge partially treated wastewater within close proximity or directly to shallow ground water. Such practices have impaired ground water with nitrate contamination and impaired surface waters in Morro Bay as indicated in Finding No. 6 (above).

8. **Ground Water Quality** - Recent ground water quality in the uppermost aquifer in Los Osos is as depicted in the following table (well sites depicted on Attachment C). Similar to historical data, the monitoring data continues to show ground water impaired by nitrates (15 wells exceeding the Maximum Contaminant Level (MCL) for drinking water and five wells approaching the MCL of 10 mg/L Nitrate as Nitrogen). Historically, shallow ground water was the predominant source of domestic supply for Los Osos. However, due to nitrate contamination in the shallow zones beyond state drinking water standards, ground water use has shifted to the better quality, deeper zones. Both upper and lower ground water zones are needed to meet the community's long-term water supply needs.

Well ID #	Depth to Water (ft)	Nitrate as N (mg/l)	Sample Date	Well ID #	Depth to Water (ft)	Nitrate as N (mg/l)	Sample Date
7K3	51	12	06/24/02	17N4	30	7.6	06/28/02
7L3	36	15	06/24/02	18B1	18	6.9	06/24/02
7N1	5	3	06/28/02	18C1	16	15	06/24/02
7Q1	7	16	06/26/02	18E1	25	11	06/27/02
7R1	21	12	06/24/02	18H3	60	11	07/09/02
8N2	35	2.4	06/25/02	18J6	24	6.9	06/25/02
13A7	5	12	07/02/02	18L3	38	9.2	06/25/02
13G	39	9.3	06/26/02	18L4	19	19	06/26/02
13H	25	1	06/26/02	18N1	68	18	06/27/02
13L5	22	19	06/26/02	18R1	10	14	07/02/02
13Q1	82	20	06/27/02	20B	60	5.7	07/02/02

17D	NA	17	07/09/02	24A	149	11	06/27/02
17F4	40	3	06/28/02	13F1	NA	20	08/20/02

Data Source: Los Osos Community Services District NA – Data not available at time of report preparation

9. In September 2000, Cleath and Associates, consultants for the Los Osos CSD, completed hydrogeologic investigations of the wastewater disposal sites and movement of ground water influenced by such disposal. These investigations concluded that ground water coming in contact with percolating wastewater will take at least one year to migrate off the disposal site and at least 14 years to reach the Bay. Accordingly, movement through the soil will contribute to further treatment of such ground waters. The investigations further conclude that some strategic ground water pumping may be needed to mitigate mounded ground water downgradient from the disposal site.

BASIN PLAN

10. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Board on and approved on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of surface and ground waters in the vicinity of the discharge.

11. **Surface Water Beneficial Uses** - Present and anticipated beneficial uses of Morro Bay include:

    a. Industrial Process Supply
    b. Water Contact Recreation
    c. Non-contact Water Recreation
    d. Wildlife Habitat
    e. Cold Fresh Water Habitat
    f. Migration of Aquatic Organisms
    g. Spawning, Reproduction and/or Early Development
    h. Preservation of Biological Habitats of Special Significance
    i. Rare, Threatened or Endangered Species
    j. Estuarine Habitat
    i. Commercial and Sport Fishing
    x. Aquaculture
    y. Shellfish Harvesting

    Present and anticipated beneficial uses of Los Osos Creek include:

    a. Municipal
    b. Agricultural
    c. Ground Water Recharge
    d. Water Contact Recreation
    e. Non-contact Water Recreation
    f. Wildlife Habitat
    g. Cold Fresh Water Habitat
    h. Warm Fresh Water Habitat
    i. Migration of Aquatic Organisms
    j. Spawning, Reproduction and/or Early Development
    k. Rare, Threatened or Endangered Species
    l. Fresh Water Replenishment
    m. Commercial and Sport Fishing

12. **Ground Water Beneficial Uses** - Present and anticipated beneficial uses of ground water in the vicinity of Los Osos include:

    a. Municipal,
    b. Domestic,
    c. Agricultural and
    d. Industrial supply.

13. **Recycled Water** – Title 22, Division 4, Chapter 3 of the California Code of Regulations specifies State Department of Health Services' criteria for use of recycled water. Water Code section 13523 authorizes the Regional Board to issue reclamation requirements for water that is proposed to be used as reclaimed (recycled) water. The Regional Board has consulted with the State and County Health Departments regarding these reuse requirements. The State Department of Health Services (DHS) has evaluated the proposed project description and these waste discharge requirements and provided comments and recommendations which have been incorporated into this Order. DHS has determined that this Order is consistent with DHS's requirements, recommendations and policies regarding use of recycled water and protection of water quality and public health. DHS has also determined

that this is a disposal project, not a ground water recharge project.

14. The Los Osos CSD project is designed to meet Title 22 requirements for recycled water. This Order incorporates those requirements and has been reviewed by DHS.

15. **Stormwater** - Federal Regulations for stormwater discharges, promulgated by the U.S. Environmental Protection Agency, require specific categories of industrial activities including Publicly Owned Treatment Works (POTWs) and construction activities that disturb a total of five acres or more to obtain a NPDES permit regulating the control of stormwater. The State Water Resources Control Board has adopted general NPDES permits for stormwater discharges associated with industrial facilities and stormwater discharges associated with construction activities. The California Environmental Quality Act (CEQA) mitigation and monitoring program in the Order require the Discharger to obtain coverage under the appropriate general NPDES permit before commencing construction and before operation of the wastewater treatment facility.

MONITORING PROGRAM

16. Monitoring and Reporting Program (MRP) No. R3-2003-0007 is part of this Order. The MRP requires routine wastewater influent and effluent and receiving water (ground water) sampling and analysis to verify compliance with this Order. Monitoring reports are required monthly and an annual report is required by January 30th of each year. Additionally, this Order requires the Discharger to comply with the CEQA mitigation monitoring program in Resolution R3-2003-0006.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

17. The Los Osos Community Services District certified a Final Environmental Impact Report (EIR) on March 1, 2002, in accordance with CEQA (Public Resources Code, Section 21000, et seq.) and the California Code of Regulations.

    Pursuant to CEQA guidelines Section 15096, the Regional Board, as a responsible agency, adopted Resolution No. R3-2003-0006 that contains required findings and a mitigation monitoring program. These findings are limited to the portion of the wastewater project approved by the Regional Board and to mitigation measures that are within the Regional Board's jurisdiction. Compliance with the mitigation measures and mitigation monitoring program described in the Resolution is mandated by this Order.

EXISTING ORDERS AND RESOLUTIONS

18. **Resolution No. 83-13** – In 1983, the Regional Board adopted Resolution 83-13, which amended the Basin Plan and prohibited, effective November 1, 1988, discharges of waste from individual and community sewage systems within portions of the Los Osos area of San Luis Obispo County. At the time of adoption of Resolution No. 83-13, the County represented that it could design and complete a wastewater, collection treatment and disposal system that would eliminate the need for individual and community on-site sewage systems by the prohibition date of November 1, 1988.

19. **Cease and Desist Orders** – The Discharger replaced the County as the agency responsible for implementing the community wastewater project and developed a plan and schedule for project implementation. In May 1999, the Regional Board issued Cease and Desist Orders (Nos. 99-53, 99-54, 99-55 and 99-56) to the Discharger and included the project implementation into those Orders. At the time of adoption, the project implementation schedule appeared reasonably attainable.

20. **Time Schedule Order** – To address uncertainties in the original CSD project, the Discharger embarked on an evaluation of multiple collection, treatment, disposal and management alternatives. This evaluation resulted in modifications to the proposed

project and the project implementation schedule. In October 2000, the Regional Board adopted Time Schedule Order No. 00-131 based on Section 13308 of the California Water Code. Time Schedule Order No. 00-131 contains a date-specific compliance schedule and a daily penalty of $10,000 for failure to meet the scheduled compliance dates. Order No. 00-131 also provides that the Regional Board may modify the time schedule in the Order to permit specified tasks to be completed at later dates if the Discharger demonstrates and the Regional Board determines that the delay was beyond the reasonable control of the Discharger.

GENERAL FINDINGS

21. On **September 6, 2002,** the Board notified the Discharger and interested agencies and persons of its intent to consider adoption of waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written comments and scheduled a public hearing.

22. In a public hearing on **February 7, 2003**, the Board heard and considered all comments pertaining to the discharge, all evidence in the record, the Final Environmental Impact Report and the applicable law and found this Order consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263, 13267 and 13523 of the California Water Code, that Los Osos Community Services District, its agents, successors, and assigns, may discharge waste from the Los Osos Wastewater Facility providing compliance is maintained with the following:

All technical and monitoring reports submitted pursuant to this Order are required pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code.

(Note: General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984, referenced in paragraph E.2. of this Order.)

Throughout these requirements footnotes are listed to indicate the source of requirements specified. Requirement footnotes are as follows:

WC = Water Code
BP = Basin Plan
T22 = California Code of Regulations, Title 22, Recycled Water Criteria
DHS = State Department of Health Services

Requirements without footnotes are based on staff's professional judgment.

A. PROHIBITIONS

1. Discharge to areas other than the disposal facilities shown on Attachment C of this Order or reuse sites approved by the Executive Officer, is prohibited. [T22, WC]

2. Discharge of any wastes including overflow, bypass and runoff from transport, treatment or disposal systems to adjacent drainage ways or adjacent properties is prohibited. [T22, WC]

3. Discharge of untreated or partially treated wastewater is prohibited. [WC]

4. Discharge of wastewater within 100 feet of any well used for domestic supply or irrigation of food crops is prohibited. [BP]

B. EFFLUENT LIMITATIONS
(Discharge to Leachfields)

1. The annual average effluent shall not exceed 1.4 MGD.

2. Effluent discharged to the disposal system shall not exceed the following limitations:

Constituent	Units	Monthly (30-Day) Average	Daily Maximum
Settleable Solids	ml/l	0.1	0.5

BOD, 5-Day	mg/l	60	100
Suspended Solids	mg/l	60	100
Total Nitrogen (as N)	mg/l	7	10

C. RECYCLED WATER SPECIFICATIONS

(Reclamation (reuse) Requirements adopted under Water Code section 13523 apply in addition to Effluent Limitations specified above)

1. Discharger shall develop an Engineering Report on the Production, Distribution and Use of Recycled Water (Engineering Report) in conformance with Title 22 of the California Code of Regulations, for review and approval of the Executive Officer (after consultation with State and local Health Departments). The Engineering Report must be submitted no less than six months in advance of proposed reuse of wastewater.

2. Recycled water production and use shall at all times be in conformance with recycled water criteria established in Title 22, Division 4, Chapter 3 of the California Code of Regulations and the Engineering Report[T22, WC] . Recycled water shall be adequately oxidized, coagulated, clarified, filtered, disinfected[T22] and not exceed the following limitations:

Parameter	Units	Monthly Mean	Max.
BOD_5	mg/l	30	90
Suspended Solids	mg/l	30	90
Turbidity [T22]	NTU	2*	5**
pH^{BP}	units	In range 6.5-8.4	

* 24-hr mean value. [T22]

**Turbidity must not exceed 5 NTU more than 5% of the time within a 24-hr period and must not exceed 10 NTU. [T22]

3. The median number of coliform organisms in recycled water shall not exceed 2.2 MPN per 100 ml, as determined from the bacteriological results of the last 7 days for which analyses have been completed. The number of coliform organisms shall not exceed 23 MPN per 100 ml in more than one sample in any 30-day period and shall not exceed 240 MPN per 100 ml in any single sample. [T22]

4. Recycled water subject to a chlorine disinfection process shall include a CT (chlorine concentration times model contact time) of not less than 450 milligram-minutes per liter at all times with a model contact time of at least 90 minutes, based on peak dry weather design flow. [T22] Chlorine residual in reclaimed water shall equal or exceed 0.5 mg/l, as measured immediately after the chlorine contact zone.

5. Any alternative, comparable disinfection process must be approved by California Department of Health Services and the Executive Officer.

6. Delivery of reclaimed water for irrigation purposes shall cease as soon as possible and all wastewater shall be returned to the treatment and/or disposal system if:

   a. Disinfection of wastewater ceases at any time; or,

   b. Reclamation specifications are violated or threaten to be violated.

7. Recycled water shall be confined within the authorized reuse areas (approved by the Executive Officer after consultation with State and local health departments).

8. Recycled water shall not be used for irrigation during extended periods of rainfall and/or runoff.

9. Personnel involved in producing, transporting or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water.

10. Use of recycled water shall occur at a time and in a manner to prevent or minimize public contact with recycled water and to prevent ponding in irrigation areas.

11. Areas irrigated with recycled water shall be posted in English and Spanish to warn the

public that recycled water is being used. Signs shall be no less than four inches high by eight inches wide and include the wording "RECYCLED WATER – DO NOT DRINK".

12. Recycled water valves shall be of a design to prevent public access.

13. Drinking fountains shall be protected from recycled water spray, mist or runoff.

14. Tank trucks used to transport recycled water shall be appropriately labeled and shall not leak.

D. RECEIVING WATER LIMITATIONS
(Ground Water Limitations)

(Receiving water quality is a result of many factors, some unrelated to the discharge. This permit considers these factors and is designed to minimize the influence of the discharge to receiving waters.)

The discharge shall not cause:

1. The nitrate-nitrogen (NO_3 as N) level of ground water to exceed 10 mg/l.[BP]

2. Significant increase of mineral constituent concentrations in underlying ground water, as determined by comparison of samples collected from wells prior to and post discharge commencement.

3. Concentrations of chemicals and radionuclides in ground water to exceed limits set forth in Title 22, Chapter 15, Articles 4 and 5 of the California Code of Regulations. [BP]

E. PROVISIONS

1. Discharger shall comply with "Monitoring and Reporting Program No. R3-2003-0007" (included as part of this Order), as ordered by the Executive Officer.

2. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984 (included as part of this Order).

3. Implementation of Mitigation Measures pursuant to California Environmental Quality Act:

   a. The Discharger shall incorporate into the work required by this Order the following mitigation measures, identified in the FEIR and set forth in Resolution No. R3-2003-0006:

      i. Geology: Geo-1, Geo-2, Geo-3, Geo-4, Geo-5, Geo 6, Geo-7, Geo-8 and Geo-9.
      ii. Drainage: WR-1, WR-2 & WR-3.
      iii. Air Quality: AQ-3.
      iv. Public Health, Safety and Services: PS-1 and PS-3.

   b. The Discharger shall implement the Mitigation Monitoring Program in Resolution No. R3-2003-0006.

4. Treatment and discharge shall not cause pollution or nuisance as defined in Section 13050 of the California Water Code.

5. All accumulated biosolids or solid residue shall be disposed at a location authorized by law. Discharger shall report to the Executive Officer, plans to discharge at a facility not covered by existing waste discharge requirements or general waste discharge requirements at least six months before disposal begins. If the Executive Officer directs the Discharger to submit a report of waste discharge, Discharger shall not begin disposal until it has obtained coverage under individual or general waste discharge requirements or other authorization to discharge.

6. Treatment, storage and disposal facilities shall be managed to exclude the public and posted to warn the public of the presence of wastewater.

7. Discharger shall develop and implement an on-site wastewater management plan no later than **January 1, 2004** assure ongoing operations, maintenance and monitoring of on-site disposal systems for the unsewered areas in the community of Los Osos.

8. Pursuant to Title 23, Division 3, Chapter 9, of the California Code of Regulations, the Discharger must submit a report to the Executive Officer, no later than **August 7, 2007,** addressing:

    a. Whether there will be changes in the continuity, character, location or volume of the discharge; and,

    b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete or otherwise in need of revision.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region, on February 7, 2003.

/s/
Executive Officer

_____
Date

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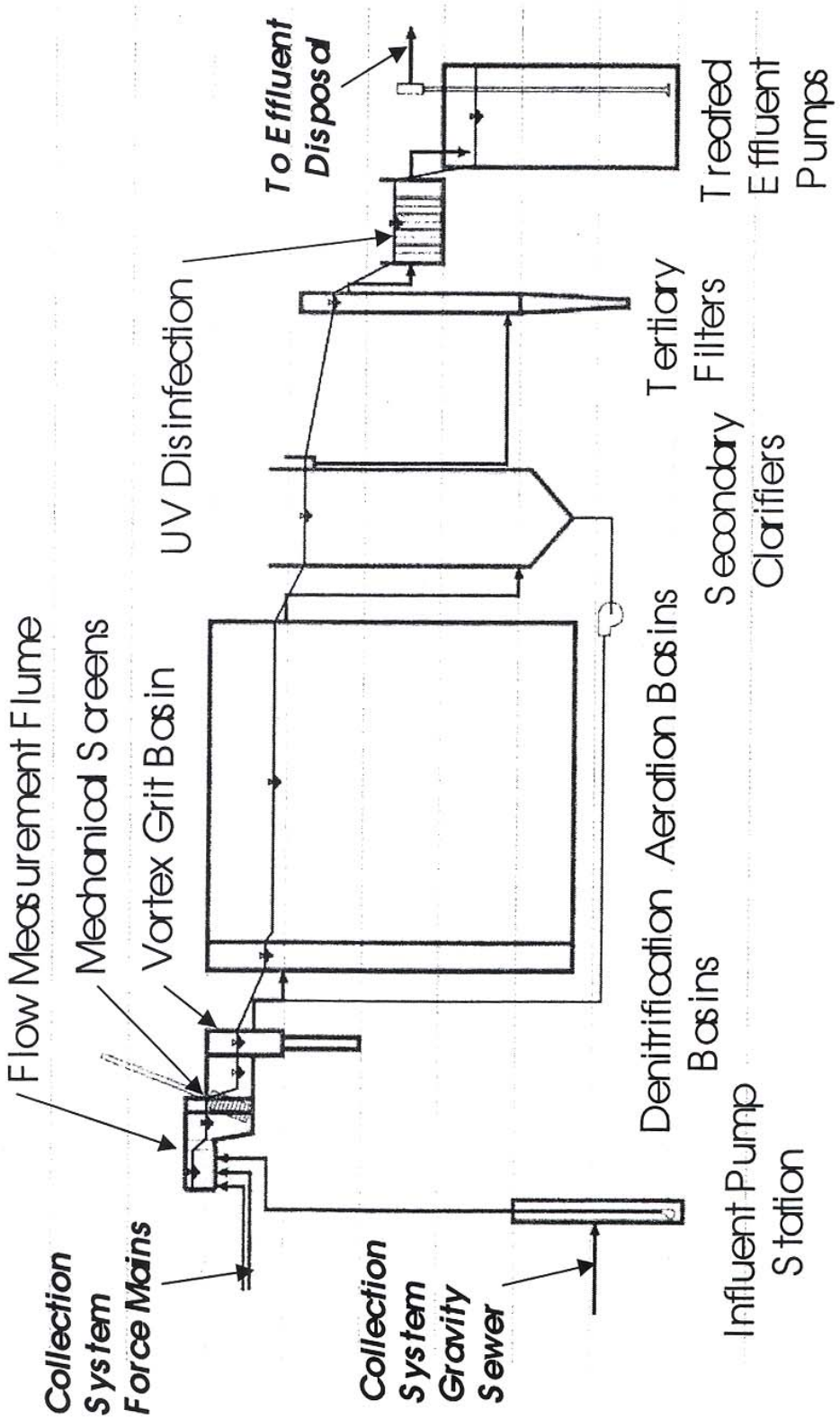
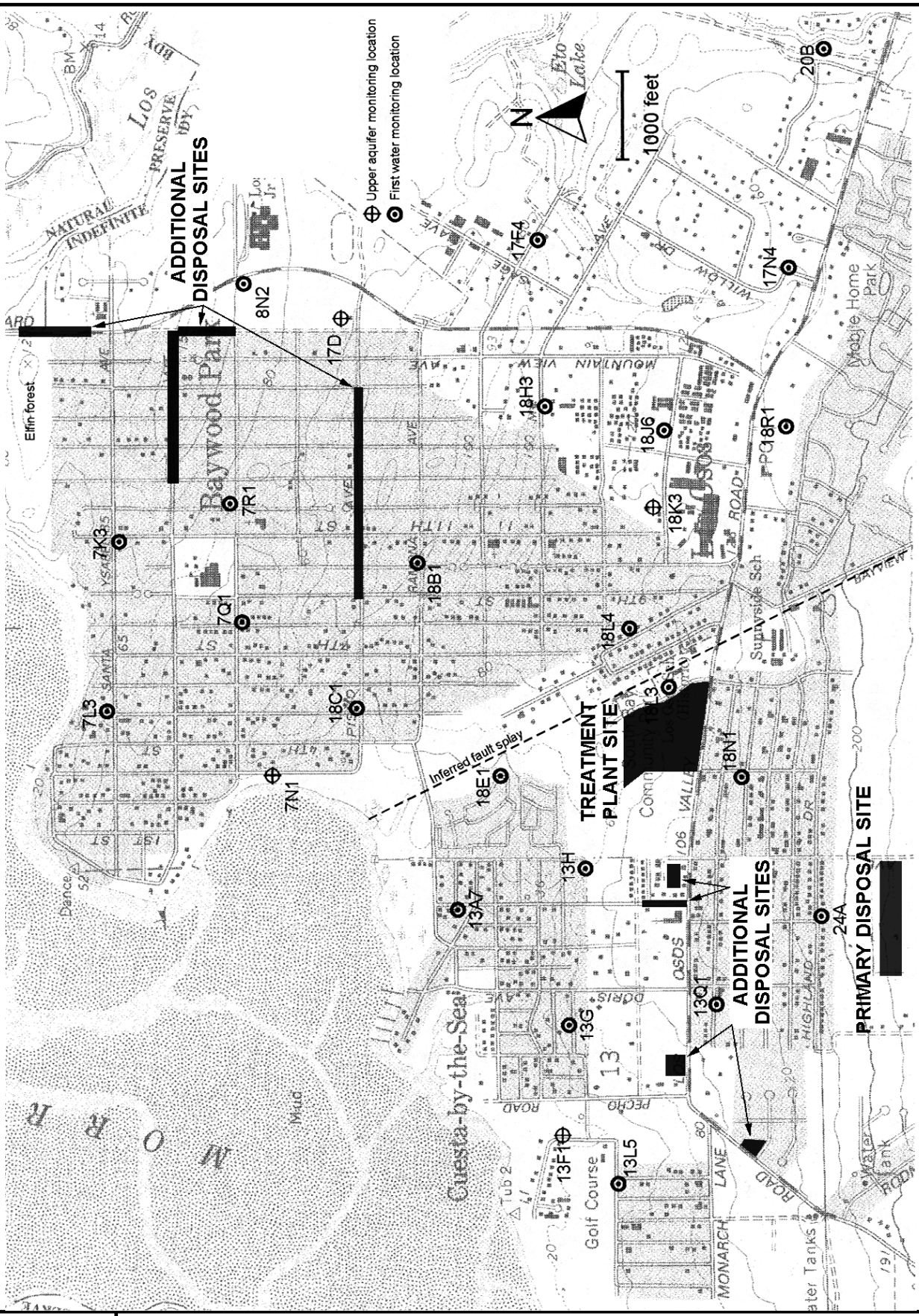
ATTACHMENT A
LOS OSOS COMMUNITY SERVICES DISTRICT
ORDER NO. R3-2002-0108



ATTACHMENT B
LOS OSOS COMMUNITY SERVICES DISTRICT
ORDER NO. R3-2002-0108



ATTACHMENT C
LOS OSOS COMMUNITY SERVICES DISTRICT
ORDER NO. R3-2002-0108