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Substantial Issue	07/9/97
Continued	01/16/98

STAFF REPORT: REGULAR CALENDAR
COASTAL DEVELOPMENT PERMIT

APPLICATION NUMBER: **A-3-SLO-97-40**

APPLICANT: **COUNTY OF SAN LUIS OBISPO, ENGINEERING DEPARTMENT**

PROJECT DESCRIPTION: Wastewater treatment system, including a treatment plant providing tertiary levels of treatment, gravity dry wells for treated effluent disposal, and a collection system consisting of pump/lift stations, force main and gravity main pipelines. The project also includes sensitive habitat acquisition, preservation, and restoration to mitigate for any biological impacts that are unavoidable.

PROJECT LOCATION: San Luis Obispo County Service Area 9, which includes the communities of Baywood, Los Osos, and Cuesta-by-the-Sea, within the Estero Planning Area of the South Bay Urban Area of San Luis Obispo County. The treatment plant will be located at the southeast corner of the South Bay Boulevard and Pismo Street intersection, and the gravity dry wells for the disposal of treated effluent will be located 200 to 500 feet south of Highland Drive, either between the extensions of Broderson Drive and Doris Drive (the Broderson site), or between the extension of Broderson Drive and Palisades Avenue (the lower Morro Palisades site); alternatively, the gravity dry wells may be located in nearby existing street rights of way.

LOCAL APPROVALS: San Luis Obispo County Development Plan/Coastal Development Permit D950245D

FILE DOCUMENTS: San Luis Obispo County certified Local Coastal Program; Comprehensive Comparative Analysis of Alternative Wastewater Treatment Plans for Los Osos, May 1998; Draft Evaluation of Effluent Disposal at the Proposed Broderson Recharge Site, November 21, 1997; Los Osos/Baywood Park Comprehensive Resource Management Plan, November 24, 1997; U.S. Fish and Wildlife Service Draft Recovery Plan for the Morro shoulderband snail and four plants from San Luis Obispo County (Morro manzanita, Chorro Creek bog thistle, Indian Knob mountainbalm,

and Pismo clarkia), September, 1997; San Luis Obispo County Development Plan/Coastal Development Permit D950245D; Final Supplemental Environmental Impact Report for the CSA 9 Wastewater Treatment Facilities, February 1997; Los Osos Wastewater Study Task G Report on Detailed Evaluation of Alternatives, July 1995; San Luis Obispo County Local Coastal Program Amendment File No. 1-90; Final Supplemental Environmental Impact Report - CSA 9 Wastewater Treatment Facilities, September 1989; Second Addendum Environmental Impact Report - CSA 9 Wastewater Treatment Facilities, October 1989; Addendum Environmental Impact Report - County Service Area No. 9 Wastewater Treatment Facilities, December 2, 1987; Final Environmental Impact Report - County Service Area No. 9 Wastewater Treatment Facilities, August 1987.

PROCEDURAL NOTE

On July 9, 1997, the Coastal Commission determined that an appeal of the Coastal Development Permit approved by the County of San Luis Obispo for the subject project raised a substantial issue with respect to project's conformance with the County's certified Local Coastal Program. As set forth by Section 13115(b) of the California Code of Regulations, the next step was for the Commission to consider the merits of the project in a De Novo hearing.

On January 16, 1998, the Coastal Commission continued the De Novo hearing on the project, until June, 1998, in order to obtain an independent comparative analysis of the project proposed by the County and an alternative developed by the locally based Solution Group. This analysis has been completed, and its findings have been incorporated into this staff recommendation. A summary of the report's findings is attached as Exhibit 9.

At this stage in the process, the procedures for the Commission action on this project are the same as if the coastal development permit application had been submitted directly to the Commission. Pursuant to Section 30604(b) of the Coastal Act, the standard of review is the San Luis Obispo County certified Local Coastal Program. Because components of the project are located between the nearest public road and the sea, the public access and public recreation policies contained in Chapter 3 of the Coastal Act also apply (Coastal Act Section 30604(c)).

SUMMARY OF STAFF RECOMMENDATION

The staff recommends that the Commission **approve, with conditions,** the coastal development permit requested by the County of San Luis Obispo for the Los Osos wastewater treatment project. As concluded by the independent comparative analysis of this project and the alternative proposed by the Solution Group, the County's project provides far more assurance of the ability to correct the existing groundwater nitrate problem, and will have less of an impact on environmentally sensitive habitats due to its smaller footprint. As a result, the wastewater treatment project proposed by the County is more consistent with directives of the San Luis Obispo County certified Local Coastal program (LCP) calling for the protection of groundwater resources and environmentally sensitive habitats.

The conditions of approval recommended by staff are designed to ensure project compliance with the applicable requirements of the LCP, particularly regarding the protection of environmentally sensitive habitat areas. Specifically, the recommended conditions limit the size of the treatment plant to the minimum area possible in order to minimize impacts on biological resources, and require the placement of gravity disposal wells in the least environmentally damaging location possible. The conditions also require the implementation of specific measures approved by the U.S. Fish and Wildlife Service and the Department of Fish and Game, that effectively mitigate the remaining unavoidable impacts to sensitive habitat areas. In addition, the recommended conditions limit the provision of wastewater treatment service within coastal zone areas to development that is consistent with the San Luis Obispo County certified LCP.

At the January, 1998 hearing, the Commission suggested that an additional condition, which delays the effective date of the coastal development permit, be considered. The purpose of this condition would be to allow for the proposed formation of a Community Services District (CSD) for the Los Osos area, which will be voted on in the November, 1998 election, in order to allow for further assessment and local evaluation of other feasible alternatives (i.e., the Solution Group alternative). If approved by the voters, the CSD would assume responsibility for providing wastewater treatment to the Los Osos area, and could determine which project would be the most environmentally preferable to pursue. This would facilitate full consideration of local issues and circumstances by the CSD in making such a determination. Commission staff **does not** recommend that such a condition be attached to this permit, because there does not appear to be a feasible and environmentally preferable alternative to the County's project available for a CSD to pursue. In addition, any further delay in the implementation of a solution to the region's water quality problems will exacerbate ongoing impacts to the biological health and productivity of wetland habitats, including those of the Morro Bay National Estuary.

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I. STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development, as conditioned, conforms with the San Luis Obispo County certified Local Coastal Program and the public access and recreation policies of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.

6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Limits of Approval.

a. Facilities: The approval of this permit is limited to the construction and operation of the wastewater treatment facilities approved by the County of San Luis Obispo County on May 6, 1997, described on pages 12 - 16 of this staff report, subject to the following special conditions. Other than normal repair and maintenance as defined in Section 30610 (d) of the Coastal Act, any modifications to any approved project components or any additional components within the coastal zone shall require a separate coastal development permit or an amendment to this permit.

PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit final plans for all elements of the project (collection system, treatment plant, disposal facilities, and On-Site Management Program), for Executive Director review and approval or determination that an amendment is required. The submittal of Final Plans shall be accompanied by written evidence that the Regional Water Quality Control Board has approved these plans, or that no such approval is required.

1) Final Plans for Stage I of the Treatment Plant:

Final plans for Phase I of the treatment plant shall include an increase in emergency storage capacity from 1.5 days to 3 days, or to the extent determined to be adequate by the Regional Water Quality Control Board. Any additional site coverage that results shall be accounted for in the final Biological Mitigation Plan required by Special Condition 4, below. Other than an increase in emergency storage capacity, final plans for the treatment plant shall reduce overall site coverage to the greatest degree feasible. This shall include eliminating those facilities at the southern portion of plant associated with the Stage II expansion (additional clarifier and equalization basin); relocating the chainlink fence along the southern boundary of the treatment plant as close as possible to the clarifiers; and, any other change that would allow for a more compact facility.

2) Final Plans for Stage II of the Treatment Plant:

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OR INSTALLATION OF ANY FACILITIES ASSOCIATED WITH STAGE II OF THE TREATMENT PLANT, the permittee shall submit for Coastal Commission review and approval, or determination that an amendment is required, final plans for Stage II of the treatment plant, which minimize site coverage to the greatest degree feasible and conform with the requirements of Special Condition 3, below.

3) Final Plans for Treated Wastewater Disposal Facilities:

Final plans for the treated wastewater disposal facilities shall locate the gravity wells outside of sensitive habitat areas to the greatest degree feasible, either within the most disturbed areas of the Broderson site, the adjacent Morro Palisades site, or within existing nearby roadway right of ways. Submission of these final plans shall be accompanied by written evidence that the use of gravity dry wells has been determined to be acceptable to the State Water Resources Control Board, the Regional Water Quality Control Board, and the State Department of Health.

b. Service Area: The service area for the approved facilities is limited to the service area illustrated by Exhibit 3 of this staff report, with the exception of the three areas located outside of the Urban Service Line designated by the San Luis Obispo certified Local Coastal Program (LCP) for the South Bay Urban Area. PRIOR TO THE ISSUANCE OF THE PERMIT, the permittee shall submit, for Executive Director review and approval, a revised service area map which eliminates all parcels beyond the designated Urban Service Line from the project service area.

Future additions to the service area within the coastal zone shall require a separate coastal development permit or an amendment to this permit, and must be proceeded or submitted concurrently with an LCP amendment that incorporates the proposed service area expansion within the Urban Service Line designated by the LCP. The permittee shall not cause any property outside of the authorized service area to be assessed for benefits received, nor enter into any agreement to serve any properties outside of the service area, until a coastal development permit or amendment to this permit for an expanded service area has been approved.

c. Allocation of Wastewater Treatment Capacities: Because the approved project has been sized to accommodate buildout within the South Bay Urban Area Urban Reserve Line allowed by the San Luis Obispo County certified Local Coastal Program, no allocation program has been proposed or established. However, should an allocation program that sets priorities for connections to wastewater treatment services be proposed in the future, such a program must be approved by the Commission either through an amendment to this permit or through incorporating such a program into the Local Coastal Program (LCP) through the LCP amendment process.

2. No Guarantees of Development Approvals. Approval of this permit, or any method of financing the project utilized by the County (e.g., the established assessment program), does not guarantee Coastal Commission or local government approval of any new or intensified uses within the service area. All new development proposals must be reviewed for consistency with the San Luis Obispo County certified Local Coastal Program (and/or the California Coastal Act, as applicable); such review shall consider, among other issues, the environmental impacts associated with the installation of lateral connections necessary to tie into the approved collection system. WASTEWATER TREATMENT SERVICE SHALL ONLY BE PROVIDED TO DEVELOPMENTS THAT HAVE OBTAINED THE REQUIRED COASTAL DEVELOPMENT APPROVALS, IN A MANNER CONSISTENT WITH SUCH APPROVALS.

PRIOR TO THE ISSUANCE OF THE PERMIT, the permittee shall submit, for Executive Director review and approval, a public notice to all property owners of record within the service area that includes a copy of this condition, and an explanation of its effect upon the ability to obtain wastewater treatment service for future development. Said notice shall be mailed to all property owners within the service area, or noticed in three local newspapers and included in public information handouts provided by the County, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

3. Project Phasing. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for Executive Director review and approval, the revised service area map required by Special Condition 1.b., which shall also illustrate the following revision to the proposed project phasing: the three large parcels at the southern end of the service area known as the Morro Palisades shall be served by Phase II of the project rather than Phase I (please see Exhibit 3).

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OR INSTALLATION OF ANY FACILITIES ASSOCIATED WITH STAGE II OF THE TREATMENT PLANT, the permittee shall submit, for Coastal Commission review and approval, a project status report which documents: the operational effectiveness of Phase I of the project; actual levels of wastewater treatment and disposal provided during Phase I; and, any changes in land use designations or expected development within the project service area (especially within the Morro Palisades properties) that would allow for a reduction in Stage II treatment plant capacities. Any opportunity to reduce the Stage II capacity of the treatment plant, based upon actual flows or changed land use circumstances documented by the approved project status report, shall be implemented by the permittee, and reflected in the submittal of final plans for Stage II of the treatment plant required by Special Condition 1.a.

4. Compliance with Local Conditions of Approval. All 74 conditions of San Luis Obispo County Coastal Development Permit/Development Plan D950245D (attached as Exhibit 1) become conditions of this permit; however, the terms of this permit shall supersede the conditions of local approval in any instance where the interpretation of a local condition of approval conflicts with the conditions of this permit. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall provide, for Executive Director review and approval, evidence that those conditions requiring action prior to the commencement of work have been signed-off by the appropriate County official, accompanied by the documentation or plans prepared pursuant to such conditions as applicable. Evidence of subsequent condition compliance must also be submitted to the Executive Director at the required stage.

5. Biological Mitigation. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for Executive Director review and approval, two copies of a final biological mitigation plan that incorporates the biological mitigation measures contained in the local conditions of approval and described in the mitigation proposal submitted by the County entitled "Draft Proposal for Mitigation of Impacts to Endangered Species Habitat from the Construction of the Los Osos Sewer and Resulting Future Residential and Commercial Development" dated 12/11/97. Any revisions to the biological mitigation measures contained in this proposal, based on a reduction in biological impacts that may be achieved through the use of gravity wells rather than rapid infiltration ponds for effluent disposal, must be, at a minimum, consistent with the mitigation criteria contained in the current proposal (i.e., 4:1 mitigation area to impacts area ratio; mitigation areas shall provide for the protection of the same type of habitat as that being impacted).

The final biological mitigation plan shall also contain monitoring and maintenance provisions to ensure the long term success of the mitigation measures, and to identify any impacts to wetland habitats that may result from changes in subsurface groundwater flows caused by the project. This shall include specific performance standards, developed in coordination with the Department of Fish and Game and U.S. Fish and Wildlife Service, that shall be conducted over a five year period commencing when treatment service begins, with a minimum monitoring frequency of one inspection every four months.

Submittal of the biological mitigation plan shall be accompanied by written evidence that the plan has been reviewed and approved by the California Department of Fish and Game and the U.S. Fish and Wildlife Service, or evidence that such approvals are not required. Submittal of the biological mitigation plan shall also be accompanied by either: evidence that the County has secured the mitigation sites that meets the established criteria for mitigation; or, a binding agreement with a qualified agency or organization, which establishes a procedure for the agency or organization to effectively implement the proposed mitigation with the necessary financing from the County. Such an agreement shall be subject to Executive Director review and approval PRIOR TO THE ISSUANCE OF THE PERMIT, and evidence of the acquisition of the proposed mitigation sites shall be provided for Executive Director review and approval PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

AT THE CONCLUSION OF THE FIVE YEAR MAINTENANCE AND MONITORING PERIOD, the permittee shall submit, for Executive Director review and approval, a report which identifies any impact to Baywood Marsh, Pecho Marsh, and/or Sweet Springs Marsh, in terms of habitat value and extent, attributable to the project. The report shall also document the successful implementation and performance of the approved mitigation meausres, and identify any failure to achieve the objectives and performance standards of the approved biological mitigation plan. In the instance that any significant disruptions to wetland habitat values are observed, or the requirements of the approved biological mitigation plan are not achieved, the report shall include an extended monitoring and maintenance program, including appropriate corrective actions, which shall be implemented until successful performance of the mitigation measures has been achieved and the biological continuance of wetland habitats has been assured.

6. Relocation of Sensitive Species. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, AND ON A DAILY BASIS DURING EARTH WORK, a qualified professional biologist shall survey the portions of the treatment plant and rapid infiltration pond sites subject to disturbance for Black legless lizards and Morro shoulderband snails, utilizing raking, coverboards, or other biologically acceptable method. Any Black legless lizards or Morro shoulderband snails discovered shall be relocated by the project biologist to a suitable habitat nearby that is not subject to construction disturbance.

7. Other Approvals. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for Executive Director review and approval, evidence of the following authorizations and project approvals, or evidence that no such approvals are required:

a. Regional Water Quality Control Board: NPDES Construction Activity Stormwater Permit; Stormwater Pollution Prevention Plan; and, Waste Discharge Requirements for any dewatering activities.

b. Department Of Fish and Game: Memorandum of Understanding and Management Agreement pursuant to Section 2050 et seq. of the California Fish and Game Code.

c. U.S. Fish and Wildlife Service: Completed Section 7 Consultation and associated mitigation program.

d. Any easement or encroachments permits required to undertake project construction.

If compliance with any of the other approvals required for the project involves revisions to the project description or plans submitted to the Commission, or requires additional plans, such changes shall be submitted PRIOR TO THE COMMENCEMENT OF CONSTRUCTION for Executive Director review and approval or a determination that an amendment is required.

8. Water Conservation Devices. All existing development within the coastal zone to be connected to the proposed project shall be provided with water conservation kits - at a minimum tank capacity reducers for all toilets and flow restrictors or aerators for all faucets and showerheads. This kit shall be provided by the County of San Luis Obispo, and verification that this has been accomplished shall be submitted to the Executive Director prior to connection to the project.

IV. FINDINGS AND DECLARATIONS

A. Project Information

1. Background

The town of Los Osos was platted in the late 19th Century, with hundreds of small lots intended for summer homes and retreats; many of these lots are only 25 feet in width and 125 feet in length. As the resident population increased from approximately 600 in 1950 to the current level of approximately 14,272, so did the number and intensity of septic systems.

In the late 1970's, the Central Coast Regional Water Quality Control Board (RWQCB) began to observe high levels of nitrate in the shallow groundwater underlying Los Osos. Ongoing studies confirmed that some nitrate levels exceeded the Maximum Concentration Limit for Nitrogen of 10 mg/L, and that bacteria levels were in excess of Basin Plan limits. The RWQCB correlated this problem with increases in population and the number of on-site wastewater systems in Los Osos, and determined that the groundwater in the Los Osos water basin was being degraded by the use of individual septic systems. As a result, the RWQCB adopted Order 83-13, which established a discharge moratorium in the area that became effective in 1988. Since that time, new construction or major expansion of existing buildings has been effectively prohibited, and is currently dependent upon the County providing a solution to the groundwater degradation problem.

The subject wastewater treatment project is intended to provide such a solution. Additionally, the proposed project seeks to utilize the treated wastewater to recharge the groundwater basin, which provides water to the South Bay communities of San Luis Obispo County. This is intended to protect the long-term integrity of groundwater basins within the coastal zone, as required by the LCP's Policies for Coastal Watersheds.

Since the County initiated plans to construct a wastewater treatment facility in 1987, the project has undergone various revisions and updates. There have been 5 environmental reviews conducted pursuant to the California Environmental Quality Act (CEQA) for this project, as well as numerous technical reports and investigations conducted by County Engineering staff and their consultants. Alternative project designs and locations have been considered throughout the project's history, as discussed in detail on pages 18 - 29 of this report.

An earlier version of the wastewater treatment project currently proposed by the San Luis Obispo County Engineering Department was approved by the County of San Luis Obispo Board of Supervisors on May 6, 1997, then appealed to the Coastal Commission. In July, 1997, the Commission determined that the appeal raised a substantial issue with respect to the project's conformance with the provisions of the San Luis Obispo County Local Coastal Program (LCP) protecting environmentally sensitive habitat areas.

As originally approved by the County, the project included the use of Rapid Infiltration Ponds for the disposal of treated wastewater. Since that time, the County has investigated the use of dry gravity wells rather than ponds for treated effluent disposal. The results of this investigation indicate that, when combined with tertiary levels of treatment, the use of wells is not only technically feasible, but provides opportunities to significantly reduce impacts to sensitive habitat areas by diminishing the footprint of the disposal facilities. As a result, the project has been modified to incorporate these changes.

Other changes to the project approved by the County in 1997 have occurred after further consultations between San Luis Obispo County, The U.S. Fish and Wildlife Service, and the Department of Fish and Game regarding the need to develop specific measures to ensure that unavoidable impacts to environmentally sensitive habitat areas will be effectively mitigated. These discussions have led to a commitment from the County to acquire, protect, and restore sensitive habitat areas containing specific characteristics (e.g., like for like habitat types, adjacent to other important habitat areas) at a 4:1 mitigation area to impact area ratio for all direct impacts to sensitive habitat areas attributable to the project. These measures are more fully described and analyzed on pages 29 - 33 of this report.

2. Events Since the January 1998 Commission Hearing

a. Independent Comparative Analysis

In November, 1997, a citizen's group referred to as the "Solution Group" proposed an alternative to the County's wastewater treatment project, described on pages 24 - 25 of this report. The Commission has received numerous letters in support of this alternative, not only because it is viewed by many people in the community as a more creative and comprehensive solution, but because it is claimed to be significantly less expensive than the project proposed by the County. It has also been represented as a more environmentally sensitive and sustainable system than the County's plan. In order to adequately consider the Solution Group alternative and its potential environmental benefits, the Commission continued the De Novo hearing on the County's project at its meeting of January, 16, 1998, and requested an independent comparative analysis of the two proposals.

Following the January, 1998 hearing, the Commission staff worked closely with the Solution Group, San Luis Obispo County, State Senator Jack O'Connell's office, and other interested parties (i.e., the "working group") in developing a Request for Proposals for such a study, and in selecting an appropriate consultant. As reported to the Commission at the March 1998 meeting, the proposal submitted by Questa Engineering Corporation was selected by a unanimous vote of the working group. The selected proposal included a "fatal flaw" process, under which an unresolvable deficiency with either project would eliminate the need to continue with further investigations. No fatal flaws were identified by the selected consultant during their review of the two projects.

As reported to the Commission at the March, 1998 meeting, a draft report was expected at the end of April, 1998. However, actual receipt of the draft Comprehensive Comparative Analysis of Alternative Treatment Plans for Los Osos was not received by Commission staff until May 19, 1998. Other working group participants received the draft report on May 21 or 22, 1998. Public comments on the draft are due May 29, 1998, and a final report, including a response to comments, will be released soon after. As the production deadline for this staff report arrives prior to the close of the public comment period on the draft, any change to the staff recommendation which may be warranted by these comments and the final report will need to be contained in an addendum to this report that will be distributed to the Commission prior to the hearing. However, based upon the strong conclusions contained in the draft report, summarized below, staff considers any significant change in the current recommendation to be unlikely.

In summary, the draft Comparative analysis has found the County project to be superior in terms of water quality protection (e.g., the ability to reduce nitrate levels in groundwater), the protection of environmentally sensitive habitat areas (the County project has a smaller footprint than the Solution Group project and will therefore disturb less habitat and potential habitat areas), and the ability to comply with applicable water quality regulations (i.e., RWQCB Order 83-13, Waste Discharge Requirements, Standards for Recharge and Recycling Projects). The draft analysis also identifies practical problems with the treatment method which limit its performance and call into question the technical feasibility of this alternative. With respect to economic impacts, the comparative analysis identifies potential costs that have not been accounted for in the Solution Group proposal, which increase the overall cost of this alternative beyond what was originally estimated. While the overall project cost of the Solution Group Alternative appear to remain below the cost of the County project, the Solution Group alternative poses greater economic risks. With respect to LCP requirements, the most important issues are the protection of environmentally sensitive habitat areas, and the protection of water resources. The findings of the comparative study regarding the differences in the two projects' impacts on sensitive habitat areas are discussed on pages 26 - 27 of this report, while the findings related to water quality are discussed on pages 39 - 41.

b. Proposal to Form a Community Services District

Another issue raised at the January 1998 hearing was the suggestion to conditionally approve the County's project in a manner that would delay the effective date of the permit until after the proposed formation of a Community Services District (CSD) is resolved. As previously noted, staff is not recommending such a condition, because, as evidenced by the comparative analysis and previous environmental reviews, there does not appear to be an environmentally preferable alternative for a CSD to pursue. In addition, there is significant concern that unless corrective action is taken immediately, water quality of the Los Osos groundwater basin will continue to degrade, and the biological productivity of the Morro Bay National Estuary will diminish.

Since the January hearing, the San Luis Obispo County Local Agency Formation Commission approved the formation of a Los Osos CSD subject to conditions, one of which is that the CSD must be approved by the voters in the November, 1998 election. Another relevant condition requires the CSD, if approved by the voters, to notify the County of San Luis Obispo on or before March 1, 1999, whether or not it desires to assume the responsibility and obligations for the County's sewer project and the associated special assessment district. If the CSD does not desire to assume this responsibility, then the CSD and the County must meet and confer to enter into a joint powers or other agreement regarding implementation of the sewer project.

c. Identification of Specific Biological Mitigation Measures

The third major issue raised at the January 1998 Commission meeting was the incomplete status, and questionable adequacy, of the biological mitigation measures proposed by the County. This was primarily due to the fact that consultations with the U.S. Fish and Wildlife Service and the California Department of Fish and Game required by federal and state endangered species laws, had not been completed. At the hearing, however, this issue was close to resolution based upon the County's newly stated intention to acquire the 100 acre lower Morro Palisades site, locate the treated wastewater disposal wells on the lower, disturbed portion of the site, and preserve the remaining important habitat areas on this site which would provide greater than a 4:1 mitigation to impact ratio of like for like habitats.

Following the January hearing, the County suspended endangered species consultation efforts until the question of the environmentally preferable project alternative (i.e., the independent comparative analysis) was resolved. Therefore, no additional progress in finalizing the specific details of the biological mitigation measures, or in completing the necessary consultations, has been made. The County still intends to acquire the lower Morro Palisades site for disposal facilities and habitat preservation (i.e., mitigation) purposes, but has retained the previously proposed Broderson site, as well as nearby roadway rights-of-ways, as potential disposal locations in case they are unable to acquire the Morro Palisades site. In such an instance, the County has committed to providing a minimum mitigation ration of 4:1 of like for like habitat, in areas that are contiguous with other open space areas and are contiguous with other open space areas and have been proposed for protection by the U.S. Fish and Wildlife Service. The final disposal location, and the specific details of the mitigation program, will be resolved after further consultation between the County, the U.S. Fish and Wildlife Service, the Department of Fish and Game, and the Morro Palisades property owner. This information is required to be submitted for Executive Director review and approval prior to the commencement of project construction by the special conditions of this permit.

3. Project Location and Description

The proposed project is located approximately 2 miles south of the City of Morro Bay, in the Los Osos Valley of western San Luis Obispo County. The Los Osos Valley is bounded by Morro Bay to the west and northwest, Park Ridge to the northeast, and the Irish Hills to the south. The project area includes the unincorporated communities of Los Osos, Baywood Park, and Cuesta-by-the-Sea, adjacent to Morro Bay State Park and Montana de Oro State Park. (See Exhibit 2 for a location map). Primary land uses in the area include residential, limited commercial, open space and agricultural uses.

The proposed project consists of a wastewater collection system, treatment plant, and treated effluent disposal facility to serve that portion of County Service Area No. 9 within the septic tank prohibition area defined by RWQCB Resolution 83-13. The proposed service area, and the location of the project components, are illustrated in Exhibits 3 and 7. Special Condition 1.b. requires slight modifications to the proposed service area in order to comply with LCP policies limiting the provision of wastewater treatment services to areas within the Urban Service Line for the South Bay planning area, as discussed on pages 34 - 38 of this report. The project also includes aforementioned mitigation measures to offset unavoidable impacts of the project on biological resources. These project components and their locations are more specifically described below.

a. Collection System

The proposed wastewater collection system consists of approximately 50 miles of gravity flow sewer pipe, 23,000 linear feet of low pressure sewer pipe, and 17,000 linear feet of sewer force main. Six below ground "lift stations" will distribute collected wastewater to collection basins, where it will flow by gravity either to another lift station, or to a pump station that will pump wastewater to the treatment plant. The two pump stations required for the project include on-site generators to provide emergency power.

The proposed collection system would be constructed at one time, but individual connections would occur in three phases. Phase 1 encompasses the majority of the prohibition area, generally defined as those areas with ground water levels of less than 30 feet below ground surface. Phase 2 hook ups to the collection system would take place two years after successful operation of the effluent disposal facilities; this area encompasses the remainder of the RWQCB prohibition area. Phase 3 includes areas of development with relatively large lots that currently comply with Regional Water Quality Control Board guidelines for on site septic systems. Sewering of these phase III properties is deferred until a later undefined date (1997 Supplemental EIR, pages 3-3 - 3-5). Special condition 3 of this permit requires revisions to the proposed phasing plan to ensure that existing development is effectively served by the wastewater treatment project, and new development which may be inconsistent with LCP policies protecting sensitive habitat areas is not encouraged by the project, as further discussed on pages 34 - 38 of this report.

b. wastewater treatment plant

The wastewater treatment plant is proposed to be constructed in two stages. The first stage will provide an average dry weather flow (ADWF) of 1.32 million gallons per day (mgd) and a peak wet weather flow (PWWF) of 4.18 mgd. Stage II, representing the currently planned facility buildout, would provide for an ADWF of 2.03 mgd and a PWWF of 5.23 mgd. This ultimate capacity of the treatment plant is based upon the expected buildout of the South Bay Urban Area allowed by the LCP. An analysis of the proposed capacities consistency with the quantity of development allowed under the certified LCP is provided on pages 35 - 36 of this report.

The proposed location of the treatment plant is on an undeveloped 10 acre site at the eastern terminus of Pismo Street, east of South Bay Boulevard, bordered by Los Osos Junior High School to the north, undeveloped land to the east, and residential neighborhoods west of South Bay Boulevard. This area is currently designated "Residential Suburban" by the Estero Plan portion of the San Luis Obispo certified LCP, intended to provide for suburban scale residential development on 1 to 5 acre parcels. Other non-residential uses, including wastewater treatment plants, are also allowed within this designation. Areas approximately one quarter of a mile northeast of the proposed treatment plant site are designated as Sensitive Resource areas as a result of the riparian habitat values associated with Los Osos Creek.

Construction of the treatment plant and associated facilities would cover approximately 7 acres of the 10 acre site (see Exhibit 7). The remaining 3 acres are proposed for sensitive habitat preservation and restoration. Special Condition 1.a. limits the site coverage of the treatment plant to the minimum amount necessary in order to minimize impacts on sensitive habitat areas.

As originally proposed, the treatment plant would provide secondary levels of treatment, and eventually be upgraded to tertiary treatment. However, the treatment plant has been upgraded to tertiary treatment in order to allow for the use of gravity wells rather than rapid infiltration ponds for treated wastewater disposal, as discussed below. 1 to 1.5 days of emergency storage would be provided by the treatment plant according to current plans. Special Condition 1 requires final

plans for the treatment plant to include at least 3 days of emergency storage, as recommended by Questa Engineering Corporation, or an amount determined to be adequate by the Regional Water Quality Control Board.

The proposed treatment process is the "Modified Ludzack-Ettinger biological process". This is a treatment process designed to remove nitrogen, biochemical oxygen demand (BOD), and suspended solids from incoming wastewaters. The treatment scheme includes aerated grit removal followed by suspended growth nitrification/denitrification to effect biological oxidation and nutrient removal from the waste stream. The carbon in the incoming wastewater will be used as a food source for microbial denitrification of the recycled flow.

Following the treatment process, secondary clarifiers will separate solids from the treated effluent, which will then undergo gravity filtration and U.V. disinfection. The resulting water is pumped to the effluent disposal facility, and the solids are hauled either to a Class 1 landfill or sold for agricultural purposes in accordance with standards established by the San Luis Obispo County Department of Environmental Health and the U.S. EPA. Approximately 60 cubic yards per week of sludge is anticipated to be generated. According to the project engineer, this equates to approximately one truck load per day. 1.3 million gallons per day of treated effluent is expected to be pumped to the effluent disposal facility.

Approximately 14% of dwelling units within the CSA 9 service area would continue to utilize septic tank treatment and on-site disposal. This would occur in limited circumstances where existing septic and on-site disposal systems have adequate capacity and replacement potential. The County would implement an On-Site Wastewater Management program for such areas, to ensure that these systems function effectively. The details of this program have yet to be developed, and are required to be submitted for Executive Director review and approval by Special Condition 1.

c. effluent disposal/groundwater recharge component

A primary component of the project is to dispose of treated wastewater in a manner which recharge's the groundwater basin upon which the affected communities are dependent for water supply. As originally approved by the County, disposal of secondary treated wastewater would take place in Rapid Infiltration Ponds located approximately 500 feet south of Highland Drive between the extensions of Broderson Drive and Doris Drive (referred to as the "Broderson Site"), south and uphill of a residential area. This disposal area is currently designated for residential single family use, although public facilities are allowed, and was selected because it is in a limited geographic region having adequate depth to groundwater and a location that facilitates groundwater recharge.

Although this method of effluent disposal was approved by the County in May, 1997, the Board of Supervisors also directed County staff to investigate the feasibility of utilizing wells, rather than percolation ponds, in order to address community concerns regarding the use of the ponds. This evaluation found that the use of wells, when combined with tertiary treatment, is not only technically feasible, but will significantly reduce project impacts on environmentally sensitive habitat areas by diminishing the permanent footprint of the disposal facilities. As a result, these changes have been incorporated into the County project.

In order to maintain groundwater recharge objectives, the disposal wells will be located in the general vicinity of the original pond site, either on the Broderson site, the adjacent Morro Palisades site, or in nearby existing roadway right-of-ways. The Morro Palisades site, which is just east of the Broderson site and also zoned for single family residential use, was identified at the January

1998 Commission hearing as a potential location for the wells because the purchase of this 100 acre site has been encouraged by the U.S. Fish and Wildlife Service and the Department of Fish and Game in order to mitigate for project impacts on sensitive biological resources. By locating the wells in a thin strip on the northern boundary of this property, as close as possible to the existing residents along Highland Avenue, the remainder of this environmentally sensitive site can be protected and preserved. Alternatively, by locating the wells in existing roadway right of ways, impacts to sensitive habitat areas may be avoided by the disposal component all together. This option, however, may preclude the purchase of either the Broderson or lower Morro Palisades site, and the associated preservation of the remaining sensitive habitat areas on these properties. Final selection of the exact disposal site from these three options will take place after further consultations between the County and the U.S. Fish and Wildlife Service and the Department of Fish and Game. Special Condition 1 of this permit requires that the wells be placed within the least environmentally sensitive portion of the selected disposal site.

d. biological mitigation

The project incorporates mitigation measures for impacts to biological resources that will result from the direct impacts associated with facility construction. In addition, the County proposes to include mitigation for secondary biological impacts attributable to development of sites containing sensitive habitat values facilitated by construction of the project.

As originally proposed, mitigation for the direct impacts of the project included: the preservation of the 66 acre remainder of the disposal ("Broderson") site, with approximately 2 acres of habitat restoration to occur in a currently disturbed area immediately south of the ponds; and, the preservation of the 3 acres of the treatment plant site (or "Pismo" site) that will not be disturbed by treatment plant construction. An additional area of native plant restoration totaling approximately 1 acre would occur in the areas immediately surrounding the treatment plant facilities.

However, in response to concerns expressed by resource agencies regarding the adequacy of the proposed mitigation, the County supplemented these measures in December 1997 by proposing to purchase 40 acres of coastal dune scrub habitat as additional mitigation for both the direct and indirect impacts of the project on biological resources. According to the draft mitigation proposal dated 12/11/97, between one and two acres of this acquisition area would be dominated by Dune Lupine, in order to mitigate for project impacts on habitat of the Morro blue butterfly. Although the specific site(s) for this mitigation were not identified, the proposal established criteria for the acquisitions site(s) to ensure that they would effectively mitigate the project's biological impacts; they must be large parcels, with dune scrub habitat of good condition, and contiguous with other open space areas.

After further discussion with the U.S. Fish and Wildlife Service regarding the December mitigation proposal, the County indicated, at the January, 1998 Commission hearing, that they would be willing to abandon the Broderson site for effluent disposal, and instead purchase the adjacent 100 acre Morro Palisades parcel, which has higher habitat values and protection needs, and includes a greater amount of habitat similar to the type of habitat that will be impacted by the project. Gravity dry wells would be installed in a thin strip behind the existing homes on Highland drive, and the remainder of the site would be preserved and protected as open space habitat. This option remains to be the preferred means of mitigating unavoidable project impacts on environmentally sensitive habitats, and is currently being pursued by the County. Under any circumstance, the County is required to provide at least a 4:1 impact to mitigation ratio of like for like habitats by Special Condition 3.

An analysis of the adequacy of the currently proposed mitigation measures, as compared to the requirements of the San Luis Obispo County certified LCP, is provided on pages 29 - 33 of this report.

B. LCP Consistency:

1. Environmentally Sensitive Habitat Areas

a. location:

LCP Requirement: Avoid Locating Public Facilities in Sensitive Area Where Feasible

Section 23.08.288 of the San Luis Obispo County Coastal Zone Land Use Ordinance (CZLUO) specifically regulates Public Utility Facilities. Part d. of this ordinance states:

> **Limitation on use, sensitive environmental areas.** Uses shall not be allowed in sensitive areas such as on prime agricultural soils, Sensitive Resource Areas, Environmentally Sensitive Habitats, or Hazard Areas unless a finding is made by the applicable approval body that there is no feasible location on or off site of the property. Applications for Public Utility Facilities in the above sensitive areas shall include a feasibility study, prepared by a qualified environmental professional approved by the Environmental Coordinator. The feasibility study shall include a constraints analysis, and analyze alternative locations.

In the case of the subject project, "feasibility" not only includes the ability to appropriately treat and dispose of wastewater, but to do so in a manner that will recharge the groundwater basin. Policy 1 for Coastal Watersheds of the Coastal Plan Policies component of the certified LCP requires that the long term integrity of groundwater basins be protected, and Policy 11 from the same LCP section mandates that new development maximize groundwater recharge.

Analysis

The first test of project compliance with LCP Section 23.08.288 is determining whether the project is located in a sensitive area. Because the treatment plant site and the effluent disposal both support special status plant and animal species, it needs to be determined if these sites should be considered as Sensitive Resource Areas and Environmentally Sensitive Habitats. The LCP defines such areas as follows:

> Sensitive Resource Area: Means those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, pursuant to Section 23.01.043c(3) of this title. [Section 23.01.043c(3) includes: special marine and land habitat areas, wetlands, lagoons, and estuaries mapped and designated as Environmentally Sensitive Habitats in the Local Coastal Plan; areas possessing significant recreational value, including any "V" (Visitor Serving designation as shown in the Land Use Element and areas in or within 100 feet of any park or recreation area; highly scenic areas which are identified as Sensitive Resource Areas by the Land Use Element; archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer; Special Communities or Small-Scale Neighborhoods which are significant visitor destination areas as defined by Chapter 23.11 of this title; areas that provide existing housing or recreational opportunities for low-and moderate income persons; and, areas where divisions of land could substantially impair or restrict coastal access.]

> Environmentally Sensitive Habitats: A type of Sensitive Resource Area where plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development. They include wetlands, coastal streams and riparian vegetation, terrestrial and marine habitats and are mapped as Land Use Element combining designations.

Numerous environmental documents prepared for the project have documented the presence of many sensitive species and habitats at both the proposed treatment plant location and the effluent disposal site, as described in detail below. Thus, the sites definitely contain Environmentally Sensitive Habitat as described by the LCP. Unfortunately, the ESH is not currently mapped in the Land Use Element, which is the anticipated mechanism for implementing resource protection policies by the County's map-based LCP. That is, in the context of the overall San Luis Obispo County LCP, which establishes a "Resource Management System" (RMS) to address changing resource circumstances, the above LCP definitions assume a robust mapping system that would be continually updated to reflect current, on-the-ground conditions. However, in this case, the County's existing SRA maps have not been updated since January, 1989, and do not reflect the actual ESH found at the sites at issue. ESH areas have been mapped on the project sites as part of the environmental reviews, but these habitat areas have not been incorporated into the LCP mapping system.

The LCP is silent on what to do in those instances where environmentally sensitive habitats are found at a particular site, as is the case here, but they have not yet been officially mapped. To interpret the LCP policies in way that such environmentally sensitive habitats are not treated as such would be at odds with both the intent of the LCP's ESH protection policies and the clear direction of Coastal Act objectives. It would also be poor public policy and resource planning to suggest that an accurate delineation of all sensitive habitats will be accomplished at only one specific point in time, due to the many dynamic variables that can affect the type and location of such resources over time. Public policy must be able to account for new information and scientific understanding in the implementation of resource protection policies, such as the information that has been developed by the County regarding the habitat values of the treatment plant and disposal sites. The only rational response in such situations, therefore is to treat existing environmentally sensitive habitats as such under the LCP, regardless of whether they are currently precisely mapped in the certified Land Use Element. As described below, such an approach is clearly warranted in this case.

1) habitat values of the treatment plant (Pismo) site:

The treatment plant site supports three primary ecological communities considered sensitive by the California Department of Fish and Game (DFG): Coastal Scrub, Chaparral, and Coast Live Oak Woodland. The coastal scrub community is the most dominant plant community on the site, with Dune Lupine Scrub occupying approximately the central one-third of the site, blending with Heather Goldenbush Coastal Scrub to the South. Live Oak woodland, along with Monterey Cypress and Monterey Pine trees, are located within the east and northeast portion of the site. Morro Manzanita, listed as federally threatened, occupies the eastern edge of the site; other chaparral communities represented by Chamise - Wedgeleaf Ceanothus are located within the southwestern portion of the site. Non-native Veldt Grass forms a grassland within a western portion of the site.

The native plant communities on the treatment plant site provide suitable habitat for numerous special status plant and animal species. Morro Manzanita and Monterey spineflower (federally

listed as threatened), as well as Sand Almond and rare non-vascular plants (lichens) have been found on the site, while other special status plant species are expected to occur. The Morro Shoulderband Dune Snail (federally endangered), Black legless lizard (proposed as federally endangered), Monarch Butterfly (habitat considered sensitive by DFG), and Morro Blue Butterfly are also expected to utilize the site.

2) habitat values of the disposal sites:

The 80 acre site originally proposed for effluent disposal (the Broderson site) supports various Chaparral, Coastal Scrub, and Live Oak Woodland habitats. Special status plant and animal species that are expected to occur on the site, include: Blochman Leafy Daisy, Indian Knob Mountainbalm, San Luis Obispo Wallflower, Morro Manzanita, and Sand Almond; and, Morro Bay Kangaroo Rat, Morro Shoulderband Dune Snail, Morro Blue Butterfly, Monarch Butterfly, Black Legless Lizard, and California Spotted Owl (which may use the area for foraging due to the presence of its primary prey, the Dusky-Footed Woodrat). This site is within the "Critical Habitat" for endangered Morro Bay Kangaroo Rat identified by the U.S. Fish and Wildlife Service, and is also within a "Conservation Planning Area" proposed by U.S. Fish and Wildlife Service in the draft Recovery Plan for the Morro Shoulderband Snail and Four Plants (Morro Manzanita, Chorro Creek Bog Thistle, Indian Knob Mountainbalm, and Pismo Clarkia) from San Luis Obispo County. The adjacent 100 acre Morro Palisades site, which has recently been proposed as an alternative disposal site, is expected to have similar sensitive habitat values. The only potential disposal site that does not contain sensitive habitat values is the existing roadway right-of-ways.

Based on the identified sensitivity, rarity, and value of habitat at both the treatment plant site and two of the three potential disposal sites, the project will be located within both Sensitive Resource Areas and Environmentally Sensitive Habitats, as defined by the San Luis Obispo County LCP. The next step in evaluating project conformance with LCP Section 23.08.288 is to determine whether alternative locations, on or off site, could feasibly accommodate the project.

3) alternative locations for the treatment plant:

A February, 1997 Supplemental Environmental Impact Report prepared for the project analyzed three alternative locations for the treatment plant, as well as an alternative to the effluent disposal sites proposed in 1987. The results of this analysis indicate that the original site for the treatment plant proposed in 1987, known as the Turri Road site, was environmentally superior by a very slight margin. This was specifically designated to accommodate the wastewater treatment plant in a 1990 amendment to the LCP approved by the Commission, but includes prime agricultural soils, as well as wetlands, and is the furthest distance from the service area. The other potential treatment plant location evaluated by the 1997 Supplemental EIR (referred to as the Cordoniz site) posed greater environmental impacts than either the Turri or Pismo sites.

Due to significant increases in project costs associated with increased pumping distances, environmental impacts associated with pipeline creek crossings, and the LCP's directive to protect prime agricultural lands, the County selected the currently proposed Pismo site for the treatment plant, rather than the Turri Road site. This selection was made in recognition that the overall environmental impacts of the two sites were generally equivalent; neither provided an opportunity to avoid impacts on sensitive environmental areas. The investigation of alternative sites, as required by Section 23.08.288 has been unable to identify feasible project locations that would avoid impacts to such areas.

Another potential site for wastewater treatment purposes, suggested by the Solution Group, is a 65 acre site in the middle of the developed portion of Los Osos, known as the Williams Brothers parcel. The comparative analysis of the County's project and the Solution Group proposal includes an evaluation of the biological resources on this site. Although the consultant was unable to obtain access to the site for field surveys, the site was deemed to contain suitable habitat for the same sensitive species as the Pismo site, based on the presence of the coastal scrub plant community. Both of the Williams Brothers and Pismo sites can be considered environmentally sensitive habitat areas because they provide potential habitat for special status plant and animal species. However, neither the Pismo site nor the Williams Brothers site has been identified by the U.S. Fish and Wildlife Service as high priorities for the long term conservation of sensitive species in the Los Osos area, as they are both surrounded by development which limits their long term value as habitat.

The comparative analysis notes that the Williams Brothers site is surrounded by urban uses, isolated from similar habitats, and has been degraded by surface use and invasion by exotics, while the County site is on the edge of urban development, closer to existing habitat areas, and less degraded. However, the analysis concludes that the Solution Group proposal would still have a greater impact on sensitive habitats due to the greater amount of acreage that would be impacted by this alternative. This discussion raises the question as to whether the Williams Brothers should be considered for the County's proposed treatment plant under Section 23.08.288 of the CZLUO.

The primary reason that pursuing the Williams Brothers site as an alternative location for the County's treatment plant is not warranted under Section 23.08.288 is that it too supports environmentally sensitive habitats, and therefore does not represent an alternative location that would avoid locating a public facility in a sensitive environmental area. In addition, the limited biological information provided by the comparative analysis does not ensure that after more detailed field surveys, the 65 acre Williams Brother site will not be found to contain more significant habitat values than the 10 acre Pismo site, which is also surrounded by development, but to a lesser degree.

4) alternative locations for the disposal of treated wastewater:

With respect to effluent disposal, the project evaluated in 1987 proposed to utilize both a discharge along Los Osos Creek during dry weather, as well as Rapid Infiltration Ponds during wet weather. Although the discharge of treated effluent to the creek was considered superior from a groundwater recharge standpoint, there were potentially significant environmental impacts associated with this element of the project (e.g., creek crossings, loss of riparian habitat), the resolution of which were deferred to a later date. The extent of Rapid Infiltration Pond development was not reduced by the inclusion of the creek disposal because during wet weather, it would be necessary to dispose all of the treated wastewater in the Rapid Infiltration Ponds.

In the 1987 EIR for the project, the Rapid Percolation Ponds were proposed in a generalized location just east of the currently proposed Broderson disposal site, in an area referred to as Site 6 (or "Morro Palisades"), which is designated as "essential habitat" for the endangered Morro Bay Kangaroo Rat by the U.S. Fish and Wildlife Recovery Plan for this species. This site was selected after four alternative percolation sites, referred to as the Los Osos Creek Valley sites and Cemetery Mesa sites (two potential disposal sites at each), were rejected due to inadequate percolation rates and inappropriate geologic conditions (!987 EIR, p. VII-25). Additional sites for wet weather disposal facilities considered and rejected by the 1987 EIR included areas along the eastern side of the Los Osos Community and west of Los Osos

creek, undeveloped areas in western Los Osos generally north of Los Osos Valley Road, and areas west of Pecho Road and east of the southern end of Morro Bay State Park. These sites were rejected due to high groundwater levels, inappropriate geologic conditions, proximity to Morro Bay, the presence of significant habitat values, and/or other reasons (1987 EIR, p. VII-30 - VII-31); these findings were also confirmed in a subsequent alternatives investigation performed in 1995, known as the Task G report (pages B1-11).

In subsequent efforts to determine the best specific location for the Rapid Infiltration ponds, the County found that impacts to sensitive habitat areas would be reduced by relocating the ponds west of Site 6 to the Broderson site, which is outside of the area identified as essential Kangaroo rat habitat by the U.S. Fish and Wildlife Service. In addition, the County found that the high permeability of the soils at this location, and sufficient depths to groundwater, would allow for the entirety of the effluent to be disposed of at the Broderson site, eliminating additional costs and environmental impacts associated with creek disposal. The County also determined that disposal of treated effluent using Rapid Infiltration Ponds at the Broderson site would effectively recharge the groundwater supply, as the water would percolate through the soil matrix to the underlying aquifer.

According to the County Engineer, locating the ponds to a more disturbed area used for equestrian purposes west of Broderson was also considered, but rejected on the basis that groundwater recharge potential would be significantly reduced; the further west the recharge site is located, the more likely it would be for the discharged effluent to flow towards the Bay, rather than towards the east where it would have a greater recharge affect upon the groundwater basin. The ponds were therefore proposed to be located on the lower portion of the Broderson site, with a 200 foot setback from the residences bordering the northern portion of the site as recommended by the 1997 Supplemental EIR. This is the most disturbed portion of the site, due to its proximity to developed areas and the presence of veldt grass, an exotic invasive species detrimental to native habitats. The 200 foot setback area was to be restored and preserved as native dune scrub habitat.

As previously noted, the project has been revised to use dry gravity wells rather than rapid infiltration ponds for the disposal of treated effluent. In addition the Broderson site, two additional locations for the gravity dry wells have been identified. Use of the 100 acre lower Morro Palisades site, just east of the Broderson site, would not only enhance groundwater recharge by being located further east than the Broderson site, but would also provide the opportunity to acquire and preserve the remainder of this 100 acre site, which, according to the U.S. Fish and Wildlife Service has greater biological value than the Broderson site. The other option, locating the wells within nearby existing roadway right-of-ways would avoid direct impacts of disposal on sensitive habitat areas, but would preclude the acquisition and protection of the habitat areas on either the Broderson or lower Morro Palisades sites, which may otherwise be impacted by the development of single family residences.

At this point in time, locating the wells in the lower portion of the Morro Palisades site, and preserving the remainder of the site as environmentally sensitive habitat, appears to be the preferable alternative from a biological resources standpoint, and is currently being pursued by the County. There may, however, be factors which limit the feasibility of this alternative, including the ability of the County to acquire the site. As a result, locating the wells on the lower portion of the Broderson site, or in nearby existing roadway right of ways, have been retained as potential locations for the disposal facilities. Final selection of the disposal site, out of these three choices, will occur after further consultation with the owner of the Morro Palisades site, the U.S. Fish and Wildlife Service, and the Department of Fish and Game.

Special Condition 1.a. requires that the wells be located in the least environmentally sensitive area of whichever site is selected.

With respect to other potential locations for effluent disposal, it has been suggested that ongoing groundwater modeling studies being conducted by Woodward Clyde consultants for the Southern California Water Company, may result in the identification of additional sites that would have the necessary characteristics to accommodate the treated effluent, in a manner that would effectively recharge the groundwater basin. The purpose of this groundwater modeling study is to evaluate, update, and enhance a model of the Los Osos Groundwater Basin developed by the U.S. Geological Service (USGS) in 1988. On September 5, 1997, the most recent product of this effort, a draft report entitled Los Osos Groundwater Model Update and Post Audit Analysis was released. According to this document, the primary objective is to update, and evaluate the groundwater model previously developed by the USGS, and convert data to enhance computer applications for groundwater management needs. While the report recognizes the use of treated effluent to recharge the groundwater basin is a management issue related to the long term yield of the groundwater basin, it did not address the issue as whether or not there may be an equally or better suited site for effluent disposal and groundwater recharge than the site proposed by the County. Given the numerous locations for effluent disposal previously considered by the County, and the unique characteristics required for an appropriate disposal site, as well as the primary scope of the study, it is unlikely that the groundwater modeling study will lead to the identification of a better site.

Other locations for treated wastewater disposal, include Los Osos Creek, or public spaces and farms, where the water could be used for irrigation. Both of these alternatives are included as part of the alternative project proposed by the Solution Group.

As previously discussed, discharging treated wastewater to the upper reaches of Los Osos creek poses environmental impacts which have not been fully identified or resolved, and would not reduce the biological impacts associated with other disposal techniques based upon its seasonal nature. Similarly, the use of treated wastewater for the irrigation of public spaces would not accommodate the year round generation of this water by the treatment plant.

The option of disposing treated wastewater on agricultural land was considered by the 1987 EIR for the County project. Other than the fact that tertiary levels was not included in the project at that time, this alternative was rejected on the basis that it would only be feasible during dry portions of the year, and because the long term commitment of an adequate number of agricultural operators could not be guaranteed. In other words, a disposal method other than irrigation remains necessary to accommodate the treated wastewater generated during wet weather, unless a wet weather storage facility is created. Rather than creating such a storage facility, which may raise additional environmental concerns, the method of disposal proposed by the County will store the treated water by recharging groundwater supplies, which is also expected to improve the currently degraded water quality of the upper aquifer.

Conclusion

As required by CZLUO Section 23.08.288, the applicant has appropriately analyzed the constraints and feasibility of alternative project locations that would avoid sensitive habitat areas. The results of these analyses support a finding that there is no feasible location on or off site of the properties designated for the wastewater treatment and treated wastewater disposal that would reduce impacts to sensitive habitats and still achieve the LCP directive to maximize groundwater recharge. The project is therefore consistent with CZLUO Section 23.08.288.

b. Siting and Design:

LCP Requirement: Design Projects to Minimize Impacts on Sensitive Resources

In addition to considering alternative locations that avoid sensitive habitat areas, other policies and ordinances contained in the LCP call for projects to be designed and sited in a manner which avoids or minimizes impacts to sensitive habitat areas. These include the following Coastal Plan Policies for Environmentally Sensitive Habitats:

> Policy 5: Protection of Environmentally Sensitive Habitats. Coastal wetlands are recognized as environmentally sensitive habitat areas. The natural ecological functioning and productivity of wetlands and estuaries shall be protected, preserved, and where feasible, restored.
>
> Policy 27: Protection of Terrestrial Habitats. Designated plant and wildlife habitats are environmentally sensitive habitat areas and emphasis for protection should be placed on the entire ecological community. Only uses dependent upon the resource shall be permitted within the identified sensitive habitat portion of the site.
>
> Development adjacent to environmentally sensitive habitat areas and holdings of the State Department of Parks and Recreation shall be sited and designed to prevent impacts that would significantly degrade such areas and shall be compatible with the continuance of such habitat areas.
>
> Policy 33: Protection of Vegetation. Vegetation which is rare or endangered or serves as cover for endangered wildlife shall be protected against any significant disruption of habitat value. All development shall be designed to disturb the minimum amount possible of wildlife or plant habitat.

Analysis

As previously established, the treatment plant site and two of the three potential effluent disposal sites are environmentally sensitive habitat areas, and are therefore subject to the above policies. The first requirement of Policy 27 is that the proposed use be dependent upon the identified sensitive habitat that will be impacted.

1) resource dependence:

Although the effluent disposal facilities are not dependent upon the specific habitat resources of either the Broderson or Morro Palisades disposal sites, they are dependent upon the unique geologic resources within this area. After extensive analysis, the limited geographic region in which the wells are proposed was the only area identified as having the geologic characteristics necessary to effectively accommodate the treated effluent and recharge the groundwater basin. The unique geologic characteristics, upon which the project is dependent, include high depth to groundwater, adequate percolation rates, and the absence of impermeable layers that would prevent the disposed effluent from traveling vertically. In addition, the acquisition of either the Broderson site or the Morro Palisades site, and the preservation of the portions of these sites that will not be impacted by the disposal facilities, will protect the sensitive biological resources dependent upon these habitat areas.

Similarly, the location of the treatment plant is not fully consistent with Policy 27 because this type of facility is not dependent upon the habitat resources found on the proposed site.

However, the habitat values at the treatment plant site are diminished by the fact that the site is surrounded by development on three sides, and is therefore a fragmented habitat that has limited value towards the long term survival of the species found on the site. Developing the treatment plant at this location will also avoid greater environmental impacts associated with alternative locations, including pipeline creek crossings, the loss of prime agricultural land, impacts to wetlands, and the disturbance of environmentally sensitive habitats with more significant habitat value.

Finally, in addition to these site-specific factors, it is important to recognize the fact that the wastewater treatment project is necessary to avoid significant adverse impacts to important groundwater resources and the extensive environmentally sensitive habitat areas within the Morro Bay National Estuary that would result from continued use of septic systems throughout Los Osos. In addition, Policy 27 must be read in conjunction with Section 23.08.288 of the CZLUO, which does not prohibit the siting of public facilities in Environmentally Sensitive Habitat areas if no other feasible alternatives available. As discussed above, such is the case here. Overall, then, the project is generally consistent with the resource dependent requirements of Policy 27.

2) alternatives that minimize impacts on sensitive habitats:

The second requirement of Policy 27, and the standard established by Policy 33, is that projects within and adjacent to environmentally sensitive habitat areas be designed to minimize the disruption of habitat values. In the case of the subject project, there may be alternative designs and technologies for wastewater treatment and disposal that could reduce project impacts on sensitive habitat areas, as discussed below.

a) use of wells for effluent disposal:

As previously discussed, the project has incorporated the use of gravity dry wells rather than Rapid Infiltration Ponds for effluent disposal. This will allow for a significant reduction in the 14 acres of environmentally sensitive habitat that would be permanently lost through the construction of the previously proposed Rapid Infiltration Ponds.

A November, 1997 report investigating the feasibility of wells estimates that 23 continuously utilized wells would be necessary to accommodate the 1.3 million gallons per day of treated wastewater generated by Phase I of the project, and recommends the installation of twice this number (46 wells) to address variables in predicted flow rates, maintenance requirements, and other performance contingencies. The report further recommends that the wells be separated by 150 feet based upon an observed 70-foot radii of wetted area surrounding the wells inferred from the recently conducted infiltration tests. The County engineer has estimated that a 30 foot wide strip would be required for each row of wells, including a maintenance corridor, and that up to 60 wells are required to adequately serve the project during wet weather flows.

The 1110 foot wide Broderson site could accommodate 7 wells per 30 foot wide row at the recommended separation of 150 feet; 8.6 rows of wells would be required for 60 wells. At a width of 30 feet and length of 1050 (7 wells x 150 foot separation) per row, each row would have a footprint of 31,500 square feet (or .72 acre); 8.6 rows would result in a total site disturbance of 270,900 square feet, or approximately 6.2 acres. This final calculation represents a reduction of 55%, (or 7.8 acres) of site disturbance when compared to the 14 acre footprint previously anticipated for the Rapid Infiltration Ponds. The Morro Palisades site, which is much wider than the Broderson site, could accommodate all of the wells in one row, further reducing impacts on sensitive habitat areas.

Impacts to sensitive habitat areas at either the Broderson site or the Morro Palisades site may be further diminished by reducing the 200 foot setback from the residences bordering the southern portion of the site, previously recommended by the 1997 Final Supplemental Environmental Impact Report. This setback area, intended to provide a buffer between the residences and the ponds, represents the most disturbed portion of the disposal site. Because impacts associated with the above ground storage of treated wastewater would be eliminated through the use of wells, a reduction in this setback seems appropriate. Special Condition 1.a. requires final plans for the disposal facilities to locate the wells in the least environmentally damaging location possible of either of these two sites.

The final option for the location of the disposal wells is in existing roadway rights-of-ways nearby the Broderson or Morro Palisades site. Although this option may avoid impacts on sensitive habitat areas, it could preclude the acquisition and protection of the sensitive habitats on the Morro Palisades and Broderson sites as part of this project. Locating the wells on either the Morro palisades or the Broderson sites would minimize the long term disruption of sensitive habitat areas that could otherwise occur under the Single Family Residential land use designation currently assigned by the LCP for these areas. Therefore, all three potential locations comply with the requirements of LCP Policy 33 for Environmentally Sensitive Habitats.

In addition to reducing impacts on environmentally sensitive habitat areas, the use of wells has other advantages when compared to ponds: by avoiding the need for surface impoundments, neighborhood concerns regarding the potential for an unplanned release of effluent to the downstream urban community is minimized; and, potential odors from the surface impoundment are avoided. Considering these benefits, the use of wells for the disposal of treated wastewater is the most protective of environmentally sensitive habitats, consistent with the previously identified LCP policies.

b) "Solution Group" Alternative:

A citizens group known as the "Solution Group", organized to address community concerns regarding the wastewater treatment project being pursued by the County, proposed an alternative project design in November, 1997 (see Exhibit 8), which has garnered a wide range of local support. In summary, this alternative proposes to:

- replace septic tanks in areas of the community with less than 30 feet to groundwater with Septic Tank Effluent Pump (STEP) systems. STEP systems pump liquids to a treatment facility, and act as a holding tank for solids that would be removed periodically and trucked to the treatment facility. Commercial areas and mobile home parks would also be served by STEP systems;

- utilize an Advanced Integrated Wastewater Ponding System (AIWPS) to treat wastewater generated from the STEP systems and independently transported septage (solids). Such systems are successfully being utilized in California communities such as St. Helena and Bolinas. The treatment scheme involves Facultative Ponds with fermentation pits for solids digestion, and the recycling of oxygen-rich water from subsequent treatment steps for odor control. After primary treatment, the effluent enters shallow, channelized High-Rate Ponds which are designed to promote rapid algae growth with concomitant generation of oxygen to aid in the further destruction of biodegradable organic matter. The separation of the algae from the treated wastewater, and the disposal of these coagulated biosolids, has not been addressed by the plan;

- retain septic tank treatment and on-site disposal for approximately 44% of the dwelling units in the service area. An On-Site Wastewater Management Zone and a Septic System Maintenance and Management Program would be established to oversee the upgrade and proper maintenance of existing septic tanks; and,

- dispose of treated wastewater by utilizing it for the irrigation of public spaces, discharging it to Los Osos Creek, and allowing it to percolate to the upper aquifer in the general area of the Broderson site through the use of gravity wells, percolation basins, leach field, infiltration chambers, and/or other methods revealed during on-going studies.

This alternative also proposes to harvest groundwater from low lying areas of the community that experience periodic flooding as a result of high groundwater levels, and utilize this water for both domestic supply and groundwater recharge purposes. The conceptual plans incorporate additional public improvements at the treatment site, including playing fields, a government center, housing, and medical offices.

In its attempt to address a wider range of community needs and concerns, the Solution Group alternative has been entitled "The Los Osos/Baywood Park Comprehensive Resource Management Plan - A Plan by and for the Community". The Commission has received numerous letters in support of this alternative, not only because it is viewed by many as a more creative and comprehensive solution, but because it is claimed to be significantly less expensive than the project proposed by the County. The alternative proposed by the Solution Group has also been represented as a more environmentally sensitive and sustainable system than the County's plan.

In order to adequately consider the Solution Group alternative and its potential environmental benefits, the Commission continued the De Novo hearing on the County's project at its meeting of January, 16, 1998, and requested an independent comparative analysis of the two proposals. A related issue discussed at the January hearing was the proposed formation of a Los Osos Community Services District, to be voted on by the Los Osos community in November, 1998. The Commission suggested that a condition delaying the effective date of a coastal development permit for the County's project may be appropriate in order to allow the CSD, if successfully formed, to determine which project would be the most environmentally preferable to pursue. This would facilitate full consideration of local issues and circumstances by the CSD in making such a determination.

The draft comparative analysis states that "neither the County Plan nor the Community Plan is clearly superior in terms of biological resource impacts. The County Plan is determined to be slightly preferable based on less overall acreage of biological resource impacts associated with suitable habitat for potentially occurring special status species which would be impacted".

More specifically, with respect to wastewater treatment sites, the report states that development of the Pismo site, at 8 acres, would result in approximately 1/3 of the impacts of developing the 25 acre Community treatment site. As a result, the biological resources analysis concludes that the smaller Pismo site remains the preferred site in terms of impacts on sensitive species.

With respect to the collection systems, the comparison of biological resource impacts concluded that although the Community Plan Collection System is smaller, impacts to biological resources of both projects can be considered similar and insignificant because they will primarily run through urban lots and along street right-of-ways.

Regarding the disposal of treated effluent, the study states that development of the County Plan's gravity wells, at an initial 6 acres with an estimated 0.12 acres of disturbance in each subsequent year, would result in lower impacts than developing 10 acres of percolation ponds under the Community Plan. (The comparative analysis identifies that wells would not be a feasible means of disposal for the Solution Group alternative due to the high potential of bio-fouling, or clogging, by the treated wastewater that would come from the treatment ponds).

In addition to having greater impacts upon terrestrial habitat areas than the County Plan (due to a larger footprint), the Solution Group alternative was determined by Questa to be inferior to the County Plan in terms of water quality protection. As a result, it would not address adverse impact to the wetland habitats of Morro Bay as effectively as the County Plan. It must also be noted that the draft comparative analysis identifies that the Solution Group's alternative may not be able to comply with regulatory requirements protecting water quality, raising serious questions regarding its feasibility, as discussed on pages 39 - 40 of this report.

Because the Solution Group alternative will increase impacts on environmentally sensitive habitat areas when compared to the County project, it is not consistent with LCP Policy 33 for Environmentally Sensitive Habitats, which requires that development be designed to disturb the minimum amount possible of wildlife or plant habitat.

In light of this fact, and in recognition of the questionable feasibility of this alternative in terms of complying with water quality regulations, Commission staff is not recommending a condition delaying the effective date of the Coastal Development permit for the County's project. If a feasible and environmentally preferable alternative to the County's project was available for a CSD to pursue, such a condition may have been appropriate. However, the numerous environmental reviews and alternative analyses that have been conducted throughout the history of the County project, including the recent comparative analysis, have failed to identify such an alternative, or provide reasonable expectation that such an alternative exists.

There is a possibility that a CSD, if successfully formed, could, after further investigations, identify a feasible alternative wastewater treatment project that, overall, has less of an environmental impact than the currently proposed County project. Given the information currently available, the identification of such an alternative in the near future appears to be unlikely. Furthermore, any delay in the implementation of a solution to the region's water quality problems would lead to ongoing impacts to the biological health and productivity of wetland habitats, particularly those of the Morro Bay National Estuary.

The relationship between the proposed formation of a CSD and the implementation of the County's wastewater treatment project has been addressed by the Local Agency Formation Commission (LAFCO). As conditioned by LAFCO, the CSD, if approved by the voters, must notify the County of San Luis Obispo on or before March 1, 1999, whether or not it desires to assume the responsibility and obligations for the County's sewer project and the associated special assessment district. If the CSD does not desire to assume this responsibility, then the CSD and the County must meet and confer to enter into a joint powers or other agreement regarding implementation of the sewer project.

c) other alternatives considered:

In addition to the location and design alternatives previously discussed, additional alternatives have been considered by the County throughout the history of this project, in an effort to both reduce project costs and minimize impacts on environmentally sensitive habitat areas. These additional alternatives are summarized below.

The no project alternative was not considered acceptable, as it would not resolve the septic system prohibition imposed by the Regional Water Quality Control Board or the water quality degradation attributable to continued use of septic systems in the area. The no project alternative would also forego the opportunity to utilize treated wastewater to recharge the local groundwater supply, and might increase pressure to develop outside of the prohibition zone, which could have an adverse impact on several sensitive plant and animal species (1987 EIR, p. VII-1).

The 1987 EIR also analyzed a reduced capacity alternative. The EIR concluded that such an alternative may reduce, but not avoid impacts to biological resources. This alternative was previously rejected because it would not provide an equivalent level of groundwater recharge, and the reduced number of residents that would share the cost did not make this an economically attractive alternative (1987 EIR, p. VII-3). However, current project plans include a revised service area that is limited to the RWQCB prohibition zone. Revisions to the assessment district formed to finance this project were required to accomplish this change, and although the total amount of treated wastewater that can be utilized for groundwater recharge purposes has been reduced, this reduction also minimizes the amount of sensitive habitat that will be impacted by the required effluent disposal facilities.

Other project alternatives rejected in 1987 include a modified water source, which would not address the degradation of groundwater or comply with the Regional Water Quality Control Board's order; and, use of contaminated groundwater for agricultural purposes, which was deemed infeasible based upon extraction and pumping costs, the potential for seawater intrusion, further groundwater degradation, and impacts to a freshwater marsh area along the southern fringe of Morro Bay (1987 EIR, p. VII-4 - VII-5).

The 1987 EIR also evaluated alternative project components. With respect to collection systems, conventional gravity systems, pressure sewer systems (including septic tank effluent pumping, or "step" and grinder pump systems), variable-grade gravity systems, and combination systems were considered. The combined use of conventional gravity and pressure collection systems were selected from an environmental, feasibility, and cost standpoint (1987 EIR, p. VII-5 - VII-10). Regarding treatment system alternatives, the 1987 EIR analyzed a regional treatment system at the Morro Bay-Cayucos treatment plant, a central community treatment system (proposed project), and neighborhood subsystems. Treatment at Morro Bay was rejected based on increased project costs and failure to recharge groundwater, while neighborhood subsystems was rejected because of increased project costs and community opposition (1987 EIR, p. VII-10 - VII-112).

Alternative disposal systems contemplated by the 1987 EIR included ocean disposal, rapid infiltration (percolation ponds), agricultural utilization, and a combination of disposal alternatives including aquaculture treatment and wetland disposal. The ocean outfall alternative was rejected due to higher costs, unknown environmental consequences, and the failure to recharge groundwater supplies. The alternative of utilizing treated wastewater for agricultural purposes was rejected because it would only be feasible during the dry portion of the year, the long term commitment of an adequate number of agricultural operators could not be guaranteed, and it would require more advanced levels of treatment. The use of aquaculture as an alternative treatment process, where water plants such as duckweed or water hyacinth are cultivated in ponds through which wastewater is passed, was rejected because of potential unreliability with regard to nitrate removal, the need for approximately 18.4 acres of additional land area, and the potential for exotic aquatic plants to invade native wetland systems (1987 EIR, p VII-14 - VII-21).

In a 1989 Supplement to the 1987 EIR (1989 SEIR), San Luis Obispo County reexamined the potential use of on-site wastewater management systems, and the establishment of a wastewater management district to oversee necessary septic system improvements and maintenance, similar to the alternative recently proposed by the Solutions Group. According to the 1989 SEIR, this alternative "had been rejected by the County and affected state and federal agencies as early as 1978. However, because of community concerns, it was reexamined by the Engineering Department and has been included in this Supplement." The County Engineering Department rejected this alternative because: it would require special legislation; continued effluent disposal from septic tanks within the Los Osos groundwater basin is specifically prohibited by the RWQCB; the financial burden of a maintenance district over the life of the project would be more expensive than a conventional sewer system; and, the County would become liable for all discharges in the district and for enforcing compliance by individual property owners. As previously noted in the discussion of the Solutions Group alternative, these issues, as well as others, remain unresolved.

In 1995, the County conducted a more detailed evaluation of alternatives for managing wastewater in Los Osos, in which more than 40 alternatives were considered. This County sponsored investigation, known as the "Task G Report", identified alternative wastewater management technologies, and evaluated them on a technical merit and cost basis. The objective of this effort was to develop alternative system plans that would reduce nitrate contamination of groundwater at a lower cost than the project proposed in 1987. This report concluded that the preferred plan was to adopt a conventional wastewater system for all areas of the community. However, the citizen-based Technical Advisory Committee participating in the review of alternatives objected to this conclusion. The report did not document any opportunities to minimize project impacts on environmentally sensitive habitat areas through the use of alternative technologies.

Conclusion

Throughout the history of the wastewater treatment project, numerous alternative technologies and designs have been considered. Most recently, the use of wells for effluent disposal rather than the proposed Rapid Infiltration Ponds has been incorporated into the project to reduce impacts on environmentally sensitive habitats. In addition, an analysis comparing the environmental impacts of the County project and the alternative proposed by the Solution Group has recently been completed. This analysis concludes that the County project will have less of an impact on environmentally sensitive habitats than the alternative proposed by the Solution Group. Therefore, the County project is consistent with LCP Policies for Environmentally Sensitive Habitat areas which require that new development minimize impacts to such areas.

c. biological mitigation:

LCP Requirement: No Significant Impact to Environmentally Sensitive Habitats; Ensure Biological Continuance of Sensitive Species

When new development is proposed within or adjacent to environmentally sensitive habitats, the LCP requires that the development must not have a significant adverse impact on such habitats, must allow for the biological continuance of the habitat, and must provide for the maximum feasible mitigation. As previously noted, LCP Policy 33 for Environmentally Sensitive Habitats requires that vegetation which is rare or endangered, or serves as cover for endangered wildlife, must be protected against any significant disruption of habitat value. Other such LCP provisions include:

- Policy 1 for Environmentally Sensitive Habitats, which requires that "New development within or adjacent to locations of environmentally sensitive habitats (within 100 feet unless sites further removed would significantly disrupt the habitat) shall not significantly disrupt the resource...".

- Policy 2 for Environmentally Sensitive Habitats, which requires "As a condition of permit approval, the applicant is required to demonstrate that there will be no significant impact on sensitive habitats and that proposed development or activities will be consistent with the biological continuance of the habitat. This shall include an evaluation of the site prepared by a qualified professional which provides a) the maximum feasible mitigation measures (where appropriate) , and b) a program for monitoring and evaluating the effectiveness of mitigation measures where appropriate."

- CZLUO Section 23.07.170a(1), which requires that permit applications for projects within or adjacent to Environmentally Sensitive Habitat "identify the maximum feasible mitigation measures to protect the resource and a program for monitoring and evaluating the effectiveness of the mitigation measures".

- CZLUO Section 23.07.170b., which requires that approvals of projects within or adjacent to environmentally sensitive habitats be accompanied by a findings that "there will be no significant negative impact on the identified sensitive habitat and the proposed use will be consistent with the biological continuance of the habitat", and "the proposed use will not significantly disrupt the habitat".

- Standards for environmentally sensitive habitat areas established by CZLUO Section 23.07.170d include "(1) New development within or adjacent to the habitat shall not significantly disrupt the resource" and "(4) Development shall be consistent with the biological continuance of the habitat".

Analysis

Under the LCP requirements identified above, the wastewater treatment project must mitigate for its unavoidable impacts to environmentally sensitive habitats to a degree that will ensure that the impacts of the project will not result in a significant adverse impact to the affected habitats, or jeopardize their biological continuance. The first step in confirming compliance with this requirement is to document the impacts to environmentally sensitive habitats that will result from project implementation.

1) biological impacts of the treatment plant:

The treatment plant and associated facilities will result in a total site disturbance of 6.9 acres on a 10 acre parcel. 6.7 acres of the disturbed area is considered to be environmentally sensitive habitat, as it provides suitable habitat for the federally endangered Morro Shoulderband Snail, Morro Bay Kangaroo Rat, and Indian Knob Mountainbalm, as well habitat for other special status species including the Morro Blue Butterfly, Black Legless Lizard, and Monarch Butterfly. This habitat is comprised of 1.4 acres of Chamise - Wedgeleaf Ceanothus chaparral, 0.7 acres of coastal scrub habitat dominated by Heather Goldenbush, 2.9 acres of coastal scrub habitat dominated by Dune Lupine, and 1.7 acres of Veldt Grass grassland which, although non-native, has been found to contain shells of the Morro Shoulderband Snail at this location.

2) biological impacts of treated wastewater disposal facilities:

Under the County's original proposal, a total of 14 acres of the Broderson site would be disturbed by the construction of the Rapid Infiltration Ponds and associated infrastructure. 11.3 acres of this area was considered environmentally sensitive habitat. This included suitable habitat for the Morro Bay Kangaroo Rat, Morro Shoulderband Snail, Morro Blue Butterfly, Monarch Butterfly, Black Legless Lizard, California Spotted Owl (which may use this area to forage for Dusky-Footed Woodrats), and numerous special-status vascular plant species.

The recent change to gravity dry wells, rather than Rapid Infiltration Ponds, has reduced habitat impacts of the disposal facilities to an initial disturbance of approximately 6 acres if constructed on the Broderson site, and under 6 acres if constructed on the adjacent Morro palisades property. The same specific types of habitat that would be impacted by the construction of the percolation ponds will be impacted by the wells, but to a lesser degree due to their smaller footprint, and the ability to consolidate the wells in the more disturbed portions of either of these sites. If constructed in existing roadway rights-of-way, impacts to sensitive habitats associated with disposal facilities could be avoided all together.

3) indirect biological impacts:

Some of the indirect impacts to environmentally sensitive habitats that will result from the project stem from the fact that by providing a solution to the septic tank moratorium established by the RWQCB, the wastewater treatment project will remove an impediment to growth and facilitate future development in the septic tank prohibition area that may contain sensitive habitat. While this may be the case, the San Luis Obispo County certified LCP anticipates development in the area that will be serviced by the project, and contains provisions to ensure that such development will take place consistent with the protection of environmentally sensitive habitats. The current effort to update the Estero Area Plan being undertaken by the County includes programs to improve the protection of sensitive habitats throughout the Los Osos area, such as a transfer of development program, clustered subdivisions and changes in zoning densities.

Given the fact that there is a certified LCP in place for the area that will be serviced by the project, the Commission must rely upon the LCP and the local coastal development permit processes to resolve the biological impacts of future development, rather than require the wastewater treatment project to mitigate these impacts. Impacts to sensitive habitats by future development will be subject to future coastal development review and approval, and must provide appropriate mitigation, consistent with LCP standards, independent of the mitigation provided through this permit.

4) proposed biological mitigation:

As proposed in a December, 1997 draft Biological Mitigation Plan submitted by the County, the direct biological impacts of the original project (i.e., using percolation ponds rather than wells for effluent disposal) were to be mitigated by preserving the remaining 2.9 acres of the treatment plant (Pismo) site, and the 66 acres of the effluent disposal (Broderson) site as open space habitat conservation areas. Portions of the Broderson site between the Rapid Infiltration Ponds and the homes along Highland Avenue would be restored as native dune scrub habitat (with the exception of an established stand of Eucalyptus tress which provide overwintering habitat for the Monarch butterfly and would therefore be preserved), as would the undeveloped portion of the treatment plant site. The December 1997 mitigation proposal also included the acquisition of 40 acres of good coastal scrub habitat in large parcels, contiguous with other open space areas, and proposed for protection by U.S. Fish and Wildlife Service in the Recovery Plans for the affected listed species.

Currently, the County intends to provide the same mitigation at the treatment plant site that was identified in the December, 1997 mitigation proposal. However, due to the fact that the exact location of the disposal wells have not been identified, the additional mitigation measures necessary to prevent the project as a whole from having a significant impact on sensitive habitats, have not been finalized. In order to resolve this issue, consistent with LCP requirements, the County has proposed to provide a biological mitigation package that will provide for a minimum mitigation area 4 times the impact area, for each particular type of sensitive habitat impacted by the project.

In analyzing the adequacy of this proposal with LCP standards, it is necessary to determine whether or not the mitigation will preserve the same type of habitat impacted, in adequate quantities, so that, overall, the project would not significantly disrupt such areas, or jeopardize their biological continuance. In determining the appropriate size of a mitigation area, resource and regulatory agencies typically require additional acreage, beyond what will be impacted by a project, to account for interim habitat losses and functional capacity, the uncertain habitat values that will result from the mitigation over the long term, and to minimize the overall loss of habitat acreage. The area of mitigation, as compared to the area of impact, is commonly referred to as the "mitigation ratio".

In cases similar to the subject project (i.e., projects which impact coastal scrub habitat), the Department of Fish and Game has recommended that unavoidable impacts to sensitive habitats of the Central Coast be mitigated by setting aside 3 acres or more of the same type of existing habitat, and restoring 1 acre of the impacted type of habitat for each acre lost, depending upon the habitat type (some projects may require greater amounts of acquisition and/or restoration depending upon the particular circumstances related to the feasibility of restoration). This is intended to ensure that if restoration is unsuccessful, the maximum amount of habitat lost over time does not exceed 25%; this habitat loss can be further reduced by increasing restoration requirements. These requirements translates to a 4:1 mitigation to impact ratio.

The County's current biological mitigation proposal (i.e., protect and preserve the same particular types of habitat directly impacted by the project at a 4:1 mitigation to impact ratio) is generally consistent with these requirement, but lacks the details necessary to ensure that these measures will effectively prevent the project from having a significant impact on environmentally sensitive habitat areas.

5) additional measures required

While the County's mitigation proposal is adequate in concept, the specific steps that will be followed in the implementation of the proposed mitigation measures, such as the location and qualities of the mitigation site(s), and the maintenance and monitoring provisions that will be undertaken to ensure the long term success of the proposed habitat preservation, have not been adequately addressed.

In addition, the comparative analysis recently completed identified that the County project may affect the wetland habitats by decreasing subsurface groundwater flows to Baywood Marsh and increasing these flows to Pecho Marsh, and Sweet Springs Marsh. No provisions to monitor or mitigate these impacts have been provided.

Special Condition 5 therefore requires that the County submit a final mitigation plan, for Executive Director review and approval, which contains specific monitoring and maintenance

provisions to ensure that the project will not result in a significant disruption to sensitive terrestrial or wetland habitats long term success of the mitigation measures. The details of these measures must be developed in coordination with the Department of Fish and Game and U.S. Fish and Wildlife Service, and approved by these agencies prior to the issuance of the Coastal Development Permit. They must be conducted over a five year period commencing when wastewater treatment service becomes available, with a minimum monitoring frequency of one inspection every four months.

To ensure the long-term success of the proposed mitigation, this condition also requires the submission of a report, at the conclusion of the five year maintenance and monitoring period, which identifies any impact to Baywood Marsh, Pecho Marsh, and/or Sweet Springs Marsh, in terms of habitat value and extent, attributable to the project. The report must also identify any failure to achieve the objectives and performance standards of the approved biological mitigation plan. In the instance that any significant disruptions to wetland habitat values are observed, or the requirements of the approved biological mitigation plan are not achieved, an extended monitoring and maintenance program, including appropriate corrective actions, must be implemented until successful implementation of the mitigation measures has been achieved and the biological continuance of wetland habitats has been assured.

With respect to the selection and acquisition of appropriate mitigation sites, Special Condition 5 requires that the biological mitigation plan be accompanied by evidence that the County has secured a mitigation site that meets the established criteria for mitigation; or, a binding agreement with an agency or organization qualified to effectively implement the required mitigation. The latter option is intended to allow for the County to pursue an agreement that would allow the U.S. Fish and Wildlife Service, or other qualified agency or organization, to implement the proposed mitigation, which would be financed by the County. Under this option, the Executive Director would have to review and approve such an agreement prior to the issuance of the permit, and evidence that the proposed mitigation sites have been acquired would have to be provided prior to the commencement of construction.

Additional measures to further minimize impacts to sensitive resource present at the treatment plant and effluent disposal construction sites are required by Special Condition 6. This condition requires a qualified biologist to relocate any Black legless lizards or Morro shoulderband snails that observed within the construction areas to a suitable habitat nearby that is not subject to construction disturbance. This condition is commonly utilized by the Commission to prevent adverse impacts to Black legless lizards, and is appropriate to utilize in this instance to minimize project impacts to sensitive resources, as directed by the LCP. Transplanting of sensitive plant species within the construction areas is already required by the local conditions of approval, which have been incorporated into this permit.

Finally, Special Condition 7 requires evidence of other agency approvals, including authorizations from the U.S. Fish and Wildlife Service, and the California Department of Fish and Game, to ensure that the project complies with state and federal endangered species acts.

Conclusion

Additional information is required to ensure that the biological mitigation proposed by the County will prevent the project from having a significant adverse impact on environmentally sensitive habitats, or jeopardize their biological continuance. This includes the exact location of the mitigation sites, specific measures for carrying out the proposed mitigation, and for ensuring the long term success of the mitigation, as well as evidence of compliance with state

and federal regulations protecting endangered species. In addition, the relocation of sensitive species that may be impacted by project construction, is also necessary to minimize project impacts on sensitive resources. As a result the Special Conditions described above have been attached to this permit, and will ensure project conformance with the LCP policies protecting environmentally sensitive habitat areas previously identified.

2. Project Capacities and Service Area

An important issue relevant to the Commission's review of "treatment work" projects in the coastal zone, pursuant to Coastal Act Section 30214 (c), is the geographic limits of service areas and the capacity of the treatment works to allow for phasing of development and use of facilities in a manner consistent with the Coastal Act; and, development projections utilized to determine the sizing of the treatment works.

In the case of the subject project, the San Luis Obispo County certified LCP regulates the intensity of new development, and specifies those areas that are eligible to receive wastewater treatment service. The proposed projects consistency with these standards is analyzed below.

LCP Requirements

Local Coastal Plan Policy 2 for Public Works states:

> New or expanded public works facilities shall be designed to accommodate but not exceed the needs generated by projected development within the designated urban reserve lines. Other special contractual agreements to serve public facilities and public recreation areas beyond the urban reserve line may be found appropriate.

The implementing ordinance for the above policy, Section 23.04.430 of the CZLUO, states:

> A land use permit for new development that requires water or disposal of sewage shall not be approved unless the applicable approval body determines that there is adequate water and sewage disposal capacity available to serve the proposed development, as provided by this section. Subsections a. and b. of this section give priority to infilling development within the urban service line [USL] over development proposed between the USL and URL [Urban Reserve Line]. In communities with limited water and sewage disposal service capacities as defined by Resource Management System alert Levels II or III:
>
> a. A land use permit for development to be located between an urban services line and urban reserve line shall not be approved unless the approval body first finds that the capacities of available water supply and sewage disposal services are sufficient to accommodate both existing development, and allowed development on presently-vacant parcels within the urban services line.
>
> b. Development outside the urban services line shall be approved only if it can be served by adequate on-site water and sewage disposal systems, except that development of a single-family dwelling on an existing parcel may connect to a community water system if such service exists adjacent to the subject parcel and lateral connection can be accomplished without trunk line extension.

Section 23.04.432 of the CZLUO states:

> To minimize conflicts between agricultural and urban land uses, development requiring new community water or sewage disposal service extensions beyond the urban services line shall not be approved.

The location of the urban service line and urban reserve line designated by the LCP for the South Bay Urban Area is illustrated by Exhibit 4, attached.

Other applicable LCP Polices for Public works include Policy 8, which states:

> Where existing or planned public works facilities can accommodate only a limited amount of new development, the following land uses shall have priority for services in accordance with the Coastal Act and be provided for in the allocation of services in proportion to their recommended land use within the service area.
>
> a. Uses which require location adjacent to the coast (coastal-dependent uses).
>
> b. Essential public services and basic industries vital to the economic health of the region, state, or nation including agriculture, visitor-serving facilities and recreation.;

and Policy 9, which states:

> For any development that constitutes a treatment works (PRC 30120), issuance of a permit shall be consistent with the certified LCP and PRC 30412 and shall address the following aspects of such development:
>
> a. The siting and visual appearance of treatment works within the coastal zone.
>
> b. The geographic limits of the service area within the coastal zone which is to be served by the treatment works and the timing of the extension of services to allow for phasing of development consistent with the certified LCP.
>
> c. Projected growth rates used to determine the sizing of treatment works.

Analysis

The LCP provisions cited above regulate both the capacity and service area of new wastewater treatment projects, and sets priorities regarding connections to wastewater treatment systems. Under these provisions, new wastewater treatment projects must be sized to serve the buildout within the Urban Reserve Line allowed under the LCP. However, wastewater treatment service can only be provided to development located within the Urban Service Line, and coastal dependent, visitor-serving, and recreation land uses have priority for connecting for such services . Projects located between the Urban Service Line and Urban Reserve Line are not eligible for wastewater treatment service until such a time that the LCP has been amended to include such properties within the Urban Service Line. In this way, treatment projects can be sized to accommodate full buildout within the Urban Reserve Lines, but the expansion of treatment services outside the Urban Service Line must take place only after such expansions have been determined to be consistent with the Coastal Act.

The vast majority of the proposed service area (Exhibit 3) is located with the Urban Service Line; however, a very small area at the southeast and southwest corners of the proposed service area, as well as a portion at the northern edge, is outside of the Urban Services Line,

but within the Urban Reserve Line. As regulated by the LCP, providing wastewater treatment service to these areas will be dependent upon an amendment to the LCP which incorporates these areas into the Urban Service Line. To maintain consistency with this LCP requirement, Special Condition 1.b. of this permit eliminates those areas located outside of the Urban Service Line from the approved project's service area. This condition also specifies that future additions to the service area within the coastal zone shall require a separate coastal development permit or an amendment to this permit, and must be proceeded or submitted concurrently with an LCP amendment that incorporates the proposed service area expansion within the Urban Service Line designated by the LCP.

With respect to the sizing of the project, the proposed wastewater treatment system is designed to accommodate the buildout allowed by the certified LCP within the South Bay Urban Area Urban Reserve Line, consistent with LCP Policy 2 for Public Works. To determine the capacity necessary to service the buildout of this area, a land use based methodology was used. This methodology derived Dwelling Unit Equivalent (DUE) projections according to the land use designations contained in the certified LCP, and applied a daily wastewater flow rate of 200 gallons per DUE. This flow rate is considered conservative by the project engineers, and was used to ensure that adequate treatment capacity was provided by the constructed facilities, consistent with the aforementioned policy.

The methodology used to determine the appropriate service capacity for the wastewater system assumes that the maximum intensity of development allowed under the LCP would be realized. Similarly, the assessment formed by the County to finance the project is based upon the assumption that the future development of currently vacant lots would occur at the maximum intensity allowed under current LCP land use designations. These assumptions do not account for the fact that maximum development intensities may not be realized due to constraints such as the presence of environmentally sensitive habitats that may be located upon a site proposed for development. As a result, a concern is raised that the assessments levied by the County creates expectations that maximum development intensities can be realized, regardless of other constraints that would need to be addressed through the coastal development process, and that may require a lower intensity of development.

To address this issue, Special Condition 2 clarifies that Commission approval of this permit, or any method of financing the project utilized by the County (e.g., the established assessment program), does not guarantee Coastal Commission or local government approval of any new or intensified uses within the service area, and that all new development proposals must be reviewed for consistency with the San Luis Obispo County certified Local Coastal Program and/or California Coastal Act, as applicable. This condition also requires that the permittee notify property owners within the service area of this condition, so that no false expectations regarding development potential result from this project.

The above condition will adequately address this issue throughout most of the proposed service area, which is primarily urbanized and composed of small lots that can not be further subdivided. There is one exception to this, however, in the southern portion of the service area. Three parcels totaling 112 acres, known as the Morro Palisades, is almost entirely composed of significant environmentally sensitive habitat. This habitat area has been identified by the U.S. Fish and Wildlife Service as essential habitat for the Morro Bay Kangaroo rat, and is listed as a conservation planning area in the Draft Recovery Plan for the Morro shoulderband snail and four plants from San Luis Obispo County (USFWS, Sept., 1997).

Based upon a current zoning designation for the site limiting residential development to an intensity of between 3 and 5 units per acre, the Morro Palisades was originally assessed for

446.8 benefit units (one benefit unit is equivalent to one residence), assuming a future development potential of 4 units per acre. According to the County Engineer, this assessment was recently reduced to 89 benefit units at the request of the property owner. However, the LCP has not been revised to reflect this reduction in future development. It is premature to conclude that either 89 or 446 residential units are allowable on this 3 parcel site, based upon LCP requirements to protect environmentally sensitive habitats.

As described earlier in this report, addressing the negative effects of existing septic systems on water quality is the primary purpose of this project. Therefore, the first phase of the collection system and the first stage of the treatment plant have been designed to provide wastewater treatment service to those areas of the community most in need; the areas with less than 30 feet to groundwater. The Morro Palisades properties, however, have a much higher depth to groundwater. Nevertheless, they have been included within Phase I of the service area. This is especially unusual due to the fact that the areas down slope of the Morro Palisades are within Phase II of the service area. In keeping with the primary objective of addressing existing sources of groundwater degradation, Special Condition 3 of this permit requires that the Morro Palisades be removed from the first phase of the project.

As proposed, Phase II of the collection system would be constructed concurrently with Phase I, but connections to the system within the Phase II service area would be installed only after the successful operation of the effluent disposal facilities has been documented over a two year period. Stage I of treatment plant construction would include the site preparation necessary to accommodate the additional facilities associated with Stage II, and construction of the effluent disposal facilities would be sized to accommodate the total quantity of effluent that will be generated by project buildout.

In order to minimize impacts to environmentally sensitive habitats associated with the Stage II expansion of the treatment plant, Special Condition 1.a. limits initial project construction to those facilities necessary to accommodate Stage I of the treatment plant. As required by Special Condition 3, the buildout of the second stage of the treatment plant, to the extent currently proposed, is contingent not only upon the operational effectiveness of the first phase, but the actual service levels provided during the first phase, and any changes in land use designations or expected development intensities, that would allow for a reduction in project buildout. This will enhance opportunities to reduce project impacts on environmentally sensitive habitats, as a reduction in the capacity of the second stage of the plant would allow for reductions in the amount of habitat disturbed at the treatment plant site. The Commission will have the opportunity to review this issue prior to the construction of the second phase of the project pursuant to Special Conditions 1 and 3.

With respect to those land uses that have priority to receive wastewater treatment services under the LCP, the wastewater treatment project has been sized to accommodate the buildout allowed under the current LCP. As a result, there will be adequate capacity to serve Coastal Act priority uses such as coastal dependent, visitor serving, and recreational facilities, as required by LCP Policy 8 for Public Works. However, to account for the potential that at some point in the future an allocation program for remaining treatment capacities may be proposed to address other land use constraints (e.g., a limit on the number of new homes that can be constructed in order to comply with air quality standards), Special Condition 1.c. requires that any such program be approved by the Commission either through an amendment to this permit or through amending such a program into the Local Coastal Program (LCP). This will ensure that any wastewater treatment capacity allocation program proposed in the future will be reviewed for conformance with the requirement to reserve capacities for priority uses.

Conclusion

The proposed wastewater treatment project has been appropriately sized to serve the maximum intensity of development allowed within the Urban Reserve Line by the San Luis Obispo County LCP, as required by LCP Policy 2 for Public Works. However, it is necessary to clarify that the approval of this permit, or the assessment utilized by the County to finance the project, does not guarantee any future development within the coastal zone, and that such development will be subject to coastal development permit review and approval.

With the exception of three small portions of the proposed service area indicated by Exhibit 3, the portion of the Community that will be served by the project is consistent with the Urban Service Line established by the LCP. The Special Conditions of this permit require the permittee to eliminate the areas outside of the Urban Service Line from the projects service area, in order to comply with CZLUO Section 23.04.432.

In addition, Special Condition 1.c. of the permit requires that any future wastewater treatment capacity allocation program be reviewed and approved by the Commission in order to ensure that such a program reserves an adequate amount of wastewater treatment capacity for Coastal Act priority uses, as required by LCP Policy 8 for Public Works.

Finally, Special Conditions 1 and 3 require that prior to constructing the second stage of the treatment plant, the Commission have the opportunity to review the status of the project, and, if appropriate, reduce the buildout of the project to meet actual land use needs. This will provide an opportunity to reduce project impacts on environmentally sensitive habitats, as required by the LCP policies previously identified in this report. Consistent with this objective, Special Condition 3 also requires that the most environmentally significant portion of the proposed service area, the Morro Palisades, be within Phase I of the project rather than Phase I. (This site also does not meet the criteria established for areas to be serviced by the first phase of the project). This required change will also achieve consistency with the stated intention that the first phase of the project will serve those areas with less than 30 feet to groundwater.

3. Water Resources

The proposed project has been initiated by the County, under the directives of the Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board, in order to protect the water quality of the Los Osos groundwater basin. It has been developed in close consultation with the RWQCB, who fully endorse the project, and have urged its timely approval and implementation based on the need to resolve this long standing water quality issue. Other organizations, such as the Morro Bay National Estuary Program, have identified problems of high nutrients and bacteria levels within Morro Bay that are of concern to the long-term health of the estuary, and have resulted in a downgrading of the local shellfish harvesting areas. Protecting the quality of Morro Bay's coastal waters, marine habitats, and the Los Osos groundwater basin is clearly dependent upon the timely implementation of a solution to the wastewater treatment and disposal needs of the Los Osos community.

LCP Requirements

LCP Policy 1 for Coastal Watersheds states:

> "The long-term integrity of groundwater basins within the coastal zone shall be protected. The safe yield of the groundwater basin, including return and retained water, shall not be

exceeded except as part of a conjunctive use or resource management program which assures that the biological productivity of aquatic habitats are not significantly adversely impacted."

Policy 2 for Coastal Watersheds states, in relevant part:

"Groundwater levels and surface flows shall be maintained to ensure that the quality of coastal waters, wetlands and streams is sufficient to provide for optimum populations of marine organisms, and for the protection of human health."

Analysis

In order to maintain the safe yield of this basin, the project proposes to dispose of treated wastewater in a manner which will recharge the groundwater basin. Hydrogeologic studies prepared for the County indicate that the disposed effluent will primarily go into the upper aquifer and produce a net basin balance. These reports further identify that some of this water will likely reach the lower aquifer, from which the community water supply is obtained. This will be achieved through the percolation of treated effluent through the permeable soils at the disposal site, and has been found to be an appropriate method of recharge by the Regional Water Quality Control Board (RWQCB). The RWQCB has established Waste Discharge Standards for the project to ensure that the disposal of treated wastewater will protect the quality of groundwater resources, and see this project as an opportunity to remediate the upper aquifer, which currently contains levels of nitrate and bacteria in excess of state drinking water quality and basin Plan standards.

In achieving the LCP's directive to protect groundwater resources, as required by the above LCP policies, water conservation, as well as proper wastewater handling, is an important issue. In recognition of this, Special Condition 9 requires the County to provide water conservation kits, containing capacity reducers for all toilets and flow restrictors or aerators for all faucets and showerheads, for all existing development to be served by the project. (New development is subject to more stringent statewide plumbing standards which require the use of water conserving fixtures, and therefore would not benefit from such water conservation kits). This requirement will not only assist in maintaining the safe yield of groundwater resources, but may also assist in reducing the actual flow of wastewater such that Stage II capacities of the treatment plant may be reduced. As previously discussed, a reduction in treatment plant buildout will minimize project impacts on environmentally sensitive habitats, as required by the LCP.

To further ensure that LCP policies calling for the protection of water resources are effectively achieved, the comparative analysis of the County project and the Solution Group alternative evaluated which of these proposals would best achieve water quality objectives. The analysis concludes that the County Plan provides far more assurance of the ability to correct the existing groundwater nitrate problem than is offered by the Community Plan (i.e., the Solution Group Alternative). The primary factor leading to this conclusion was that the level of wastewater treatment the Solution Group expected to be realized through the use of the Advanced Integrated Wastewater Ponding System (AIWPS) was found to be unrealistic. While the Solution Group had expected that treated effluent would have a concentration of 3 mg/L of nitrogen, the wastewater engineers comparing the two projects believe that a nitrogen concentration ranging between 8 and 12 mg/L would be more likely.

The analysis also identifies that even if a nitrogen concentration of 3 mg/L in the treated wastewater could be consistently realized under the Solution Group alternative, the RWQCB's

objective of reducing nitrate levels throughout the groundwater basin to 7 mg/L would not be realized. In comparison, the report states that the County project will be able to achieve this objective in 17 to 30 years.

Other aspects of the Solution Group alternative identified by the comparative analysis which make it inferior to the County project in terms of protecting water resources include:

- an AIWPS is susceptible to uncontrollable process imbalances (e.g. cloudy days which limit photosynthesis, windy conditions which turnover pond contents, and seasonal shifts in algal species) that can reduce the ability to remove nitrogen;
- areas where septic systems are retained would result in "plumes" of groundwater with nitrogen concentrations in excess of 10 mg/L, the drinking water limit, and poses greater risks of groundwater contamination from bacteria and other pathogens; and,
- the proposed recharge of the deep aquifer via Los Osos creek would have the undesirable affect of introducing relatively high loads of total dissolved solids (TDS) directly into the aquifer from which Los Osos obtains its drinking water.

In addition, the comparative analysis identifies elements of the Solution Group Plan which raise serious questions regarding its technical feasibility, and ability to comply with water quality regulations. These include:

- unresolved issues regarding the handling and disposition of coagulated biosolids that result from the proposed treatment process; and
- the unlikelihood of the treated wastewater to meet requirements that would allow for its use as irrigation water or for disposal to Los Osos Creek.

The comparative analysis notes that there are clear advantages to the use of the AIWPS in rural settings where land area is not a constraint and where the treated wastewater can be used for irrigation (e.g., St. Helena, Hollister, Bolinas). However, it concludes that the over-riding demand to comply with strict nitrogen removal requirements and to produce tertiary level effluent quality for groundwater recharge and/or reuse make the AIWPS an inappropriate choice for the Los Osos situation.

While the comparative analysis is clear in which alternative is superior from a water quality protection standpoint, it notes some deficiencies in the County plan. These include:

- a recommendation to increase emergency storage capacity at the treatment plant from 1.5 days to 3 days;
- the need to develop specific details regarding the organization and management of the proposed On-site Wastewater management Program for areas that will retain septic systems;
- a suggestion that further consideration be given to utilizing tertiary treated wastewater for irrigation;
- and, potential impacts to wetland resources caused by changes in subsurface flows.

In order to address these issues, Special Condition 1 requires final plans to include emergency storage for three days or more, or to the extent determined to be adequate by the Regional Water Quality Control Board, as called for by LCP Policy 1 for Public Works, which requires adequate service capacities. Special Condition 1 also requires that final plans include the details of the On-site Wastewater Management Program, as approved by the Regional Water Quality Control Board. With respect to the suggestion that further consideration be given to the use of treated wastewater for irrigation, the comparative analysis does not explain the benefits to water resources that would be realized through this disposal alternative. Commission staff is investigating this issue further, and if it can be determined that the use of treated wastewater for irrigation offers greater benefits to local water resources when compared to the currently proposed disposal method, this alternative can be required to be implemented to the greatest degree feasible. The staff will present its findings on the issue to the Commission at the June hearing. Finally, potential impacts to wetland resources have been addressed by Special Condition 5 and the findings of this report regarding Environmentally Sensitive Habitat Areas.

Conclusion

In comparison to the alternative proposed by the Solution Group, the wastewater treatment project proposed by San Luis Obispo County provides far more assurance of the ability to correct the existing groundwater nitrate problem of the Los Osos groundwater basin. The project, as conditioned, will protect and improve the water quality of the Los Osos groundwater basin and Morro Bay estuary, consistent with the objectives of LCP Policies for Coastal Watersheds. In addition, the indirect groundwater recharge that will result from the disposal of treated effluent will help maintain groundwater levels, and restore groundwater quality, consistent with LCP Policies protecting water resources.

4. Other LCP Issues:

Other LCP issues raised by this project, including the protection of archaeological resources, visual resources, and wetland habitats within 100 feet of the proposed collection system, have been appropriately addressed during local review of the project. The local conditions of approval , which effectively ensure protection of these resources consistent with LCP requirements, are incorporated into this permit by Special Condition 5 and attached as Exhibit 1.

C. Public Access and Recreation

Although the effluent disposal component of the project is approximately 1.5 miles inland of the ocean, it is located between the sea and the first through public road paralleling the sea, which in the southern portion of the Los Osos community is Los Osos Valley Road. As a result, the project must be analyzed for conformance with the public access and recreation policies of the Coastal Act pursuant to Public Resources Code Section 30604(c).

Due to its distance from the ocean, the project will not have any direct affect upon coastal access and recreation opportunities. However, by providing a solution to the water quality problems resulting from the use of septic systems, the project will enhance and preserve opportunities for water-oriented recreational activities, consistent with Coastal Act Section 30220.

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures which would substantially lessen any significant adverse effect which the project may have on the environment.

San Luis Obispo County has conducted 5 environmental reviews pursuant to CEQA since the original wastewater treatment project was proposed in 1987. Most recently, the County Board of Supervisors approved and certified the February 1997 Final Supplemental Environmental Impact Report, which includes extensive mitigation measures to address the environmental impacts of the current project. These mitigation measures are attached to this report with the local conditions of approval as Exhibit 1.

In addition to the project alternatives that have been considered pursuant to CEQA, a comparative analysis of the County project and the alternative proposed by the Solution Group was recently undertaken. The results of this analysis indicate that the County project is environmentally superior, form both a sensitive habitat and water resource perspective, and raises questions regarding the feasibility of the Solution Group proposal to effectively protect groundwater resources and comply with water quality regulations.

The Commission's review of this project has identified additional mitigation measures and project revisions that are necessary to achieve project consistency with the San Luis Obispo County certified LCP, described throughout this staff report and required by the Special Conditions of approval. These mitigation measures, in conjunction with the mitigation measures adopted by the County of San Luis Obispo, ensure that the project, as conditioned, will not have a significant impact on the environment within the meaning of CEQA.

EXHIBIT M

COUNTY SERVICE AREA NO. 9 WASTEWATER TREATMENT FACILITIES COASTAL DEVELOPMENT PERMIT/DEVELOPMENT PLAN; ED96-002 (D950245D) CONDITIONS OF APPROVAL & MITIGATION MEASURES

APPROVED DEVELOPMENT

1. This approval authorizes a community wastewater treatment plant located at the south east corner of South Bay Boulevard and Pismo Avenue, rapid infiltration ponds for treated effluent disposal located south of Highland Drive near Broderson Drive, and the collection system of pump/lift stations and force main and gravity main pipe.

2. All development shall be consistent with the approved site plans, landscape plans, floor plans, and architectural elevations.

PROJECT WIDE

3. Mitigation Monitoring and Reporting. Mitigation monitoring shall be accomplished using a coordinated team approach. The team shall consist of the Environmental Coordinator, the Planning Director, and the County Engineer. Mitigation monitoring shall be accomplished in a manner that ensures oversight of all phases of the project, in order to guarantee the implementation and success of all required project mitigation measures. As required by Article 9 of the County of San Luis Obispo Environmental Quality Act Guidelines, mitigation monitoring shall be at the direction of the Environmental Coordinator, who shall take the lead in coordinating the efforts of the County Engineer and the Planning Director.

   The County shall contract with an outside environmental monitoring consultant, whose functions will be to:

   1. Provide persons with expertise and experience in each of the following disciplines:

      a. Biological Resources
      b. Air Quality
      c. Drainage, Sedimentation and Erosion Control
      d. Cultural Resources
      e. Traffic

   2. Depending on the discipline,act as an independent and objective preparer, reviewer, and/or implementor of mitigation plans.

   3. Conduct in the field monitoring (including the preparation of required written reports) during and after the construction of the project.

At the discretion of the Environmental Coordinator, the County may contract with certain individuals (e.g. archaeologist, biologist, erosion control specialist) to act as environmental monitoring team members, in lieu of including those disciplines in the contract with the outside environmental monitoring consultant.

4. **At approximately twelve months prior to the availability of sewer hookups,** the project proponent shall apply for Community Development Block Grant (CDBG) funding to assist with the cost of the individual sewer hookup for eligible, low income families.

5. [PEIR V-6] **Prior to commencement of construction,** a qualified soils engineer shall prepare grading and drainage plans designed to minimize erosion, sedimentation, and flooding potential during and after construction, in a manner consistent with Sections 23.05.034 - 036 of the Coastal Zone Land Use Ordinance, for review and approval by the Planning Director.

6. [PEIR V-6] **Prior to commencement of construction,** the County Engineer shall develop a plan for disposal of any excess excavated soil from the project as a part of final project design. The plan shall include the identification of a site or sites for placement of excess soil if it is not possible to otherwise use the material for fill on the project. **Prior to placement of any excess soils,** the County Engineer shall obtain all necessary permits for placement of excess soil at selected sites and shall consult with the Planning Director, the County Environmental Coordinator, the U.S. Fish and Wildlife Service, and the State Department of Fish and Game prior to final disposal site(s) selection.

7. [PEIR V-6] **During project construction,** all grading activities shall be consistent with the approved grading and drainage plans, and consistent with the requirements of Sections 23.05.034 - 036 of the Coastal Zone Land Use Ordinance.

8. [GEO-1] NPDES Construction Activity Storm Water Permit **During project construction,** appropriate Best Management Practices, as established in the project's NPDES Construction Storm Water Permit, shall be employed. Such measures may include, but are not limited to, temporary sand bagging, construction of berms, installation of geofabric, and revegetation of areas by hydroseeding and mulching. The NPDES permit shall apply to all proposed facilities. The Pollution Prevention Plan portion of the NPDES permit shall be reviewed and approved by the County Engineer and the RWQCB.

9. [GEO-2] UBC Seismic Zone 4 Design Requirements **As a part of project final design,** proposed facilities shall comply with UBC Seismic Zone 4 regulations, which provide for design of structures to withstand the maximum credible earthquake (M 7.0) within the project area.

10. [GEO-4][PEIR V-5] Erosion and Sedimentation Control Plan **As a part of project final design,** the County Engineer shall develop a long-term Erosion Control Plan. The plan shall include the treatment plant site, the pump station and force main locations, and the location of the rapid infiltration ponds. Additionally, the *1987 Final Program EIR* identified the need for long-term erosion control measures to be implemented at sewer lines not installed within roadways. The Erosion Control Plan shall identify erosion

Ex. 1
P. 2

control practices to be utilized for typical facility design scenarios. These may include recompaction of soils, revegetation of disturbed areas, utilization of soil binding, or other methods for reducing long-term erosion. The Plan shall be reviewed and approved by the Planning Director in consultation with the Natural Resources Conservation Service, and shall be included in contractor bid and contract documents.

11. [WR-1] RWQCB Authorization **During project construction**, any discharges associated with dewatering activities shall be authorized by the Regional Water Quality Control Board through issuance of Waste Discharge requirements and individual permit, or under a general NPDES permit for construction activity.

12. [AQ-1(a)] Equipment Emission Control Measures. **During project construction**, the applicant shall fully implement California Best Available Construction Technology (CBACT) for the highest emitting piece of diesel-fired heavy equipment used to construct each major component of the proposed project. It is expected that tandem scrapers or tracked tractors would be the highest emitters. CBACT includes:

    a. Fuel injection timing shall be retarded two degrees from the manufacturer's recommendation.

    b. High pressure fuel injectors shall be installed in all engines.

    c. Reformulated diesel fuel shall be used on the project site.

    d. Ceramic coating of the combustion chamber

    e. Installation of catalytic converters

    In addition, Caterpillar pre-chamber, diesel-fired engines (or equivalent low NO_x engine design) shall be used in heavy equipment used to construct the project to further reduce NO_x emissions. These requirements shall be noted on the grading plan and listed in the contractor and subcontractor contracts. If implementation of such measures is not feasible within the time frame mandated for the proposed project, other vehicle fleets would be considered as alternatives, subject to APCD approval. At a minimum, if the above CBACT or an equivalent are not feasible for mitigation, all heavy equipment operation onsite should have the timing retarded 4 degrees.

13. [AQ-1(b)] Dust Control Measures. **During project construction**, dust generated by construction activities shall be kept to a minimum by full implementation of the following measures.

    a. During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems are to be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

    b. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas in the morning and after

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work is completed for the day and whenever wind speed exceeds 15 mph.

c. Stockpiled earth material shall be sprayed as needed to minimize dust generation.

d. During construction, the amount of disturbed area shall be minimized, and onsite vehicle speeds should be reduced to 15 mph or less.

e. Exposed ground areas that are planned to be reworked at dates more than one month after initial grading should be sown with fast germinating native grass seed and watered until vegetation is established.

f. After clearing, grading, earth moving, or excavation is completed, the entire area of disturbed soil shall be treated immediately by watering or revegetating or spreading soil binders to minimize dust generation until the area is paved or otherwise developed so that dust generation will not occur.

g. Grading and scraping operations shall be suspended when wind speeds exceed 20 mph (one hour average).

h. All new roadways, driveways, and sidewalks associated with construction activities should be paved as soon as possible. In addition, building and other pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

14. [N-1(a)] Construction Hours. **During project construction**, and in accordance with the recommendations of the County's Noise Ordinance, construction activities shall be limited to 7 a.m. to 9 p.m. on weekdays, and 8 a.m. to 5 p.m. on weekends.

15. [N-1(c)] Equipment Use Procedures. **During project construction**, the following procedures shall be adhered to by the construction contractor: 1) all equipment powered by internal combustion engines shall be properly maintained and fitted with appropriate mufflers; 2) the contractor should use electric-powered (as opposed to diesel-powered) construction equipment whenever feasible; and 3) portable noise barriers shall be used around equipment areas and stationary noise sources.

16. [T-2(a)] [PEIR V-72] Traffic Control Plan. **Prior to the commencement of construction**, the County Engineer shall develop a Traffic Control Plan to identify appropriate construction scheduling and detour plans, including provision for alternative access routes to critical land uses (schools, fire stations, etc.) where necessary. Development and implementation of the plan shall include community representatives (appointed by the District 2 Supervisor), emergency service representatives, County staff and contractor representatives. The draft plan shall be presented to the community for review and comment. As part of this plan, the construction manager shall name and be responsible for a traffic control coordinator, whose job it will be to notify transit operators, emergency service providers, schools, and other agencies of road closures and delays. The coordinator shall ensure that adequate transportation routes for such services would be maintained during construction periods. The final Traffic Control Plan shall be reviewed and approved by the County Engineer prior to project implementation.

Ex. 1, P. 4

17. [T-2(b)] Public Notice of Construction. **During project construction**, the County Engineer shall notify the public of potential obstructions and alternative access provisions. This notification may be accomplished by posting signs near the construction area at least one week in advance of the commencement of construction. In addition, information signs shall be posted on Los Osos Valley Road and South Bay Boulevard, with a phone numbers to call with questions. Phone numbers should include the construction manager's office, County Engineering, and an emergency number where inquiries can be answered 24 hours a day. Alternative access provisions and parking shall be provided where necessary, with guide signs to inform the public. The project shall also provide alternative pedestrian facilities to avoid obstruction to pedestrian circulation.

18. [VR-1] Good Housekeeping. **Prior to commencement of grading activities** the County Engineer shall prepare a "good-housekeeping plan" for the project, to be reviewed and approved by the Planning Director. The plan shall include such information as designation of onsite locations for materials and equipment storage, schedule for debris removal, and proposed screening mechanisms.

19. [VR-2(a)] Project Design. **As part of project final design**, the project shall include elements (architectural treatments, graded berms, exterior materials, exterior color selection) that help the facility blend into the existing environment and provide as much compatibility with surrounding structures as possible. **Prior to commencement of grading activities** the final project design shall be reviewed and approved by the Planning Director in consultation with the community advisory committee.

20. [VR-5] Revegetation Plan. **Prior to the commencement of any site disturbance**, the County Engineer shall submit a Revegetation Plan using native materials for the pump and lift station sites to be reviewed and approved by the Planning Director. The plan shall include specific revegetation details (e.g. plant palette, number and size of plants to be used, etc.) for each of the lift and pump station sites. For pump station number 2, the Revegetation Plan shall include vegetative measure to provide screening of the generator. The generators shall also be screened and protected through structural means.

21. [PEIR V-58] **During all phases of construction**, a Cultural Resources Mitigation Program shall be implemented for the project. The program shall be reviewed and approved by the Environmental Coordinator and managed by a qualified archaeologist approved by the Environmental Coordinator. The program shall consist of measures to coordinate the management of cultural resources mitigation measures and applicable statutes with the construction of the project. The program shall include the following elements:

    a. Education: Instruction and training of construction supervisors and other personnel in the recognition of cultural resources, including training of field supervisors and construction personnel. May also extend into realm of public education (see #4 below).

    b. Scientific Investigations: Includes both archaeological and paleoenvironmental studies of archaeological deposits impacted by the project. Also includes

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monitoring and mitigation/rescue work conducted during installation and construction of the system.

c. Documentation: Development of a more complete set of data for all impacted sites, including compilation of existing documents and coordination of scientific studies and educational projects.

d. Resource Protection and Public Enjoyment: Recognition and enhancement of the cultural resources through management policies and goals such as cultural and educational fairs, museums, tours, and popular publications.

e. [CR-1 (a)] Monitoring. Based upon the results of the Phase II Excavation and Data Recovery Program, all ground disturbance activities shall be monitored by a qualified archaeologist and Chumash Native American representative. All monitoring shall be detailed in monitoring reports filed with the Environmental Coordinator.

f. [CR-2(a)] Monitoring. In areas determined to be of high archaeological sensitivity, based on Phase I survey and/or Phase II findings and recommendations, implement CR-1(a) as necessary.

g. [CR-2(b)] Halt Work Order. Section 23.05.140 of the Coastal Zone Land Use Ordinance requires that: "In the event archaeological resources are unearthed or discovered during any construction activities, the following standards apply:

   i Construction activities shall cease, and the Environmental Coordinator and Planning Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.

   ii In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Planning Department and Environmental Coordinator so proper disposition may be accomplished."

h. [CR-3(a)] Phase I Archaeological Investigation. **Prior to any ground disturbing activities**, a Phase I investigation shall be conducted by an archaeologist approved by the Environmental Coordinator for any construction location not subject to previous reconnaissance. The Phase I investigation shall include an archival records search at UC Santa Barbara. If the records search determines that the project site has not been subject to previous field reconnaissance or that the previous field reconnaissance is unacceptable by current professional standards, then the project site shall be surveyed by a qualified archaeologist. Based upon results of the Phase I Archaeological Investigation, implement measures CR-2(a) and CR-2(b) as necessary.

Ex. 1, p. 6

If results of the Phase I Investigation indicate that proposed facilities would impact known archaeological sites, then the following mitigation measures shall also be implemented:

i. [CR-3(b)] Avoidance of Impact. Redesign the facilities to avoid identified archaeological sites within the proposed disturbance area. Subsurface testing to determine the boundaries of these sites may be necessary to ensure that the impacts are avoided.

j. [CR-3(c)] Phase II Investigation. If avoidance is not feasible, then a Phase II investigation will be necessary to determine if the archaeological sites are significant as defined by CEQA. If a site is determined significant, a data recovery program should be implemented to recover a sample large enough to adequately characterize that portion of the site that will be destroyed by project implementation. A local Native American representative should be involved in any data recovery program. Any additional mitigation measures, including monitoring, will be based on the Phase II findings and recommendations.

22. [P-LU-2] Proposed High School and Park Planning. Treatment plant development on the Pismo site would remove the location for a possible high school and park shown in the Estero Area Plan. The school district indicated that they would not be building a high school in Los Osos because it is impractical to duplicate the facility in Morro Bay. During the area plan update, alternative school and park sites should be identified that meet the community's needs and the location criteria specified in the LCP Framework for Planning.

TREATMENT PLANT SITE

23. **As a part of project final design**, the primary structural elements of the buildings shall be no higher than 35 feet above average natural grade.

24. [PEIR V-53] **As a part of project final design**, and in consultation with the Regional Water Quality Control Board, the treatment plant shall provide for emergency storage of treated effluent in order to respond to potential seismic or other failure of the effluent force mains.

25. [GEO-3] Geotechnical Investigation **As a part of project final design**, a geotechnical investigation shall be completed by a qualified engineer. This geotechnical investigation shall include analysis of proposed treatment plant, pump station, and force main facilities, as determined necessary by the design team. The geotechnical investigation shall address the following issues:

Ex 1, P. 7

a. Design of facility foundations such that potential impact associated with onsite fault rupture would be reduced to the extent feasible. Design measures for rapid repair of facilities shall be identified as necessary.

b. The potential for liquefaction impacts at the Pismo Street site. The investigation should determine onsite ground water levels, and identify soil layers that could be

subject to liquefaction during a seismic event. The report should take into account existing ground water conditions, as well as increased ground water levels associated with project implementation. Specific measures, such as excavation/recompaction of foundation areas, long-term dewatering, or utilization of foundation piles should be identified as necessary to reduce potential impacts to a less than significant level.

c. The potential for settlement or lurching associated with seismic events. Specific measures, such as excavation/recompaction, should be identified as necessary to reduce potential impacts to a less than significant level.

d. [SEIR89 IV-10] The potential for disruption of force mains associated with fault rupture. Design measures for rapid repair of facilities shall be identified, as necessary.

The County Engineer shall review and approve the scope and findings of the geotechnical investigation, and shall review final project design to ensure incorporation of recommended measures.

26. [WR-3] Drainage Control and Sedimentation Plan **As a part of project final design**, a Drainage Control and Sedimentation Plan shall be developed, and shall include infrastructure to adequately control and convey flows generated by impervious surface areas onsite. The Plan shall be subject to review and approval by the Planning Director and County Engineer prior to implementation.

27. [WR-4] Non-Point Source Pollution The Drainage Control and Sedimentation Plan shall take into account non-point source pollution associated with proposed facilities, and shall include, to the extent feasible, design measures to control the quality of storm runoff generated onsite. These measures may include, but are not limited to, oil and grease traps, sediment traps, and bar screens. Additionally, sludge storage and loading areas should be provided with containment such that stockpiled materials are not subject to entrainment and discharge offsite during rains.

28. [P-BIO-1(a)] Agency Consulting/Permitting. **Prior to project construction**, the County Engineer shall secure authorization for the disturbance or take of sensitive species from both the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), consistent with the following:

a. Authorization for take by USFWS will require either a formal consultation with USFWS pursuant to Section 7 of the Federal Endangered Species Act (16 USC 1531 et seq.), or issuance of a Section 10(a)(1)(B) permit. Such a permit requires the development and implementation of a Habitat Conservation Plan (HCP). A framework for development of either a Section 10 HCP or Section 7 consultation & mitigation program is outlined in Mitigation Measure BIO-2.

b. Authorization for take by CDFG would require a Memorandum of Understanding (MOU) and Management Authorization (MA) pursuant to Section 2050 et seq. of the California Fish and Game Code. Development of a MOU/MA would be

Ex. 2, p.8

C-2

based upon the Section 7 or Section 10 USFWS consultations discussed above.

29. [P-BIO-1(b)] Additional Habitat Restored Pursuant to the requirements of the USFWS and CDFG permits, the County Engineer shall undertake the restoration of additional land, beyond that disturbed by project construction, into suitable habitat for the local species of concern identified in the 1997 Final Supplemental EIR. This will require securing land that has been disturbed and/or where exotic species have invaded to the exclusion of native species.

Acquisition. The land acquired should have the following qualities:

a. The land should be a parcel or group of parcels containing approximately 10 to 20 acres.

b. The land should be disturbed, but not developed, or otherwise in a state that is *not* a pristine native habitat; alternatively, the land could be in good condition relative to native habitats, but otherwise destined for development that would destroy the existing habitat. This may include land that is already owned or controlled by a resource agency such as California Department of Parks and Recreation.

c. The land should be capable of restoration to a native habitat. This would mean that the soils have not been removed or fill placed on the site that is unsuitable for the native plantings (other than small amounts). The land should be free of structures or debris, or capable of being cleared of any structures.

d. The land should have primarily aeolian sand deposits; be in a stabilized condition (not mobile); have an open canopy; and be of the appropriate aspect and other meteorological conditions.

e. The land should be held by the County or appropriate conservation organization in perpetuity with deeded guarantees of non-development or transfer (unless to another like organization). The protection of the land may allow for some passive public activities, such as hiking, scientific investigation, and low-impact educational activities.

Restoration. After securing the land, the County should restore the land so that it functions as suitable habitat for many of the local species of plants and wildlife whose existence is endangered or of concern. One of the benefits of this mitigation approach is that a single program will mitigate the impacts to all or most of the species described in the environmental setting section of the 1997 Final Supplemental EIR. Restoration of the land should include the following:

Ex. 1, p.9

f. Removal of invasive exotic plant species. This may mean removal of all plants by grading, or a program of hand labor, depending upon the condition of the land. If the amount of invasives is relatively small, the work should be performed by hand so as to leave as much of the existing native vegetation intact as possible.

g. Removal of structures or debris.

h. Regrading of any unnatural mounds, holes or berms previously created on the site.

i. A planting program of a mixture of indigenous plant species that serve to restore the site and serve multiple species' needs, especially the Morro Blue Butterfly, Black Legless Lizard, and potential future re-introduction of the Morro Bay Kangaroo Rat. This will include Dune Lupin for the Morro Blue Butterfly. The final planting program should be developed in consultation with the CDFG and USFWS.

j. An ongoing maintenance and observation program. Ideally this would be established as part of the Morro Bay Estuary Program and/or in conjunction with Cal Poly (especially the Biology and Forestry and Natural Resources Departments).

30. [P-BIO-2(a)] Minimize Disturbance of Coastal Scrub, Chaparral, and Coast Live Oak Woodland Habitats Located Around the Perimeter of the Treatment Plant Site. **During project construction**, to the extent feasible, the amount of disturbance of land beyond the actual area of development shall be minimized. This can be accomplished by identifying minimum activity area required, and establishing a physical construction limit beyond which equipment and storage of material would not extend. **Prior to any site disturbance,** the County Engineer shall:

a. Clearly identify and mark the perimeter of the proposed treatment plant facility construction zone prior to and during construction onsite with highly visible temporary fencing.

b. Restrict the use of all heavy equipment, vehicles, and materials storage to areas located inside of the identified construction zone throughout the duration of construction.

c. Clearly identify and mark the proposed access route to the construction zone of the treatment plant facility, and limit all construction traffic to areas located within the identified access route.

31. [P-BIO-2(b)] Treatment Plant Buffer Area. **At the conclusion of construction of the proposed treatment plant,** the County Engineer shall direct the immediate revegetation of all areas located within or around the perimeter of the treatment plant facility that previously contained native vegetation and that were disturbed during construction. Revegetate only with appropriate indigenous native vegetation approved by the Environmental Coordinator. At a minimum, the structure and composition of habitats restored should reflect pre-project site conditions or better. Use only native vegetation for landscaping in areas located inside of the treatment plant facility. All exotics that escape cultivation should be removed on a regular basis. All plantings shall be grown from native parent stock collected onsite, and will be propagated by a native plant nursery specialist. In addition, the health and maintenance of all replacement vegetation shall be monitored by a qualified botanist for a period of not less than five years or until the new vegetation has been successfully establishment, whichever is greater.

Ex. 1, p. 10

32. [P-BIO-2(c)] Treatment Plant Site Additional Land. **At the conclusion of project construction,** the additional land around the treatment plant site (that beyond the area disturbed) shall be enhanced in its ability to provide habitat for the native species of plants and wildlife that occur or may occur in the area, in a manner consistent with USFWS and CDFG permits..

33. [P-BIO-2(d)] Control Introduction of Invasive Exotic Plants. **As a part of final project design and during project construction,** the County Engineer shall implement the following measures to control the introduction of invasive exotic plants on site:

a. Use only clean fill material (free of weed seeds) within the construction zone of the proposed project.

b. Thoroughly clean all construction equipment prior to being moved onto and used at the site.

c. Prohibit planting or seeding of disturbed areas with nonnative plant species;,

d. Control the establishment of invasive exotic weeds in all disturbed areas.

34. [P-BIO-3(a)] Avoid or Minimize Disturbance of Special-Status Plants Located Within and Adjacent to the Perimeter of the Project Site Construction Zone. **Prior to and during construction,** the County Engineer shall implement the following measures to avoid or minimize unnecessary disturbance of special-status plants occupying the vicinity of the project site.

a. Retain a qualified botanist approved by the Environmental Coordinator to conduct focused surveys for special-status plant species during the appropriate flowering periods for the various species that are known to occur or have potential to occur within the construction zone of the project site, based on the presence of suitable habitat.

b. Clearly map and identify each individual or groups of special- status plants observed during the focused survey with highly visible flagging. Morro Manzanita located in the southern portion of the site should be marked with highly visible flagging and fencing and completely avoided.

c. Provide instruction to construction personnel on avoiding unnecessary disturbance of areas marked with flagging and fencing and identify the locations of all groups of special-status plants.

Ex. 1, p. 11

35. [P-BIO-3(b)] Transplant Individual Special-Status Plants Located Within the Construction Zone of the Treatment Plant Facility. **Following implementation of BIO-3(a),** individual special-status plants that are identified as occurring within the proposed construction zone for the treatment plant facility shall be identified. If it is determined by the botanist that avoidance or disturbance of the identified plants is not feasible, implement transplanting operations for the identified species. It should be noted that the success of transplanting is highly dependent on the specific taxon. Transplanting of some

species currently occupying the site may not be as successful as for others, or may fail entirely. Therefore, prior to implementing these operations, previous case studies should be researched to determine which plants are expected to have reasonable opportunities for survival following transplantation, and determine which techniques have been successful previously. If transplanting is then determined by a qualified botanist to be a viable option for some identified special-status plants, implement the following measures under the supervision of the botanist:

a. Avoid disturbance of the root system of each plant during transplanting.

b. A plant should only be moved to a habitat that contains site conditions similar to the location previously occupied by each plant.

c. As specified by the botanist and required by the Environmental Coordinator, closely monitor the success of each transplanted species.

36. [P-BIO-4(a)] Replace Suitable Morro Shoulderband Dune Snail Habitat. **At the conclusion of project construction**, and in a time frame and manner consistent with USFWS and CDFG permits, implement P-BIO-1(b), with a percentage of habitats created consisting of Coastal Scrub dominated by Heather Goldenbush. This percentage should be equivalent to the percentage of habitat disturbed. Implementation of this measure would replace habitats dominated by Heather Goldenbush, the host plant for the Morro Shoulderband Dune Snail, with habitats exhibiting similar species composition. Additionally, the non-native brown garden snail shall be controlled within mitigation areas due to its role as a potential competitor. Currently, there is not sufficient information available on the habitat requirements of the dune snail to ensure successful creation of suitable habitat for this species. Therefore, creating Coastal Scrub habitat with Heather Goldenbush as a dominant, is considered to only partially mitigate for loss of potential Morro Shoulderband Dune Snail habitat.

37. [P-BIO-5(a)] Replace Suitable Morro Blue Butterfly Habitat. **At the conclusion of project construction,** and in a time frame and manner consistent with USFWS and CDFG permits, implement P-BIO-1(b), with a percentage of habitats created consisting of Coastal Scrub dominated by Dune Lupine. This percentage should be equivalent to the percentage of habitat disturbed. Implementation of this measure would replace habitats dominated by Dune Lupine, the host plant for the Morro Blue Butterfly. To be successful, replacement habitat should be located adjacent to or within 1,000 feet of occupied habitat. It may be possible to use the same property for this and the prior mitigation measure provided the habitat meets the USFWS and CDFG standards.

Ex. 1, p. 12

38. [P-BIO-6(a)] Avoid unnecessary disturbance of Windrow Habitats Located Around the Perimeter of the Construction Zone. Implement the following measures identified for protecting Windrow Habitat in the vicinity of the project site:

a. **Prior to commencement of project construction,** place highly visible temporary fencing around the perimeters of the driplines of windrow areas near the treatment plant construction zone.

b. **During project construction**, avoid all soil disturbance, compaction, and grading activities within and adjacent to the associated dripline of windrow areas.

39. [AQ-2] Best Available Technology. **During project final design**, the project shall be designed to conform with energy efficiency requirements outlined in Title 24 of the California Code. To the extent feasible, design of the proposed project should incorporate best available technology for energy efficiency. Additionally, the project shall include:

a. Provide an on-site employee lunch room with refrigeration and food preparation (i.e., microwave) appliances to reduce daily trips to and from the treatment plant.

b. Use double pane windows in office areas where interior heating/air conditioning will occur.

c. Use energy efficient lighting where applicable.

40. [N-1(b)] Treatment Plant Location. **During project final design**, the treatment plant should be located as close to the center of the project site as possible. Special attention should be given to locating the plant away from the nearest residences, which are about 600 feet south and 800 feet west of the site's center. This would minimize potential impacts associated with project construction and site preparation.

41. [T-1(a)] Construction Routes. **During project construction**, construction vehicles at the treatment plant site shall avoid residential areas to the extent possible. Trucks shall access the site from the west, via Pismo Avenue, and not from the south, via Sage Avenue. The access route shall be clearly and continuously marked throughout the construction time frame.

42. [VR-2(b)] Landscaping Plan. **Prior to the commencement of construction**, submit a landscaping plan in conformance with section 23.04.186 that provides native, drought tolerant, vegetative screening (particularly for views from South Bay Boulevard and the adjacent school facility for the Pismo Site). Vegetative screening need not create a complete visual block, but provide a softening of the overall project design. The landscaping plan shall be reviewed and approved by the Planning Director in consultation with Los Osos Citizen's Advisory Committee and CSA-9.

a. The applicant shall provide parking for general use by the public on the northern portion of the site to the maximum extent possible consistent with conservation of archeological and biological resources as elsewhere conditioned in this report.

Ex. 1, p.13

43. [VR-3] Lighting Plan. **Prior to the commencement of construction**, submit a lighting plan in conformance with section 23.04.320 that includes specific elements designed to reduce glare and the spillage of light from the treatment plant site. At a minimum, the plan shall identify shielding measures for all lights to avoid glare and light spill-over onto adjacent properties and roadways. The Lighting Plan shall be reviewed and approved by the Planning Director prior to the commencement of grading activities.

RAPID INFILTRATION BASIN SITE

44. **As a part of final project design,** provision shall be made for a pedestrian and equestrian trail in conformance with county trail standards. Access for wheeled vehicles are restricted to that needed for facility maintenance.

45. **This permit authorizes** interpretive displays for sensitive site features that may be installed at a future time by a community organization.

46. **As a part of final project design,** site fencing shall provide for the required safety fencing immediately around the infiltration basins with perimeter fencing kept to the least visually intrusive designs available to control access.

47. **As a part of final project design and during project construction,** grading design shall use rounding and slope transition curves along with native vegetation to give the site a more natural appearance.

48. On-site lighting shall be limited to emergency use only and any such lighting shall meet the requirements of section 23.04.320 of the CZLUO.

49. [WR-6] [CW-1] Supplemental Analysis - Los Osos Creek Outfall Should utilization of Los Osos Creek as means of effluent disposal be proposed in the future, analysis to meet the requirements of CEQA shall be conducted as a Supplement under the Project Program, as provided for in Section 15168 of the State CEQA Guidelines. Quantification of impacts associated with implementation of this effluent disposal scenario would require assessment of water quality and flow regime alteration associated with the discharge of effluent to Los Osos Creek. Additionally, specific species surveys to identify the presence of sensitive species and potential secondary impacts would be required.

50. [RIP-BIO-1(a)] **Agency Consulting/Permitting. Prior to beginning construction on the rapid infiltration pond site,** implement P-BIO-1(a) and complete appropriate consultation and authorization with USFWS and CDFG.

51. [RIP-BIO-2(a)] Minimize Disturbance of Coastal Scrub, Chaparral, and Oak Woodland Habitats Located Around the Perimeter of the Infiltration Basin Site. **During project construction,** implement measures identified in P-BIO-2(a), along with the following measures identified for protecting Coast Live Oaks in the vicinity of the project site:

    a. **Prior to commencement of project construction,** place highly visible temporary fencing around the perimeters of the driplines of all Coast Live Oaks located near the treatment plant construction zone.

    b. **During project construction,** avoid all soil disturbance, compaction, and grading activities within and adjacent to the associated dripline of each individual Coast Live Oak.

52. [RIP-BIO-4(a)] Avoid or Minimize Disturbance of Special-Status Plants Located Within

Ex. 1, p. 14

and Adjacent to the Perimeter of the Rapid Infiltration Pond Site Construction Zone. Implement measures identified in P-BIO-3(a).

53. [RIP-BIO-4(b)] Transplant Individual Special-Status Plants Located With the Construction Zone of the Rapid Infiltration Pond Site. Implement measures identified in P-BIO-3(b).

54. [RIP-BIO-5(a)] Replace Suitable Morro Bay Kangaroo Rat Habitat at the Rapid Infiltration Pond Site. Implement measures identified in P-BIO-1(a), and replace with habitats similar to those existing on site prior to project implementation. The substrate, topography, and plant species composition should be similar to those habitats that currently exist at the project site and areas that are known to provide suitable habitat for Morro Bay Kangaroo Rat, such as in portion of the Essential Habitat area.

55. [RIP-BIO-5(b)] Conduct Pre-Construction Surveys For Morro Bay Kangaroo Rat at the Rapid Infiltration Pond Site. **Immediately prior to construction,** conduct surveys for Morro Bay Kangaroo Rat within the vicinity of the proposed rapid infiltration pond site, to determine if habitats are currently occupied and identify what protective measures, if any, should be implemented prior to construction.

56. [RIP-BIO-7] Replace Suitable Black Legless Lizard Habitat at the Rapid Infiltration Pond Site. Implement measures identified in P-BIO-1(a).

57. [RIP-BIO-8] Replace Suitable Morro Blue Butterfly Habitat at the Rapid Infiltration Pond Site. Implement P-BIO-1(a) 1(a), with a percentage of habitats created consisting of Coastal Scrub dominated by Dune Lupine. This percentage should be equivalent to the percentage of habitat disturbed. Implementation of this measure would replace habitats dominated by Dune Lupine, the host plant for the Morro Blue Butterfly.

58. [RIP-BIO-9(a)] Avoid unnecessary disturbance of Windrow Habitats Located Around the Perimeter of the Rapid Infiltration Pond Construction Zone. Implement the following measures identified for protecting Windrow Habitat in the vicinity of the rapid infiltration ponds:

    a. **Prior to commencement of project construction,** place highly visible temporary fencing around the perimeters of the driplines of windrow areas near the treatment plant construction zone.

    b. **During project construction,** avoid all soil disturbance, compaction, and grading activities within and adjacent to the associated dripline of windrow areas.

Ex. 1, p. 15

59. [PEIR V-69] **As part of project final design,** the percolation ponds shall be set back from the Bayview Heights Drive and Redfield Woods subdivisions a minimum of 200 feet.

60. [VR-6] [PEIR V-69] The rapid infiltration ponds shall be included within the Landscape Plan prepared for the proposed project. A low (10-15 foot) landscape screen shall be planted around the rapid infiltration ponds. The screen shall be planted with native

materials. Additionally, the earth berms around the ponds shall be vegetated with drought-resistant, native ground cover. The Landscape Plan shall include specific revegetation details (e.g. plant palette, number and size of plants to be used, etc.), and shall be reviewed and approved by the Planning Director prior to the commencement of grading activities.

61. [RIP-LU-2] Rapid Infiltration Pond Safety. The proposed rapid infiltration pond facility could present an attractive nuisance to nearby residents, particularly neighborhood children. Adequate safety measures must be incorporated into the development of this facility. Such measures could include fencing and alarms, as well as onsite emergency lifesaving equipment. Lighting, if it is used, should be designed to meet the requirements of CZLUO Section 23.04.320 so as not to result in visual impacts to adjacent residential development.

PUMP STATIONS

62. [P-PS-LU-3] Pump Station #2 Fuel Storage. Bulk fuel storage at pump station #2 shall be placed underground, or shall be provided by portable fuel tank(s). Portable fuel tanks, if used, shall be moved to the site only during actual emergency situations and exercises, and shall be removed within 24 hours after the conclusion of the emergency power need.

LIFT STATIONS

63. Lift station number 1. **As part of project final design,** the County Engineer shall ensure that all components of the lift station, including the construction buffers and fences will be a minimum of 50 feet from the upland edge of the riparian zone. The final design plans shall be reviewed and approved by the Environmental Coordinator.

64. Lift station number 3. **As part of project final design,** the County Engineer shall ensure that all components of the lift station, including fencing are locate in such a way as to not preclude future development of a community park/coastal access. The final design plans shall be reviewed and approved by the Planning Director.

65. Lift station number 7. **As part of project final design,** the County Engineer shall ensure that all components of the lift station, including the construction buffers and fences will be outside the driplines of adjacent oak trees. The final design plans shall be reviewed and approved by the Environmental Coordinator.

Ex. 1, p.16

COLLECTION SYSTEM AND FORCE MAINS

66. [SEIR89 IV-11] **During project construction,** a qualified geologist shall observe the trenching for the effluent force main in the vicinity of strand "B" of the Los Osos fault to verify that the rapid repair facilities are properly located, and shall accurately map and appropriately record the location of the fault. Such information shall also be kept on file at the County Engineering Department and made available to the public for review.

67. [T-2(c)] [PEIR V-72] Safe Trench Crossings. **During project construction,** safe, temporary pedestrian crossing of all excavations shall be provided for school children and

other pedestrians as necessary. All excavations shall be made safe for pedestrians when work is not being conducted in the immediate area.

68. [PEIR V-67] **Prior to the completion of construction,** all pipeline routes in areas of natural vegetation shall be restored using native plants in order to return the corridor to its original appearance. Restoration of pipeline routes shall occur in a manner consistent with revegetation efforts applied to the treatment plant and rapid infiltration pond sites as regards species composition, monitoring, use of qualified botanists, and compliance with State and Federal permitting requirements.

OPERATIONAL REQUIREMENTS

69. [GEO-7] Ground Water Monitoring **Post project implementation** monitoring of ground water levels shall continue for a minimum 2-year period following implementation of Phase I to ensure that basin response is consistent with the results of ground water modeling conducted for the proposed project. In the event that ground water levels exceed modeled parameters, and or intersect with soils zones identified as potentially liquefiable, discharge parameters shall be altered, in consultation with the Regional Water Quality Control Board, to ensure that ground water levels do not increase the potential for liquefaction within the Los Osos Area.

70. [PEIR V-27] **For the life of the proposed project,** and in the event that sludge from the treatment plant is sold, delivered, or disposed of to users or locations within the limits of the Los Osos ground water basin, the County Engineer shall advise the recipient that this use should replace existing nutrient sources (i.e., commercial fertilizers).

71. [WR-5] [PEIR V-27] Ground Water Monitoring Program **At the time of project implementation,** a Ground Water Monitoring Program shall be initiated to monitor and assess ground water conditions as rapid infiltration pond facilities are brought online and utilized over the long-term. This program shall include sufficient data recovery to determine the areal extent of ground water infiltration and its affect on ground water levels within the Los Osos area. The intent of this program shall be the maintenance of ground water levels to provide adequate effluent disposal, improvement of long-term ground water quality, maintenance of long-term basin yield, and avoidance of potential secondary impacts associated with high ground water levels, particularly within low-lying areas and along the bay fringe. These include potential secondary impacts to salt marsh habitat identified in Section 5.3 of the 1997 Final Supplemental EIR. The Ground Water Monitoring Program shall be developed by the Consulting Engineer, and shall be subject to review and approval by the County Engineer and the Regional Water Quality Control Board **prior to project implementation.**

Ex 1., p.17

72. [T-3(a)] Chemical Deliveries. **For the life of the proposed project,** chemical deliveries shall be routed to avoid sensitive receptors to the extent feasible.

73. [PUB-4] Hazardous Materials Management Plan. **Prior to operation of the project,** the County Engineer shall submit a Hazardous Materials Management Plan to the County of San Luis Obispo Health Department for review and approval. The plan shall identify hazardous materials utilized onsite and their characteristics; storage, handling and

training procedures; and spill contingency procedures. Additionally, the plan should address diesel fuel storage at the pump station sites.

74. [PUB-5] Emergency Response Plan. **Prior to operation of the project**, an Emergency Response Plan shall be developed for the proposed wastewater treatment plant and pump stations in coordination with the South Bay Fire Department. The plan shall address the following topics.

a. Hazardous materials handling, storage and application.

b. Hazardous material spill response.

c. Emergency release of untreated influent from the collection system or treatment facilities.

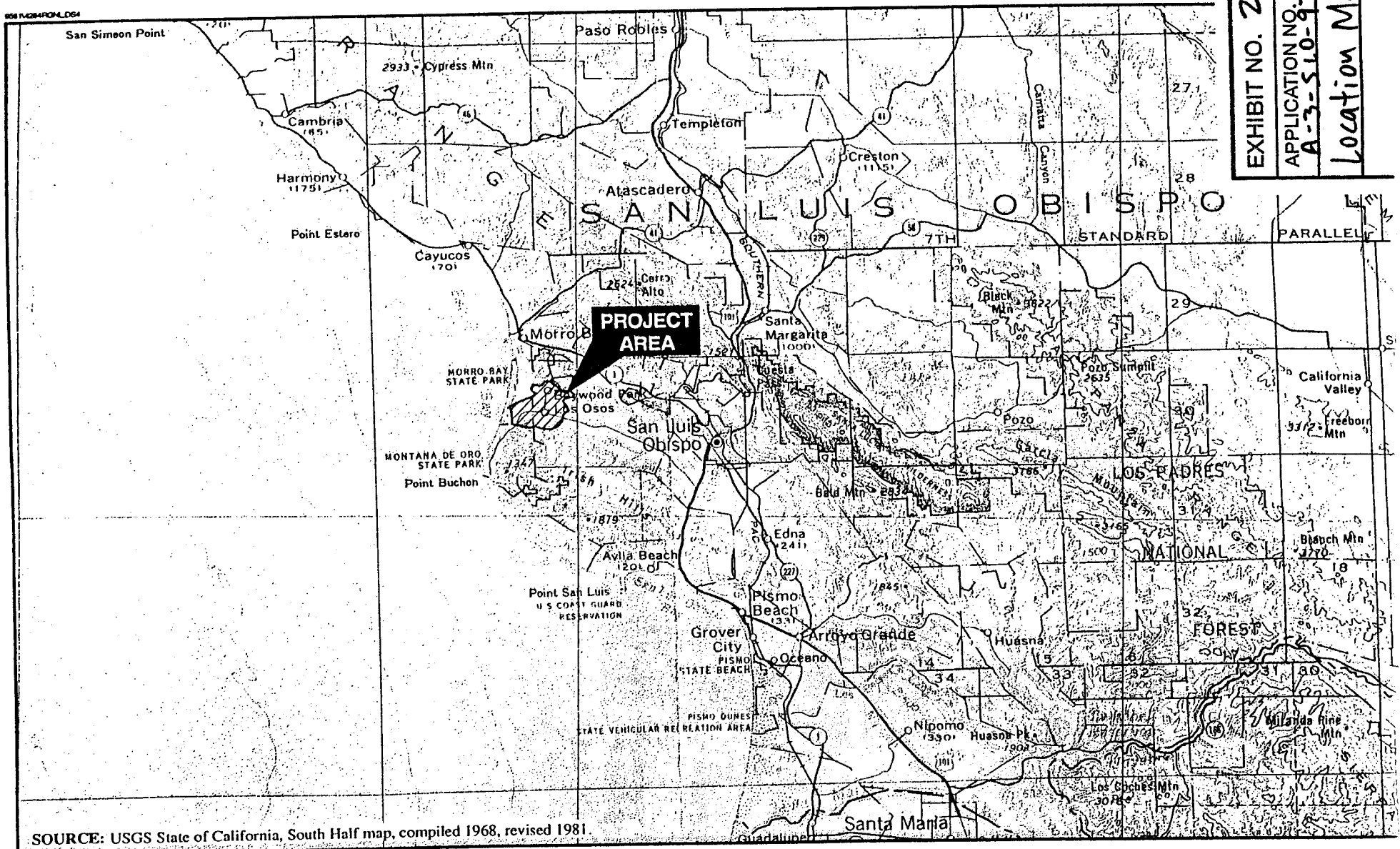
d. Emergency failure of treatment facilities, resulting in a release of untreated or partially treated effluent.

e. Personnel training.

f. Community notification.

g. Impacts on critical community facilities such as schools, public gathering areas, health care facilities, high occupancy structures, etc..

Ex. 1, p. 18



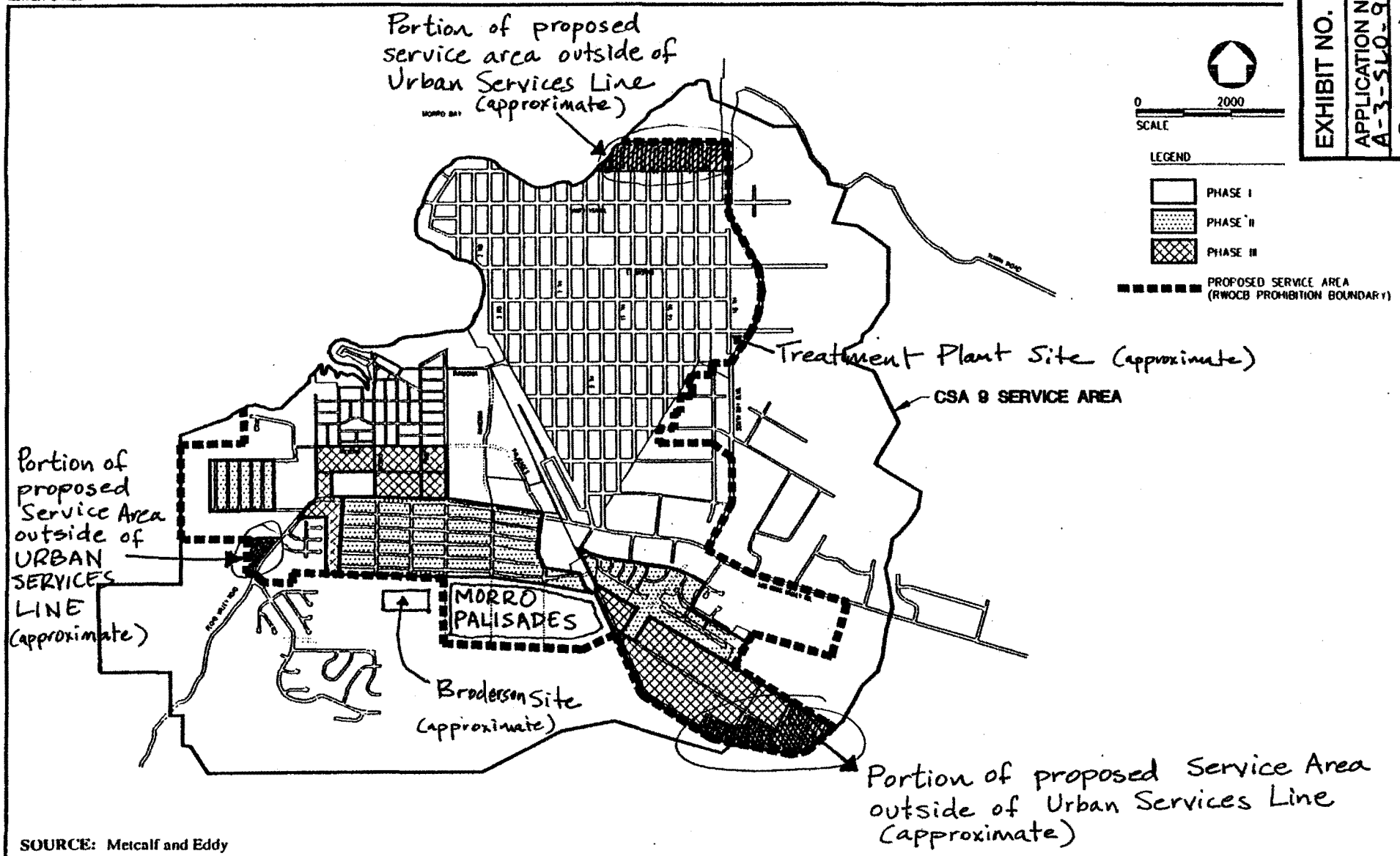
SOURCE: USGS State of California, South Half map, compiled 1968, revised 1981.

REGIONAL LOCATIO

LOS OSOS SEWER
Environmental Review

Figure 3.2

EXHIBIT NO. 3
APPLICATION NO. A-3-SLO-97-40
Proposed Service Area



SOURCE: Metcalf and Eddy

PROPOSED SERVICE AREA AND IMPLEMENTATION PHASING

LOS OSOS SEWER
Environmental Review

Figure 3.4-1

FUGRO

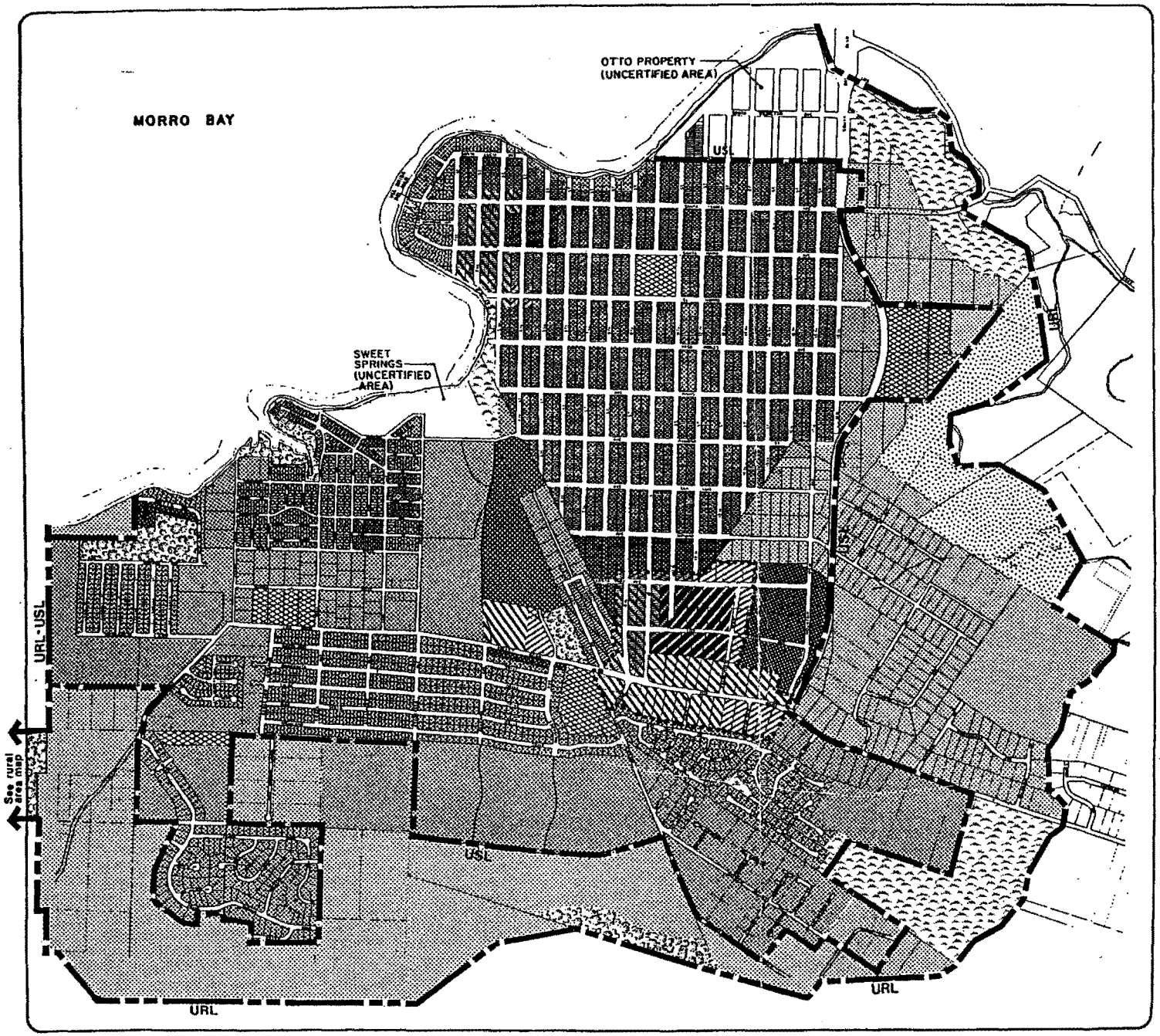


EXHIBIT NO. 4
APPLICATION NO. A-3-SLO-97-40
Land Use Categories

LEGEND

LAND USE CATEGO

- AGRICULT
- RURAL LA
- RECREATI
- RESIDENT
- RESIDENTIAL SUBURBAN
- RESIDENTIAL SINGLE FAMILY
- RESIDENTIAL MULTIPLE FAMILY
- OFFICE & PROFESSIONAL
- COMMERCIAL RETAIL
- COMMERCIAL SERVICE
- INDUSTRIAL
- PUBLIC FACILITIES
- OPEN SPACE

BOUNDARIES

- URBAN RESERVE LINE (URL)
- URBAN SERVICES LINE (USL)
- VILLAGE RESERVE LINE (VRL)
- PLANNING AREA
- CENTRAL BUSINESS DISTRICT

SCALE 0 1450'

NORTH N

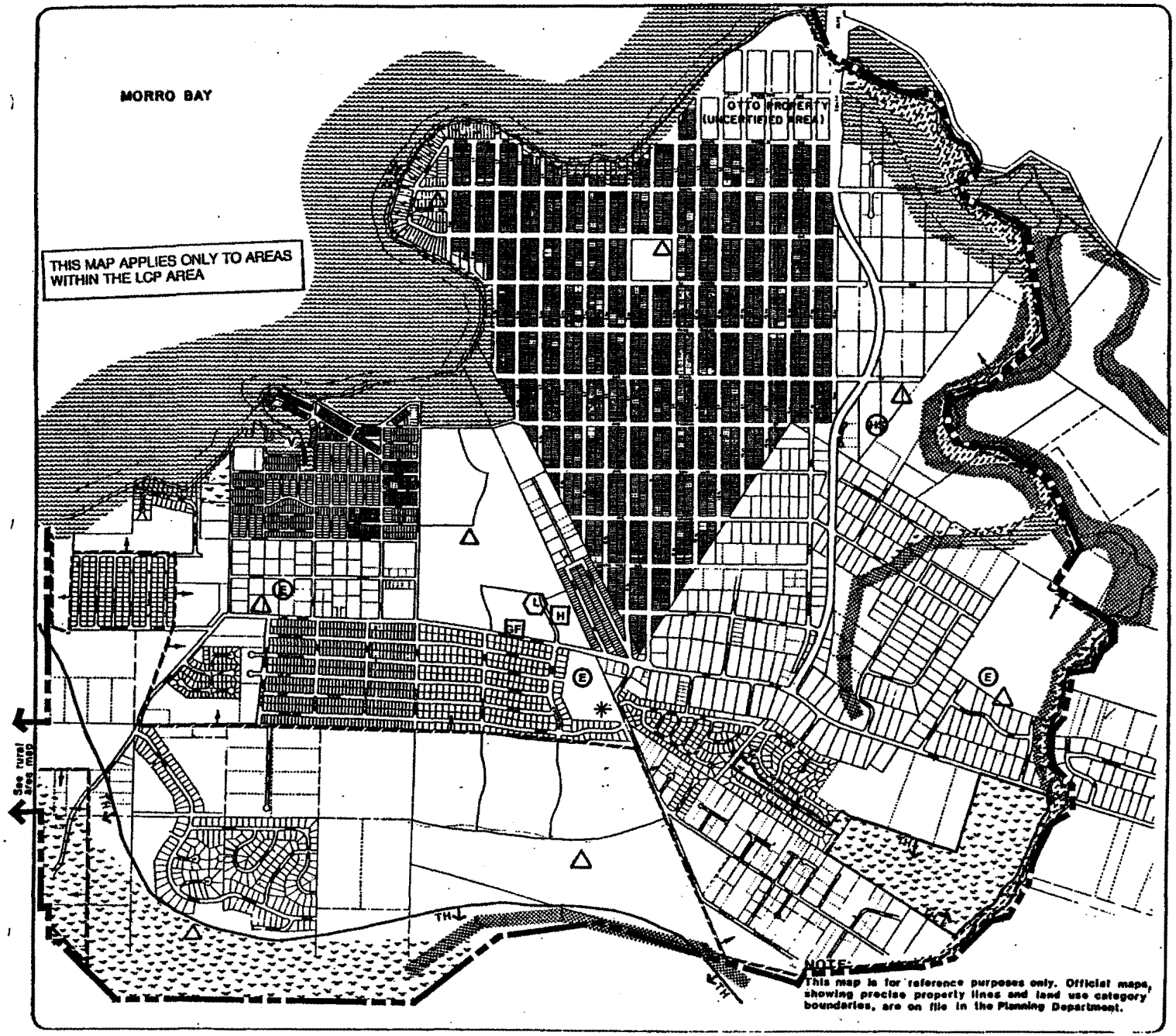
NOTE:
This map is for reference purposes only. Official maps showing precise property lines and land use category boundaries, are on file in the Planning Department.

SOUTH BAY

LAND USE CATEGORIES

San Luis Obispo County Planning Department
Revised: 12-2-75

EXHIBIT NO. 5
APPLICATION NO. A-3-SLO-97-40
South Bay
Combining Designations



LEGEND

COMBINING DESIGNA

	AR	AH
	ARCH-SEN	AR SE
	GS	GE
	FH	FL
H	H	HI
EX	EX	ENERGY & EXTRACTIVE AREA
LCP	LCP	LOCAL COASTAL PLAN
V	V	VISITOR SERVING AREA
	SRA	SENSITIVE RESOURCE AREA

PROPOSED PUBLIC FACILITIES

- HS — HIGH SCHOOL
- JHS — JR. HIGH SCHOOL
- E — ELEMENTARY SCHOOL
- PARK
- POLICE OR PUBLIC SAFETY FACILITY STATION
- WT — WATER TREATMENT FACILITIES
- ST — SEWAGE TREATMENT FACILITIES
- SW — SOLID WASTE FACILITIES
- GF — GOVERNMENT FACILITY
- L — LIBRARY

SENSITIVE RESOURCE AREAS THAT ARE ALS ENVIRONMENTALLY SENSITIVE HABITATS

- TH — TERRESTRIAL HABITATS
- COASTAL STREAMS AND RIPARIAN VEGETATION
- WETLANDS
- MARINE HABITAT

SCALE 0 1450'

NORTH N

SOUTH BAY

COMBINING DESIGNATIONS

San Luis Obispo County Planning Department
Revised: 1-6-89

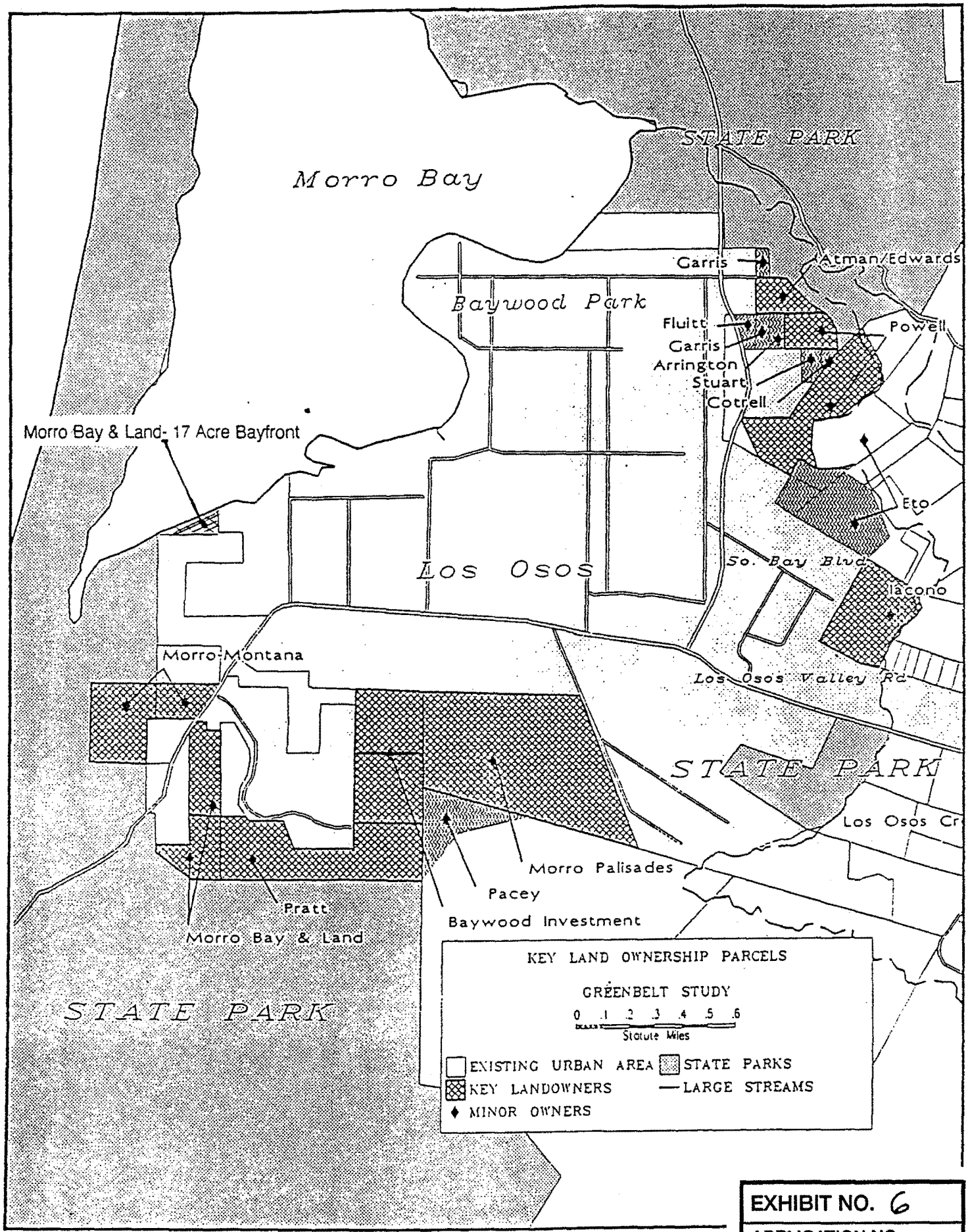
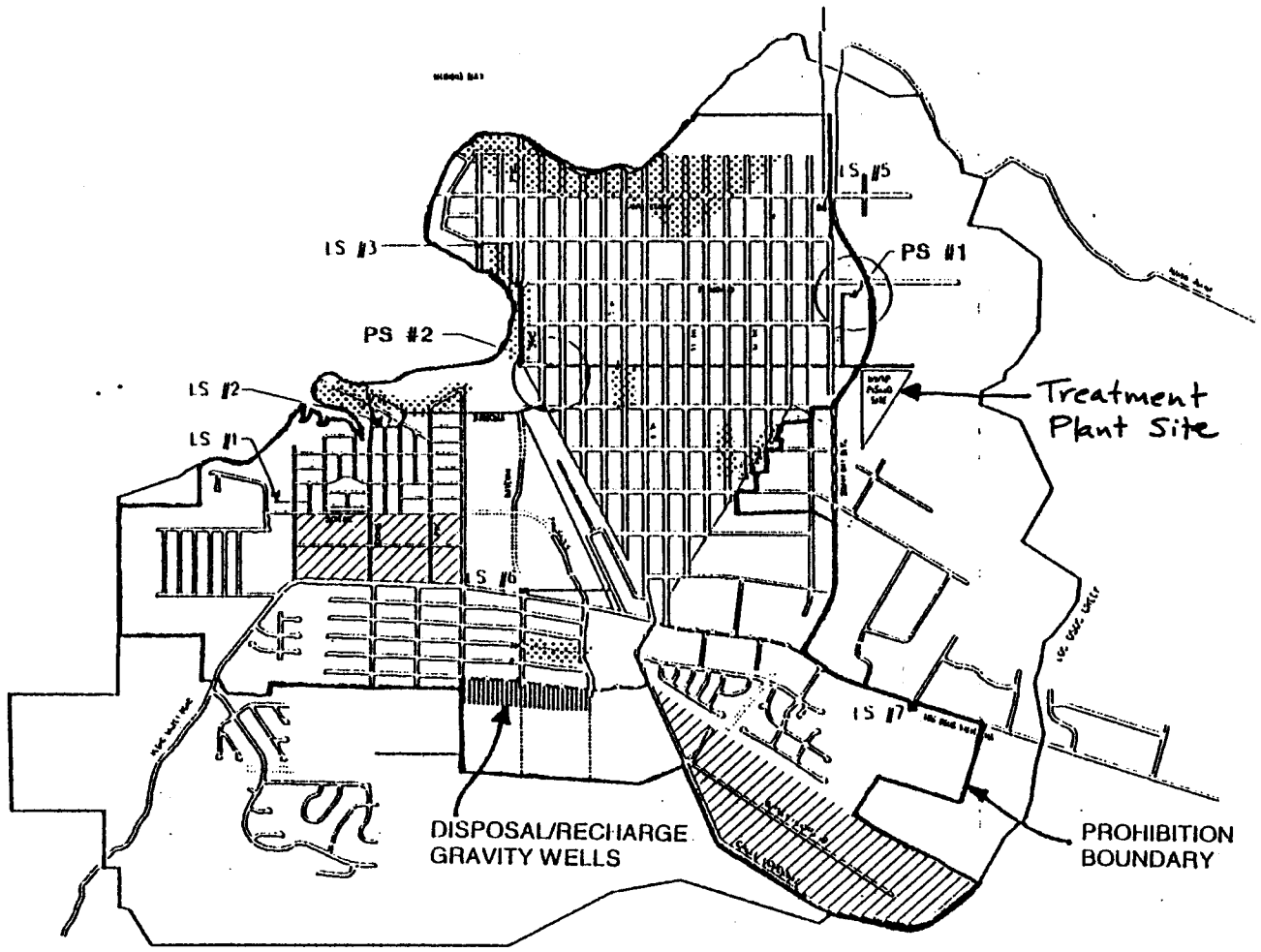


figure 6

SOURCE: LAND CONSERVANCY, 1995

EXHIBIT NO. 6
APPLICATION NO. A-3-SLO-97-40
Key habitat /
greenbelt parcels

EXHIBIT NO. 7
APPLICATION NO. A-3-SLO-97-40
Wastewater Treatment Facilities proposed by San Luis Obispo County



FORCE MAIN (EFFLUENT MAIN FROM PS TO WWTP)

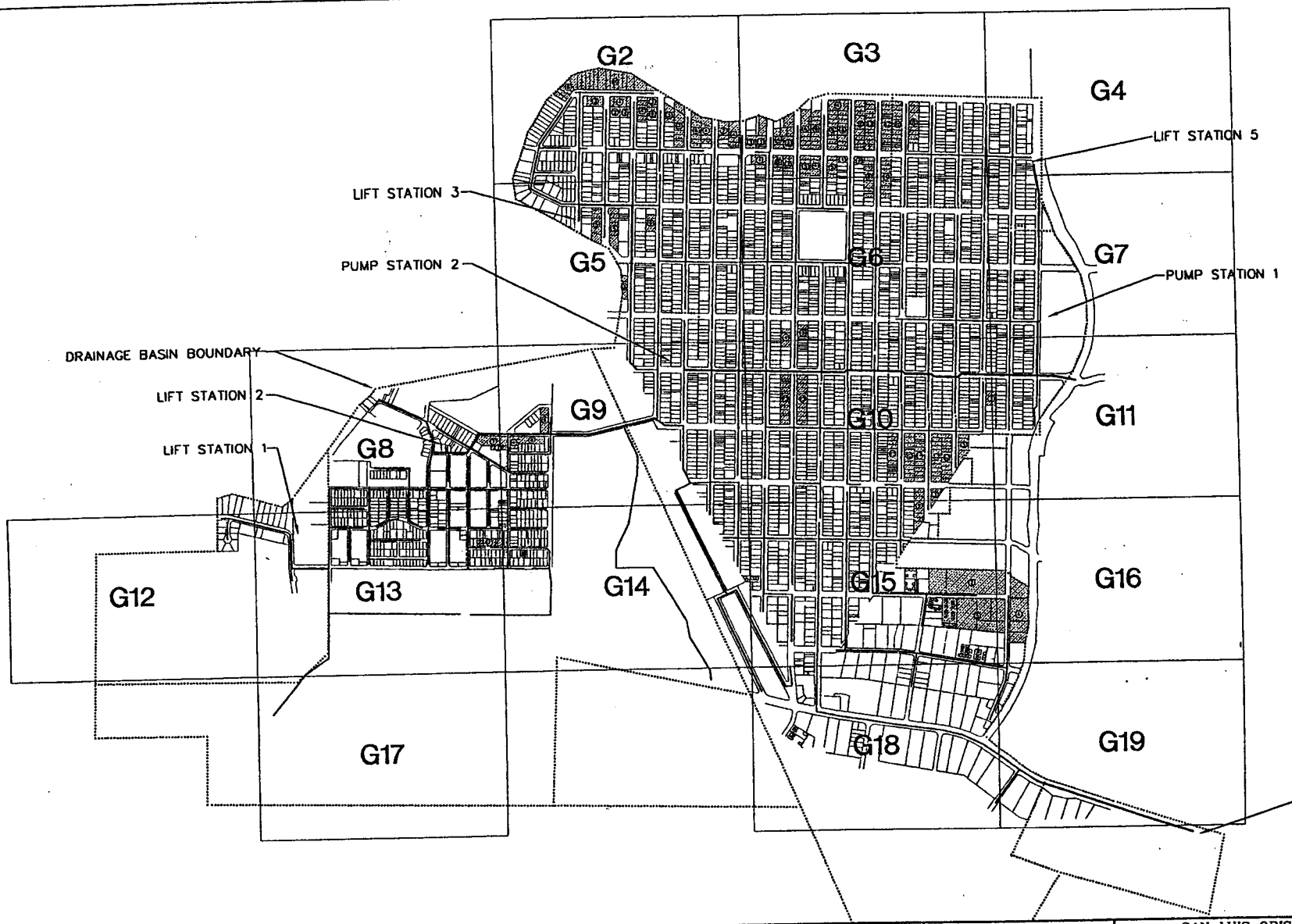
EFFLUENT MAIN

AREAS TO BE SERVED BY PRESSURE SEWERS

AREAS TO REMAIN ON-SITE SYSTEMS

QUESTA ENGINEERING CORPORATION 1220 BRICKYARD COVE ROAD PT. RICHMOND, CA 94807 Job No: Appr: Date:	SAN LUIS OBISPO COUNTY WASTEWATER FACILITIES PLAN FOR LOS OSOS	FIGURE 1

EXHIBIT NO. 7, P. 2
APPLICATION NO. A-3-SLO-97-40
Collection System



NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTIONS
B	3/20/97	SEH		KEY MAP GRID UPDATED
A	3/17/97	SEH		POTENTIAL GRINDER PUMP PARCELS IDENTIFIED

REVISIONS

DESIGNED BY: RRH
DRAWN BY: SEH
CHECKED BY:

M&E METCALF & EDDY

REG. PROF. ENGR. _____ DATE _____

SCALE: HORIZ 0' 600' 1200'

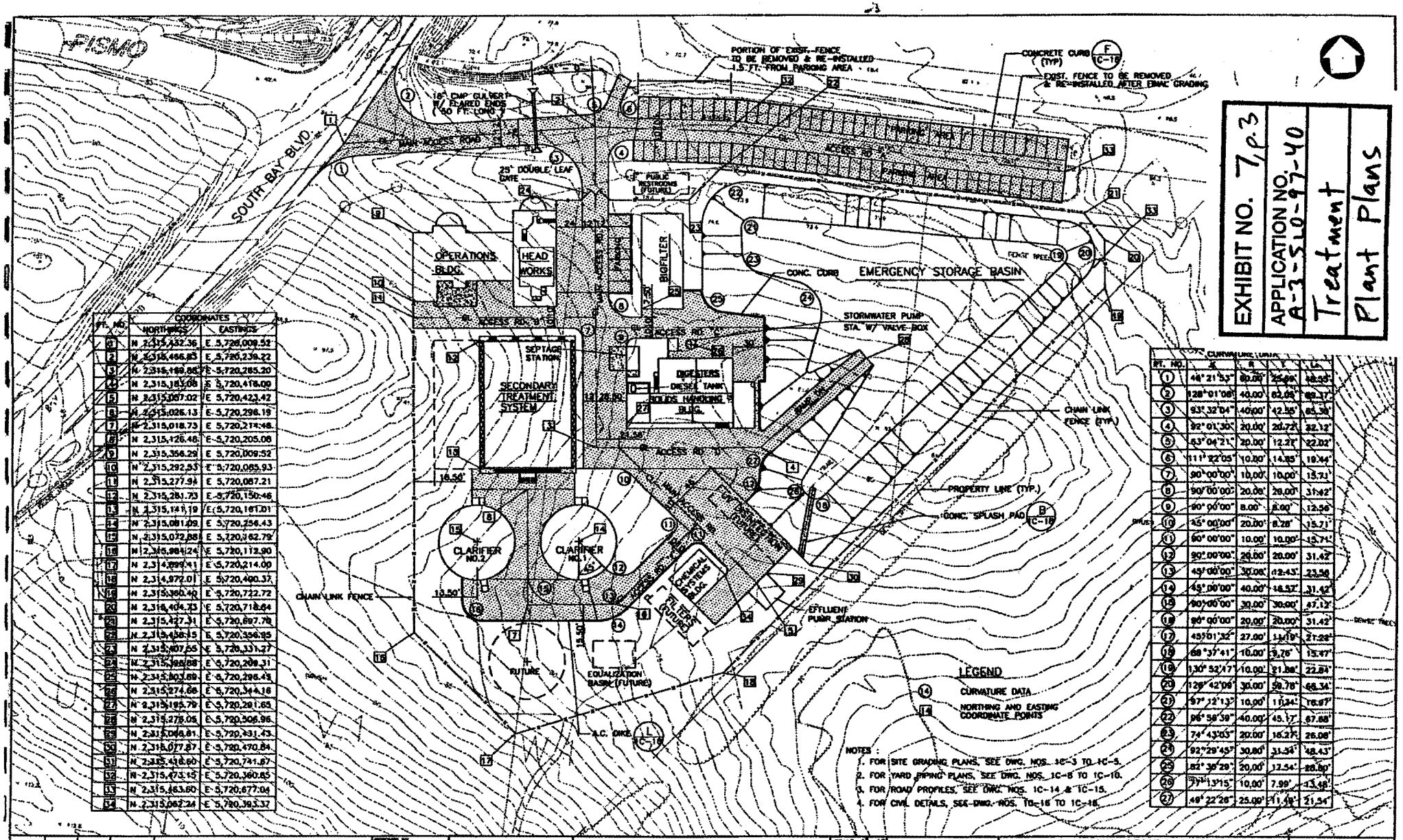
SAN LUIS OBISPO COUNTY
SERVICE AREA NO. 9

OVERALL PLAN

JOB J018757

DWG. NO. G-1

SHEET ____ OF ____



PT. NO.	COORDINATES NORTHINGS	EASTINGS
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2	N 2,315,466.85	E 5,720,239.22
3	N 2,315,189.88	E 5,720,285.20
4	N 2,315,183.08	E 5,720,418.09
5	N 2,315,087.02	E 5,720,423.42
6	N 2,315,026.13	E 5,720,298.19
7	N 2,315,018.73	E 5,720,214.48
8	N 2,315,126.48	E 5,720,205.06
9	N 2,315,356.29	E 5,720,009.52
10	N 2,315,292.53	E 5,720,065.93
11	N 2,315,277.94	E 5,720,087.21
12	N 2,315,281.73	E 5,720,150.46
13	N 2,315,143.19	E 5,720,161.01
14	N 2,315,081.09	E 5,720,256.43
15	N 2,315,072.88	E 5,720,362.79
16	N 2,315,984.24	E 5,720,112.90
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18	N 2,314,972.01	E 5,720,490.37
19	N 2,315,360.48	E 5,720,722.72
20	N 2,316,404.73	E 5,720,718.84
21	N 2,315,427.31	E 5,720,697.78
22	N 2,315,458.15	E 5,720,356.95
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24	N 2,315,398.88	E 5,720,208.31
25	N 2,315,503.69	E 5,720,298.43
26	N 2,315,274.66	E 5,720,344.16
27	N 2,315,195.79	E 5,720,281.65
28	N 2,315,278.08	E 5,720,506.96
29	N 2,315,048.81	E 5,720,431.43
30	N 2,315,077.87	E 5,720,470.84
31	N 2,315,418.60	E 5,720,741.87
32	N 2,315,473.15	E 5,720,360.85
33	N 2,315,463.60	E 5,720,677.04
34	N 2,315,062.24	E 5,720,393.37

PT. NO.	Δ	R	T	L
1	48° 21' 53"	80.00'	35.69'	68.55'
2	128° 01' 08"	40.00'	82.08'	89.37'
3	93° 32' 04"	40.00'	42.55'	65.30'
4	92° 01' 30"	20.00'	20.72'	32.12'
5	63° 04' 21"	20.00'	12.21'	22.02'
6	111° 22' 05"	10.00'	14.85'	19.44'
7	90° 00' 00"	10.00'	10.00'	15.71'
8	90° 00' 00"	20.00'	20.00'	31.42'
9	90° 00' 00"	8.00'	8.00'	12.56'
10	45° 00' 00"	20.00'	8.28'	15.71'
11	90° 00' 00"	10.00'	10.00'	15.71'
12	90° 00' 00"	20.00'	20.00'	31.42'
13	45° 00' 00"	30.00'	12.43'	23.56'
14	45° 00' 00"	40.00'	16.57'	31.42'
15	90° 00' 00"	30.00'	30.00'	47.12'
16	90° 00' 00"	20.00'	20.00'	31.42'
17	45° 01' 32"	27.00'	11.19'	21.22'
18	68° 37' 41"	10.00'	7.26'	11.97'
19	130° 52' 17"	10.00'	21.86'	22.84'
20	128° 42' 06"	30.00'	58.78'	68.34'
21	97° 12' 13"	10.00'	11.34'	16.97'
22	96° 56' 39"	40.00'	45.17'	67.68'
23	74° 43' 05"	20.00'	16.21'	26.08'
24	92° 29' 45"	30.00'	31.54'	48.43'
25	82° 36' 29"	20.00'	12.54'	28.80'
26	77° 13' 15"	10.00'	7.99'	13.48'
27	49° 22' 28"	25.00'	11.49'	21.54'

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
B	7/25/97			75% PROGRESS SUBMITTAL
A	3/1/97			50% SUBMITTAL

REVISIONS

DESIGNED BY: E. Dela Cruz
DRAWN BY: E. Dela Cruz
CHECKED BY:

METCALF & EDDY

REG. PROF. ENGR. — DATE

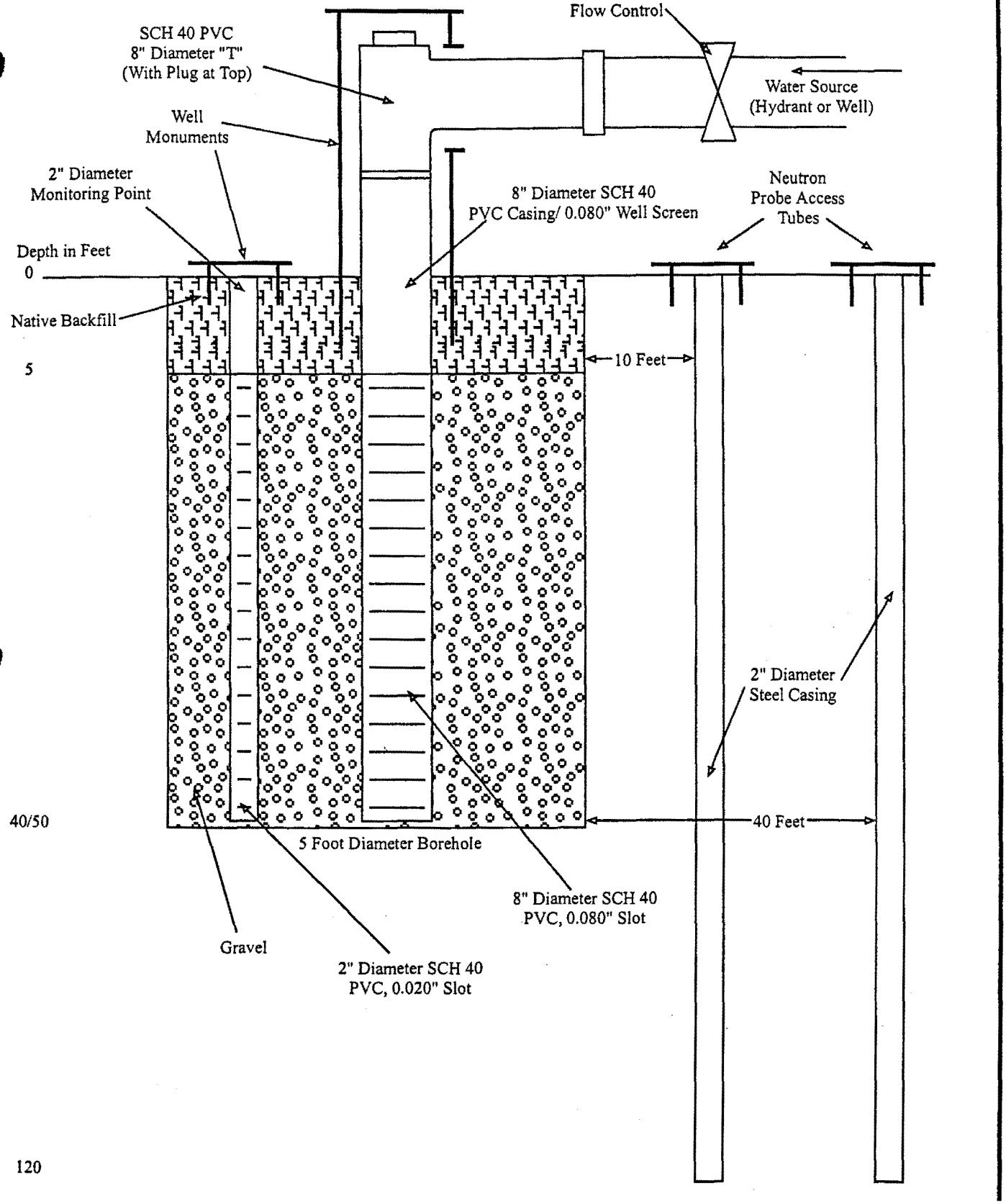
SCALE: 1"=40'

SAN LUIS OBISPO COUNTY
County Service Area No. 9
WASTEWATER TREATMENT FACILITY
SITE PLAN

JOB NO. 0018737

DWG. NO. 1C-2

SHEET ___ OF ___



Not to Scale

drywellA.cdr

FIGURE 2-2
SHALLOW RECHARGE WELL SCHEMAT
LOS OSOS VALLEY INFILTRATION STUI
LOS OSOS, CALIFORNIA

EXHIBIT NO. 7, p.4
APPLICATION NO.
A-3-SLO-97-40
Recharge Well
Schematic

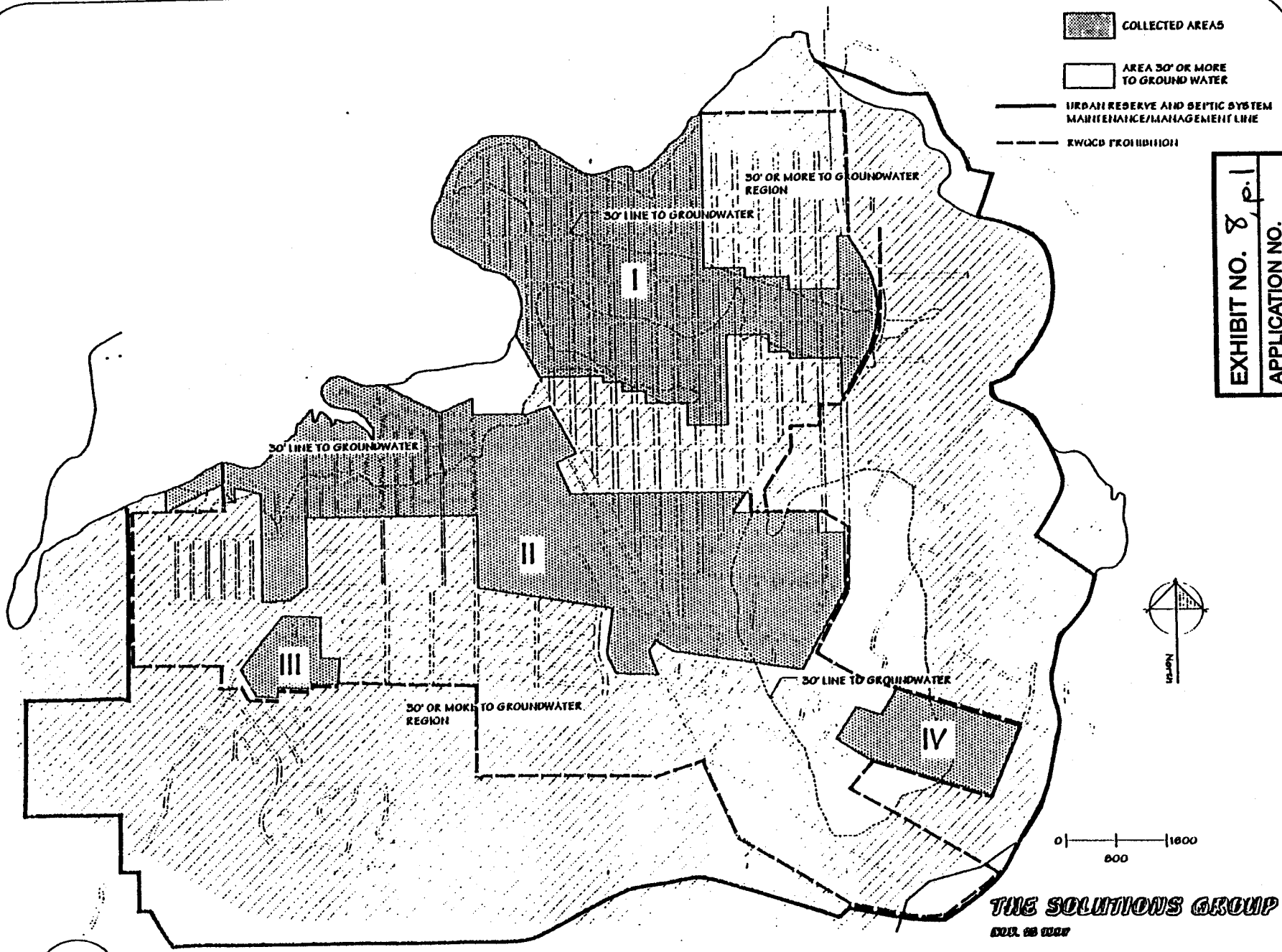


EXHIBIT NO. 8, p.1
APPLICATION NO. A-3-SLO-97-40
Wastewater Treatment Facilities Proposed by The Solution Group

FIG. 2

PROPOSAL FOR COLLECTED REGIONS

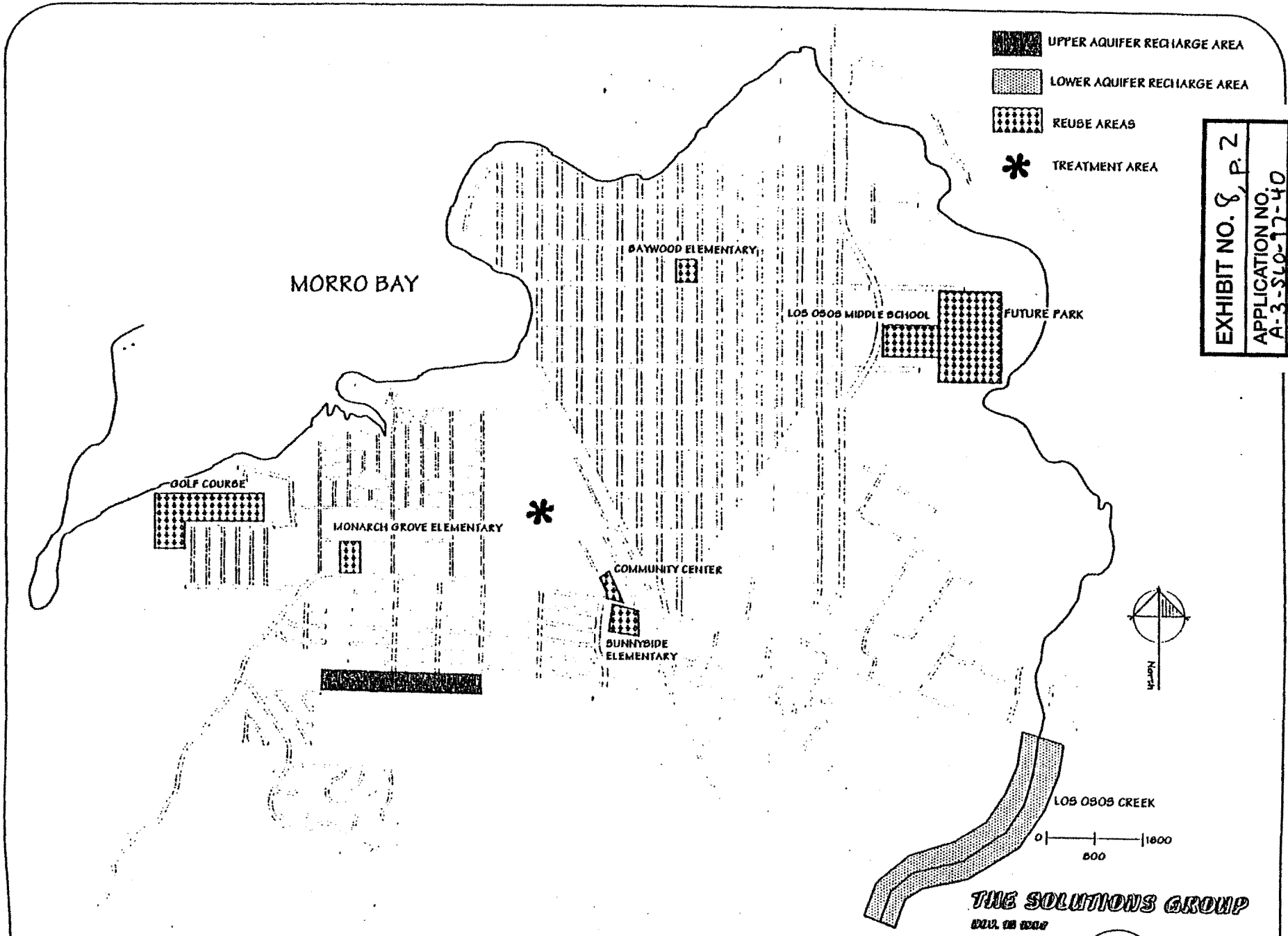
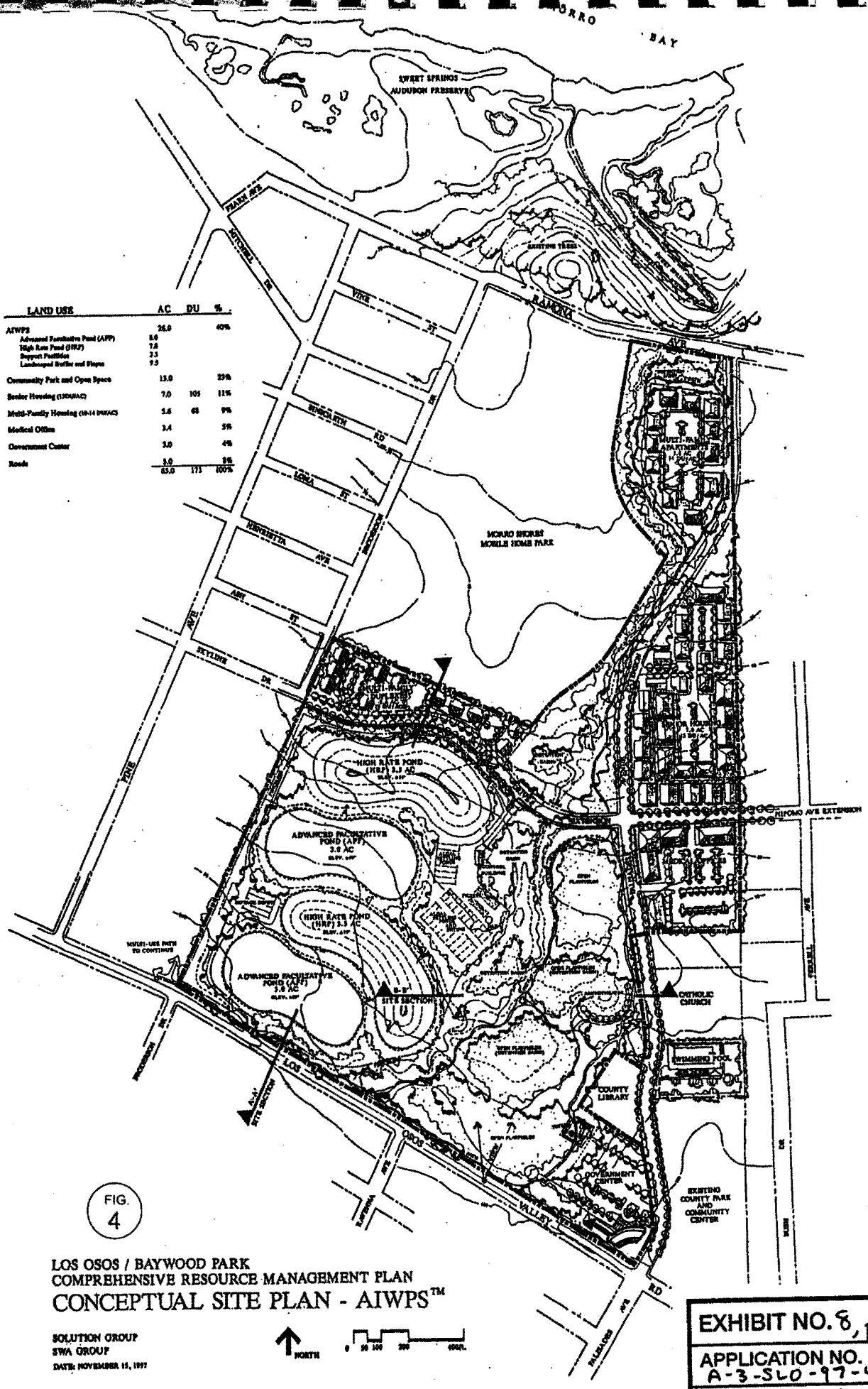


EXHIBIT NO. 8, P. 2
APPLICATION NO. A-3-SLO-97-40
Wastewater Disposal Facilities proposed by the Solution Group

PROPOSED TREATMENT/RECHARGE/REUSE AREAS

FIG. 3



LAND USE	AC	DU	%
AIWPS	26.0		40%
Advanced Facultative Pond (AFP)	8.0		
High Rate Pond (HRP)	7.8		
Support Facilities	2.3		
Landscaped Buffer and Slopes	9.9		
Community Park and Open Space	15.0		23%
Senior Housing (12DU/AC)	7.0	105	11%
Multi-Family Housing (10-14 DU/AC)	5.6	68	9%
Medical Office	3.4		5%
Government Center	3.0		4%
Roads	5.0		8%
	65.0	173	100%

FIG. 4

LOS OSOS / BAYWOOD PARK
COMPREHENSIVE RESOURCE MANAGEMENT PLAN

CONCEPTUAL SITE PLAN - AIWPS™

SOLUTION GROUP
SWA GROUP
DATE: NOVEMBER 15, 1997

NORTH

0 50 100 200 400ft.

EXHIBIT NO. 8, p. 3
APPLICATION NO. A-3-SLO-97-40
Conceptual Site Plan for the Treatment Facility proposed by

SUMMARY OF FINDINGS

Following is a summary of the significant findings and conclusions from this comparative analysis of the proposed County and Community wastewater plans for the Los Osos area. The organization of the findings corresponds to the sequence of information as outlined in the Scope of Work and as it is presented in the body of the report.

WATER QUALITY EVALUATION

Nitrate Loading

The County Plan provides far more assurance of the ability to correct the existing groundwater nitrate problem than is offered under the Community Plan. Only with the most optimistic (and, in our opinion, unsupportable) projection of a 3 mg/L nitrogen effluent quality from the AIWPS facility would the Community Plan achieve an equal basin-wide improvement in groundwater nitrate levels as provided under the County Plan.

- Under the County Plan, the results of nitrate loading analysis indicate:
  - overall, the upper aquifer will reach 10 mg/L NO_3-N in about seven years and 7 mg/L in approximately 23 years;
  - the west sub-basin (Los Osos Area) will reach in 10 mg/L NO_3-N in about five years and 7 mg/L in approximately 17 years;
  - the east sub-basin (Baywood Park Area) will reach 10 mg/L NO_3-N in about nine years and 7 mg/L in approximately 30 years.
- Under the Community Plan, as proposed, the NO_3-N levels in the west sub-basin, and for the upper aquifer as a whole, will likely be reduced to 10 mg/L or less, but achievement of 7 mg/L as an NO_3-N objective is unrealistic.
- Under the Community Plan, if all wastewater is recharged at the Broderson site (i.e., none to irrigation or Los Osos Creek), similar reduction in groundwater nitrate levels will be achieved basin-wide and in the west sub-basin as with the proposed distribution of wastewater disposal.
- Average nitrate levels in the eastern portion of the upper aquifer (Baywood Park) will decline under the Community Plan to less than 8 mg/L (as N), but "plumes" of high (>10 mg/L) nitrate-nitrogen are likely to remain in the groundwater in the immediate areas where septic systems are retained.

EXHIBIT NO. 9, p.1
APPLICATION NO. A-3-SLO-97-40
Summary of Findings from Draft Comparative Analysis

Total Dissolved Solids

There is little, if any difference between the County Plan and the Community Plan relative to total dissolved solids (TDS) loading, due to the fact that, with the exception of sludge disposal via hauling, all salts will be retained in the basin. The differences will be in the geographical distribution of TDS within the upper aquifer.

- Under the County Plan, the salts will be concentrated in the west sub-basin from recharge of the large volumes of treated wastewater at the Broderson site, causing significant rise in TDS levels in the west sub-basin. Levels in the east sub-basin will improve as compared to current levels.

- Under the Community Plan, there will also be a rise in TDS levels in the west sub-basin, but to a lesser extent than under the County Plan. TDS levels in east sub-basin will also improve under the Community Plan, but to a lesser extent than under the County Plan.

- Potentially, the most significant effect on TDS levels would be from the proposed recharge of the deep aquifer (via Los Osos Creek) as proposed under the Community Plan. This aspect of the plan would have the effect of introducing relatively high TDS water directly into the Los Osos water supply aquifer, which would be undesirable.

Coliform Bacteria

Both projects have the ability to correct the bacteriological problems associated with existing on-site wastewater disposal systems. However, there will be continuing risks of bacteriological contamination with elements of both projects.

- The most significant threat of contamination under the County Plan is from the sewage collection system, specifically "exfiltration" (i.e., leakage) from gravity sewers. The effect of collection system leakage in Los Osos, should it occur, would likely be insignificant in comparison with the existing septic system discharges, which in many cases are in direct continuity with groundwater.

- The Community Plan will minimize bacteriological contamination through STEP collection of wastewater, but risks of individual pump and collection system failure and the challenge of maintaining water-tight septic tanks in a high groundwater environment will contribute to an ongoing risk of STEP unit flooding and overflows with resultant groundwater and/or surface water contamination.

- The Community Plan proposes to retain on-site disposal for nearly 44 percent of the DUEs. Discharges from these remaining individual septic systems will continue to present many of the same bacteriological risks to groundwater that currently exist in Los Osos, although to much less of an extent due to abandonment of systems in the high groundwater region. This factor causes the Community Plan to be judged as posing a greater risk of groundwater contamination from bacteria and other pathogens.

A-3-SLO-97-40
Exhibit 9, p.2

TECHNICAL FEASIBILITY

County Treatment Plant

- The design of the Phase I County wastewater treatment facilities is generally appropriate for the project as it is currently configured. Relatively minor opportunities may exist to reduce the Phase I cost, specifically deleting the facilities for adding an external carbon source for nitrogen removal to levels lower than can be achieved by the Modified Ludzack-Ettinger process.

- The proposed use of the ML-E process is capable of meeting the 7 mg/L total nitrogen level specified in the Draft Waste Discharge Requirements for this project.

- The change to gravity dry wells for effluent disposal increases the required level of treatment to include tertiary effluent filtration. It is recommended that the process designers give serious consideration to the new "fuzzy filter" effluent filtration process for possible cost savings.

- With the conversion from percolation ponds to gravity wells for effluent disposal, emergency storage for this project should be increased to three days or more.

Community Treatment Plant - AIWPS

While there are no fundamental flaws in the theory of the AIWPS, there are practical problems that can limit the performance of the process including: (1) the inability to remove algae from the treated effluent; (2) the characteristics of the wastewater which may limit the ability of the process to remove nitrogen; (3) the inability to control events that may lead to thermal overturns; and (4) the inherent variability of the process relative to the restrictive discharge requirements. Based upon these potential serious operational and compliance problems and the lack of any long-term, full-scale operating data to validate the process, it would be very risky and inappropriate to utilize the proposed AIWPS for the Los Osos project - especially given the limited resources of the community.

Should the decision be made to go forward with an AIWPS project the following drawbacks of this system should be understood:

- The system is very unlikely to be able to achieve compliance with Title 22 tertiary treatment requirements for water recycling (i.e., unrestricted reclamation use) or recharge via Los Osos Creek on a consistent basis due to turbidity levels.

- The Dissolved Air Floatation (DAF) process for removal of algae solids will require a high level of operator attention and control, and massive doses of polymer. Large polymer doses will be required in the proposed design to produce a minimum effluent quality suitable for disposal via surface spreading only (i.e., percolation ponds).

- Subsurface disposal/recharge of AIWPS effluent via gravity wells (per current County Plan) is not advisable due to the serious potential for biofouling (i.e., clogging). Recharge should

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Exhibit 9, p.3

be limited to free access percolation basins (per former County Plan), where routine maintenance and restoration of the soil infiltration surface is feasible.

- Although the AIWPS produces only small amounts of primary sewage sludge, large volumes of bio-solids from the DAF-Filtration process will be generated. Provisions will have to be added for handling and disposal of this secondary sludge; this has not been addressed in the Community Plan.

- Attainment of a 3 mg/L total nitrogen level in the effluent (proposed as a key feature of the Community Plan) is not realistic. Given the high concentration of total nitrogen in septic tank effluent and process limitations, the effluent nitrogen concentration is more likely to be in the range of 8 to 12 mg/l.

There are clear advantages to the use of the AIWPS in rural settings where land area is not a constraint and where the treated water can be used for irrigation (e.g., St. Helena, Hollister, Bolinas). The process has low energy requirements and can be visually and environmentally attractive. However, the over-riding demand to comply with strict nitrogen removal requirements and to produce tertiary-level effluent quality for groundwater recharge and/or reuse make the AIWPS an inappropriate choice for the Los Osos situation.

Collection System

- The County Plan proposes approximately 50 miles of conventional gravity sewers that will be problematic and expensive to install due to the predominance of loose sands throughout Los Osos. Despite good construction methods, the sewers will be a continuing source of inflow and infiltration in the high groundwater regions of the collected area. Excessive flow can lead to periodic hydraulic overload problems at the treatment facility.

- The Community Plan proposes to retain existing septic tanks for primary treatment and utilizes septic tank effluent pumping (STEP) and small diameter shallow pressure sewers to obviate some of the shortcomings of the County Plan. Some septic tank replacement (an estimated 20 percent) and electrical service upgrading must be anticipated. STEP systems inherently include more customer-District interaction and will require easements for inspection (at least once/year) and equipment maintenance.

On-Site Wastewater Management Program

- The County Plan does not provide specific details regarding the organization and management of the proposed On-site Wastewater Management Program for areas to retain septic systems. As compared with the Community Plan, a smaller portion of the properties will retain on-site wastewater disposal. Those properties that retain on-site disposal are larger lots and have adequate land area and conditions for septic system upgrades and replacement. An on-site management program in these areas should not present any special difficulties.

- The Community Plan outlines an ambitious program for on-site wastewater management. The proposal is for the District to inspect, repair/replace and maintain all systems installed after

1978. Furthermore, the District will assume responsibility for the older (pre 1978) systems after initial inspection and owner-financed repair ensures that each system meets State and County requirements. Many properties that will retain on-site disposal under the Community Plan have limited available area for replacement and system upgrade. Consequently, enforcement of upgrade requirements will be difficult. The planning and liabilities associated with District-financed improvements on private properties will also be an on-going challenge that may absorb considerable resources and become a source of conflict and animosity within the community.

Other Community Project Elements

1. **Irrigation with Recycled Water**

   - The proposal in the Community Plan to produce and distribute recycled water from the AIWPS facility has questionable feasibility due to the unlikely ability to meet Title 22 tertiary treatment standards.

   - The proposed use of recycled water for irrigation of the Sea Pines Golf Course is precluded by an existing approved housing project (Monarch Grove Development) that, in conjunction with the existing Sea Pines Hotel, proposes to use the golf course for this purpose.

2. **Los Osos Creek Discharge**

   - Seasonal release of treated effluent to Los Osos Creek from the AIWPS facility is presently deemed infeasible due to expected high effluent nitrogen levels and likely inability to meet Title 22 treatment standards for direct recharge.

   - The ability to implement a creek discharge project is constrained by the severe channel instability and bank erosion problems in the reach of Los Osos Creek under consideration.

   - Additional biological and creek channel stability analysis and mitigation measures, as well as groundwater modeling, will likely be required if seasonal discharge to Los Osos Creek is pursued.

3. **Harvest Wells**. The development of "harvest wells" under the Community Plan proposes to recover water from the shallow upper aquifer for use in the municipal drinking water supply for Los Osos. This project element, as proposed, is considered infeasible due to a probable conflict with water well protection requirements under the "Drinking Water Source Assessment and Protection (DWSAP) Program", under preparation by the Department of Health Services and due to be adopted by the State of California in 1999.

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Exhibit 9, p.5

REGULATORY COMPLIANCE

Order No. 83-13

- The County Plan complies with RWQCB Order 83-13 and meets the clear intent of the Order.

- Under the Community Plan, there will be a continued threat of nitrate and bacteriological contamination of groundwater in violation of Order 83-13 due to the retention of a large number of on-site wastewater disposal systems, many of which incorporate deep seepage pit disposal.

Draft Waste Discharge Requirements

- Compliance with the proposed Waste Discharge Requirements as articulated in Draft Order 97-8 can be expected under the County Plan.

- Compliance with the Draft WDRs is doubtful under the Community Plan due to the likelihood that the AIWPS facility cannot meet the effluent limit of 7 mg/L for total nitrogen. In addition, localized high nitrate concentrations (in excess of 10 mg/L) will continue to exist in high-density areas that will retain on-site disposal if the Community Plan is implemented.

Title 22 - Reclamation Standards for Recharge and Recycling Projects

- Both the County Plan (utilizing gravity wells) and the Community Plan (assuming percolation ponds) have the potential to meet specific Title 22 Regulations with regard to wastewater treatment, recharge site conditions and timing and amount of recovery by drinking water wells.

- The elements of the Community Plan that call for recycling of treated wastewater for park/golf course irrigation and for Los Osos Creek discharge are considered infeasible at this time due to the expected inability of the AIWPS facility to meet Title 22 requirements for tertiary recycled water. The effluent produced by the County-proposed facility would comply with Title 22 standards for either of these uses; and this represents a potential future disposal/reuse option under the County Plan.

BIOLOGICAL RESOURCES EVALUATION

- Both the County Plan Pismo site and the Community Plan treatment site lack conclusive and quantifiable information regarding the actual occurrence and subsequent severity of impacts on the special status plants and wildlife taxa. When comparing the two sites, this analysis must rely on comparisons of the amount of suitable habitat which would be impacted. Development of the Pismo site, at eight acres, would result in approximately 33 percent of the impacts of developing the 25-acre Community treatment site.

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Exhibit 9, p.6

- Although the County and Community Plans differ in details in their approach to wastewater collection, the approximate footprints and system routes are roughly similar, although the Community collection system is smaller. Given that the collection systems will run through urban lots and along street rights of way, impact to biological resources can be considered similar and insignificant for both projects.

- Since the disposal sites are adjacent to one another, the sites contain fairly equivalent suitable habitat for all of the special status species. Development of the County Plans' gravity wells, at an initial six acres with an estimated 0.12 acres of disturbance in each subsequent year, would result in lower impacts than developing ten acres of percolation ponds, which is anticipated to be required for AIWPS effluent under the Community Plan.

- In addition to the percolation ponds, the Community Plan also contains a component for dry season disposal within Los Osos Creek. The feasibility of creek disposal/recharge under the Community Plan remains questionable due to effluent quality concerns. However, even if it were to be implemented, it would be a seasonal disposal alternative and therefore would not reduce the total acreage required at the Broderson disposal site.

- Both plans lack a clear demonstration of how impacts would be successfully mitigated. Without proper planning, implementation of either wastewater treatment plan could be critical to long-term conservation of biological resources of the area. A more detailed habitat mitigation and monitoring plan will need to be prepared for whichever project is ultimately selected.

GROUNDWATER RESOURCES EVALUATION

- High groundwater levels are a problem in certain residential areas. Although the Community Plan tailors its wastewater collection to address this problem, the County Plan is superior because of the more extensive provision of sewers.

- To the extent that maintenance of the current distributed patten of recharge is desirable, the Community Plan will provide for greater local recharge of groundwater.

- In comparing wastewater disposal/recharge at the Broderson site, the Community Plan (assumed to rely on percolation ponds) presents an advantage because of its reliance on established recharge methods, wider distribution of recharge, and a lower overall volume of recharge.

- The County Plan would reduce flow to Baywood Marsh and increase flow to Pecho Marsh and Sweet Springs Marsh. The Community Plan, without harvest wells, would alter the flows to these marshes to a lesser extent.

- If harvest wells are not considered, the Community Plan is superior because it provides the least disruption to existing conditions of no salt water intrusion. The use of harvest wells,

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Exhibit 9, p. 7

however, could induce salt water intrusion depending on the specific configuration and operation of this aspect of the project.

- The County Plan is superior in protecting the quality of the groundwater largely because it provides more extensive sewering and greater protection of the deep aquifer that is the major source of drinking water supply.

- The Community Plan, if it can be implemented entirely as proposed, is generally preferred on issues related to groundwater quantity.

ARCHEOLOGICAL RESOURCES EVALUATION

- The Los Osos/Baywood Park area is documented as having high sensitively for heritage resources. Both Plans (County and Community) would potentially affect archeological sites throughout the study area.

- The Pismo treatment plant location appears to have more cultural resource sensitivity than the property under consideration by the Community Plan, although heritage data bases for each property are not comparable.

- Use of a pressurized STEP collection system significantly reduces potential impacts to heritage resources as compared to the conventional sewer system due to reduced excavation requirements.

- There are indications that a STEP collection system would result in reduced monitoring costs and possibly mitigation costs due to less disturbance to the ground and shorter construction time.

- The Community Plan collection system area coverage would cause less potential impacts than the County Plan.

- Recycling and deep aquifer recharge of treated effluent (to the extent that it can help preclude future importation of water) would involve less impacts than construction of a water pipeline from external sources.

A-3-SLO-97-40
Exhibit 9, p.8

ECONOMICS AND PROJECT FEASIBILITY

Capital Costs

- The total estimated capital cost for the County's wastewater treatment facilities is $65.5 million. Financing for the capital improvements would involve $28.9 million from the sale of bonds, $35.4 million in funds from a State Revolving Fund loan, and $1.2 million from project fund earnings. The long-term (30-year) assessment costs per unit are estimated to be

approximately $67 per month. Financing for sewer connection costs are estimated to be about $30 per month for a period of ten years.

- The total estimated capital cost of the wastewater facilities proposed by the Comprehensive Resource Management Plan (CRMP) is estimated to be $33.4 million. The Plan identifies the State Revolving Fund as the only source of funding proposed for the project. The State has indicated that its loans: (1) are not available for certain types of costs, such as land and contingencies; and (2) contain restrictions on funds used for purposes such as planning, design, and construction management. As a result of these limitations on financing, the Plan-proposed facilities have an unmet funding need for $8.9 million. The Plan's estimated monthly cost of $38.75 per unit would be increased dependent on the nature and extent of financing obtained to fund land and contingency costs. The Plan would not result in additional costs for sewer connection financing by individual property owners.

Operation and Maintenance Costs

- Estimated operation and maintenance costs for the County wastewater facilities are $1.1 million per year. Estimated monthly costs per unit would total $18.57. For a 30-year financing period, the present value of this annual cost stream is $18.4 million. Construction and operation and maintenance costs would total $66 million.

- Operation and maintenance costs for the CRMP proposal are estimated to be $1.8 million per year. The monthly costs per connected unit would be $22.54. Over an assumed 30-year period, the present value of the annual operation and maintenance costs would be $31.9 million. Construction and operation and maintenance costs would total $65.3 million. The per unit monthly costs for this proposal would be lower resulting from a larger community base served by the facilities.

Economic Risks

- Delays in the implementation of either wastewater treatment proposal would result in increased construction costs and, most likely, higher finance costs. Since the initial cost proposal for construction of wastewater facilities in 1987, estimated construction costs have increased by approximately $1 million (1998 dollars) per year. Finance costs have decreased in the past 15 years; however, in consideration of the currently low interest rates, the risk of higher finance costs would increase over a prolonged period of delay in project implementation.

- The economic risks associated with operation of the two different types of wastewater treatment facilities are dissimilar. While normal operations would meet the State's water quality criteria for effluent discharge, operational problems and failures of the County wastewater facilities could result in administrative fines totaling thousands of dollars per incident or on a daily basis. Mechanical problems would need to be remedied in over a short-term (days) period.

A-3-SLO-97-40
Exhibit 9, p. 9

- Economic risk attached to the CRMP proposed facilities would center on the ability to meet State water quality parameters after construction of the project. Failure to meet the State standards could result in the State imposing additional infrastructure requirements on the Community to correct the operational problems. The capital expenditures in this event would most likely be an order of magnitude greater than the fines imposed for incident-based violations.

- Specific financing risk attached to the CRMP proposal entails the availability of the existing assessment district as a financing vehicle for the development of the wastewater facilities. In the event that the current assessment district is not available and the formation of a new assessment district is required, the approval of financing will be subject to the voting provisions of Proposition 218. There is a risk associated with the approval of levied assessments by two-thirds of the property owners in the Los Osos area.

- With the formation of a new assessment district, there is some question as to the disposition of the "acquired value" of the work performed to date under the present assessment district. If it is used by CRMP planning and design, the proposed financing may need to provide for the acquisition of this "asset."

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Exhibit 9, p. 10