

**CALIFORNIA COASTAL COMMISSION**

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**Th 6a****STAFF REPORT AND RECOMMENDATION****ON CONSISTENCY DETERMINATION**

Consistency Determination No. **CD-062-98**  
Staff: LJS-SF  
File Date: 5/27/98  
45th Day: 7/11/98  
60th Day: Extended to 3/1/99  
Commission Meeting: 2/4/99

**FEDERAL AGENCY: INTERNATIONAL BOUNDARY AND  
WATER COMMISSION (IBWC)**

**DEVELOPMENT****LOCATION:**

South Bay International Wastewater Treatment Plant (SBIWTP),  
Tijuana River Valley, City of San Diego (Exhibits 1-3).

**DEVELOPMENT****DESCRIPTION:**

Construction of a Completely Mixed Aerated (CMA) Pond  
secondary wastewater treatment facility at the SBIWTP. (The  
Commission previously concurred in 1994 with an activated sludge  
secondary treatment facility; the IBWC now proposes to construct  
the CMA pond facility.)

**SUBSTANTIVE FILE DOCUMENTS:**

1. Draft Supplemental Environmental Impact Statement for the International Boundary and Water Commission South Bay International Wastewater Treatment Plant Long Term Treatment Options (January 1998).
2. Preliminary Coastal Consistency Determination for South Bay International Wastewater Treatment Plant Long Term Treatment Options (May 1998).
3. Draft Supplement to the Final Supplemental Environmental Impact Statement for the International Boundary and Water Commission International Wastewater Treatment Plant Interim Operation Project (October 1998).
4. Final Supplemental Environmental Impact Statement for the International Boundary and Water Commission International Wastewater Treatment Plant Interim Operation Project (November 1996).
5. Final Environmental Impact Statement, International Boundary and Water Commission South Bay International Wastewater Treatment Plant (1994).
6. Consistency Determinations for the South Bay International Wastewater Treatment Plant:
  - CD-2-94 (treatment plant and ocean outfall)
  - ND-1-95 (plant modifications)
  - CD-31-95 (outfall modifications)
  - ND-34-96 (tunnel spoils disposal site)
  - ND-77-96 (dechlorination facility)
  - ND-120-96 (Smuggler's gulch culvert)
  - ND-136-96 (removal of offshore construction platform)
  - CD-137-96 (interim discharge of advanced primary effluent through 2001)
  - CD-138-96 (vegetation removal)
  - ND-53-97 (outfall modifications)
  - ND-150-97 (road improvements)
  - ND-122-98 (change in advanced primary effluent characteristics)
7. CC-62-91 (City of San Diego, Point Loma Treatment Plant outfall extension).
8. NE-94-95 (City of San Diego, Point Loma Treatment Plant secondary treatment waiver).
9. CDP 6-88-277 (City of San Diego, South Bay Land Outfall).
10. CDP 8-91-217 (City of San Diego, Point Loma Treatment Plant outfall extension).
11. Certified Tijuana River Valley Land Use Plan and City of San Diego LCP Implementing Ordinances.

12. Tijuana River National Estuarine Sanctuary Management Plan.
13. International Wastewater Treatment Plant -- Biological Assessment, December 1993.
14. Hydrogeological Assessment of the Tijuana River Valley, State Water Resources Control Board, February 1992.

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### EXECUTIVE SUMMARY

The International Boundary and Water Commission (IBWC) has submitted a consistency determination for construction of a Completely Mixed Aerated (CMA) pond secondary wastewater treatment facility at the South Bay International Wastewater Treatment Plant (SBIWTP), located in the Tijuana River Valley, San Diego. The purpose of the CMA facility is to treat dry-weather wastewater flows originating in Mexico to secondary treatment standards prior to effluent discharge into the Pacific Ocean. In 1994 the Commission concurred with a consistency determination (CD-2-94) for construction and operation of the SBIWTP, including provisions for activated sludge secondary treatment and ocean discharge of effluent through the South Bay Ocean Outfall. Construction of the SBIWTP and SBOO was completed in 1997 and January 1999, respectively. Construction of the activated sludge secondary treatment facility was deferred by the IBWC and the U.S. Environmental Protection Agency in 1996 so that additional secondary treatment alternatives could be examined. However, since 1997 the SBIWTP has operated at the advanced primary stage of treatment and has discharged effluent through the City of San Diego's Point Loma Ocean Outfall. Discharge of advanced primary effluent through the SBOO is scheduled to begin in January 1999. The Commission concurred with interim operation at the advanced primary treatment stage in CD-137-96 and ND-122-98.

The proposed CMA ponds secondary treatment facility will result in a net benefit to coastal resources because it will eliminate the current discharge into the ocean of advanced primary effluent from the SBIWTP. In addition, construction of the secondary treatment works will allow the plant to operate at full capacity and remove dry-weather flows of raw sewage from the Tijuana River, thereby improving habitat quality in the river, its estuary, and nearshore waters, and improving the quality of recreational resources in the region by reducing beach closures, odors, and mosquitos. The proposed project is consistent with the water quality, marine resource, environmentally sensitive habitat, development, visual resource, and air quality policies of the California Coastal Management Program (Sections 30230, 30231, 30254.5, 30240, 30250, 30251, 30253, and 30414 of the Coastal Act).

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## STAFF SUMMARY AND RECOMMENDATION:

### I. Project Description.

The International Boundary and Water Commission (IBWC) proposes to construct a Completely Mixed Aerated Pond secondary wastewater treatment facility at its South Bay International Wastewater Treatment Plant (SBIWTP)(Exhibits 1-3). In 1994 the Commission concurred with construction and operation of an activated sludge secondary wastewater treatment facility at the SBIWTP (CD-2-94). The SBIWTP has operated since 1997 at the *advanced primary treatment level* with effluent discharged to the Pacific Ocean through the City of San Diego's Point Loma Ocean Outfall. Construction of the IBWC's South Bay Ocean Outfall was completed in January 1999 and discharge of advanced primary effluent was scheduled to commence later that month. However, construction of the activated sludge secondary treatment facility was deferred by the IBWC and the U.S. Environmental Protection Agency in 1997 so that additional secondary treatment alternatives could be examined in a supplement to the SBIWTP Final EIS. In addition to the alternatives analysis, the Supplemental EIS for Long Term Treatment Options at the SBIWTP also included analysis of the following:

- *Consider the environmental impacts of peak sewage flows that would not receive secondary treatment at the SBIWTP as designed and described in the 1994 FEIS. The 1994 FEIS does not address treatment of peak flows above 25 mgd (1,095 liters per second [L/s]).*
- *Evaluate additional technical information on the feasibility of alternative methods of achieving secondary treatment, including pond systems, that has become available since the 1994 FEIS and ROD.*
- *Incorporate new technical information on the constituents in and chemical makeup of Mexican wastewater.*
- *Collect and analyze new baseline sampling data on marine water quality.*
- *Consider increasing budgetary constraints that necessitate a closer review of all major program expenditures.*

The IBWC now proposes to construct a Completely Mixed Aerated (CMA) pond secondary treatment facility (Exhibits 4 and 5). The subject consistency determination addresses *only* the construction and operation of the CMA pond secondary treatment facility and its consistency with the policies of the California Coastal Management Program (CCMP). The Commission, through its review since 1994 of four consistency determinations and eight negative determinations associated with the SBIWTP, has previously concurred with: (1) construction of the SBIWTP, including secondary treatment works; (2) discharge of secondary treated effluent into the Pacific Ocean through the SBOO; (3) interim operation to the year 2001 of the SBIWTP with discharge of advanced primary treated effluent into the Pacific Ocean through the City of San Diego's Point Loma Ocean Outfall and the IBWC's South Bay Ocean Outfall; and (4)

interim discharge through the aforementioned outfalls to the year 2001 of advanced primary effluent that periodically exceeds California Ocean Plan standards for acute toxicity and dioxin. The Commission determined that all these activities were consistent with the CCMP and would significantly help to alleviate the long-standing raw sewage problems in the Tijuana River, its estuary, and the Pacific shoreline along southern San Diego County. The previous consistency determinations and negative determinations associated with the SBIWTP are incorporated by reference into this report, and they provide detailed background information on the issues which led to the construction of the SBIWTP and SBOO and the interim and permanent operating and discharge plans.

The subject consistency determination describes the proposed project as follows:

*This alternative includes treatment ponds capable of treating 25-mgd (1,095 L/s) average flow with peaks of 50 mgd (2,190 L/s). In this alternative, conventional primary treatment, as opposed to advanced primary treatment, is provided at the SBIWTP to optimize the pond system. The primary effluent would be the influent to the pond systems.*

*The additional property required for this alternative comprises the [privately-owned] Hofer parcel adjacent to the SBIWTP and a government-owned parcel north of the Hofer parcel. This alternative would use a completely mixed aerated process preceded by specialized cells called anaerobic digester pits (ADPs). This design incorporates recommended modifications to this alternative (CH2M HILL, Phase II Ponds Study). The proposed new facilities, which are shown in Figure 2, would require the following major elements:*

- *Four ponds, each divided into five cells: four ADPs receiving primary effluent, followed by one CMA cell receiving effluent from all of the ADPs. The ADPs will have surface aerators and the CMA cells will be completely mixed and aerated.*
- *Two surface aerated ponds (27 million gallons each) divided into two cells, each pond receiving effluent from the CMA cells.*
- *Distribution structures.*
- *Pump stations.*
- *Control building.*

*This alternative would cover a total of approximately 36 acres, with a total pond surface area of approximately 29 acres. The proposed new facilities are sized to treat an average monthly organic loading of 370 mg/L, 5-day biochemical oxygen demand (BOD-5), 350 mg/L total suspended solids (TSS), and an average flow of 25 million gallons per day (mgd) with a 50 mgd peak. The system is designed to provide secondary effluent quality of 20 mg/L BOD-5 and 20 mgd/L TSS with a total system capacity of 126.25 million gallons.*

The consistency determination additionally states that:

*Based on the analysis of the seven alternatives discussed in the Long Term SEIS and comments received by the public, the lead agencies have selected the CMA Ponds at Hofer Site Alternative as the Preferred Alternative. The rationale for this decision is summarized below:*

- *Environmentally Preferred – Secondary treatment is the environmentally preferred alternative. The CMA Ponds at the Hofer Site is a secondary treatment alternative that is designed to meet all secondary treatment standards and all California Ocean Plan requirements. Furthermore, the CMA ponds are expected to have no significant impacts on marine and terrestrial biology, cultural and paleontological resources, land use, socioeconomic and environmental justice, scenic and recreational resources, geology, noise, or energy.*
- *Buffering Capacity – Of the secondary treatment alternatives considered in the SEIS, the ponds alternatives have larger holding volumes and biomass, which provide greater treatment reliability by equalizing fluctuations in influent constituent concentrations. Until an effective pretreatment program is established, the buffering capacity of secondary treatment using ponds provides an additional margin of safety against toxic upset and pass through. (The other pond alternative, Advanced Integrated Pond System (AIPS) at Spooner's Mesa, was not selected because of a significant impact regarding land use.)*
- *Land Use – Of the two pond alternatives, only the CMA pond alternative is consistent with local land use designations. The AIPS alternative, located at Spooner's Mesa, would be consistent with County of San Diego plans for the Mesa and the Multispecies Conservation Plan.*
- *Sludge Quantity and Quality – Although the alternatives considered in the SEIS are expected to produce hazardous sludge, the CMA ponds produce the least amount of sludge.*
- *Costs – Of the secondary treatment alternatives (the environmentally preferred alternatives), the CMA ponds have the lowest capital and operation and maintenance costs, while meeting all project objectives.*
- *Timeliness – Of the secondary treatment alternatives (the environmentally preferred alternatives), the CMA ponds can be implemented most expeditiously.*
- *Odors and Vectors – Although nuisance odors are not anticipated to be a problem under normal operating conditions, the pond alternatives provide an added margin of safety against possible odors due to their greater resistance to toxic upset. No vector problems are anticipated with the CMA Ponds at the Hofer Site Alternative. The CMA Ponds at the Hofer Site Alternative will include design measures such as concrete skirts and surface aeration to prevent mosquito breeding conditions.*

- *Public Input – Although there were numerous comment letters recommending a variety of the alternatives, the majority of comment letters received on the SEIS expressed support for a ponding system, specifically requesting that the CMA Ponds at the Hofer Site Alternative be selected as the Preferred Alternative. Common rationale for the preference included high water quality, low cost, and a greater buffering capacity.*

As included in the original consistency determination for secondary treatment works (CD-2-94), the secondary treated effluent from the CMA pond system would be directed into the South Bay Land Outfall (completed in 1993) and the South Bay Ocean Outfall (completed in January 1999), and then discharged through a wye diffuser into the Pacific Ocean three miles offshore at a water depth of 93 feet.

## **II. Status of Local Coastal Program.**

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has incorporated the City of San Diego LCP into the CCMP.

## **III. Federal Agency's Consistency Determination.**

The IBWC has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

## **IV. Staff Recommendation.**

The staff recommends that the Commission adopt the following motion:

*MOTION. I move that the Commission concur with the IBWC's consistency determination.*

The staff recommends a **YES** vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

### **Concurrence**

The Commission hereby **concurs** with the consistency determination made by the IBWC for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

## **V. Findings and Declarations.**

The Commission finds and declares as follows:

**A. Water Quality and Marine Resources.** Section 30230 of the Coastal Act provides:

*Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act provides:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30254.5 of the Coastal Act provides:

*Notwithstanding any other provision of law, the commission may not impose any term or condition on the development of any sewage treatment plant which is applicable to any future development that the commission finds can be accommodated by that plant consistent with this division. Nothing in this section modifies the provisions and requirements of Sections 30254 and 30412.*

The discharge of sewage into the Tijuana River degrades the quality of coastal waters, including the Tijuana River, its estuary, and nearshore areas. The sewage problem has existed since the 1930s and has resulted in adverse effects to water quality, habitat, and recreational resources. The consistency determination summarizes the historic problem as follows:

*As stated in the 1994 FEIS, the purpose of the SBIWTP project is to provide new wastewater management facilities to safeguard the public health, environment, public beaches, water quality, and economy of San Diego, California and Tijuana, Baja California. Since the 1930s, the south San Diego area has been subject to contamination from sewage entering the Tijuana River and flowing north from the City of Tijuana. Failures, overloads, and breakdowns of the Mexican system have resulted in the overland flow of sewage each year from canyons and gullies that are tributary to the Tijuana River estuary. Intermittent raw sewage spills crossing the international boundary into the United States through the river and its tributaries pose serious threats to public health and substantial pollution risks to the estuary. These sewage flows have caused*



*quarantines of beaches along the south San Diego coast and both substantially and adversely affect the estuary, which was designated a United States National Estuarine Sanctuary in 1982 and is currently designated as a National Estuarine Research Reserve.*

*The USIBWC constructed the advanced primary facilities of the SBIWTP at a site in the Tijuana River Valley in the United States. The SBIWTP collects and treats excess wastewater flows from the City of Tijuana. Following treatment, effluent is discharged into the Pacific Ocean in the United States by way of a land and ocean outfall conveyance system. The sludge generated by the SBIWTP will be processed (i.e., lime stabilization and pasteurization) onsite and transported by truck back to Mexico for disposal.*

In February 1994, the Commission concurred with consistency determination CD-2-94 submitted by the IBWC for construction of a 25 million gallon-per-day (mgd) secondary wastewater treatment plant on a 75-acre site on the west bank of the Tijuana River at the International Border in California, 3.5 miles inland from the Pacific Ocean. That project included wastewater collection and distribution facilities, an 11-foot-diameter tunneled ocean outfall (extending from the terminus of the existing South Bay Land Outfall (constructed under coastal development permit 6-88-277) to a point 3.5 miles offshore in 93 feet of water), and discharge of 25 mgd of secondary treated wastewater through the outfall into the Pacific Ocean. The purpose of the plant was to collect and treat *dry-weather* flows of raw sewage in the Tijuana River, thereby reducing water quality, habitat, and recreational impacts from discharge of sewage into the River. During storm events, the volume of water is too great to allow full collection and treatment. As a result, while the plant would continue to operate during wet weather, there would still be raw sewage in the river during these wet weather peak flows. In addition, the Commission noted that discharge of raw sewage into the surf zone approximately five miles south of the International Boundary at Mexico's San Antonio de Los Buenos treatment plant would continue to create water pollution problems in U.S. waters. Notwithstanding these limitations, the Commission found that:

*[T]he natural resource and public health benefits realized by eliminating the discharge of several million gallons per day of raw sewage into the Tijuana River estuary far outweigh the minor, adverse impacts associated with the discharge of up to 25 mgd of secondary treated wastewater 3.5 miles offshore.*

Construction of the advanced primary treatment facility at the SBIWTP was completed in 1997. To address public concerns over health and environmental hazards from the untreated sewage in the river, IBWC began operating the plant prior to completion of the SBOO and the secondary treatment works, with discharge of advanced primary effluent through the City of San Diego's Point Loma Ocean Outfall and, when completed, the SBOO. The Coastal Commission concurred with this interim operating plan (proposed to run to the year 2001) in December 1996 through consistency determination CD-137-96.

In October 1998, the San Diego Regional Water Quality Control Board approved Addendum No. 2 to Cease and Desist Order No. 96-52 (which addressed the discharge of advanced primary effluent from the SBIWTP and the schedule to achieve full secondary treatment) and directed the IBWC to:

- Submit a report with the current results of the Toxic Identification Evaluation [a step in solving the acute toxicity problem in the SBIWTP effluent] by November 1, 1998 and a final report by August 1, 1999.
- Achieve compliance with the discharge specification for acute toxicity in Cease and Desist Order No. 96-52 by May 16, 2000. All other discharge specifications shall apply to the undiluted effluent from the SBIWTP discharged through the SBOO.
- With the concurrence of U.S. EPA, submit a definitive schedule for selection, installation, and implementation of secondary treatment at the SBIWTP, including firm dates for all significant milestones, to this Board prior to November 18, 1998.
- Achieve a Record of Decision for implementation of secondary treatment at the SBIWTP in accordance with the schedule submitted pursuant to Directive 3 (above), prior to May 1, 1999.

In November 1998, the Commission concurred with ND-122-98, finding that interim discharge through the SBOO to the year 2001 of advanced primary effluent that periodically exceeds California Ocean Plan standards for acute toxicity and dioxin is also consistent with the CCMP. The Commission found that the interim discharge proposed by the IBWC and approved by the RWQCB would lead to significant improvements in water quality and marine resource health in the Tijuana River, its estuary, the shoreline, and offshore waters by reducing the amount of raw sewage discharged into these areas. In ND-122-98 the Commission noted that:

*Discharge of advanced primary treated effluent that exceeds acute toxicity and dioxin standards at a point three miles offshore is less environmentally damaging than: (1) discharge of that effluent into the Tijuana River; or (2) discharge of untreated sewage into the Tijuana River should the SBIWTP not be utilized as envisioned in CD-137-96.*

Therefore, given the Commission's previous determinations on the consistency of discharging secondary treated wastewater from the SBIWTP into the Pacific Ocean through the SBOO, the issue presently before the Commission in this consistency determination is whether the proposed secondary treatment alternative – CMA Ponds at the Hofer Site – is consistent with the CCMP. (The Commission determined in 1994 that the activated sludge secondary treatment alternative was consistent with the CCMP.)

Section I of this staff report provided the site and operational details of the CMA Ponds alternative, a facility that USEPA and the IBWC determined would generate wastewater effluent "designed to meet all secondary treatment standards and all California Ocean Plan

requirements." The consistency determination examines the potential effects of the CMA ponds facility on the marine environment:

*The Preferred Alternative will result in beneficial impacts to marine resources. The model of surf discharges projected that average total coliform levels following initial dilution within the zone of initial dilution would be significantly reduced. By the time the effluent travels to the kelp beds and coastal zone areas where these limits are actually applied, the dilution and bacterial die-off are expected to be reduced to concentrations well below Ocean Plan limits. Secondary treated effluent from the CMA ponds is expected to be in compliance with the Ocean Plan limits for total coliform at all times. The probability of exceeding standards for total or fecal coliform is zero, as predicted by the ocean model; therefore, there would be no significant impacts from total or fecal coliform levels.*

*An Ecological Risk Assessment (Appendix D of the Long Term SEIS) was performed to estimate the risk to marine biota from the effluent. For secondary treatment, chromium, copper, lead, mercury, nickel, silver, zinc, cyanide, DDT, and hexachlorocyclohexane (HCH)(also known as lindane) were predicted to be present in the effluent and/or settleable solids at levels that would pose an ecological risk. The concentrations of these chemicals would not result in toxicity to the marine environment within the 100:1 dilution zone (this zone is covered by the NPDES permit conditions set in accordance with the Ocean Plan Standards). The potential for toxicity impacts is not estimated to occur outside of the dilution zone and the impact is considered less than significant.*

*In regard to toxicity, the lead agencies tested effluent from the advanced primary treatment system in 1997 and 1998 for the parameters of the NPDES permit and the California Ocean Plan. As a result of that testing, it was found that the SBIWTP exceeded the acute toxicity limits. Toxicity is caused by the presence of compounds in wastewater that, in high concentrations, act as toxic stressors to test organisms. Findings of a toxic identification evaluation (TIE) suggest that surfactants are a major source of toxicity in the effluent. (Surfactants are typically found in cleaning agents [e.g., detergents] used in domestic and industrial activities.)*

*Secondary treatment removes surfactants from the wastewater effluent. The CMA Ponds Alternative is a secondary treatment process and, therefore, is expected to remove the surfactants that are not removed by the current advanced primary treatment process.*

*If toxicity is identified after secondary treatment is implemented, the USIBWC will perform additional TIEs to isolate and address toxicity.*

*Testing of effluent was also performed to assess impacts by dioxin using new, high resolution instruments. These tests determined that, under average discharge conditions, dioxin concentrations would not exceed the Ocean Plan or NPDES limits for any of the alternatives. Under maximum conditions, these limits would be exceeded by the Advanced Primary and Partial Secondary alternatives. A secondary Ecological Risk Assessment (Section 3.1.3 of the SEIS) was performed and evaluated the risk caused by dioxin to*

*marine life from the effluent water and from sediment produced from settled solids containing dioxin. The risk assessment did not identify a risk to marine life by any of the alternatives.*

*It is possible that even with the CMA ponds secondary treatment, some concerns regarding recreation in the marine environment could remain. If a coliform exceedance were to occur at the kelp bed, it would be a significant adverse impact if divers were present. Modeling of the surf discharge indicates a low probability and short duration of the occurrences. In the event of exceedances of coliform standards at the SBIWTP, disinfection by chlorination/dechlorination would occur. There could be potential impacts to aquatic life with the use of chlorination. The impacts, however, are infrequent, short-term, and not expected to be significant because chlorination would be followed by dechlorination and performed on an emergency basis only.*

*The CMA system at the Hofer site would be better able to manage toxic spikes without reduced treatment or upset than other of the alternatives considered in the SEIS. As with other methods of secondary treatment, dissolved oxygen, pH levels, suspended solids, and Table B compounds would be predicted to meet the NPDES permit limits.*

The IBWC also notes in the consistency determination that the water quality and marine resource mitigation measures included in the 1994 FEIS for the SBIWTP are still valid, and that additional mitigation measures for the CMA ponds alternative include the following:

- In the event that coliform levels exceed receiving water limits, the City and County of San Diego Department of Environmental Health, Cities of Imperial Beach and Coronado, California Regional Water Quality Control Board, and Office of Emergency Services would be notified immediately. Although coliform exceedances from the SBIWTP are not expected to occur, an emergency disinfection plan would be prepared and implemented.*
- Toxic contaminants in the water column or in newly settled sediment would be mitigated by Mexico instituting a pretreatment program, in accordance with Minute 283. The program would prioritize industries and institutions that generate wastes containing the compounds in the Ecological Risk Assessment (Appendix D of the Long Term SEIS).*

The IBWC concluded that the proposed CMA ponds at the Hofer site will improve water quality in the Tijuana River, its estuary, and ocean waters by providing for the discharge of secondary treated wastewater through the SBOO. The Commission concurs. The secondary treatment works will significantly reduce, but not completely eliminate, the amount of raw sewage discharged into the Tijuana River. (Discharge of sewage into the surf zone in Mexico will continue to adversely affect U.S. coastal water quality, and wet weather storm flows in the river will periodically carry untreated sewage through the Tijuana River Valley to the ocean.) However, operation of the CMA ponds secondary treatment facility at the IBWC will eliminate the current discharge into the ocean of advanced primary effluent from the SBIWTP and allow the plant to comply with California Ocean Plan standards, as required under the NPDES permit issued by the RWQCB. Ongoing effluent monitoring and implementation of toxicity

identification evaluations will help to ensure compliance with and enforcement of the NPDES permit conditions.

The Commission previously documented in its concurrences with construction, operation, and modifications of the SBIWTP that the marine resources present in the Tijuana River estuary and in ocean waters at and shoreward of the SBOO discharge point must be protected from unavoidable adverse water quality effects generated by the SBIWTP. The Commission finds that the proposed discharge of effluent from the proposed CMA ponds secondary treatment facility is consistent with the water quality and marine resource policies of the CCMP (Sections 30230, 30231, and 30254.5 of the Coastal Act).

**B. Environmentally Sensitive Habitat.** Section 30240 of the Coastal Act provides:

*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

*(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The site of the proposed CMA ponds is the privately-owned Hofer parcel adjacent to the SBIWTP and a government-owned parcel north of the Hofer parcel. The consistency determination states that:

*The SBIWTP site is disturbed as a result of existing facilities constructed in support of primary wastewater treatment. The Hofer site is disturbed from current and past agricultural, gravel extraction, vegetation clearing, and livestock activities. No patches of native vegetation remain within the site boundary. Sensitive species found in the vicinity of the SBIWTP and the Hofer site include San Diego barrel cactus, San Diego marsh-elder, ashy spike-moss, and San Diego sunflower. No sensitive plant species occur within the Hofer site or the SBIWTP. Sensitive wildlife observed in the general vicinity include least Bell's vireo, coastal California gnatcatcher, black-shouldered kite, northern harrier, red-tailed hawk, red-shouldered hawk, and Caspian tern. None of these animals is expected to nest within the SBIWTP's boundary or on the Hofer site because of the lack of suitable habitat.*

...

*The CMA Ponds at the Hofer Site Alternative would result in the loss of disturbed habitat at the proposed treatment pond site, but is not expected to affect special-status or wildlife species adversely. . . Adverse effects on wildlife at the site are not expected to be significant because of the proximity of the site to adjacent open space, the lack of native*

*habitat, the lack of foraging, and the level of disturbance at the site. Operational noise would be below accepted standards. There would be temporary, indirect impacts to non-sensitive species adjacent to the site, but these impacts are not significant.*

The IBWC incorporated into the proposed project additional mitigation measures (beyond those in the 1994 FEIS for the SBIWTP) to protect environmentally sensitive habitat, including noise suppression measures (e.g., noise suppressing mufflers and compliance with local noise control ordinances) and limitations on soil hauling to periods outside the least Bell's vireo breeding season. The IBWC concluded that the proposed CMA ponds project will not generate significant adverse effects on environmentally sensitive habitat at or adjacent to the Hofer and SBIWTP sites.

The Commission previously found in CD-2-94 that construction of the SBIWTP was consistent with Coastal Act policies protecting environmentally sensitive habitat:

*The proposed development has the potential to generate short-term construction and permanent operational impacts to sensitive terrestrial and estuarine habitat in the Tijuana River Valley. However, the project will also benefit these habitat areas by eliminating dry-weather sewage flows and returning the Tijuana River to a more natural seasonal flow regime.*

The proposed 36-acre CMA ponds secondary treatment facility is sited immediately adjacent to the 75-acre SBIWTP and will not eliminate or adversely affect environmentally sensitive habitat at those sites. Operation of the CMA ponds secondary treatment works at the SBIWTP should lead to improved environmental quality throughout the Tijuana River valley, including existing sensitive habitat. The Commission finds that the proposed project is consistent with the environmentally sensitive habitat policies of the CCMP (Section 30240 of the Coastal Act).

**C. Land Use/Visual Resources.** The Coastal Act contains policies that regulate land use and visual resources. Section 30250 of the Coastal Act provides in part:

*New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. . . .*

The 1998 Draft SEIS for the Long Term Treatment Options addresses the issue of land use at the proposed project site:

*Use of the Hofer site for wastewater treatment was evaluated in the 1994 FEIS for the SBIWTP as part of the Dairy Mart Road alternative. . . The underlying local land use plans, including the community plan, local coastal plan, and concept plan for the Tijuana River Valley Regional Open Space Park, all designate wastewater treatment facilities for*

*the site. The current actual land use at the Hofer site is open space, a currently inactive sand and gravel quarry is located to the west, and open space and agricultural uses are located to the north.*

The Commission concurs with the IBWC that use of the Hofer site (adjacent to the SBIWTP) as the location for the CMA ponds secondary treatment facility is consistent with local land use plans and with Coastal Act policies governing the siting of new development. The Commission also finds that construction of the secondary treatment works at the Hofer parcel is consistent with previous Commission decisions on the siting and construction of the SBIWTP, the South Bay Ocean Outfall, and the South Bay Land Outfall (CDP No. 6-88-277), will not generate significant adverse impacts on land use and development patterns in the Tijuana River Valley, and is consistent with the development policies of the CCMP (Section 30250 of the Coastal Act).

Section 30251 of the Coastal Act provides:

*The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

The IBWC states that the proposed CMA ponds facility is not expected to generate significant impacts to scenic and visual resources. The consistency determination states that:

*The newly constructed SBIWTP is a prominent feature in the immediate viewshed, visible to surrounding areas approximately 1.25 to 1.5 miles to the east and northeast in the valley, to elevated hills approximately 1.5 to 2.5 miles north and northeast.*

*The area surrounding the Hofer site includes agricultural pastureland and upland, and disturbed areas containing a sand and gravel quarry. Views of the SBIWTP and the Hofer site from the residential areas and I-5 to the north and east are mostly screened by dense vegetation or buildings. Views from the west are screened by the ridgeline.*

*Overall, the visual sensitivity of the Hofer site is considered to be low due to the distance from which most viewers see this site and the low volume of residential, recreational, and roadway use that occurs within one-half mile of the site.*

In CD-2-94, the Commission addressed the placement of a large industrial facility in a relatively undeveloped, non-industrial area of the coastal zone:

*... the impacts on scenic coastal public views in this location has been minimized and would not be significantly adverse. The project would lead to permanent but minor visual*

*resource impacts confined to the extreme southeastern corner of the Tijuana Valley. Moreover, the public benefits to be gained from construction of the treatment plant and the subsequent removal of raw sewage flows from the Tijuana River will lead to a cleaner and safer Tijuana River estuary, which in turn will encourage more people to visit and enjoy the public open space areas (including scenic views across the estuary) present throughout the Tijuana River Valley. For these reasons, the Commission finds that the proposed development, overall, is consistent with the visual resource protection policies (Section 30251) of the Coastal Act.*

Construction of the SBIWTP is now complete, save for the secondary treatment works. Initially, an activated sludge secondary treatment facility was to be built within the 75-acre footprint of the SBIWTP. The proposed 36-acre CMA ponds facility – with a total pond surface area of approximately 29 acres – would be located immediately west of the SBIWTP and would represent an expansion of the industrial landscape in this area. However, the SBIWTP, the Hofer site, and the area west of the Hofer parcel are all designated for wastewater treatment facilities in local land use plans (Exhibit 6). (The City of San Diego plans to construct its South Bay Water Reclamation Plant and South Bay Wastewater Treatment Plant on property west of the Hofer site.) The proposed facility would not generate significant, adverse affects on public views to and along the shoreline or across the Tijuana River estuary. Given the existing land use designation, and the Commission's previous concurrences with construction of the SBIWTP at this location in the Tijuana River Valley, the Commission finds that the additional visual resource impacts associated with the CMA ponds do not represent a significant degradation of the valley's scenic and visual resources, and is that the project consistent with the visual resource policies of the CCMP (Section 30251 of the Coastal Act).

**D. Air Quality.** Section 30253 of the Coastal Act provides in part:

*New development shall:*

...

*(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development. . . .*

Section 30414 of the Coastal Act provides:

*(a) The State Air Resources Board and air pollution control districts established pursuant to state law and consistent with requirements of federal law are the principal public agencies responsible for the establishment of ambient air quality and emission standards and air pollution control programs. The provisions of this division do not authorize the commission or any local government to establish any ambient air quality standard or emission standard, air pollution control program or facility, or to modify any ambient air quality standard, emission standard, or air pollution control program or facility which has been established by the state board or by an air pollution control district.*



*(b) Any provision of any certified local coastal program which establishes or modifies any ambient air quality standard, any emission standard, any air pollution control program or facility shall be inoperative.*

*(c) The State Air Resources Board and any air pollution control district may recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs.*

The IBWC states that the proposed CMA ponds facility is not expected to generate significant adverse impacts on air quality. The consistency determination states that:

*The SBIWTP is within the San Diego Air Basin. Odors are not regulated under emission standards; rather, they are regulated under the Air Pollution Control District's (APCD) Regulation IV, Rule 51 (the "nuisance" rule). An odor is considered a nuisance based on the number of complaints received by the APCD. Since the SBIWTP is located in a rural area surrounded by agricultural and livestock activities and a few isolated residences, odors detected during previous odor surveys in the area were primarily manure odors from a local farm. These surveys found the ambient odor conditions in the vicinity of the SBIWTP to be acceptable, although comments received at a previous public meeting indicated that the existing odor of the Tijuana River was foul and unacceptable.*

The Draft SEIS for Long Tern Treatment Options includes an extensive discussion of air quality impacts associated with each of the secondary treatment alternatives. The analysis concluded that nuisance-level odors would not be produced under normal operations for any of the treatment alternatives, and that the ponds alternative are predicted to produce fewer odors than the activated sludge alternative. The Draft SEIS states that for the CMA Ponds at the Hofer site:

*. . . would use four fully mixed ponds and two partially mixed ponds with a total surface area of 28.5 acres (11.5 ha). The fully mixed ponds would include cells with anaerobic digester pits. These cells would have surface aeration by mechanical aerators. Surface aeration effectively converts malodorous compounds produced under anaerobic conditions to oxidized compounds, which do not have nuisance odors.*

*. . .*

*The hydrogen sulfide/odor study modeled the emissions that would be generated by the primary and pond treatment facilities at the CMA at Hofer Site alternative, referred to in the study as the "CC-2/Pond System" scenario (Malcom Pirnie, 1997b, see Appendix B6.2). Emissions data from an earlier odor study (Malcom Pirnie, 1997a, see Appendix B6.1) were supplemented with measurements of emissions collected from a completely mixed aerated pond system, the Coachella Mid-Valley Water Reclamation Plant. The influent to the Coachella plant is domestic wastewater only. The wastewater from Tijuana is both domestic and industrial wastewater that will have somewhat different properties in terms*

*of emissions and odors. Those differences were not taken into account when modeling this alternative in the study. (emphasis added.)*

...

*Given the available data, the air dispersion modeling indicates that hydrogen sulfide and other odors would not impact the surrounding area. It is possible that different conditions such as higher hydrogen sulfide concentrations in the influent wastewater to the SBIWTP and higher temperatures could increase odors from hydrogen sulfide and other compounds; however, given the low concentrations predicted by the model and the distance between the SBIWTP and receptors, particularly the Coral Gate Development, odors are not expected to impact receptors when plant operations are properly maintained.*

...

*In the event of failures in the aeration equipment, anaerobic surface water conditions could occur in the ponds and result in odors. As designed, a redundant power supply and back-up aerators would mitigate these risks from upsets. The ponds may be potentially susceptible to toxic loads that reduce beneficial bacteria and reduce treatment levels. However, multiple ponds provide for increased detention and dilution of influent that reduce the impacts of episodic toxic loads more effectively than for the Activated Sludge and No Action alternatives. (emphasis added.)*

The Draft SEIS also describes the mitigation measures that the IBWC will implement with the operation of the CMA ponds facility:

- High surface aeration would be maintained during normal operations and during pond draining for sludge removal. If this approach is not satisfactory, the sludge would be removed by dredging and dewatered using existing equipment.
- A back-up power source for the mechanical aeration of the ponds would ensure that there is no interruption in the aeration process.
- The potential for malodorous episodes could be mitigated by a pretreatment program in Mexico that would reduce the concentration of toxic compounds. United States agencies, in cooperation with local agencies, would continue to assist Mexico to implement its pretreatment program.

However, even with these mitigation measures the IBWC acknowledges in its consistency determination that:

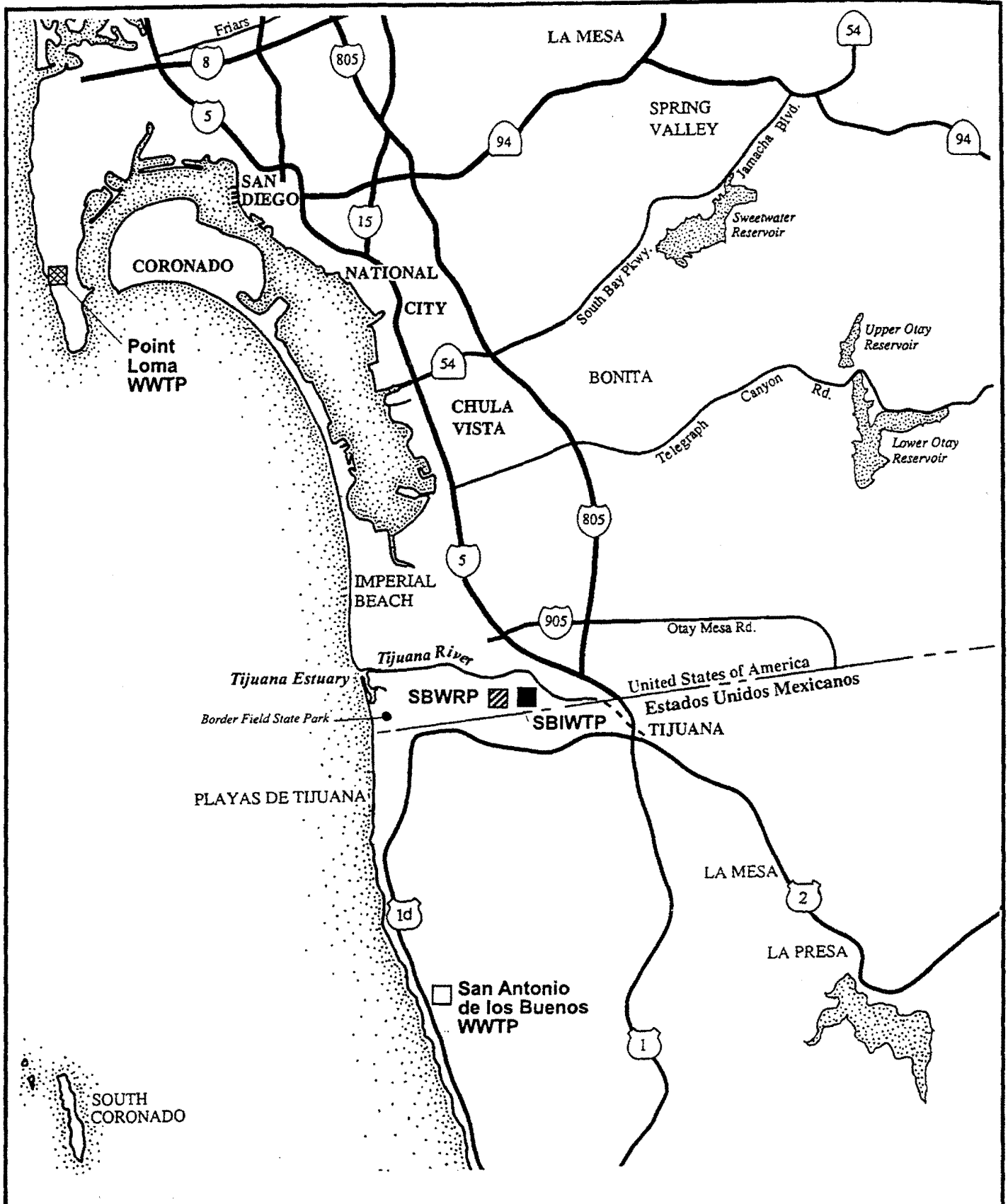
*... episodic and localized emissions could occur with the CMA Ponds at the Hofer Site Alternative due either to operating practices or specific climatic conditions. Although this possibility is less for the CMA Ponds at the Hofer Site Alternative than it is for other*

*secondary treatment alternatives considered in the SEIS, occasional odor impacts could occur. These impacts are not considered significant.*

The Commission acknowledges that as with any large wastewater treatment plant, operations at the SBIWTP may periodically generate odors which will adversely affect the surrounding area. When the Commission concurred with CD-2-94 for construction of the SBIWTP and activated sludge secondary treatment works, it noted that the facility would be subject to the requirements of the federal Clean Air Act, California Clean Air Act, California Air Toxics Act, and the San Diego County Air Pollution Control District. The proposed CMA Ponds secondary treatment facility will likewise be subject to those statutes and the enforcement provisions therein. Odor emissions at the facility will be controlled using the best available technology and operating procedures, and back-up power sources and aerators are designed to ensure no interruption to mechanical processes at the SBIWTP. Given these measures which will be implemented through IBWC receipt of and compliance with the applicable APCD permits, the Commission finds that the proposed project will be consistent with the air quality policies of the CCMP (Sections 30253 and 30414 of the Coastal Act).

G/land use/federal consistency/staff reports/98/062-98



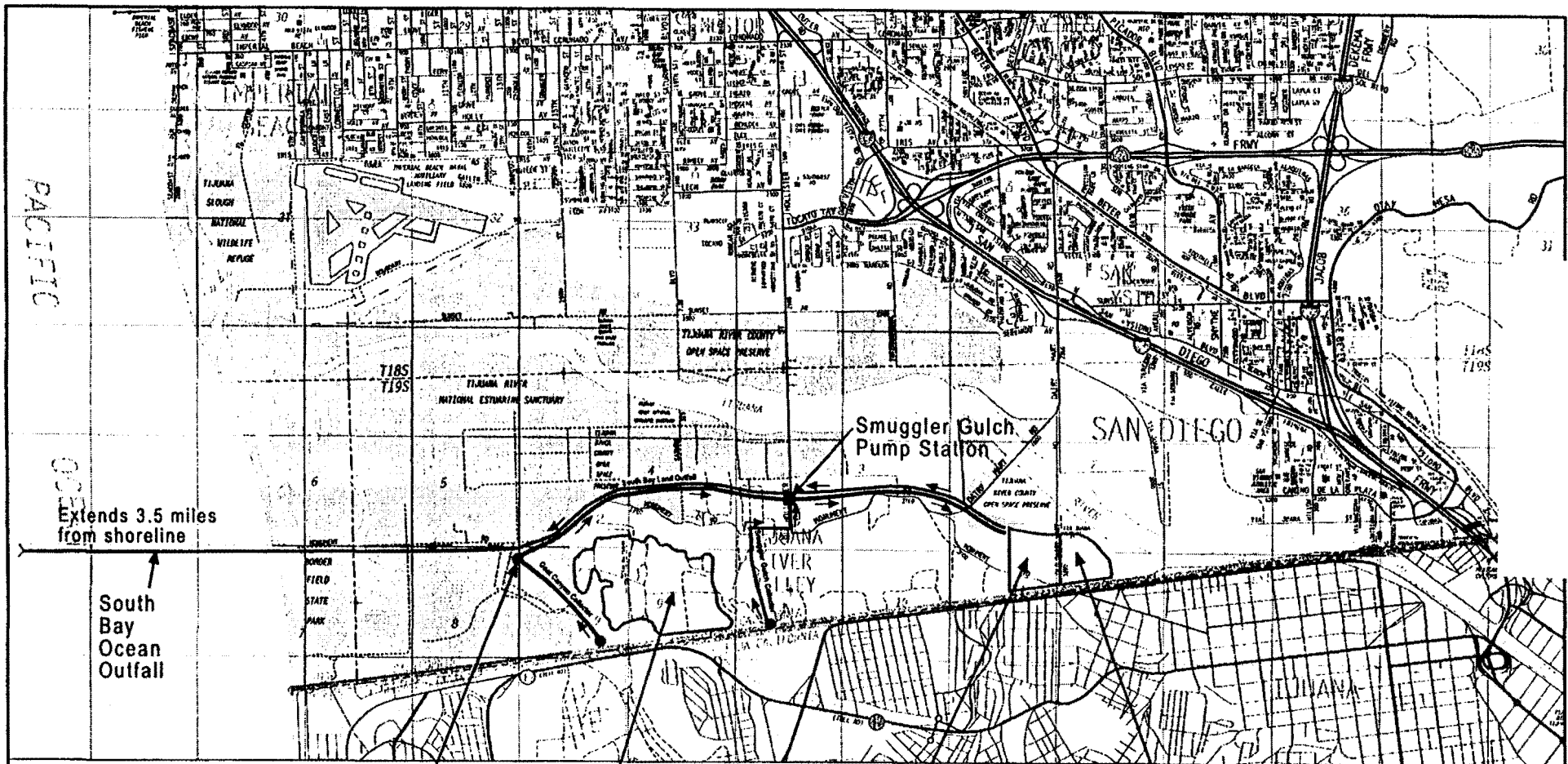


- South Bay International Wastewater Treatment Plant (SBIWTP)
- San Antonio de los Buenos Wastewater Treatment Plant (WWTP)
- ▨ South Bay Wastewater Reclamation Plant (SBWRP)
- ▩ Point Loma Wastewater Treatment Plant (WWTP)

Source: RECON, Interim O

Figure 1.3-1  
Regional Location  
SEIS for SBIWTP Lo

<b>EXHIBIT NO. 1</b>
APPLICATION NO.
CD-62-98
California Coastal Commission



Goat Canyon Pump Station

Spooner's Mesa Site

Hofer Site

South Bay International Wastewater Treatment Plant

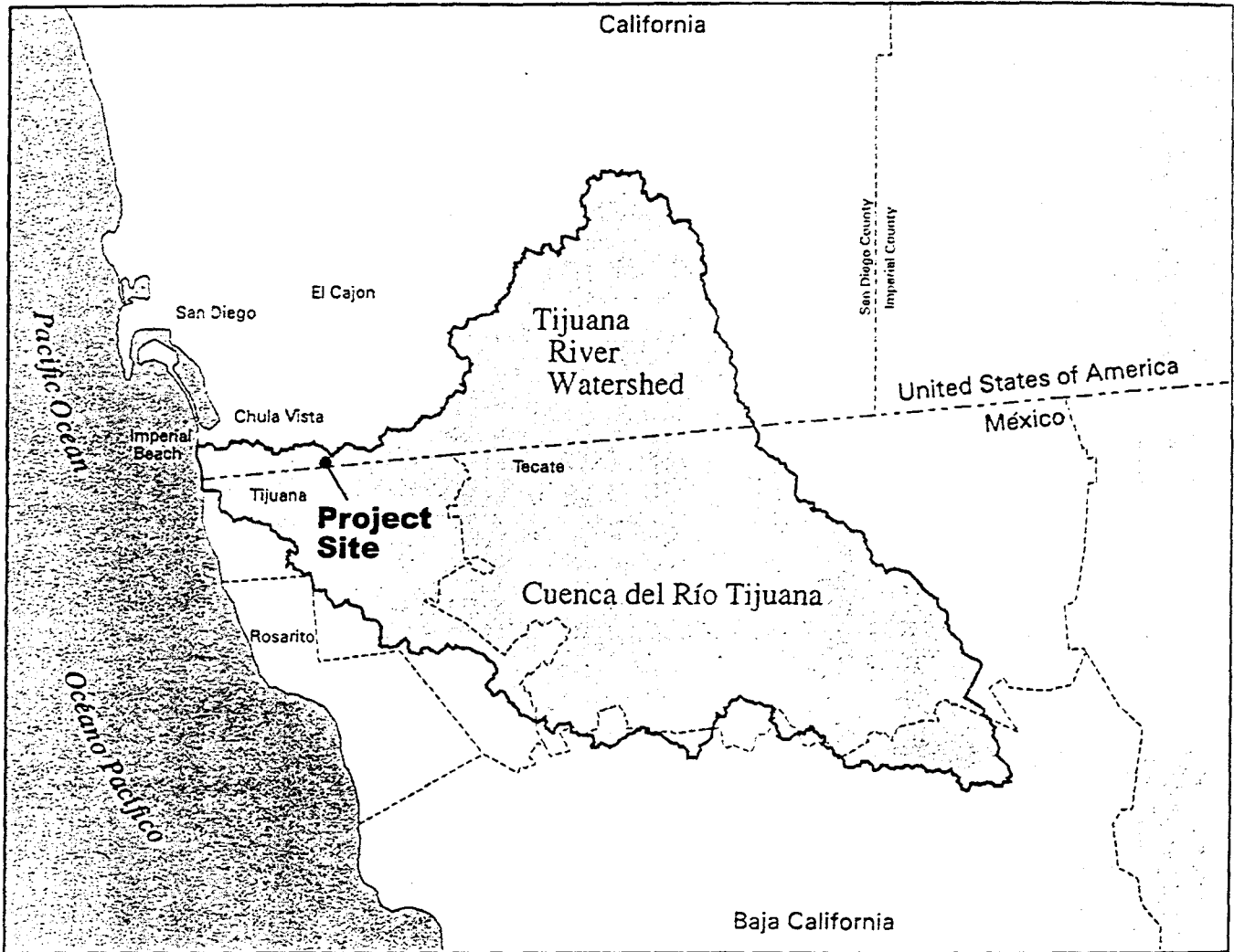
Extends 3.5 miles from shoreline

South Bay Ocean Outfall

EXHIBIT NO. 2  
 APPLICATION NO. CD-62-98  
 California Coastal Commission

1.0 Miles  
 Kilometers

Figure 1.3-2  
 Site Location Map and United States Facilities SEIS for SBIWTP Long-Term Treatment Options



<b>EXHIBIT NO. 3</b>
APPLICATION NO.
CD-62-98
California Coastal Commission

Source: San Diego Association of Governments/  
San Diego State University

**Figure 2.1.1**  
**Tijuana River Watershed**  
SEIS for SBIWTP Long-Term Treatment Options

**CH2MHILL**

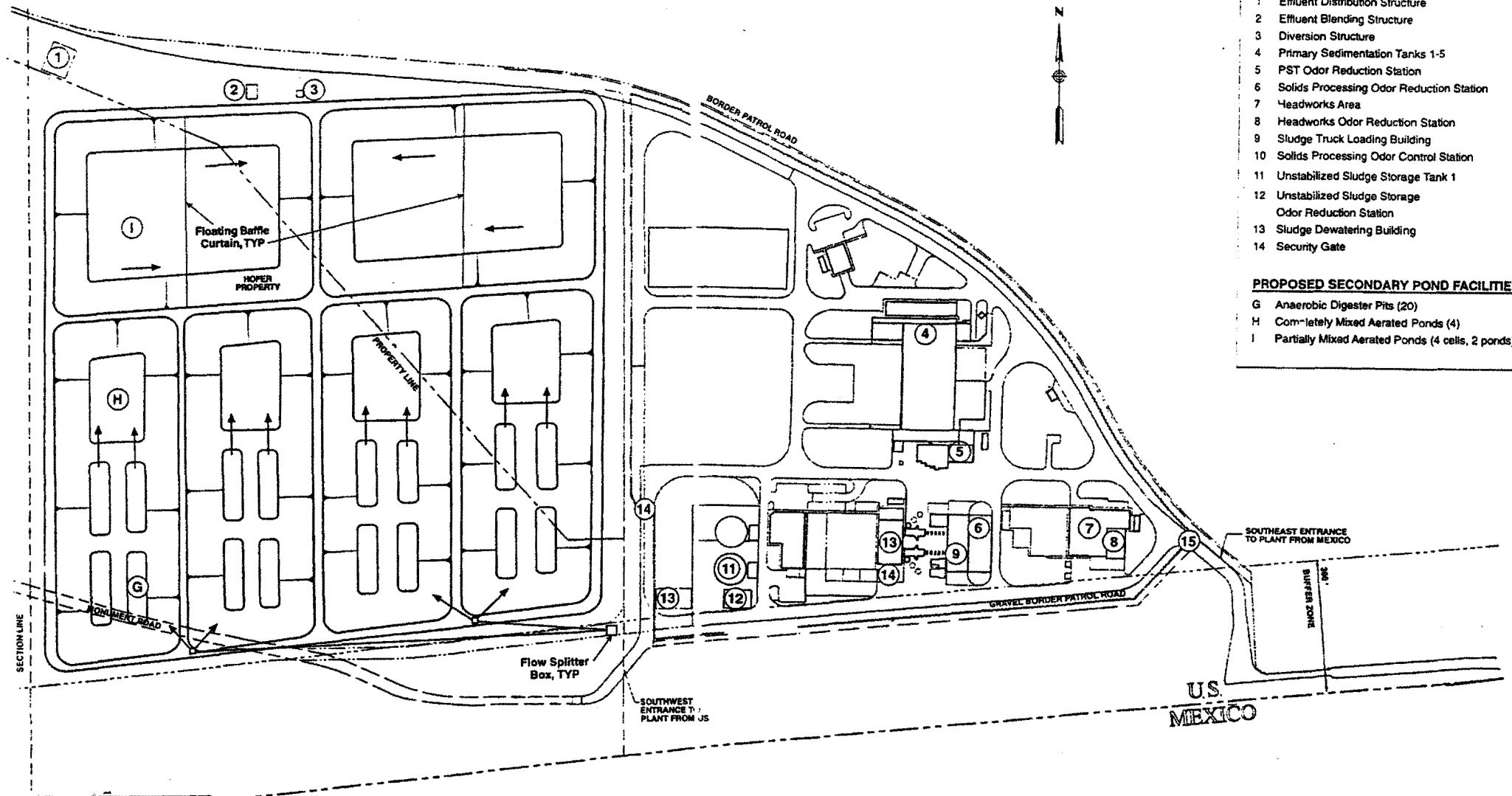
**LEGEND**


**EXISTING PRIMARY FACILITY STRUCTURES**

- 1 Effluent Distribution Structure
- 2 Effluent Blending Structure
- 3 Diversion Structure
- 4 Primary Sedimentation Tanks 1-5
- 5 PST Odor Reduction Station
- 6 Solids Processing Odor Reduction Station
- 7 Headworks Area
- 8 Headworks Odor Reduction Station
- 9 Sludge Truck Loading Building
- 10 Solids Processing Odor Control Station
- 11 Unstabilized Sludge Storage Tank 1
- 12 Unstabilized Sludge Storage Tank 2
- 13 Sludge Dewatering Building
- 14 Security Gate

**PROPOSED SECONDARY POND FACILITIES**

- G Anaerobic Digester Pits (20)
- H Completely Mixed Aerated Ponds (4)
- I Partially Mixed Aerated Ponds (4 cells, 2 ponds)



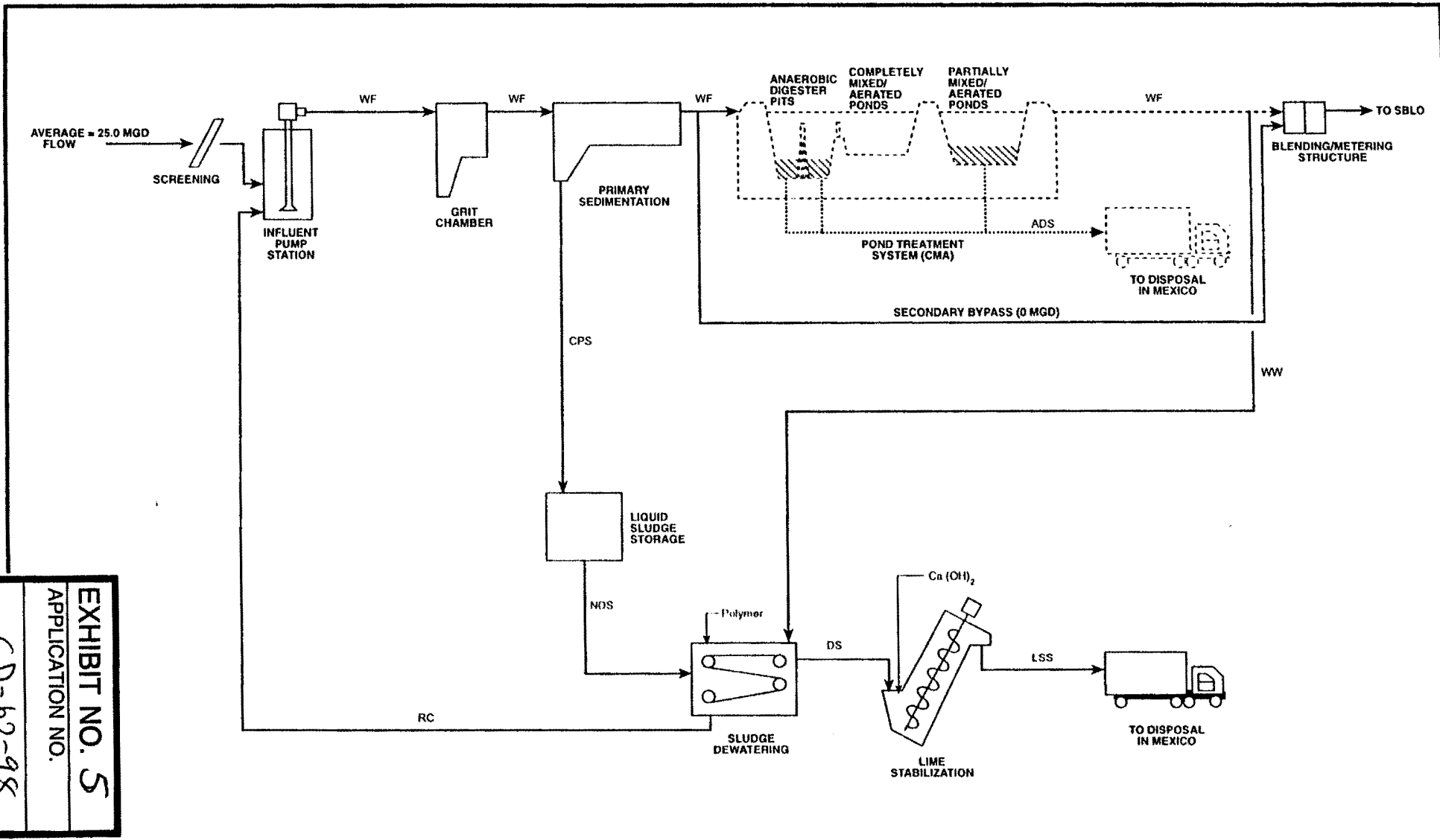
  
 California Coastal Commission  
**EXHIBIT NO. 4**  
 APPLICATION NO.  
 CD-62-98

0 200  
Scale in feet

Figure 1.5-8  
Physical Features of Completely Mixed  
Aerated Pond System at Hofer Site  
Alternative  
SEIS for SBIWTP Long-Term Treatment Options



EXHIBIT NO. 5  
 APPLICATION NO. CD-62-98  
 California Coastal Commission



**LOADINGS**

BOD5 = 370 mg/L  
 TSS = 350 mg/L

**PRIMARY TREATMENT REMOVALS**

BOD5 = 17%  
 TSS = 64%

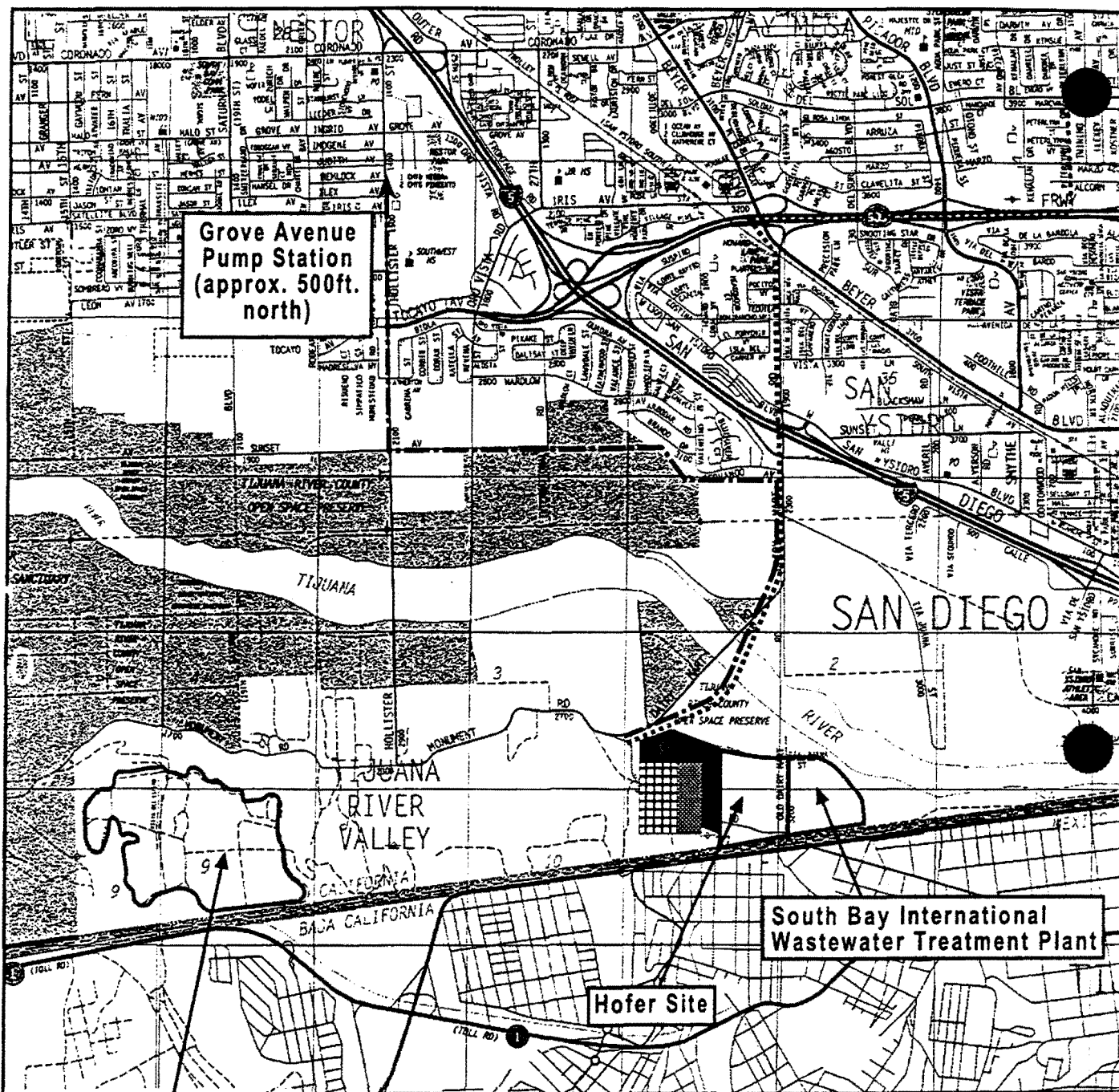
**FLOW STREAM**

- ADS = Anaerobically Digested Sludge
- CPS = Conventional Primary Sludge
- DS = Dewatered Sludge
- LSS = Lime Stabilized Sludge
- NDS = Nondewatered Sludge
- RC = Recycled Wastewater
- WF = Treated Wastewater Flow
- WW = Wastewater

- Existing SBIWTP Facilities
- - - Proposed SBIWTP Facilities
- ..... CMA System Sludge Disposal

SBIWTP: South Bay International Wastewater Treatment Plant  
 SBLO: South Bay 1 and Outfall

**Figure 1.5-9**  
**Completely Mixed Aerated System**  
**at Hofer Site: System Operations**  
**SEIS for SBIWTP Long-Term Treatment Options**








Grove Avenue Pump Station  
(approx. 500ft. north)

South Bay International Wastewater Treatment Plant

Hofer Site

Spoooner's Mesa Site

Legend:

-  SSPF - Secondary Sludge Processing Facility
-  SBSTP - South Bay Secondary Treatment Plant
-  SBWRP - South Bay Water Reclamation Plant
-  South Bay Reclaimed Water Distribution System
-  South Bay Conveyance System



Scale in miles

EXHIBIT NO. 6  
APPLICATION NO.  
CD-62-98

Figure 4-1  
San Diego  
Projects Lo  
SEIS for SBIW

Source: Adapted from City of San Diego, 1996.