Appendix K.2

Salinity Management Project

Preliminary Environmental Analysis of Phase II Salinity Management Project

Denise Duffy & Associates, Inc.
PLANNING AND ENVIRONMENTAL CONSULTING

June 25, 2004

Ray von Dohren / Sanford Veile
Carmel Area Wastewater District
3945 Rio Road
Post Office Box 221428
Carmel, CA 93922

Subject: **Preliminary Environmental Analysis of the Phase II Reclamation Project (Salinity Management Project)**

Dear Mr. von Dohren and Mr. Veile:

Denise Duffy & Associates (DD&A) is pleased to submit this preliminary environmental review of the Carmel Area Wastewater District's (CAWD's) conceptual Phase II Reclamation Project (also known as, Salinity Management Project, or hereafter in this document, the "SMP") for your purposes to respond to Pebble Beach Company's recent request related to their Del Monte Forest Preservation and Development Plan (DMFPDP) Draft EIR (SCH #2002021130) (Monterey County Planning and Building Inspection Department, February 2004). Specifically, you requested that we prepare an environmental analysis of the conceptual SMP for the purpose of providing Pebble Beach Company information to submit to Monterey County. In the process of preparing an EIR on the DMFPDP, the County has chosen to require mitigation for the project's water supply impacts. The SMP is considered to be feasible mitigation for one or more of these impacts and the County is considering the implications of requiring implementation of the SMP in their EIR. Therefore, this letter provides an analysis of secondary impacts that would result from implementation of the SMP and an explanation of the implications of use of the SMP as mitigation for project level impacts of the DMFPDP.

Because the purpose of this environmental review is to support the Pebble Beach Company's DMFPDP entitlements process, the analysis utilizes the impacts and mitigation measures included within that EIR for the purposes of completeness and consistency. For full text of the impacts and mitigation measures, the DMFPDP should be referenced and the mitigation modified as appropriate to address the specifics of the SMP. Should the DMFPDP lead agency (Monterey County) certify the DMFPDP EIR with the SMP as a mitigation measure for impacts of that project, and approve the project prior to completion of the project-level CEQA process for the SMP, then CAWD or the Pebble Beach Company would be obligated to implement those mitigation measures identified within this analysis during eventual implementation of the SMP. If, however, the project-level CEQA process for the SMP were completed prior to DMFPDP EIR certification and project approval, then this preliminary analysis would no longer apply to that project provided that CAWD has reduced, or is required to reduce, all impacts of the SMP project to a less-than-significant level through implementation of mitigation measures in its CEQA document.

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PROJECT DESCRIPTION AND LOCATION

The project under review in this letter is described in Attachment 1 which was provided to DD&A by CAWD on May 27, 2004. The location and aerial photograph of the site are shown in Figure 1. A conceptual facilities layout showing the anticipated physical changes to the existing facilities is shown in Figure 2. Photographs of the site are shown in Figure 3.

The project involves minor physical changes to the CAWD plant, specifically construction of a new structure (equipment on slab) that will expand the existing tertiary treatment facility, construction of new pipelines, and changes to the treatment processes inside the existing facility building. The new facility is conceptually designed to have a canopy structure over the new facilities, and depending upon recommendations of a structural engineer, the structures may potentially need to be built on pre-cast concrete pilings to prevent damage due to soil liquefaction during an earthquake.

SITE ENVIRONMENTAL SETTING

The site is currently developed with wastewater treatment facilities, pavement and landscaped turf grass as shown in Figure 3. The site of the improvements at the CAWD wastewater treatment plant is surrounded to the south by dense rows of eucalyptus trees, to the west by the laboratory facility, and to the north and east by existing wastewater treatment facilities. Detailed environmental setting information pertaining to various resources in the surrounding areas can be found in the Final EIR for the Carmel Sanitary District Wastewater Reclamation Project (dated June 1989, SCH #88040520) that is available for review at CAWD offices 3945 Rio Road, Carmel, CA 93922.

STANDARDS/CRITERIA OF SIGNIFICANCE

The standards of significance utilized for this analysis are consistent with the DMFPDP Draft EIR, see Attachment 2.

ISSUES FOR WHICH THE PROJECT WOULD HAVE NO IMPACT

The following issues are not described or otherwise addressed in this analysis because the SMP is not related to the issue or would have no impact related to these issues:

Land Use

- Land Use Compatibility (The modifications to the existing treatment plant site will be located completely on the existing CAWD site that is designated Public/Quasi-Public and is zoned Public/Quasi-Public. No changes to land use are proposed.)
- Plan/Policy Consistency (The project is considered to be consistent with the Monterey County General Plan, Local Coastal Plan and Carmel Area Land Use Plan, including the policies within those plans based on consistency of CAWD's existing operations and lack of substantial changes to the land uses of those operations).

Geology, Seismicity and Soils

- Landslides and Slope Stability (The site is flat and is not at risk for land slide or slope instability.)

Biological Resources[1]

- Direct Impacts to one or more of the following: (The project would not involve direct disturbance or impact to any of these resources; indirect impacts are discussed in the next section.)
    - Environmentally Sensitive Habitat Areas (ESHAs)
    - Sensitive Habitats (non-ESHA)
    - Wetlands
    - Special Status Species
    - Wildlife Habitat/Populations/Plant Communities
- Indirect Habitat Impacts Due to Human Use (No increased use of the site or surrounding area is proposed by this project.)
- Wildlife Movement (The project will not interfere with any wildlife corridor, because it consists of minor changes to existing wastewater treatment plant facilities.)
- Wildlife Breeding (The project will not interfere with any wildlife breeding, because it consists of minor changes to existing wastewater treatment plant facilities. No native wildlife nursery sites are located at the site. No nesting species utilizes the industrial structures and areas that would be directly disturbed by this project. Indirect impacts to nesting species are addressed below.)
- Tree Removal (No trees will be removed or altered for the project.)

Hydrology and Water Quality

- Alteration of Drainage Patterns (Project will occur on developed/disturbed areas.)
- Stormwater Runoff and Drainage Infrastructure (Project will occur on developed/disturbed areas.)
- Depletion or Interference with Groundwater Recharge (Project will occur on already disturbed areas and/or will add a minor amount of new impervious areas. The Proposed Project also does not include any use of groundwater, and therefore impacts to groundwater hydrology and water quality are not discussed further.)

Public Services and Utilities

- Fire and Police Services (No increased services necessary.)
- Emergency Access (The project will not change any accesses.)
- Wildland Fire Hazard (Surrounding land uses are riparian and agriculture.)
- Water Demand (The project will improve water supply availability.)
- Infrastructure Capacities (The project will improve infrastructure capacities.)
- Wastewater Treatment (The project will improve wastewater treatment.)
- School Enrollments (The project will not increase demand.)
- Recreational Demand (The project will not increase demand.)
- Open Space (The project will not increase demand, nor affect open space.)
- Landfill Capacity (The project will not increase solid waste generation. Sludge is generated by the tertiary facilities now using polymers to coagulate solids in the wastewater which add to the total solid by-product of the process. The new system would not increase and may decrease the sludge produced by the facilities because the new facilities would no longer use polymers.)

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[1] Marine Biological Resources are addressed in the next section under the heading Hydrology and Water Quality.

- Existing Utility Disruptions (There will be no off-site construction. There will be no need for Underground Service Alert markings. CAWD will maintain wastewater treatment processes during construction in compliance with all relevant permits.)

Aesthetics

- Scenic Vistas and Corridors (Based on Figures 1 and 2, the site is blocked from all public viewpoints, including designated scenic Highway 1, by large dense stands of eucalyptus and riparian trees.)
- Visual Character/Building Scale and Mass (The proposed building will be no bigger than and of the same character as the existing structures on and surrounding the project site and therefore would not impact the area's existing visual character.)
- Light and Glare (The site is blocked from all public and most private viewpoints by large dense stands of eucalyptus and riparian trees and negligible new lighting will be needed. The section titled "Biological Resources" addresses indirect effects of lighting on nearby potential habitat areas.)

Transportation and Circulation

- LOS Decrease to Unacceptable Levels (The only new traffic generated by the project would be during construction. See discussion below for details on construction traffic.)
- Traffic Increase to Existing Unacceptable Level (The only new traffic generated by the project would be during construction. See discussion below for details on construction traffic.)
- Access and Circulation (The project will not change any accesses or circulation patterns.)
- Parking (No parking would be affected; no additional parking demand would occur.)
- Transit and Bicycle Travel (The project would have no effect on policies, plans or programs supporting alternative transportation.)

Air Quality

- Air Quality Plan Consistency (The MBUAPCD AQMP accommodates construction projects of this size in its air quality inventories; this project is consistent with that plan.)
- Long-Term Emissions (The project would not emit any long-term emissions, because there are no additional vehicle trips necessary for operations, no continually operating generators are proposed, and equipment and storage of volatile chemicals will be in compliance with OSHA and applicable hazardous materials containment requirements.)
- Construction Emissions (The project would be well below thresholds for generation of criteria pollutants, including ROG, NOx, PM_{10}, and toxic air contaminants, due to the small amount of grading and site disturbance necessary during construction, i.e., less than 1 acre total.)
- Sensitive Receptors (Sensitive receptors are located more than ¼ mile from the project construction activities and minimal construction activities will occur).
- Odors (No increase in odors is anticipated during construction or operation of the facility.)

Noise

- Long-Term Noise Increases (All pumps generating operational noise will be housed in appropriate sound and vibration dampening buildings and/or enclosures to ensure that there is no increase in time-averaged noise levels at any nearby sensitive receptor site.)

- Vibration (All equipment generating operational noise will be housed in appropriate sound and vibration dampening buildings and/or enclosures to ensure that there is no increase in time-averaged vibration at any nearby sensitive receptor site.)

Cultural Resources

- Historical Resources (The only historic resource on the project site or in the project vicinity is the Carmel Mission, as shown in Figure 1, and the project will only affect structures on-site and built within the last 30 years.)

LESS THAN SIGNIFICANT, POTENTIALLY SIGNIFICANT, AND SIGNIFICANT IMPACTS

Geology, Seismicity and Soils (section 3.2 of the DMFPDP DEIR)

A description of the geology, seismicity and soils issues of the project site can be found in the Final EIR for the Carmel Sanitary District Wastewater Reclamation Project (dated June 1989, SCH #88040520) that is available for review at CAWD offices 3945 Rio Road, Carmel, CA 93922.

Seismic Hazards

The project will be located in a seismically active region and will likely be subject to the effects of large magnitude earthquakes; however, no known active faults occur within the project area.

Seismic Hazards Impact A1.[2] Placement of new structures could result in potential structural damage and associated human safety hazards resulting from ground shaking caused by earthquakes on nearby active and potentially active faults. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-A1. Design all proposed structures in accordance with the requirements of the California Building Code, current edition, and recommendations contained in site-specific geologic and geotechnical reports.

Seismic Hazards Impact A2. Placement of new structures at the site could result in potential structural damage and associated human safety hazards from liquefaction caused by earthquakes on nearby, active and potentially active faults. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-A2. Conduct further geotechnical investigations of the site, if necessary based on review of existing geologic and soils reports and information, and design all proposed structures in accordance with the requirements of the California Building Code, current edition, and recommendations contained in site-

[2] The numbers of the impacts and mitigation measures correspond to the numbering in the DMFPDP Draft EIR

specific geologic and geotechnical reports. Based on past geotechnical studies, the structures may need to be built on piles to prevent damage due to liquefaction.

Erosion

Although the project will be constructed on a level area that is already developed, it involves some ground disturbing activities that may occur during a windy or rainy period of the year and potentially result in erosion or loss of exposed soils, and subsequent sedimentation into local drainage facilities and water bodies due to weather.

Erosion Impact C1. Grading and excavation could result in substantial soil erosion, loss of topsoil, and sedimentation. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-C1-1. Prepare and Implement an Erosion and Sediment Control Plan.

GSS-C1-2. Wet season grading requires additional erosion control measures.

Soil Constraints Impact D1. Construction in areas of expansive soils could result in substantial damage to overlying building foundations and roadways. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-D1. Design all proposed structures in accordance with the requirements of the California Building Code, current edition and recommendations contained in site-specific geologic and geotechnical reports.

Soil Constraints Impact D2. Construction of underground structures in the presence of shallow groundwater and weak surrounding deposits could result in inadequate drainage and structural failure during construction or operation. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-D2. Dewater excavations and shore temporary cuts during construction of the any subsurface features. Develop and implement an engineered drainage plan to handle surface and subsurface runoff. Implement all other relevant recommendations of the geotechnical engineer of record.

Soil Constraints Impact D3. Construction in areas of unconsolidated fill could result in settlement and substantial damage to overlying building foundations. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

GSS-D3. Design all proposed structures in accordance with the requirements of the California Building Code, current edition and implement recommendations of project geotechnical and geologic reports.

Hazardous Materials

All hazardous materials potentially used during construction and operation of the project would be subject to the materials management practices contained in the Storm Water Pollution Prevention Plan for the construction project and the facility, including provisions for the proper handling, storage, use and disposal of these materials. Potentially hazardous chemicals used at the Wastewater Treatment Facility would also be subject to Hazardous Material Management Plan (HMMP) or "Business Plan" materials management provisions pursuant to AB 2185. The plant superintendent may need to amend or update existing hazardous waste management and safety plans in accordance with County, Occupational Health and Safety Association (OSHA), and United States Environmental Protection Agency (EPA) requirements.

The project would also be in compliance with EPA Risk Management Planning (RMP) Rule 40 CFR 68, which may require the plant superintendent to register the facility with the EPA prior to on-site storage of hazardous chemicals. For security purposes, the facility would allow site access to areas storing hazardous materials by authorized personnel only via a secured entry point.

The project would comply with all applicable laws and regulations governing the use, transport, and disposal of hazardous materials and would not be generating substantial amounts of hazardous materials on-site. In addition, CAWD will select technologies and processes that minimize or eliminate the need for hazardous chemicals to the extent feasible. This will reduce the disposal requirements for such substances, lessen the impacts of potential spills or releases from the facility, and reduce discharges of hazardous constituents into the environment. CAWD will select the least environmentally damaging options for treatment and cleaning of plant components. For this reason, routine transport, use, or disposal of hazardous materials would constitute a less-than-significant impact. Due to the facilities proposed, minor use of hazardous materials and requirements by federal, State, and local agencies, reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment are also considered a less-than-significant impact. Therefore, no potential impacts from hazardous materials or to public health and safety are anticipated. The project site is not located on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and therefore, implementation of the proposed project would have no associated human health risk.

Biological Resources (section 3.3 of the DMFPDP DEIR)

Indirect Impacts during Construction

Most of the area of the site is extremely disturbed and currently contains paved and turf grass areas. No direct impacts are anticipated on the site for wildlife and vegetation due to the disturbed nature of the site. The project site is located nearby riparian, landscaped and natural trees that may contain nests for special status wildlife (specifically bird species, described below), and other sensitive habitat areas and species; therefore, construction and operation at the site can result in indirect impacts to these resources.

Raptors and their nests (including hawks, eagles, falcons, kestrels, and owls) are protected under the Migratory Bird Treaty Act of 1918 and CDFG Code Sections 3503 and 3503.5. All active nests are protected from take by CDFG Code Sections 3503 and 3503.5. Potential nesting trees appropriate for many avian species occur within 90 meters (300 feet) of the API. Potential nesting habitat for a variety of common avian species (disturbance tolerant) is present within riparian portions of the project site.

Most raptors are breeding residents throughout most of the wooded portions of the state. Raptors can be found from sea level to above 2700 meters (9000 feet). Stands of live oak, riparian deciduous or other forest habitats, as well as open grasslands, are used most frequently. Nesting also occurs in isolated stands of trees adjacent to foraging habitat. Most species nest in tree crotches three to 23 meters (10 to 80 feet), but usually six to 15 meters (20 to 50 feet), above ground. Breeding occurs between March and August, with peak activity may through July. Prey for these species include small birds (especially young during the nesting season), small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges, and often in agricultural fields.

Raptor species likely to occur (at least for foraging) within the project site (i.e., eucalyptus trees in this project area) include, but are not limited to, red-tailed hawk (Buteo jamaicensis), and red-shoulder hawk (Buteo lineatus). While the life histories of these species vary, overlapping nesting similarities (approximately from mid-March to August 1) allows their concurrent discussion.

Biological Resources Impact.[3] Project operation might result in potential small increase in lighting, or small hydrologic changes, and construction activities might result in sedimentation of drainages/water quality areas, and noise during construction activities impacting habitats and/or species in the surrounding areas, including migratory bird species. *This is a potentially significant indirect impact that can be mitigated to a less-than-significant level with the following mitigation, in addition to implementation of mitigation under the issues of Geology, Seismicity, and Soils, Hydrology and Water Quality, and Noise.*

Mitigation

BIO-1. The following measures shall be taken to ensure that biological resource impacts remain at a less-than-significant level.

- The new facilities shall use low-level lighting with sharp cutoffs to minimize the effect of lighting on off-site areas.

- Final drainage systems shall be designed to maintain existing drainage patterns and limit flow quantities to pre-project levels.

- Trees or vegetation not planned for removal shall be protected during construction to the maximum extent feasible. This includes the use of exclusionary fencing of herbaceous and shrubby vegetation, such as hay bales, and protective wood barriers for trees. Only certified weed-free straw should be used to avoid the introduction of non-native, invasive species. Following construction, disturbed areas without buildings or paving shall promptly be re-

[3] This impact was not an impact identified in the DMFPDP DEIR for the DMFPDP because that project addresses these indirect effects together with direct effects. Therefore, this is an impact of the SMP, only.

vegetated using locally occurring native species and native erosion control seed mix, in consultation with a qualified re-vegetation specialist.

- Protective fencing shall be placed so as to keep construction vehicles and personnel from impacting vegetation adjacent to the project site outside of work limits.

- Grading, excavating, and other activities involving substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques required by the County's standard requirements for grading plans to minimize erosion and sedimentation to native vegetation.

- Irrigation systems shall be designed and operated to minimize runoff or irrigation water into adjacent areas of native vegetation.

- Provide and maintain oil/grease and silt traps at the storm drain outfall locations to intercept and contain oily residue and debris washed from vehicle areas before dispersal to native vegetation areas.

- Paved roads and parking areas shall be mechanically swept at least once per year, prior to the start of the rainy season.

BIO-2. Pre-construction surveys should be conducted for nesting avian species (including raptors), if construction is to be initiated after mid-March (March 15 to August 1). If nesting raptors (or any other nesting birds) are identified during pre-construction surveys, an appropriate buffer should be imposed within which no construction activities or disturbance should take place (generally 300 feet in all directions for "raptors", other avian species have specific requirements). Work may only proceed prior to August 1st if a wildlife biologist conducts periodic nest checks and confirms that the nest is no longer active (i.e. the young have fledged) and work re-initiation has been specifically authorized by the appropriate regulatory agency (USFWS and/or CDFG depending on status of the species). Alternative if nests are still active and USFWS and/or CDFG agree that construction would not significantly affect the nest, a qualified biological monitor shall be on-site during work re-initiation in the vicinity of the nest to ensure that the buffer is adequate and that the nest is not stressed abandoned. Alternatively, all construction activities could be conducted outside of the peak breeding season (August 1 to mid-March) to avoid disturbance of active nests. Given the potential for re-nesting or secondary nesting species, a pre-construction survey is recommended if work is to begin during early August or March.

Hydrology and Water Quality (section 3.4 of the DMFPDP DEIR)

Water Supply Quality

There are potential impacts that pose risks to public health through water supply contamination or other ingestion/exposure that include the following scenarios:

- accidental cross connection of water distribution systems,
- proximity of use to the public (including the public drinking the recycled water sprayed from irrigation systems),

- excessive irrigation application and movement to public water supplies,
- pipeline, facility leaks or spills.

Compliance with requirements within California Code of Regulations, Title 22, for the distribution and use of tertiary treated recycled water would ensure that these potential risks to public health remain at a less than significant level. To implement the SMP, CAWD and the PBCSD would require new permits for distribution and use of recycled water. CAWD's existing Water Reclamation Requirements for the Carmel Area Wastewater District Water Reclamation Project (California Regional Water Quality Control Board Order No. 93-72) contain detailed information about the existing requirements for treatment and delivery of the recycled water (see Attachment 4). More information about California requirements can be found in the following sources:

- California Health Laws Related to Recycled Water "The Purple Book" Excerpts from the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations Last Update: June 2001
  http://www.dhs.ca.gov/ps/ddwem/publications/waterrecycling/purplebookupdate6-01.PDF
- Guidelines For The Preparation Of An Engineering Report For The Production, Distribution And Use Of Recycled Water (March 2001)
  http://www.dhs.ca.gov/ps/ddwem/publications/waterrecycling/ERGUIDE2001.PDF

Stormwater/Drainage Quantity and Quality

The project will result in a very small increase in stormwater runoff, grading, paving, and use of fuels and construction materials. As required by the mitigation measures presented below, documentation is required to be developed, including a drainage report and an erosion control plan, to ensure that the project does not significant impact hydrology and water quality.

Stormwater Runoff and Drainage Infrastructure Impact B1. The Proposed Project will result in increased stormwater runoff due to an increase in impervious surfaces and topographic alterations. This impact is partially offset by the on-site retention and other drainage structures proposed by the applicant. However, project design is preliminary and increased flows may exceed the capacity of proposed or existing stormwater infrastructure. *This is a potentially significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

HWQ-B1-1. Assess downstream stormwater infrastructure and implement all drainage improvements necessary to adequately handle increased stormwater flows from the Proposed Project.

HWQ-B1-2. Prepare and implement a final drainage plan including evaluation of adequacy of all proposed on-site drainage improvements and include it in final plans.

Water Quality Impact C6. Construction of the Proposed Project would include substantial amounts of grading, paving, and use of fuels and construction materials that may result in sedimentation or other contamination of stormwater runoff. *This is a potentially significant impact that can be reduced to less-than-significant with the following mitigation:*

Mitigation

GSS-C1. Prepare and implement an Erosion and Sediment Control Plan.

GSS-C2. Wet season grading would require additional erosion control measures.

WHQ-C6. If necessary, obtain authorization through the Regional Water Quality Control Board (RWQCB) for a National Permit Discharge Elimination System (NPDES) permit for general construction activity.

Marine Water Quality and Marine Biological Resources.

An important issue related to the SMP is whether the project would violate any water quality standards or otherwise substantially degrade surface water quality or contribute substantial non-point sources of pollution to the Carmel Bay Area of Special Biological Significance. Because changes to water quality would be the only potential adverse impact on marine species, this determination also includes analysis of impacts to marine biological resources.

As described in the project description, reject water from the RO units will contain dissolved solids, or salts, not removed by the tertiary treatment process or microfilters. The concentration of salts, expressed as total dissolved solids (TDS), in the reject water is expected to have an average value of 3,200 mg/L, which is about four times the average concentration of TDS in the microfiltered secondary effluent. Reject flows will be discharged to the Pacific Ocean, which has a TDS concentration approximately ten times greater than the expected reject water. The current conceptual design is for the reject water to be discharged via the existing ocean outfall along with any remaining excess secondary treated wastewater from the CAWD plant. The reject water will contain other constituents, and the concentration of these constituents must not exceed the concentration levels set in the California Ocean Plan as detailed in CAWD's existing National Pollutant Discharge Elimination System (NPDES) permit (Waste Discharge Requirements (WDRs) Order No. R3-2002-026, which is included with this letter as Attachment 3). At this time, based upon water quality pilot testing completed in December 2003, it appears the reject water will not exceed Ocean Plan limits. This analysis assumes that further dilution modeling, which will be conducted at the project design-level, will demonstrate that all parameters measured and monitored in compliance with the NPDES permit are below the limitations, and that any other potential changes in discharge characteristics meet CAWD's WDRs. In this case, there would be a less-than-significant impact on marine water quality and marine biological resources because the permit is the regulatory mechanism established to protect these resources.

In the unlikely event that dilution modeling conducted during project-level design results in a finding that there are potential exceedances or potential changes necessary to the WDR or permit limitations, the project will be redesigned so that reject water is mixed with secondary effluent to produce water of a concentration level which meets Ocean Plan requirements. Should the project description or project-level design change substantially prior to implementation, such that a new significant impact would occur, or a significant impact identified herein would increase in severity, new environmental review would be necessary. If this analysis is to be valid, the project-level design must ensure that impacts to the marine water quality and marine biological resources are otherwise reduced to a less-than-significant level. In

any case, subsequent CEQA is required to permit and/or approve the project that will verify these conclusions.

Flood Hazards

The treatment plant project site is within the 100-year floodplain of the Carmel River under the existing channel and bank conditions. The 100-year flood elevation at the site is 20-feet. Floodplains are defined as those areas that would be inundated by a 100-year flood, an event of such magnitude that it would have a probable recurrence interval of 100 years. The floodway is the portion of the floodplain necessary to transport the flood flow. High flow velocities and dangerous movement of debris occur in the floodway. The area outside the floodway is defined as that portion of the floodplain that could be obstructed without causing an increase in the water surface elevation of more than one foot. More information about the flood issues can be found in the Final EIR for the Carmel Sanitary District Wastewater Reclamation Project (dated June 1989, SCH #88040520) that is available for review at CAWD offices 3945 Rio Road, Carmel, CA 93922.

The project facilities would be either built on pre-cast piles or graded to raise the finished floor elevation above the 100-year flood elevation of 20 feet above sea level.

Flood Hazard Impact:[4] Inundation of the project site by flood waters from 100-year floods could result in damage to treatment plant facilities, or changes in flood levels or behavior upstream or downstream of the site. *This is a potentially significant impact that can be reduced to less-than-significant with the following mitigation:*

Mitigation

HWQ-1.[2] All structures shall be designed to withstand a 100-year flood and have negligible adverse effect on upstream or downstream properties subject to review and approval by MCWRA. The project shall be designed in accordance with County of Monterey floodplain and flood hazard regulations, including Ordinance #3272. The project engineer shall submit design calculations and design data to MCWRA for review and approval.

Public Services and Utilities (section 3.5 of the DMFPDP DEIR)

Construction Traffic Impacts

The project would result in temporary impacts to transportation and circulation systems due to construction material delivery, hauling of construction debris, and construction worker trips. An estimation of the potential worst-case construction traffic trips anticipated for projects of similar size follows. This is not based on design-level engineering because that has not occurred yet, therefore, this information should be updated upon completion of design-level engineering.

[4] This impact was not an impact identified in the DMFPDP DEIR for the DMFPDP because that project did not have any significant flood hazard impacts. Therefore, this is an impact of the SMP, only.

Construction would last nine months and the worst-case construction traffic (trips per day) would be during delivery of pre-cast concrete piles and concrete pours for the new facility structure. The pre-case concrete piles would be delivered in five (5) truck loads per day over 5 days and the concrete pours would occur for up to 3 days during up to three weeks (with each week spread out over the construction period). On the concrete pour days, up to ten truck trips would occur between the hours of 7 am - 2 pm. In addition, up to 20 construction employee trips are possible on a worst-case day.

This amount of traffic can be managed to avoid the peak hour at local congested intersections and along locally congested roadways.

Construction Traffic Impact G1. Additional construction traffic associated with construction truck trips could impact traffic flow on adjacent streets, aggravate the operations of intersections previously identified as deficient, and degrade the quality of life of residents near the construction sites. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

TC-1.[5] The project construction plans and schedule shall be designed to minimize the amount of construction traffic overall, to reduce peak construction traffic, and to avoid construction vehicle trips during peak traffic volume periods.

TC-G1-2. The construction contractor shall implement traffic control measures.

TC-G1-3. The applicant shall receive approval for construction truck traffic routes from the County of Monterey and include these routes in all contracts.

TC-G1(C). The applicant shall coordinate construction traffic movements with substantial other developments under construction in immediate proximity to project construction, as necessary to identify appropriate measures to reduce cumulative traffic impacts.

Noise (section 3.9 of the DMFPDP DEIR)

Short-Term Noise Increases

Construction of the project would cause short-term noise increases. The proposed project may result in short-term impacts to sensitive receptors including nearby residences due to noise from construction equipment and activities. The following table presents a list of noise generation levels for various types of equipment typically used on construction projects.

[5] This mitigation was not a mitigation identified in the DMFPDP DEIR for the DMFPDP. Therefore, this is a mitigation for the SMP, only.

Table 1 Construction Equipment Noise Emission Levels Equipment Typical Noise Level (dBA) 50 ft from Source	
Air Compressor	81
Compactor	80
Concrete Pump	82
Crane, Derrick	85
Dozer	82
Grader	76
Backhoe	88
Concrete Mixer	83
Concrete Vibrator	85
Crane, Mobile	81
Generator	85
Jack Hammer	88
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller/Sheep's Foot	74
Saw	76
Scraper	89
Shovel	82
Truck	88
Source: Federal Transit Administration 1995.	

Assuming more than one piece of equipment may be operating at any one time during construction and based on the information in this table and on the proximity of the site to sensitive receptors, the closest receptors to the project site may be exposed to noise levels above 85 dBA and would, therefore, be significantly impacted.

Short-term Noise Increases Impact B1. The project would result in exposure of outdoor activity areas of noise-sensitive land uses to construction noise greater than 85 dB at a distance of 50 ft. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

NOISE-B1-1. Limit Hours of Construction Activities.

NOISE-B1-2. Locate equipment as far from noise-sensitive receptors as practicable.

NOISE-B1-3. Use sound-control devices on combustion-powered equipment.

NOISE-B1-4. Shield/shroud any impact tools.

NOISE-B1-5. Shut off machinery when not in use.

NOISE-B1-6. Use shortest practicable traveling routes.

NOISE-B1-7. Disseminate essential information to residences and implement a complaint response/tracking program.

NOISE-B1-8. Implementation of additional mitigation measures, as needed and/or required to comply with the County's noise ordinance.

Cultural Resources (section 3.10 of the DMFPDP DEIR)

Based on review of previous cultural resources reconnaissance surveys, previous environmental review of the project site, and the disturbed nature of the site, there is very little potential for discovery of cultural resource at the site during construction of this project. Despite lack of evidence of any on-site resources, there is the potential to find previously undiscovered resources during ground disturbing activities at the site.

Archaeological Resources Impact B1. Project grading/excavation may result in disturbance to previously undiscovered archaeological resources. *This is a significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

CR-B1. Stop work if buried cultural deposits are encountered during construction activities.

Human Remains Impact C1. Project grading/excavation may result in disturbance to previously undiscovered human remains. *This is a potentially significant impact that can be mitigated to a less-than-significant level with the following mitigation.*

Mitigation

CR-C1. Stop work if human remains are encountered during construction activities.

Growth-Inducing Impacts (section 4.4 of the DMFPDP DEIR)

The use of reclaimed water for irrigation allows offset potable water to be available for other uses. While the SMP results in the development of a new source of water by virtue of offsetting potable water currently used for peak irrigation demands and golf course flushing flows, the management and allocation of offset potable water is the responsibility of the MPWMD and has already been determined to be non-growth inducing.

The project would not by itself result in growth inducement impacts. Growth inducement due to reallocation of potable water has been previously addressed in and is consistent with the MPWMD Water Allocation Program and EIR and planned development in local plans. Therefore, reallocation of potable

water not considered in the DMFPDP Draft EIR, due to the SMP, would not result in unapproved growth inducement and is in compliance with CEQA requirements. No additional mitigation is required.

Cumulative Impacts

As described above, all project impacts are less-than-significant or can be reduced to less-than-significant with mitigation and these impacts do not rise to the level of contributing substantially to any cumulative impacts.

CONCLUSION

Although the project has not been designed and is still conceptual, based on the above analysis, the SMP can be implemented in such a way that all impacts would be less-than-significant or can be reduced to less-than-significant with mitigation provided herein. Should the project description changes substantially prior to implementation, such that a new significant impact would occur, or a significant impact identified herein would increase in severity, new environmental review would be necessary. As stated above, should the DMFPDP lead agency (Monterey County) certify the DMFPDP EIR with the SMP as a mitigation measure for impacts of that project, and approve the project prior to completion of the project-level CEQA process for the SMP, then CAWD or the Pebble Beach Company would be obligated to implement those mitigation measures identified within this analysis during eventual implementation of the SMP. If, however, the project-level CEQA process for the SMP were completed prior to DMFPDP EIR certification and project approval, then this preliminary analysis would no longer apply to that project provided that CAWD has reduced, or is required to reduce, all impacts of the SMP project to a less-than-significant level through implementation of mitigation measures in its CEQA document.

We appreciate the opportunity to provide you with this analysis. Please contact me if you have any questions.

Sincerely,

DENISE DUFFY & ASSOCIATES, INC.

Alison M. Imamura, AICP
Project Manager

Attachments:

1. Narrative Description of Project
2. Standards/Criteria of Significance
3. Waste Discharge Requirements Order No. R3-2002-026 (NPDES Permit No. CA0047996) for the Carmel Area Wastewater District and Pebble Beach Community Services District.
4. Water Reclamation Requirements for Carmel Area Wastewater District (Order NO. 93-72)

Figure 1. Site Location and Surrounding Land Use
Figure 2. Conceptual Site Plan of the Salinity Management Project
Figure 3. Site Photos

Attachment 1. Narrative Description of Project

Attachment 1

Narrative Description of Proposed Advanced Treatment Facilities for Providing High Quality Water for the CAWD/PBCSD Reclamation Project

The Carmel Area Wastewater District (CAWD) and the Pebble Beach Community Services District began operation of the CAWD/PBCSD Reclamation Project in 1994. This project consists of tertiary treatment and distribution facilities to provide water for the existing golf courses and other properties within Del Monte Forest. The project has produced an average of 670 acre-feet of recycled water annually over the last ten years.

The annual project demand for water from the recycled water users has totaled 950 acre-feet per year. The additional water demand above the 670 acre-feet supplied by the Reclamation Project (280 acre-feet annually) has been provided via the domestic potable water supply. This additional water use is needed for two purposes. It augments the recycled water supply when the advanced treatment facilities do not produce enough water during short intensive demand periods and it provides water for golf course water flushing cycles to remove excess sodium build up in the soil.

Phase II of the Reclamation Project was conceived to eliminate these two uses of potable water for the Project. Additional storage will be provided to eliminate the need for potable water during high demand periods and additional advanced treatment will be provided to lower salinity levels such that the recycled water will not cause any detrimental effects to the golf course grasses.

The existing advanced treatment facilities consist primarily of rapid sand filters and pumping. In addition there is an attached flow equalization storage basin and disinfection system used only by the tertiary facilities. The facilities are designed to produce California Title 22 Recycled Water Standards which require the water to meet specific disinfection and turbidity limits. The existing facilities have consistently met these limits.

For several years the parties involved with the Reclamation Project have discussed methods of achieving water quantity and quality criteria that will allow the golf courses to eliminate the need for any potable water use. Several advanced treatment options have been investigated. The option that has been selected to achieve this goal will require the construction of micro-filtration and reverse osmosis facilities designed to produce water meeting the following criteria:

Sodium Adsorption Ratio: 3.00
Adjusted Sodium Adsorption Ratio: 4.00
Sodium Level: 55 mg/L
Electroconductivity: 350-450 µmhos/cm
pH: 6.3-7.3

As presently conceived the project will include four microfilter (MF) units that will produce water for four reverse osmosis (RO) skids. The total capacity of this new facility will be 1.5 million gallons of water per day. The MF units consist of tanks that contain filter media. The effluent from the secondary treatment facilities at the existing treatment plant will flow into these tanks. The filter media will take water from the tanks and filter it to produce water of sufficient quality to provide feed water to the RO units. Reject water from the MF units will be returned to the head of the secondary treatment facilities where it will be retreated to again produce feed water for the MF units.

The individual RO units are mounted on skids. Each skid contains between 20 and 30 individual RO units. Each unit consists of a tube about eight inches in diameter and twenty feet long. The unit contains RO filter media in cartridges. Each cartridge is about three feet long with six cartridges in each RO unit. The osmosis process simply states that water from a region of high water concentration will flow through a semi-permeable membrane to a region of low water concentration. For example water will flow from a solution that is less salty to a solution that is more salty. Reverse Osmosis primarily through the application of high pressure allows the opposite to occur and water will flow from a more salty state to a less salty state.

The proposed membranes for this project are capable of producing recycled water with a sodium concentration close to 0 mg/L. Since water of that quality is not required, a portion of the MF water will bypass the RO units and then be blended back with RO filtrate to produce the required sodium level of 55 mg/L. In fact the water will need additional chemical conditioning to raise the pH and add back some salts (non-sodium salts) to provide the water quality required by the golf course grasses. The water will then flow through a final disinfection system and be pumped to the Forest Lake Reservoir in the Del Monte Forest. From there, the existing distribution system will supply the irrigation needs of the golf courses and other recycled water users.

Reject water from the RO units will contain salts and other material not removed by the microfilters. This water will have a sodium concentration about four times the feed water or about 500 mg/L. This compares with seawater with a salt concentration of about 35,000 mg/L. The reject water will contain other constituents and the concentration of these constituents must not exceed the concentration levels set in the California Ocean Plan. At this time based upon water quality pilot testing completed in December 2003, it appears the reject water will not exceed Ocean Plan limits. In any case should this appear to be a problem, the reject water will be mixed with secondary effluent to produce water of a concentration level to meet Ocean Plan requirements. See the California, Regional Water Quality Control Board, Central Coast Region, Waste Discharge Requirements for the Carmel Area Wastewater District and the Pebble Beach Community Services District, Monterey County (Order No. R3-2002-026) which is available for review at CAWD offices 3945 Rio Road, Carmel, CA 93922.

The District considers the reject water, which could be as much as one-half acre-foot per day, to be a valuable resource. This reject is relatively high quality water that has received advanced treatment and with proper application could be reused. The District will examine other options other than discharge to the ocean for this water.

The advanced treatment project and Forest Lake are being designed to meet the water quantity and water quality demands of the existing uses and one additional golf course. With proper operation of the facilities, good coordination with the parties receiving the water, and a flexible understanding of overall needs by those involved with the Project, the Phase II Project will achieve the water quantity and quality objectives of these Del Monte Forest users without the use of potable water.

Attachment 2. Standards/Criteria of Significance

Attachment 2

Standards of Significance

(adapted for this project from DMFPDP, DEIR, February 2004)

Land Use

Land Use Compatibility. Introduce new land uses into an area that could be considered to be incompatible with the surrounding land uses or with the general character of the area.

Plan/Policy Consistency. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general specific plan, LCP, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Geology, Seismicity and Soils

Seismic Hazards. Expose people or structures to potential substantial adverse effects resulting from the rupture of a known earthquake fault, seismic ground shaking, landslides, or seismic-related ground-failure, including liquefaction, and that cannot be mitigated through the use of standard engineering design techniques.

Landslides and Slope Stability. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide or slope failure. Be located on an existing slope with a gradient greater than 30%.

Erosion. Result in substantial soil erosion or the loss of topsoil and subsequent sedimentation into local drainage facilities and water bodies.

Soil Constraints. Be located on an expansive soil, as defined by the California Building Code (1997) or be subject or to other soil constraints that might result in deformation of foundations or damage to structures, creating substantial risks to life or property.

Hazardous Materials. Create a significant hazard to the public or the environment through the release of hazardous materials into the environment.

Biological Resources

Environmentally Sensitive Habitat Areas (ESHAs). Result in any direct or indirect disturbance of habitats designated as an ESHA by the relevant Local Coastal Plan which results in disruption of protected resources and habitat values.

Sensitive Habitats (non-ESHA). Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local, state or federal regional plans, policies or regulations, including those resulting in long-term degradation of a sensitive plant community because of substantial alternation of a land form or site conditions (e.g., alteration of wetland hydrology).

Wetlands. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, or wetlands that meet the Coastal Act definition, through direct removal, filling, hydrological interruption or other means.

Special Status Species. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (DFG) or the U.S. Fish and Wildlife Service, (USFWS) including reducing the number or restricting the range of an endangered, rare or threatened species.

Wildlife Habitat/Populations/Plant Communities. Substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community.

Indirect Habitat Impacts Due to Human Use. Result in substantial disturbance of wildlife and their habitats from human activities related to equestrian and pedestrian trail siting and use;

Wildlife Movement. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, by blocking or fragmenting access, or by permanently eliminating known wildlife corridors in areas known for frequent and substantial wildlife movement that provide important links between habitat areas.

Wildlife Breeding. Impede the use of native wildlife nursery sites or directly harm nesting species protected under the provisions of the Migratory Bird Treaty Act.

Tree Removal. Remove any tree that has biological or resource importance.

Hydrology and Water Quality

Alteration of Drainage Patterns. Substantially alter the existing drainage pattern of the site or area, or result in offsite drainage or flood problems.

Stormwater Runoff and Drainage Infrastructure. Substantially increase the rate or amount of surface runoff which would exceed capacity of existing or planned storm drain facilities, cause downstream or offsite drainage problems, or increase the risk or severity of flooding in downstream areas.

Water Quality. Violate any water quality standards or otherwise substantially degrade surface water quality or contribute substantial non-point sources of pollution to the Carmel Bay Area of Special Biological Significance.

Depletion or Interference With Groundwater Recharge. Substantially deplete groundwater supplies or substantially interfere with groundwater recharge.

Flood Hazard. Result in construction of habitable structures within a 100-year floodplain, which would expose people or structures to a significant risk of loss, injury, or death due to flooding.

Public Services and Utilities

Fire and Police Services. Result in substantial increased demands to maintain acceptable service ratios, response times, or other performance objectives related to fire or police services, which would require additional staff, equipment and/or new or expanded facilities to maintain acceptable provision of service or result in inadequate emergency access.

Emergency Access. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Wildland Fire Hazard. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Water Demand. Result in a water demand that exceeds water supplies available to serve the project from existing entitlements and resources, and/or require that new or expanded supplies may be needed.

Infrastructure Capacities. Result in water demand that exceeds capacity of the water supply or infrastructure system, or would require substantial expansion of water supply, treatment or distribution facilities, the construction of which could cause significant environmental effects.

Wastewater Treatment. Result in wastewater flows that exceed sewer line or treatment plant capacity, or that contribute substantial increases to flows in existing sewer lines that exceed capacity.

Utility Disruption During Construction. Result in prolonged or recurring disruption in the provision of services and utilities, including power, water, and sewer service to residences, businesses, or public service providers during construction of the Proposed Project.

School Enrollments. Result in increased student enrollments that would cause school capacities to be exceeded, or student enrollments that would substantially increase existing overcrowded schools.

Recreational Demand. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, and/or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Open Space. Diminish the quality or quantity of open space areas.

Landfill Capacity. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

Aesthetics

Scenic Vistas and Corridors. Have substantial adverse effects on a scenic vista, public viewing area, or view corridor. These effects include obstructing or obscuring: public views, "visually prominent" areas , public views to and along the shoreline, and distant views from publicly accessible shoreline areas such as Point Lobos.

These effects also include: removal of or damage to scenic resources including, but not limited to trees, rock outcrops, or historic buildings along a scenic highway, or a County-designated scenic roadway.

Visual Character/Building Scale and Mass. Substantially degrade the existing visual character or quality of the site and/or surrounding area, result in ridgeline development, or be incompatible with the development scale and style of the surrounding area.

Light and Glare. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views or activities in the area or pose a nuisance. This includes ambient nighttime illumination levels that would be increased beyond the property line, or use of highly reflective building materials.

Transportation and Circulation

LOS Decrease to Unacceptable Levels. Increase traffic on roads or intersections causing existing levels of service (LOS) to drop to unacceptable levels (i.e. LOS D, E or F).

Traffic Increase to Existing Unacceptable Levels. Cause a 1% (0.01) increase or more in the critical movement's volume-to-capacity (v/c) ratio due to increased traffic where an intersection is already at LOS D or E, or cause any increase (i.e., one vehicle) in the critical movement's volume-to-capacity ratio (v/c) where the intersection is already at F.

Access and Circulation. Create new roadways that do not meet the design criteria established by Caltrans or any local jurisdiction, or substantially increase hazards due to design of roadways or internal circulation patterns.

Parking. Result in inadequate parking.

Transit and Bicycle Travel. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Construction Traffic. Cause short-term increases in traffic on roads or intersections causing existing levels of service to drop to unacceptable levels or aggravating the operation of intersections previously identified as deficient.

Air Quality

Air Quality Plan Consistency. Conflict with or obstruct implementation of the Air Quality Management Plan (AQMP).

Long-Term Emissions. Result in generation of emissions of or in excess of 137 pounds per day for VOC or NOx, 550 pounds per day of carbon monoxide, and/or 82 pounds per day of PM_{10} (per MBUAPCD CEQA standard).

Construction Emissions. Result in generation of emissions of 82 pounds or more per day of PM10 due to construction with minimal earthmoving on 8.1 or more acres per day or grading/excavation site on 2.2 or more acres per day (per MBUAPCD CEQA standard), or result in a short-term increase in Toxic Air Contaminants.

Sensitive Receptors. Expose sensitive receptors (i.e. residents, schools, hospitals) to substantial pollutant concentrations, i.e. those that exceed the MBUAPCD standards identified above.

Odors. Create objectionable odors in substantial concentrations, which could result in injury, nuisance or annoyance to a considerable number of persons or would endanger the comfort, health or safety of the public.

Noise

Long-Term Increases in Noise. Expose persons to or generate noise levels in excess of standards established in the County's "Land Use Compatibility for Exterior Community Noise" chart, or

Expose outdoor activity areas of noise-sensitive land uses to a 5 dB increase in noise where existing noise levels are below 60 dBA Ldn, a 3 dB increase in noise where existing noise levels are between 60 and 65 dBA Ldn, or a 1.5 dB increase in noise where existing noise levels are above 65 dBA Ldn.

Short-Term Noise Increases. Expose outdoor activity areas of noise sensitive land uses to construction noise of greater than 85 dB at 50 feet.

Vibration. Expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Cultural Resources

Historical Resources. Cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines Section 15064.5), including physical demolition, destruction, relocation, or alteration of historical resources or their immediate surroundings, such that their significance would be materially impaired. The significance of a historical resource is considered materially impaired when a project demolishes or adversely materially alters those physical characteristics that convey its historical significance and that justify its eligibility for or inclusion in the California Register of Historical Resources (CRHR) or in registers meeting the definitions in Public Resources Code 5020.1(k) or 5024.1(g).

Archaeological Resources. Cause a substantial adverse change in the significance of an archaeological resource, or potential disturbance to undiscovered archaeological resources (CEQA 15064.5).

Human Remains. Disturb or potentially disturb any undiscovered human remains, including those interred outside of formal cemeteries.

Attachment 3. Waste Discharge Requirements Order No. R3-2002-026 (NPDES Permit No. CA0047996) for the Carmel Area Wastewater District and Pebble Beach Community Services District

California Regional Water Quality Control Board
Central Coast Region

Vinston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov/~rwqcb3
81 Higuera Street, Suite 200, San Luis Obispo, California 93401-5427
Phone (805) 549-3147 • FAX (805) 543-0397

Gray Davis
Governor

March 26, 2002

Mr. Ray Von Dohren
Carmel Area Wastewater District
P.O. Box 221428
Carmel, CA 93922

Mr. Mike Niccum
Pebble Beach CSD
Forest Lake and Lopez
Pebble Beach, CA 93953

Dear Messrs. von Dohren and Niccum:

UPDATED WASTE DISCHARGE REQUIREMENTS FOR CARMEL AREA WASTEWATER DISTRICT AND PEBBLE BEACH COMMUNITY SERVICES DISTRICT, MONTEREY COUNTY

Enclosed is a copy of Waste Discharge Requirements Order No. R3-2002-026 (NPDES Permit No. CA0047996) for Carmel Area Wastewater District and Pebble Beach Community Services District. This Order was adopted by the Regional Board on March 22, 2002, and is effective immediately.

If you have any questions, please contact **Matt Thompson at (805) 549-3159** or Gerhardt Hubner at (805) 542-4647.

Sincerely,

Roger W. Briggs
Executive Officer

Enclosure

cc:

Monterey Bay National Marine Sanctuary
299 Foam Street, Suite D
Monterey, CA 93940

Discharger File: Carmel Area Wastewater District
S:\WB\Coastal Watershed\Staff\MThompson\Regulated Facilities\NPDES\Carmel Area Wastewater District\Adopted Order No. 02-026\Transmittal adopted 02-026.doc

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

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2002-026
NPDES NO. CA0047996
Waste Discharger Identification No. 3 270101001

For

CARMEL AREA WASTEWATER DISTRICT AND
PEBBLE BEACH COMMUNITY SERVICES DISTRICT
MONTEREY COUNTY

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

1. The Carmel Area Wastewater District, a governmental agency, owns and operates a wastewater collection, treatment, and disposal system to provide sewerage service for residential and commercial sources, including restaurants, in
   a. the City of Carmel-by-the-Sea, a governmental agency,
   b. the Pebble Beach Community Services District, a governmental agency, and
   c. outlying county areas

2. The Carmel Area Wastewater District has agreed to provide one third of its treatment and disposal capacity to the Pebble Beach Community Services District.

3. The Pebble Beach Community Services District, owns, operates, and has direct responsibility for a wastewater collection and transport system for residential and commercial sources in its constituent area. That responsibility transfers to the Carmel Area Wastewater District once the collected sewage enters interceptors owned and operated by the Carmel Area Wastewater District.

4. It is incumbent upon the Carmel Area Wastewater District and the Pebble Beach Community Services District to protect the environment to the greatest degree possible and insure their respective collection systems and receiving sewerage systems are protected and utilized properly. This responsibility includes preventing overflows and may include restricting or prohibiting the volume, type, or concentration of wastes added to the system.

5. The Board last issued NPDES Permit No. CA0047996 on July 14, 2000, under Board Order No. 00-061. The Discharger appealed Order No. 00-061 to the State Board in August 2000. In August 2001, Regional Board staff agreed to a hold a new hearing of this permit. The State Board has placed the Discharger's petition into abeyance until 30 days after the new hearing.

6. The Carmel Area Wastewater District's treatment facility, located as shown on Attachment "A", is designed to process an annual average daily flow rate of 3.00 million gallons per day (MGD). Actual flows over the last three years ranged from 1.48 MGD to 1.89 MGD.

7. Wastewater treatment consists of grit removal, primary settling, flow equalization, activated sludge contact, clarification, chlorination, and dechlorination. Sludge is anaerobically digested, de-watered by a belt press, and hauled for land application or composting by a second party.

8. Treated wastewater is either recycled or discharged to the Pacific Ocean. The recycling project is regulated under a separate Board

Order. Ocean discharge occurs through a 600-foot outfall/diffuser system. The outfall terminates in Carmel Bay within the Monterey Bay National Marine Sanctuary (36° 32" 00' N. Latitude, 121° 55" 43' W. Longitude) in approximately 35 feet of water. The minimum initial dilution (seawater:effluent) of the outfall is 121:1.

9. The Environmental Protection Agency and Board classify this discharge as a major discharge.

10. Effluent is discharged to a portion of the Pacific Ocean designated as the Monterey Bay National Marine Sanctuary. The entire Monterey Bay was officially designated as a National Marine Sanctuary on September 15, 1992. The National Marine Sanctuaries Program is mandated by Title III of the Marine Protection, Research, and Sanctuaries Act of 1972. The Program protects areas of the marine environment that possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance. The first priority of the Program is the long-term protection of resources within a sanctuary. The Monterey Bay Sanctuary has been recognized for its unique and diverse biological and physical characteristics.

11. The State Water Resources Control Board (State Board) most recently adopted the "Water Quality Control Plan, Ocean Waters of California-California Ocean Plan" (California Ocean Plan) on December 3, 2001. The Ocean Plan contains objectives and requirements governing discharges to the Pacific Ocean.

12. The Ocean Plan provides that waste shall not be discharged to designated Areas of Special Biological Significance (ASBS), except for temporary activities specified in the Ocean Plan. The Ocean Plan also authorizes the State Water Resources Control Board to grant exceptions to Ocean Plan requirements in compliance with the California Environmental Quality Act, after a public hearing, subject to the concurrence of the U.S. Environmental Protection Agency, where the State Board determines the exception will not compromise protection of ocean waters for beneficial uses, and the public interest will be served. In 1984, the State Water Resources Control Board adopted Resolution No. 84-78, conditionally authorizing the Discharger to discharge wastewater from its treatment facility to the Carmel Bay ASBS. The conditions required annual monitoring, including mussel growth measurements, and a comprehensive study to be implemented every ten years, beginning in 1987, to evaluate the effects of the discharge on the ASBS, and determine whether there are changes as a result of the discharge. Additional conditions included compliance with flow limits established by the Regional Board, which must be included in the Discharger's NPDES permit. The State Board based this exception on the finding that discharges of secondary treated wastewater into the Carmel Bay ASBS had no significant adverse impact on Carmel Bay ecosystems. The State Board also found it was financially and economically infeasible for Discharger to cover the entire cost of advanced treatment needed for the wastewater to be recycled. The State Board has not revisited the 1984 exception to the Ocean Plan. The Discharger failed to implement the comprehensive study required in 1997 by Resolution No. 84-78.

13. The California Department of Fish and Game declared Point Lobos an Ecological Reserve in 1973. Commercial fishing is prohibited in this Reserve. The State Water Resources Control Board designated ocean waters within one-quarter mile offshore of Point Lobos' from Granite Point to the southernmost boundary of the Point Lobos State Reserve, as shown on Attachment "A", as an ASBS.

14. The State Board designated portions of Carmel Bay an ASBS on July 19, 1975 (Resolution No. 75-61). The ASBS is that part of Carmel Bay shoreward from an imaginary straight line between Pescadero Point and Granite Point as shown on Attachment "A". The Department of Fish and Game designated the same area as an Ecological Reserve on August 27, 1977. Commercial fishing is severely restricted within the boundaries of the Reserve.

15. The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Board 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 State waters including the Pacific Ocean.

16. Present and anticipated beneficial uses of the Pacific Ocean in the vicinity of the discharge include:
    a. Industrial Water Supply,
    b. Water Contact Recreation,
    c. Water Non-Contact Recreation,
    d. Aesthetic Enjoyment,
    e. Navigation,
    f. Commercial and Sport Fishing,
    g. Mariculture,
    h. Preservation and Enhancement of Areas of Special Biological Significance,
    i. Rare, Threatened, and Endangered Species,
    j. Marine Habitat,
    k. Fish Migration and Spawning, and
    l. Shellfish Harvesting

17. The California Water Code Section 13263.6 requires this Permit include effluent limitations for all substances that are reported in toxic chemical release data reports prepared pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 USC section 11023). There are no industries in the CAWD service area and no toxic chemical release reports have been submitted to the CAWD. Therefore, there are no substances to report that fall under this rule.

18. Discharges of toxic pollutants (listed in Table B of the Ocean Plan) are typically intermittent and more variable than discharges of conventional pollutants. Intermittent discharge of toxic pollutants may cause or contribute to an excursion above effluent limitations that may not be measured by annual samples of the effluent, and thus not be accounted for in a statistical analysis (Reasonable Potential Analysis) of the effluent. The Discharger's Reasonable Potential Analysis was based on 2 to 4 samples of each pollutant and U.S. EPA's default coefficient of variation, which provides insufficient statistical knowledge of actual effluent variability of each pollutant. The discharge to the Carmel Bay Area of Special Biological Significance (ASBS) and the Monterey Bay National Marine Sanctuary (MBNMS) warrants a greater knowledge of actual effluent variability of each pollutant than the Discharger's Reasonable Potential Analysis has provided. No legal authority mandates the removal of existing effluent limitations from an NPDES permit based on the results of a Reasonable Potential Analysis based on effluent quality alone. Effluent limitations may be retained if the Board has a reasonable basis to do so. Additionally, elimination of the existing effluent limitations may violate the anti-backsliding provisions of federal Clean Water Act section 402(o). While there may be an exception to anti-backsliding, the fact that the discharge is to an ASBS and MBNMS means there is a heavier burden of proof to justify an exception. The anti-backsliding exception must be consistent with the anti-degradation policy. The anti-degradation policy provides that where high quality waters constitute an outstanding national resource, that water quality shall be maintained and protected. In addition, all dischargers of waste into MBNMS are prohibited unless specifically authorized by a state or federal permit (15 C.F.R. sec. 922.123). Consistent with the highest level of water quality protection required in Carmel Bay, all existing effluent limitations remain in the proposed permit.

19. A statistical evaluation of the Discharger's frequently monitored (i.e. daily or weekly) effluent data, long-term performance trends, and compliance with effluent limitations indicates minor reductions in monitoring frequency are appropriate for some constituents.

20. Waste discharge requirements for the existing discharge are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with section 13389 of the California Water Code.

21. The discharge has been subjected, and will continue to be subjected, to extensive monitoring to assure no environmental impacts on the ASBS. Other factors concerning impacts from growth were addressed in a final Environmental Impact Report certified in June 1979.

22. The U.S. Environmental Protection Agency promulgated Federal Regulations for stormwater discharges on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activities including Publicly Owned Treatment Works (POTWs) which discharge storm water associated with industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.

23. The majority of storm water from the wastewater treatment facility process areas are collected and discharged to percolation beds. A small portion is directed to the wastewater treatment plant headworks and treated along with the wastewater. These storm water flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharge at this facility. The Carmel Area Wastewater District must still comply with the Industrial Activities Storm Water General permit adopted April 17, 1997. The regional Board approved an exemption from sampling stormwater runoff at the District's facility in June 11, 1993.

24. A permit and the privilege to discharge waste into waters of the State is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or supplemented by implementing guidelines and regulations) and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act and as Waste Discharge Requirements pursuant to the California Water Code. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the project.

25. Discharge of any wastewater by the Carmel Area Wastewater District into the Carmel Bay ASBS is subject to the Ocean Plan exception adopted by the State Board in 1984. Additionally, all discharges of wastewater to the Monterey Bay National Marine Sanctuary are prohibited unless authorized by a state or federal permit that is accepted by NOAA. Pursuant to California Water Code section 13263, discharging waste is a privilege and not a right, and no discharge, even if authorized by permit, creates a vested right to continue the discharge. Pursuant to the State Board resolution, the Regional Board established a permitted flow limit of 3.0 MGD. Any increase in this flow limitation is subject to authorization by the Regional Board, in compliance with applicable provisions of the federal Clean Water Act, state Porter-Cologne Act, and applicable regulations. Any increase in wastewater discharge volume is prohibited by the Anti-degradation policy (40 C.F.R. section 131.12 and SWRCB Resolution 68-16) unless the Regional Board adopts findings, supported by evidence in the record, that justify authorizing additional waste load to the Carmel Bay ASBS and Monterey Bay National Marine Sanctuary. Note the Anti-degradation policy provides that where high quality waters constitute an outstanding National resource, that water quality shall be maintained and protected.

26. On December 21, 2001, the Board notified the public and interested agencies of its intent to reissued waste discharge requirements for the Discharger, provided them with an opportunity to submit their written views and recommendations, and scheduled a public hearing.

27. In a public hearing on March 22, 2002, in Salinas, the Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, Carmel Area Wastewater District, its agents, successors, and assigns, may discharge waste at its Carmel Wastewater Treatment Facility, providing compliance is maintained with the following.

All technical and monitoring reports submitted pursuant to this Order are required pursuant to Sections 13267 and 13383 of the California Water

Code. Failure to submit reports in accordance with schedules established by this Order, 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 Sections 13268 and 13385 of the California Water Code. The Regional Board will base all enforcement actions on the date of Order adoption.

The following references are used throughout this Permit to indicate the source for the Permit condition:

OP	Water Quality Control Plan, Ocean Waters of California
84-78	State Water Resources Control Board Resolution No. 84-78
ROWD	The Discharger's Report of Waste Discharge

A. PROHIBITIONS

1. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited. OP

2. Discharges of discrete, point-source sewage in a manner that would alter conditions from those occurring naturally in the area of the discharge, an ASBS, are prohibited. 84-78

3. Federal law prohibits pipeline discharge of sludge to the ocean; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited. OP

4. Discharge to Carmel Bay at a location other than 36° 32" 00' N. Latitude, 121° 55" 43' W. Longitude, shown on Attachment "A", is prohibited. ROWD

5. Discharge of anything other than that described in the Findings of this Permit is prohibited. ROWD, OP

B. EFFLUENT LIMITATIONS

1. "Removal efficiencies" for Total Non-Filterable Residue (Suspended Solids) and Biochemical Oxygen Demand (BOD) shall not be less than 85 percent (40 CFR 133). In addition, effluent concentrations shall not exceed the following limits*:

Constituent	Units	30-Day Average	7-Day Average	Daily Maximum
BOD_5	mg/l lbs/day kg/day	30 750 340	45 1130 510	90 2250 1020
Total Non-Filterable Residue (Suspended Solids)	mg/l lbs/day kg/day	30 750 340	45 1130 510	90 2250 1020

2. Effluent shall not exceed the following limits:[B]

Constituent	Units	30-Day Average	7-Day Average	Daily Maximum
Grease and Oil*	mg/l lbs/day kg/day	25 630 280	40 1000 450	75 1880 850
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225

* For flows less than 3.0 MGD, mass emission rates shall not exceed the "Maximum Allowable Mass Emission Rate" as specified in the Standard Provisions and Reporting Requirements.

3. Effluent shall maintain pH within limits of 6.0 to 9.0 pH units at all times.[OP]

4. Effluent shall not exceed the following limits (minimum initial seawater:effluent dilution ratio equals 121:1):[OP]

   a. PROTECTION OF MARINE AQUATIC LIFE**

Constituents	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	mg/l	0.61	3.54	9.40
Cadmium	mg/l	0.12	0.49	1.22
Chromium(Hex)[1]	mg/l	0.24	0.98	2.44
Copper	mg/l	0.12	1.22	3.42
Lead	mg/l	0.24	0.98	2.44
Mercury	µg/l	4.82	19.46	48.74
Nickel	mg/l	0.61	2.44	6.10
Selenium	mg/l	1.83	7.32	18.30

[1] The chromium limit may be met as Total Chromium as the Discharger chooses.

Constituents	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Silver	mg/l	0.07	0.33	0.84
Zinc	mg/l	1.47	8.79	23.43
Cyanide[2]	mg/l	0.12	0.49	1.22
Total Chlorine Residual	mg/l	0.24	0.98	7.32
Ammonia (as N)	mg/l	73.20	292.80	732.00
Acute Toxicity	TUa		3.9	
Chronic Toxicity	TUc		122.00	
Phenolic Compounds (non-chlorinated)	mg/l	3.66	14.64	36.60
Chlorinated Phenolics	mg/l	0.12	0.49	1.22
Endosulfan[3]	µg/l	1.10	2.20	3.29
Endrin	µg/l	0.24	0.49	0.73
HCH[4]	µg/l	0.49	0.98.	1.46
Radioactivity[5]	Not to exceed limits specified in California Code of RegulationsTitle 22, Chapter 15, Article 5, Section 64443.			

b. PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS**

Constituents	Units	30-Day Average
Acrolein	mg/l	26.84
Antimony	g/l	0.15
Bis(2-chloroethoxy) Methane	mg/l	0.54
Bis(2-chloroisopropyl) Ether	g/l	0.15
Chlorobenzene	mg/l	69.54
Chromium (III)	g/l	23.18
Di-n-butyl Phthalate	g/l	0.43
Dichlorobenzenes[6]	g/l	0.62
Diethyl Phthalate	g/l	4.03
Dimethyl Phthalate	g/l	100.04
4,6-dinitro-2-methylphenol	mg/l	26.84
2,4-dinitrophenol	mg/l	0.49
Ethylbenzene	g/l	0.50
Fluoranthene	mg/l	1.83
Hexachlorocyclopentadiene	mg/l	7.08
Nitrobenzene	mg/l	0.60
Thallium	mg/l	0.24
Toluene	g/l	10.37
Tributyltin	µg/l	0.17
1,1,1-trichloroethane	g/l	65.88

[2] The cyanide limit may be met by the combined measurements of free cyanide, simple alkali metal cyanides and weakly complexed organometallic complexes upon approval of the Regional Board and the U.S. Environmental Protection Agency.

[3] Endosulfan shall mean the sum of endosulfan-alpha and –beta and endosulfan sulfate.

[4] HCH shall mean the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

[5] Effluent limitation on radioactivity shall apply to the undiluted combined effluent.

[6] Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

c. PROTECTION OF HUMAN HEALTH --CARCINOGENS**

Constituents	Units	30-Day Average
Acrylonitrile	µg/l	12.20
Aldrin	ng/l	2.68
Benzene	mg/l	0.72
Benzidine	ng/l	8.42
Beryllium	µg/l	4.03
Bis(2-chloroethyl) Ether	µg/l	5.49
Bis(2-ethylhexyl) Phthalate	mg/l	0.43
Carbon tetrachloride	mg/l	0.11
Chlordane[7]	ng/l	2.81
Chlorodibromomethane	mg/l	1.05
Chloroform	mg/l	1.59
DDT[8]	ng/l	20.74
1,4-dichlorbenzene	mg/l	2.20
3,3-dichlorobenzidine	µg/l	0.99
1,2-dichloroethane	mg/l	3.4
1,1-dichloroethylene	mg/l	0.11
Dichlorobromomethane	mg/l	0.76
Dichloromethane	mg/l	54.90
1,3-dichloropropene	mg/l	1.09
Dieldrin	ng/l	4.88
2,4-dinitrotoluene	mg/l	0.32
1,2-diphenylhydrazine	µg/l	19.52
Halomethanes[9]	mg/l	15.86
Heptachlor	µg/l	0.006
Heptachlor epoxide	µg/l	0.002
Hexachlorobenzene	ng/l	25.62
Hexachlorobutadiene	mg/l	1.71
Hexachloroethane	mg/l	0.31
Isophorone	mg/l	89.06
N-nitrosodimethylamine	mg/l	0.89
N-nitrosodi-N-propylamine	mg/l	0.046
N-nitrosodiphenylamine	mg/l	0.31
PAHs[10]	µg/l	1.07
PCBs[11]	ng/l	2.32
TCDD equivalents[12]	pg/l	0.48

[7] Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[8] DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

[9] Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[10] PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo(a)pyrene, chrysene, dibenzo(ah)anthracene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

[11] PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

[12] TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans(2,3,7,8-CDFs) multiplied by their respective toxicity factors, as listed in Appendix I of the Ocean Plan.

Constituents	Units	30-Day Average
1,1,2,2-tetrachloroethane	mg/l	0.28
Tetrachloroethylene	mg/l	0.244
Toxaphene	ng/l	25.62
Trichloroethylene	mg/l	3.29
1,1,2-trichloroethane	mg/l	1.147
2,4,6-trichlorophenol	µg/l	35.38
Vinyl Chloride	mg/l	4.39

** Based on California Ocean Plan criteria using a minimum initial dilution ratio of 121:1 (seawater:effluent). If the actual dilution is found to be less than this value, it will be recalculated and the Order revised.

c. During any 24-hour period, the effluent mass emission rate shall not exceed the "Maximum Allowable Mass Emission Rate".

d. The Discharger shall report violations of the "Instantaneous Maximum" or "Maximum Allowable Daily Emission Rate" to the Executive Officer within 24 hours after discovery.

e. During any six-month period, the effluent mass emission rate shall not exceed the "Maximum Allowable Six month Median Mass Emission Rate."

5. Effluent daily dry weather average flow shall not exceed a monthly average of 3.0 MGD.

6. The median number of total coliform organisms in effluent shall not exceed 230 per 100 milliliters, as determined from the bacteriological results of the last seven days for which analyses have been completed, and the number of coliform organisms in any sample shall not exceed 10,000 per 100 milliliters.[OP]

7. Effluent shall be essentially free of materials and substances that:[OP]

a. float or become floatable upon discharge.

b. may form sediments which alter benthic communities or other aquatic life.

c. accumulate to toxic levels in marine waters, sediments or biota.

d. decrease the natural light to benthic communities and other marine life.

e. materials that result in aesthetically undesirable discoloration of the ocean surface.

Table 1 - Shoreline Bacterial Limitations

		30-Day		60-Day	6-Month
	Maximum	Geometric Mean	80% of Samples	90% of Samples	Geometric Mean
Total Coliform (MPN/100mL)	10,000		1,000		
Fecal Coliform (MPN/100mL)		200		400	
Enterococcus (MPN/100mL)		24			12

Where a "Geometric Mean" shall be a moving average based on no less than five samples per month, spread evenly over the time interval

Table 2 – Water Column Bacterial Limitations (if shellfish are harvested)

Parameter Applicable to Any 60-day Period	Total Coliform Organisms (MPN/100mL)
Median	70
10% of Samples	230

C. RECEIVING 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 in the receiving water.)

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp beds, the bacterial objectives of Table 1 shall be maintained throughout the water column. [OP]

2. The bacteriological limits of Table 2 are not to be exceeded in the water column in areas where shellfish are harvested. [OP]

3. Floating particulates and grease and oil shall not be visible on the ocean surface. [OP]

4. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface. [OP]

5. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste. [OP]

6. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded. [OP]

7. The dissolved oxygen concentrations shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials. [OP]

8. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally. [OP]

9. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions. [OP]

10. The concentration of substances set forth in Table B of the Ocean Plan shall not increase in marine sediments to levels that would degrade indigenous biota. [OP]

11. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life. [OP]

12. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota. [OP]

13. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [OP]

14. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered. [OP]

15. The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. [OP]

16. Discharge of radioactive waste shall not degrade marine life. [OP]

D. PROVISIONS

1. The Discharger shall submit for Executive Officer approval no later than **September 22, 2002**, a work plan for the development of a comprehensive study of the discharge's effect on Carmel Bay. The study shall incorporate all pertinent receiving water data, define natural water quality conditions in Carmel Bay, and evaluate the discharge's effect on the natural water quality of Carmel Bay. If necessary, the Discharger shall participate in a working group with the Executive Officer that will be assigned such tasks as further defining the scope of the study, determining additional data needs, and evaluating the findings of the study. A written report of the study shall be submitted to the Executive Officer no later than **March 22, 2003.** [84-78]

2. The Discharger shall conduct a bacterial assessment if Receiving Water Limitations C.1 is consistently exceeded. If the bacterial assessment finds the discharge is the source of

coliform or enterococcus bacteria, the Discharger shall conduct a survey to determine if the Discharge is the source of contamination. The survey shall be in accordance with a time schedule to be agreed upon in writing by the Executive Officer. OP

3. If the discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 1, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps necessary to reduce toxicity to the required level. OP

4. The Discharger shall comply with "Monitoring and Reporting Program No. R3-2002-026," as ordered by the Executive Officer.

5. The Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January 1985, (also referred to as "Standard Provisions"). Paragraph (a) of item E.1. shall apply only if the bypass is for essential maintenance to assure efficient operation.

6. The Discharger may request Permit modification should the Ocean Plan be revised during the term of the Permit. All requests shall be in writing and shall contain facts or reasons supporting the request.

7. This permit may be modified in accordance with the requirements set forth at 40 Code of Federal Regulations, Part 122 and 124, to include appropriate conditions on limits based on newly available information, or to implement an EPA-approved new state water quality objective.

8. The discharger shall comply with all requirements of the most current Industrial Activities Storm Water General Permit (General Permit) adopted by the State Board, except the discharger is exempt from sampling stormwater runoff at its facility. The discharger shall implement a Storm Water Pollution Prevention Plan (SWPP Plan) in accordance with the General Permit. The SWPP Plan shall be reviewed and updated as appropriate before the next Permit reissuance or whenever appropriate.

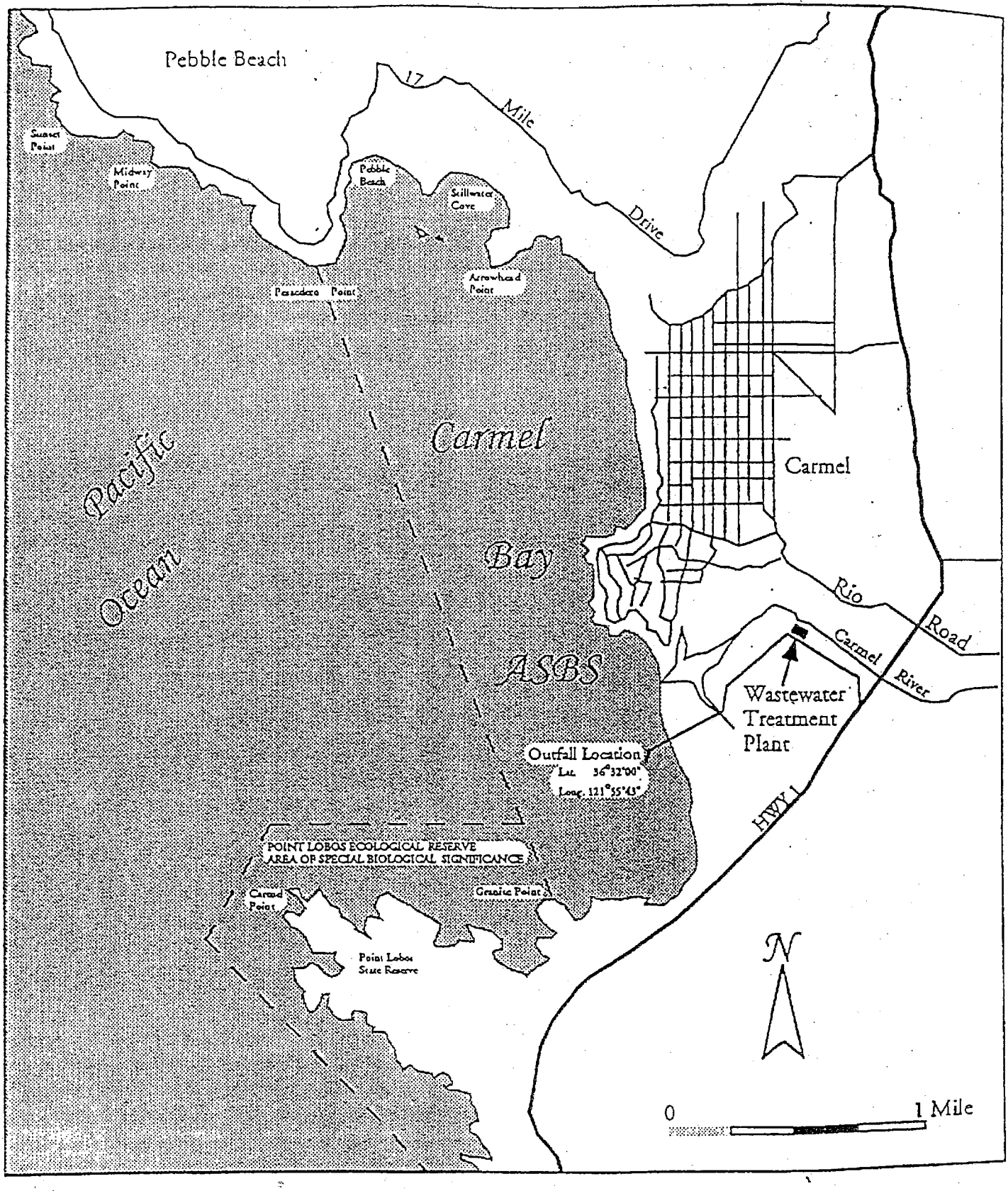
9. This Order expires March 22, 2007, and the Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code, not later than September 23, 2006, if it wishes to continue the discharge.

IT IS FURTHER ORDERED, that Pebble Beach Community Services District shall comply with relevant items of the "Standard Provisions and Reporting Requirements".

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 March 22, 2002.

Ordered By: _____
Roger W. Briggs, Executive Officer

Date: 3-26-02



ATTACHMENT "A"
CARMEL AREA WASTEWATER DISTRICT
WASTEWATER TREATMENT PLANT

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

MONITORING AND REPORTING -PROGRAM ORDER NO. R3-2002-026
NPDES NO. CA0047996
Waste Discharger Identification No. 3 270101001

for

CARMEL AREA WASTEWATER DISTRICT AND
PEBBLE BEACH COMMUNITY SERVICES DISTRICT
MONTEREY COUNTY

I. INFLUENT MONITORING

A sampling station shall be established where representative samples of the influent can be obtained. Samples shall be collected for the following constituents at the frequencies specified in Table I.

Table 1

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Total Flow Volume	MG	Metered	Daily
Max. Daily Flow	MGD	Metered	Daily
BOD_5	mg/l	24-hr. Composite	Once every 13 days
Total Suspended Solids	mg/l	24-hr. Composite	Once every 13 days

II. EFFLUENT MONITORING

A sampling station shall be established where representative samples of effluent can be obtained. Samples shall be collected for the following constituents at the frequencies specified in Table 2.

Table 2

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Average Daily Flow	MGD	Metered	Daily
pH	--	Grab	Five days per week
Temperature	°F	Grab	Five days per week
Suspended Solids	mg/l	24-hr. Composite	Five days per week
Settleable Solids	ml/l	Grab	Five days per week
Total Coliform Organisms	MPN/100 mL	Grab	Five days per week, and whenever Final Chlorine Residual (as measured prior to dechlorination) is less than 25% of Initial Chlorine Residual for 5%, or more, of any 24-hour period.
Total Chlorine Residual	mg/l	Continuous	Daily
BOD_5	mg/l	24-hr. Composite	Once every 13 days
Turbidity	NTU	24-hr. Composite	Once every 13 days

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Oil and Grease	mg/l	Grab	Once every 13 days
Ammonia (as N)	mg/l	Grab	Monthly
Nitrate (as N), Total Nitrogen	mg/l	Grab	Monthly
Urea	mg/l	Grab	Monthly
Silicate	mg/l	Grab	Monthly
Acute Toxicity[1]	TUa	Grab	Quarterly (Mar., June, Sept., Dec.)
Chronic Toxicity[1]	TUc	Grab	Quarterly (Mar., June, Sept., Dec.)

[1] Compliance with Toxicity Objectives: Compliance with acute toxicity objective (TUa) shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTI), EPA, American Public Health Association, or State Board.

The Regional Board requires the use of critical life stage toxicity tests to measure TUc. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, and after Executive Officer approval, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from and unaffected area of the receiving water. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results. The following tests shall be used to measure TUc:

Species	Effect	Test Duration	Bioassay Reference
abalone, Haliotis rufescens	abnormal shell development	48 hours	see* below
giant kelp, Macrosystis pyrifera	% germination; germ tube length	48 hours	see *below
Silversides, Menidia beryllina	larval growth rate; percent survival	7 days	see **below

Bioassay Reference

*Hunt, J.W., B.S. Anderson, S.L. Turpin, A.R. Conlon, M. Martin, F.. Palmer, and J.J. Janik. 1989. Experimental Evaluation of Effluent Toxicity Testing Protocols with Giant Kelp, Mysids, Red Abalone, and Topsmelt. Marine Bioassay Project. Fourth Report. California State Water Resources Control Board, Sacramento.

**Weber, C.I., W.B. Horning, II, D.J. Klemm, T.W. Neiheisel, P.A. Lewis, E.L. Robinson, J. Menkedick, and F. Kessler (eds.). 1988. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms. EPA-600/4-87/028. National Technical Information Service, Springfield, VA.

Toxicity Reduction Requirements:

If the discharge consistently exceeds an effluent limitation based on toxicity objectives, a toxicity reduction evaluation (TRE) shall be required. The TRE shall include all reasonable steps to identify the source of the toxicity. Once the toxicity is identified, the Discharger shall take all reasonable steps to reduce toxicity to the required level.

PROTECTION OF MARINE AQUATIC LIFE

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels[2] (µg/l)
Arsenic	mg/l	24-hr. Composite	Annually (December)	All methods contained in Table II-3, pg 33 of 2001 Ocean Plan, with exception to the Direct Current Plasma method
Cadmium	mg/l	" "	" "	" "
Chromium(Hex)	mg/l	" "	" "	" "
Copper	mg/l	" "	" "	" "
Lead	mg/l	" "	" "	" "
Mercury	µg/l	" "	" "	" "
Nickel	mg/l	" "	" "	" "
Selenium	mg/l	" "	" "	" "
Silver	mg/l	" "	" "	" "
Zinc	mg/l	" "	" "	" "
Cyanide	mg/l	" "	" "	" "
Phenolic Compounds (non-chlorinated)	mg/l	Grab	" "	See Appendix II, pg. 29 of 2001 Ocean Plan
Chlorinated Phenolics	mg/l	24-hr. Composite	" "	" "
Endosulfan	µg/l	" "	" "	0.01
Endrin	µg/l	" "	" "	0.01
HCH	µg/l	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan
Radionuclide	pCi/l	Grab	" "	--

[2] Minimum Levels (taken from Appendix II of the 2001 California Ocean Plan) represent the lowest quantifiable concentration in a sample based on the proper application of method-specific analytical procedures and the absence of matrix interferences.

The Discharger must instruct their laboratory to establish calibration standards so that the Minimum Level is the lowest calibration standard. At no time is the Discharger to use analytical date derived from extrapolation beyond the lowest point in the calibration curve.

The Discharger must report with each sample result the reported Minimum Level and the laboratory's current Method Detection Limit (MDL).

Dischargers must report analytical results using the following protocols:

1. Sample results greater than or equal to the reported Minimum* Level must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample).
2. Sample results less than the reported Minimum Level, but greater than or equal to the laboratory's MDL, must be reported as "Detected, but Not Quantified", or DNQ. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc.").
3. Sample results less than the laboratory's MDL must be reported as "Not Detected", or ND.

PROTECTION OF HUMAN HEALTH – NONCARCINOGENS

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/l)	
				Gas Chromatography Method	Gas Chromatograpy / Mass Spectrometry Method
Acrolein	mg/l	24-hr. Composite	Annually (December)	2	5
Antimony	g/l	" "	" "	All methods contained in Table II-3, pg 33 of 2001 Ocean Plan	
Bis(2-chloroethoxy) Methane	mg/l	" "	" "	--	5
Bis(2-chloroisopropyl) Ether	g/l	Grab	" "	10	2
Chlorobenzene	mg/l	24-hr. Composite	" "	0.5	2
Chromium (III)	g/l	" "	" "	See Table II-3. pg 33 of 2001 Ocean Plan	
Di-n-butyl Phthalate	g/l	" "	" "	--	10
Dichlorobenzenes	g/l	" "	" "	See Table II-2. pg 30 of 2001 Ocean Plan	
Diethyl Phthalate	g/l	" "	" "	10	2
Dimethyl Phthalate	g/l	" "	" "	10	2
4,6-dinitro-2-methylphenol	mg/l	" "	" "	10	5
2,4-dinitrophenol	mg/l	" "	" "	5	5
Ethylbenzene	g/l	" "	" "	0.5	2
Fluoranthene	mg/l	" "	" "	10	1
Hexachlorocyclopentadiene	mg/l	" "	" "	5	5
Isophorone	g/l	" "	" "	10	1
Nitrobenzene	mg/l	" "	" "	10	1
Thallium	mg/l	" "	" "	See Table II-3. pg 33 of 2001 Ocean Plan	
Toluene	g/l	" "	" "	0.5	2
Tributyltin	µg/l	" "	" "	--	--
1,1,1-trichloroethane	g/l	" "	" "	0.5	2
1,1,2-trichloroethane	g/l	" "	" "	0.5	2

PROTECTION OF HUMAN HEALTH – CARCINOGENS

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/l)	
				Gas Chromatography Method	Gas Chromatograpy / Mass Spectrometry Method
Acrylonitrile	µg/l	24-hr. Composite	Annually (December)	2	2
Aldrin	ng/l	" "	" "	0.005	--
Benzene	mg/l	" "	" "	0.5	2
Benzidine	ng/l	" "	" "	--	5
Beryllium	µg/l	" "	" "	All methods contained in Table II-3, pg 33 of 2001 Ocean Plan, with exception to the Direct Current Plasma and Flame Atomic Absorption methods	

Constituent	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/l)	
				Gas Chromatography Method	Gas Chromatograpy / Mass Spectrometry Method
Bis(2-chloroethyl) Ether	µg/l	" "	" "	--	1
Bis(2-ethylhexyl) Phthalate	mg/l	" "	" "	10	5
Carbon tetrachloride	mg/l	" "	" "	0.5	2
Chlordane	ng/l	" "	" "	0.1	--
Chlorodibromomethane	µg/l	" "	" "	0.5	2
Chloroform	mg/l	" "	" "	0.5	2
DDT	ng/l	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan	
1,4-dichlorobenzene	mg/l	" "	" "	See Table II-1 and II-2, pgs. 29-30 of 2001 Ocean Plan	
3,3-dichlorobenzidine	µg/l	" "	" "	--	5
1,2-dichloroethane	mg/l	" "	" "	0.5	2
1,1-dichloroethylene	mg/l	" "	" "	0.5	2
Dichlorobromomethane	µg/l	" "	" "	0.5	2
Dichloromethane	mg/l	" "	" "	0.5	2
1,3-dichloropropene	mg/l	" "	" "	See Table II-1 and II-2, pgs. 29-30 of 2001 Ocean Plan	
dieldrin	ng/l	" "	" "	0.01	--
2,4-dinitrotoluene	mg/l	" "	" "	10	5
1,2-diphenylhydrazine	µg/l	" "	" "	--	1
Halomethanes	mg/l	" "	" "		
Heptachlor	µg/l	" "	" "	0.01	--
Heptachlor epoxide	µg/l	" "	" "	0.01	--
Hexachlorobenzene	ng/l	" "	" "	--	1
Hexachlorobutadiene	mg/l	" "	" "	5	1
Hexachloroethane	mg/l	" "	" "	5	1
N-nitrosodimethylamine	mg/l	" "	" "	10	5
N-nitrosodi-N-propylamine	mg/l	" "	" "	10	5
N-nitrosodiphenylamine	mg/l	" "	" "	10	1
PAHs	µg/l	" "	" "	See Appendix II, pg. 29 of 2001 Ocean Plan	
PCBs	ng/l	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan	
TCDD equivalents	pg/l	" "	" "	--	--
1,1,2,2-tetrachloroethane	g/l	" "	" "	0.5	2
Tetrachloroethylene	mg/l	" "	" "	0.5	2
Toxaphene	ng/l	" "	" "	0.5	--
Trichloroethylene	mg/l	" "	" "	0.5	2
2,4,6-trichlorophenol	µg/l	" "	" "	10	10
Vinyl Chloride	mg/l	" "	" "	0.5	2

III. SLUDGE MONITORING

A sampling station shall be established where representative samples of residual solids from the treatment process can be obtained. Samples shall be collected from the last point in the sludge handling process and analyzed for the following constituents at the frequencies specified in Table 3.

Table 3

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Quantity	Tons or yds^3	Measured	Monthly
Moisture Content	%	Grab	Semi-Annually (March and Sept.)
Total Kjeldahl Nitrogen	mg/l	Grab	" "
Ammonia (as N)	mg/l	Grab	" "
Nitrate (as N)	mg/l	Grab	" "
Total Phosphorous	mg/l	Grab	" "
PH	--	Grab	" "
Oil & Grease	mg/l	Grab	" "
Boron	mg/l	Grab	" "
Cadmium	mg/kg	Grab	" "
Copper	mg/kg	Grab	" "
Hexavalent Chromium	mg/kg	Grab	" "
Lead	mg/kg	Grab	" "
Nickel	mg/kg	Grab	" "
Mercury	mg/kg	Grab	" "
Zinc	mg/kg	Grab	" "
Silver	mg/kg	Grab	" "
Cyanide	mg/kg	Grab	" "

IV. RECEIVING WATER MONITORING

Receiving water monitoring is conducted to verify compliance with the California Ocean Plan. The Discharger shall participate in the Central Coast Long-term Environmental Assessment Network (CCLEAN) as a component of receiving water monitoring activities.

The Receiving Water Monitoring Program consists of the following components:

A. Shoreline Bacterial Sampling
B. Central Coast Long-term Environmental Assessment Network (CCLEAN)
    1) Bottom sediment sampling
    2) Benthic biota sampling
    3) Mussel bioaccumulation sampling
    4) Stream and river mouth sampling
    5) Solid Phase Extraction Column sampling of effluent and rivers.

A. Shoreline Sampling

Shoreline sampling shall occur if effluent total coliform exceeds 2,400 MPN/100mL three or more times in a 30-day period. Latitude and Longitude shall be provided for all stations when reporting.

Table 4

Shore Stations	Description
K-4	Mission Point
K-5	North Shore Carmel River Mouth
K-6	Point at North end of Monastery Beach

Parameter	Units	Sampling Station	Depth of Sample	Sampling Frequency
Total and Fecal Coliform Organisms[3,4]	MPN/100ml	County Stations K-4 thru K-6	Surf Zone	Daily (until the Executive Officer agrees that normal sampling can resume)
Enterococcus Organisms[5]	MPN/100ml	" "	"	"

Monitoring shall include observations of wind (direction and speed), weather (e.g., cloudy, sunny, rainy), antecedent rainfall (7-day), sea state, and tidal conditions (e.g., high, slack, or low tide). Observations of water discoloration, floating oil and grease, turbidity, odor, and material of sewage origin in the water or on the beach shall be recorded and reported.

[3] For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100ml. The detection methods used for each analysis shall be reported with the results of the analysis.

[4] Detection methods used for total and fecal coliform shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.

[5] Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, "Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure", or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.

B. Central Coast Long-term Environmental Assessment Network (CCLEAN)

The Discharger shall participate in the implementation of the CCLEAN Regional Monitoring Program in order to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program Objectives:

I. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.
II. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan.
III. Determine sources of contaminants to nearshore waters.
IV. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.
V. Develop a long-term database on trends in the quality of nearshore waters, sediments and associated beneficial uses.
VI. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.
VII. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.

General components of the first phase of the CCLEAN Program are outlined in the following Table. The CCLEAN Quality Assurance Project Plan (QAPP) for each year will be submitted for staff approval prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites, a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in this document.

Table 5

Sampling sites, parameters sampled, frequency of sampling, applicable water-quality stressors, and relevant program objectives in Phase I of CCLEAN

(all sampling to begin in 2001 with the exception of flow-proportioned river mouth sampling)

Sampling Sites	Parameters Sampled at Each Site	Frequency of Sampling	Applicable Water-quality Stressors	Program Objectives
Water Sampling Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent Beginning 2002 - Four river sites (San Lorenzo, Pajaro, Salinas, Carmel) near mouths	30-day flow proportioned samples using automated pumping equipment, solid-phase-extraction techniques for: 1) persistent organic pollutants, and weekly grab samples of effluent and recording probes in rivers for 2) ammonia and nitrate, 3) turbidity, 4) temperature, conductivity, pH	Twice per year (wet season and dry season)	Persistent Organic Pollutants Nutrients Suspended Sediments in Rivers	III, IV
	Grabs for urea, nitrate and silicate in effluent	Monthly	Nutrients	III, IV
	Evaluate satellite imagery for algal blooms	Periodically	Nutrients (effects of)	I, III, IV
30-ft contour sites for each major discharge and sites sampled for AB 411	Grabs for total and fecal coliform, enterococcus	Monthly	Pathogens	I, II, III, IV
Approximately 20 streams and rivers	Grabs for: 1) total and fecal coliform and enterococcus, 2) nitrates, urea, silicate, 3) total suspended solids	Monthly	Pathogens Nutrients Suspended Sediments in Rivers	I, II, III
Sediment Sampling Four depositional sites and four background sites along 80-m contour	Single samples for benthic infauna, persistent organic pollutants, total organic carbon and grain size	Annually	Persistent Organic Pollutants (and effects of)	I, II
Mussel Sampling 5 rocky intertidal sites	One composite of 30-40 mussels for persistent organic pollutants, total and fecal coliform, and enterococcus	Twice per year (wet season and dry season)	Persistent Organic Pollutants Pathogens	I, II, III

Reporting

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so the date, the constituents, and the concentrations are readily discernable. The data shall be summarized to demonstrate compliance with requirements contained in Order No. 00-061. Location of sludge disposal shall be described in the report.

Monitoring reports shall be submitted for all monitoring and sampling herein on, or before, the last day of the month following the sampling or monitoring event (Table 6).

Receiving water monitoring components specified in Table 5 above shall be reported in a single CCLEAN Annual Report which summarizes findings for all participants. 30-foot contour pathogen monitoring shall be reported monthly by the Discharger, as well as in the CCLEAN Annual Report.

Table 6

Monitoring Frequency	Report Due
Daily, Weekly and Monthly	last Day of Following Month
Quarterly Monitoring	last Day of January, April, July and October
Semi-Annual Monitoring	last Day of January and April, or , of July and October (as appropriate)
Annual Monitoring	last Day of January
Annually (CCLEAN Annual Report and QAPP for upcoming year)	last day of January

Roger W. Briggs, Executive Officer

Date: 3-26-02

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CUSTOMER SERVICE SURVEY

ne of Cal/EPA's objectives is to provide superior levels of customer service. Your feedback telling us what is going well and hat needs improvement is essential to our success in our efforts to better serve you. Please take a moment to respond to ie following questions.

Winston H. Hickox, Secretary for Environmental Protection

SERVICE PROVIDER: Regional Water Quality Control Board (San Luis Obispo)

hat was the nature of your contact with us? (Please check only one box)

General Information	☐ Problem Resolution	☐ Technical Assistance
Permitting/Licensing Assistance	☐ Registration Assistance	☐ Other: _____

STATEMENTS	*Check (✓) As Appropriate*			
	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*
Staff was courteous and helpful.				
Staff provided complete, accurate information to you.				
A timely response was provided.				
My overall experience was positive.				
Please complete the section below if your contact with us involved permitting/licensing/registration assistance.				
The regulations were understandable.				
The application instructions were understandable.				
The permit/license/registration terms and conditions were understandable.				

Please indicate any staff person you would like to commend: _____
Name(s)

Comments:

If you feel we fell short in meeting your service expectations, please describe the situation, including name of the staff person involved and the date the incident occurred.

As a result of your experience with us, what service-related improvements can you recommend?

☞ Please fold this survey in thirds, staple/tape, and mail. Postage will be paid by Cal/EPA.

Attachment 4. Water Reclamation Requirements for the Carmel Area Wastewater District (Order No. 93-72)

TATE OF CALIFORNIA

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD —
CENTRAL COAST REGION
1 HIGUERA STREET, SUITE 200
AN LUIS OBISPO, CA 93401-5414
(05) 549-3147

Rec'd: 9/20/93
Initial
M.S. 9/20
S.U. 9/20

September 15, 1993

Mr. Michael Zambory, General Manager
Carmel Area Wastewater District
P.O. Box 221428
Carmel, CA 93922

Dear Mr. Zambory:

Enclosed is a copy of Order No. 93-72, "Water Reclamation Requirements for Carmel Area Wastewater District, Water Reclamation Project, Monterey County," which was adopted by this Board on September 10, 1993.

Sincerely,

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD, CENTRAL COAST REGION

By William R. Leonard
WILLIAM R. LEONARD
Executive Officer

sm27:93-72.cl

Enclosure

cs:

State Water Resources Control Board
Archie Matthews, Div. of Water Quality
P.O. Box 100
Sacramento, CA 95812-0100

U.S. Environmental Protection Agency
Region IX, W-5-1
75 Hawthorne Street
San Francisco, CA 94105

U.S. Environmental Protection Agency
Frederick Leif
Region IX, W-4
75 Hawthorne Street
San Francisco, CA 94105

State Department of Health
Office of Drinking Water
2151 Berkeley Way, Room 458
Berkeley, CA 94704-1011

Mary Anne Dennis
Monterey County Health Department
1270 Natividad Road
Salinas, CA 93906-3198

Margo Nottem Kamper
Monterey Peninsula Water Mgmt. District
P.O. Box 85
Monterey, CA 93942-0085

ID#3 270101001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

ORDER NO. 93-72

WATER RECLAMATION REQUIREMENTS FOR CARMEL AREA WASTEWATER DISTRICT WATER RECLAMATION PROJECT, MONTEREY COUNTY

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

1. Michael Zambory, General Manager, filed a Report of Waste Discharge on December 14, 1992, in accordance with Section 13522.5 of the California Water Code. The report was filed on behalf of Carmel Area Wastewater District (CAWD) for authorization to produce reclaimed water for delivery within the Carmel/Del Monte Forest area in Monterey County. The information supports a request for issuance of producer water reclamation waste discharge requirements.

2. Carmel Area Wastewater District (hereafter Discharger), Rio Road, Carmel, CA, proposes to own and operate water reclamation facilities located at the Carmel Area Wastewater Districts' Treatment Plant. Location of the proposed facilities are shown on Attachment "1" of this Order.

3. Up to 1.8 million gallons per day of secondary treated effluent from the Carmel Area Wastewater District's Treatment Plant is proposed to be treated by the reclamation facility. Treatment will consist of chemical coagulation, flocculation, filtration and disinfection. About 260,000 gallons of plantsite storage is available. The initial phase of the project will entail additional treatment of the existing secondary treated effluent. CAWD has begun improvements to the existing wastewater treatment facility which will provide high quality secondary effluent for reclamation treatment. Improvements to the existing treatment facility include: construction of two aeration basins, flow split control, and replacement of the existing mechanical aeration diffusers. The Water Reclamation Areas are listed in Finding No. 8 below, and are shown on Attachment "1" of this Order.

4. The Discharger is currently permitted to discharge up to 2.5 million gallons-per-day of secondary treated effluent to the Pacific Ocean through an outfall/diffuser system. This discharge is regulated by a separate NPDES permit (Order No. 90-40).

5. These waste discharge requirements are being issued to regulate reclaimed water production. This discharge has never been regulated by the Board.

6. The Water Quality Control Plan, Central Coastal Basin (Basin Plan), was adopted by the Board on November 17, 1989 and approved by the State Board on August 16, 1990. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.

7. Present and anticipated beneficial uses of the Pacific Ocean that could be affected by reuse include: water contact recreation, noncontact

Other requirements of this Order not referenced are based on professional judgement.

1. Discharge to areas other than water reclamation areas shown on Attachment "1", areas as listed in Finding No. 4 & 8 of this Order and to areas other than approved reclamation areas (see Standard Provision A.24.), is prohibited.[3]

2. Discharge of any wastes, including overflow, bypass, and overspray from treatment, storage, or transport to adjacent drainageways or adjacent properties is prohibited.[3]

3. Bypass of the treatment facility and discharge of untreated or partially treated wastes directly to water reclamation areas is prohibited.[2]

B. RECLAMATION SPECIFICATIONS

1. Daily flow averaged over each month shall not exceed 1.8 million gallons.

2. Reclaimed water shall not contain constituents in excess of the following:[2]

Constituent	Unit of Measurement	Mean	Maximum
Biochemical Oxygen Demand, 5-Day	mg/l	10**	25
Turbidity***	NTU	2	5
Total Non-Filtrable Residue (Suspended Solids)	mg/l	10**	25
Settleable Solids	ml/l	-	0.1
Total Dissolved Solids	mg/l	-	1200

**Compliance shall be determined from results of the five most recent samples.

***Limits to be met following filtration. Maximum limit shall not be exceeded more than 5 percent of the time during any 24-hour period.

3. The median number of coliform organisms in reclaimed water shall not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of coliform organisms shall not exceed 23 per 100 milliliters in any sample.[2]

4. Reclaimed water shall not have a pH less than 6.5 or greater than 8.4.[1]

5. Chlorine residual in reclaimed water shall equal or exceed 5 mg/l, as measured within the chlorine contact zone at the end of the chlorine contact chamber.

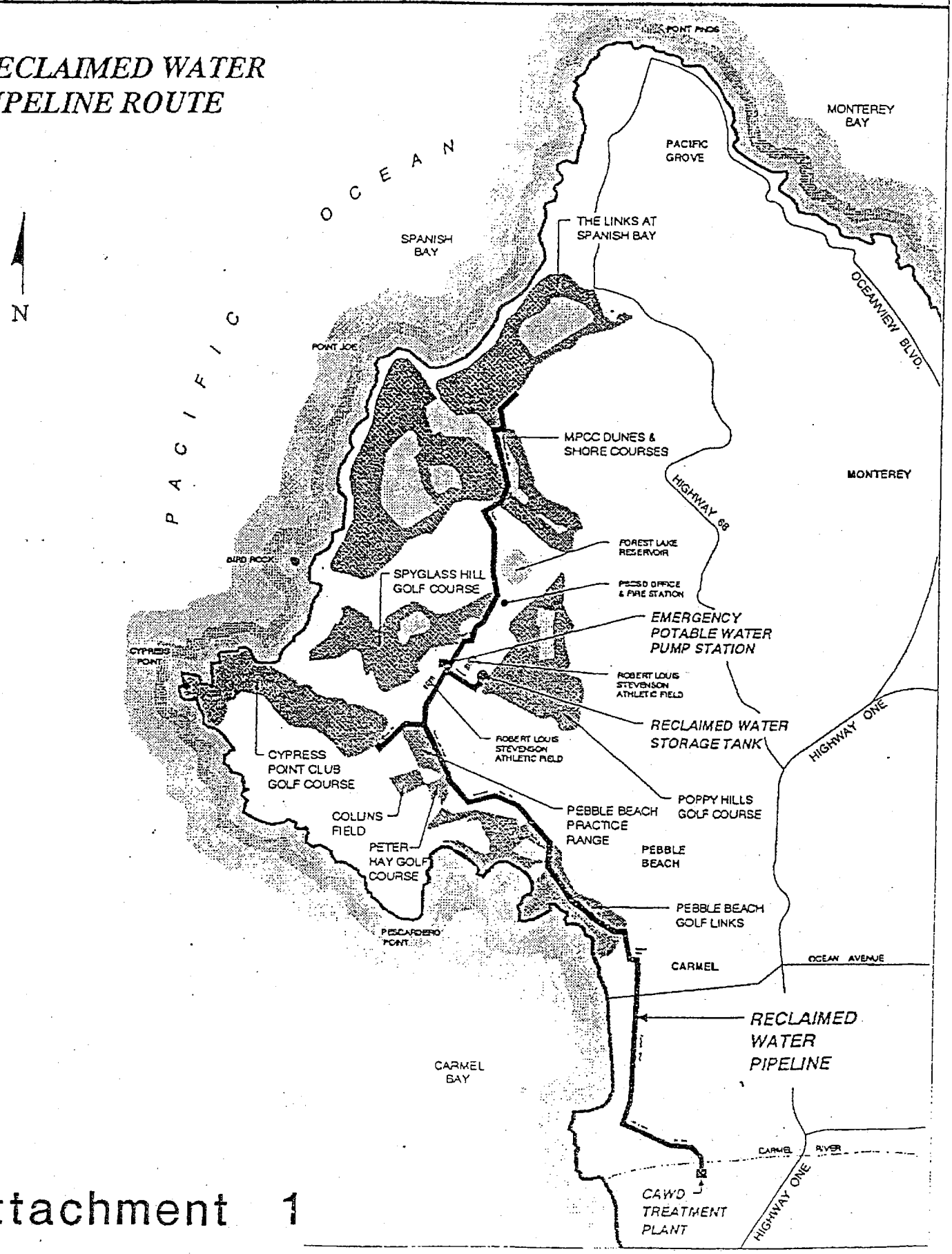
6. Use of reclaimed water shall cease and all wastewater shall be diverted immediately to CAWD ocean outfall if:

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

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

7. Reclaimed water used for dust mitigation and soil compaction shall comply with the California Department of Health Services' Guidelines for the Use of Reclaimed Water for Construction Purposes and Guidelines for Worker Protection.

WASTEWATER RECLAMATION PROJECT



Attachment 1

* Flow shall be metered at the distribution system pump station to provide a record of the quantity of reclaimed water used each day (per normal irrigation period).

** Report daily maximum and daily mean values. In reporting turbidity, the amount of time that 5 NTU was exceeded each day shall be reported. Turbidity samples may be obtained anywhere in the treatment process following filtration.

*** Report daily maximum and daily minimum values prior to discharge and at the end of the chlorine contact chamber. Compliance shall be determined by daily minimum values measured within the chlorine contact zone at the end of the chlorine contact chamber.

Reporting

Reports shall be submitted by the 20th day of the month and shall include (for previous month):

1. Results of reclaimed water monitoring;

2. A summary of operational problems, plant and equipment malfunctions, and any diversion of reclaimed water to the Carmel Area Wastewater Districts' Treatment Facility;

3. A record of equipment or process failures initiating an alarm, as well as, any corrective and preventative measures taken;

ORDERER BY William R. Leonard
Executive Officer

September 10, 1993
Date

AW/G/sm27:93-72.mrp

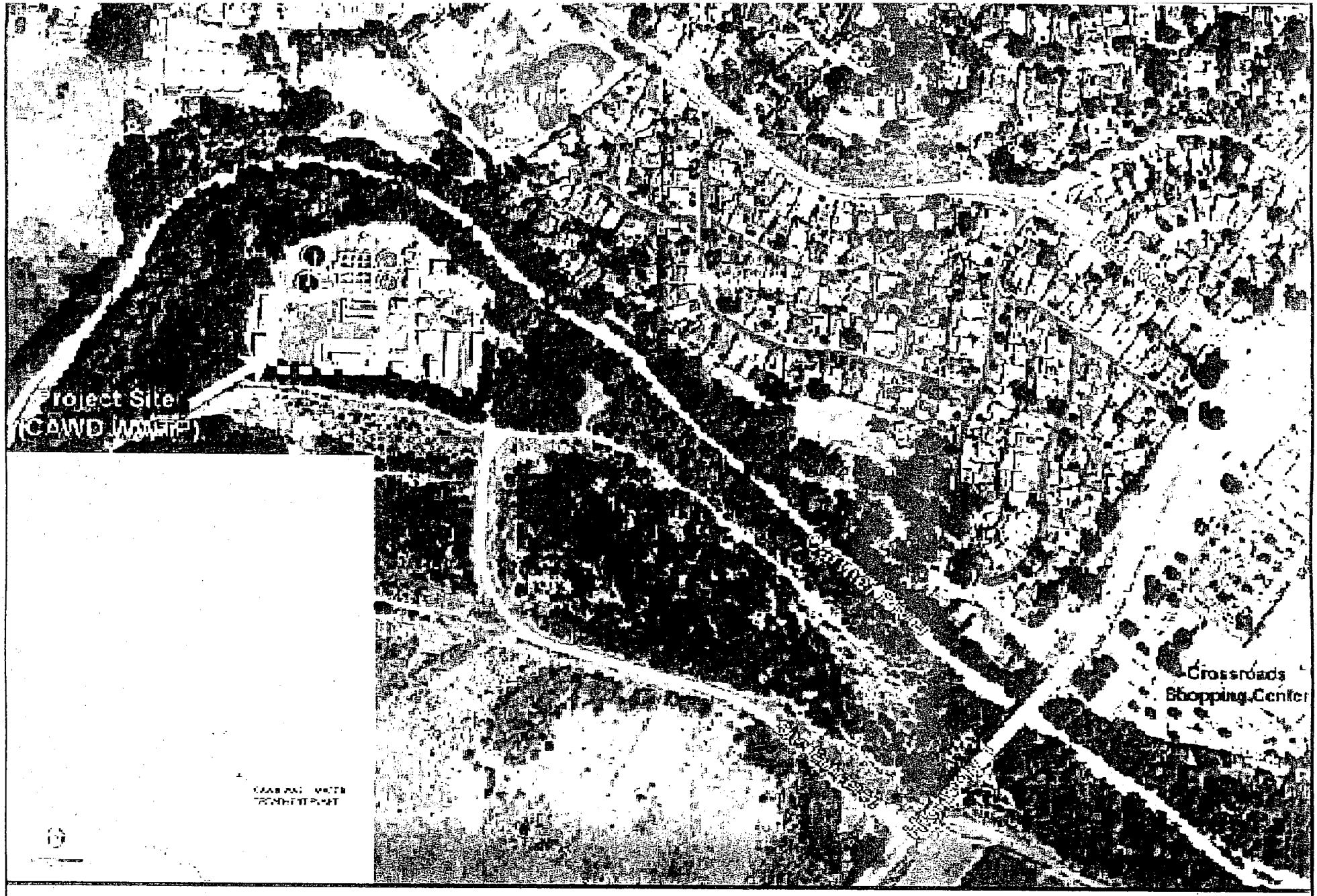
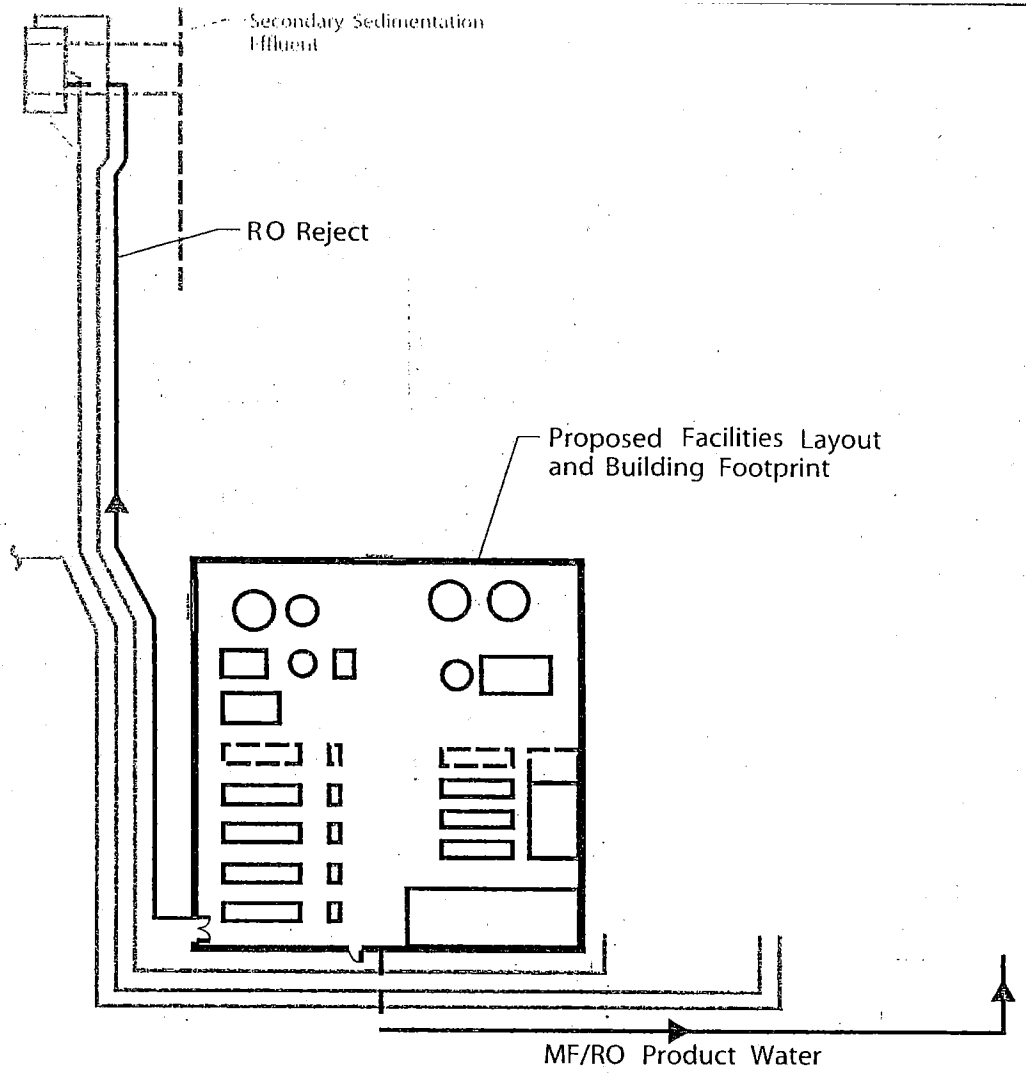


Figure 1
Site Location and Surrounding Land Uses



N

0 15' 30' 60'
Scale in Feet

Source: CAROLLO engineers

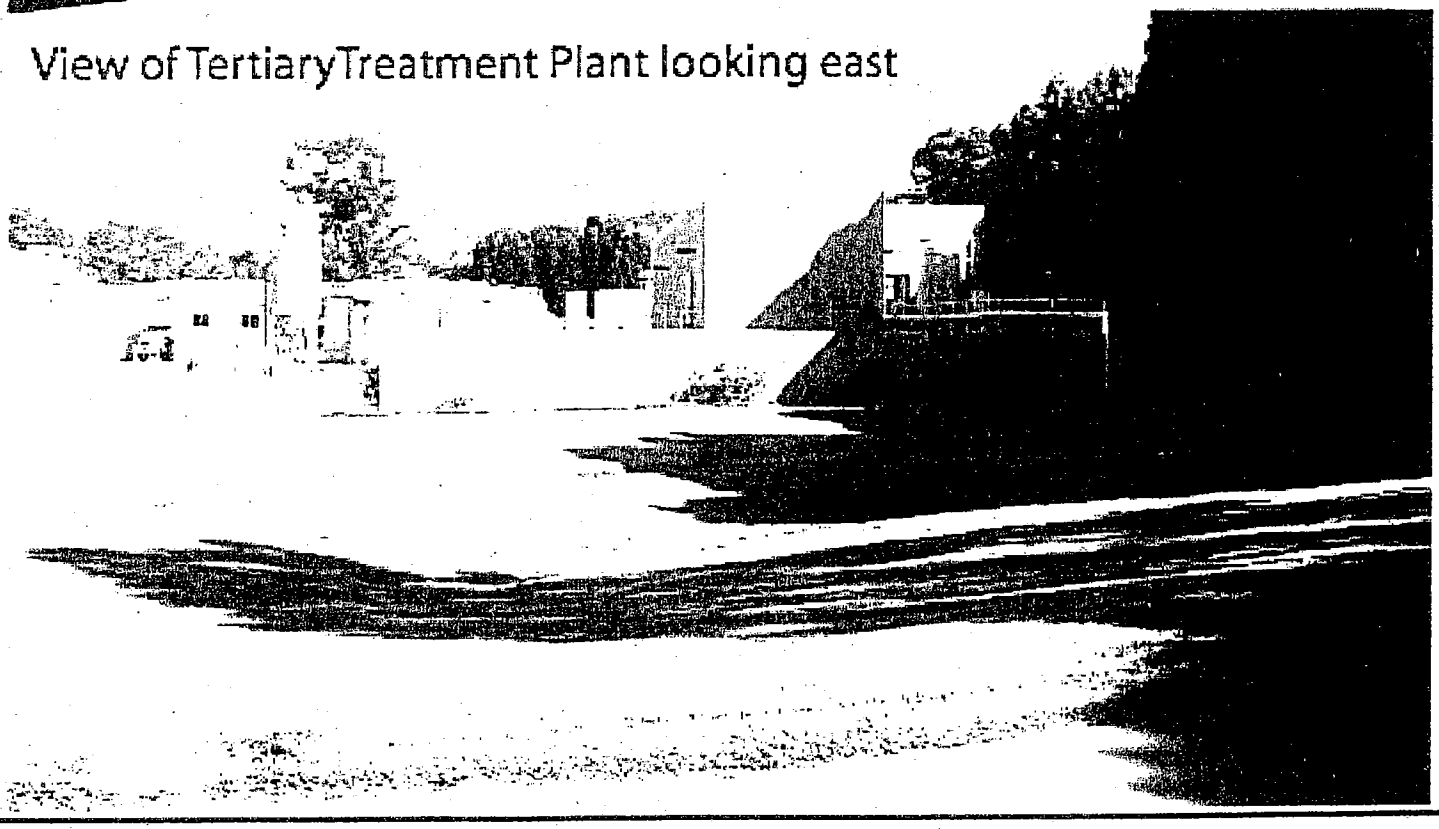
October 1, 2003

DD&A

Figure 2
Conceptual Site Plan of the Salinity Management Project

View of Tertiary Treatment Plant looking south

View of TertiaryTreatment Plant looking east



DDA

Figure 3
Site Photos